GAZA SOLID WASTE MANAGEMENT PROJECT

ADDITIONAL FINANCING PROJECT

Environmental and Social Compliance

Semi Annual Report

July –December 2020

List of Acronyms

AFD	French Development Agency
ARAP	Abbreviated Resettlement Action Plan
EQA	Environmental Quality Agency
ESMP	Environmental and Social Management Plan
ESIA	Environmental and Social Management Plan
EU	European Union
ERW	Explosive Remnants War
HSEQ	Health, safety, environment Quality
IDB	Islamic Development Bank
GSWMP	Gaza Solid Waste Management Plan
JD	Jordanian Dinar
JSC-KRM	Joint Service Council – Khan Younis, Rafah and Middle area
MDLF-PDSU	Municipal Development and Lending Fund- Project Development and Safeguards Unit
MSW	Municipal Solid Waste
OP	Operational Policy
OSHA	Occupational Safety and Health Administration
PARC	Palestinian Agricultural Relief Committees
PAPs	Project Affected Persons
PCBS	Palestinian Central Bureau of Statistics
PEL	Environmental Law of Palestine
PWA	Palestinian Water Authority
SW	Solid Waste
ST cell	Short-term cell
TS	Transfer Station
UNDP-DEEP	United Nation Development Program- Deprived Families Empowerment Program
UNMASS	United Nation Mine Action Service System
UNRWA	United Nations Refugee Work Agency
UXO	Unexploded ordnance
WB	World Bank
WHO	World Health Organization
WWTP	Wastewater Treatment Plant

Semi Annual Report: Environmental and Social Compliance

SECTION ONE: AL-FUKHARY LANDFILL

1. INTRODUCTION

Al-Fukhary (Sofa) landfill is a sanitary landfill over an area 235,000 m2, it is located east of Khan Younis Governorate (800 m from the eastern border of Gaza Strip), and it receives 600 ton/day of municipal waste from three governorates (Khan Younis, Rafah, and Middle Area) which mainly consist of food waste, paper and cardboard, plastics and nylon, tin cans and aluminum, glass, leather…etc. The landfill site is fully secured by a fence, and only one entrance gate is available for incoming and outgoing trucks which managed by a control room, as well the site is secured by two guards and a CCTV system. A second gate is available but closed, it is used only for some specific purposes. The Landfill site is also included the old waste dumping site which is semi-closed by a clayey layer with a side slope 1:2 and height 30 m above the ground, and it also included excavated soil stockpile which is located over an area 85,000 m2 with a height up to 14 m. Figure (1) provides schematic of the new sanitary landfill with all major facility elements.

1.1 The landfill site components

Al-Fukhary (Sofa) Sanitary landfill consist of:

- Entrance area including weighbridge and control room;
- Building (190 m² on 3 levels) for JSC-KRM operation personnel staff;
- Maintenance Workshop (528 m²); Storm water drainage and storage pond (10,531 m3 capacity);
- Disposal cell 1, divided in cell 1A and 1B (excavated up to 20 m below natural ground level), and slope 1:2 for sides with horizontal perm 5m width;
- Leachate pre-treatment (aeration lagoon, usable volume 6800 m3), it is excavated to 2.75 m below natural ground level;
- Peripheral road (length 1,735 m);
- Old Dumpsite (40,000 m2);
- Stockpile of excavated soil (85,000 m2); and
- Fence is surrounding all the site.

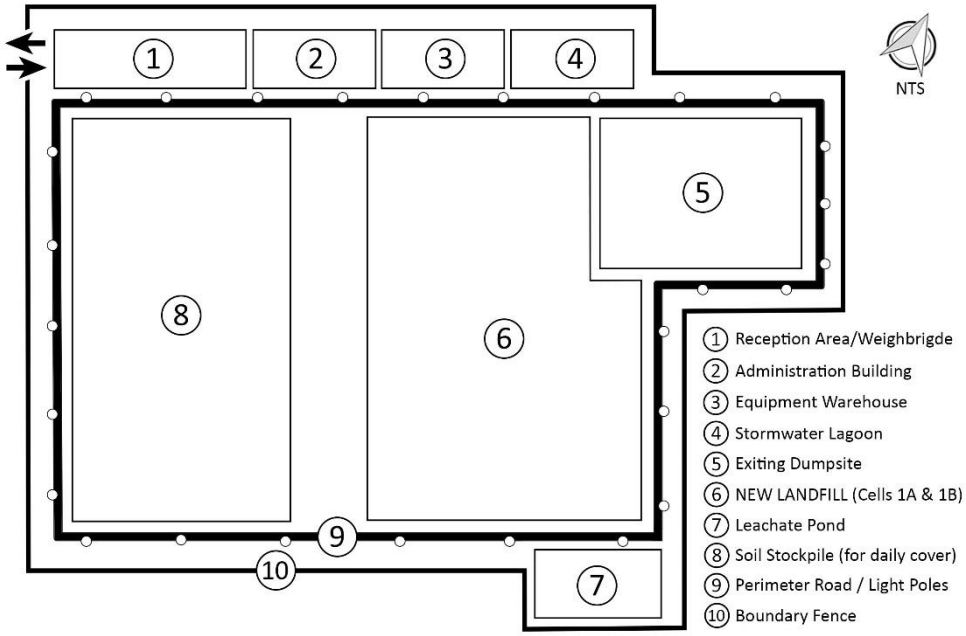

Figure 1. Schematic of Sofa Sanitary Landfill in Al-Fukhari

1.2 Operation of Al-Fukhary (Sofa) Sanitary Landfill

Al-Fukhary (Sofa) Landfill is a sanitary landfill which managed by JSC-KRM since July 15th, 2019. During the reporting period; it received an average 501 ton/day or 15369 Ton/month of municipal waste from 17 localities in middle and south of Gaza Strip. An average of 54 of incoming waste vehicles are received to the landfill on the daily basis; their access is managed by the control room employee which proceed with the weighting of incoming waste and controlling the access of vehicles to the landfill. The waste is dumped at the disposal cell based on a specific filling sequence, flagman (observer) is directing the vehicles for unloading of waste regarding to the landfill manager instructions, whereas Bulldozer is leveling the received waste. At the end of any working day, the waste is covered by a thin layer of daily clay cover (20-30 cm of sub-soil).

External storm water is collected by a storm water ditch which is installed surrounding the landfill site, and it is directed by gravity to the storm water lagoon; The stormwater lagoon is lined by a geomembrane. The stormwater is sprayed against the dust in the dry days and pumped to the nearest landfill land to be used for irrigation of crops

Leachate, which resulted from the internal storm water and the waste liquid, are collected through the geo-composite network (AFTIX) and pumped to the leachate lagoon; the leachate lagoon is lined by a geomembrane. Leachate was planned to be treated biologically and physically and sent to the adjacent WWTP for additional treatment regularly.

1.3 Landfill Organization and Staffing

The landfill is totally managed by JSC-KRM, there are 13 fixed term employees working on different managerial and technical tasks to accomplish the daily operations of the landfill, according to the following table (1):

Table 1. Existing Al-Fukhary Landfill Staff

No.	Position/ Task	Number of Employees
1	Landfill Manger	1
2	Weighbridge Employee	2
3	Heavy Machinery Driver	4
4	Worker	2
5	flagman (observer)	2
6	Guard	2

The landfill manager is directly reporting to JSC-KRM executive manager and he is leading the other employees according to the bylaws of the JSC-KRM and the instructions of the operational plan.

2. OPERATION PROGRESS

2.1 Waste Quantities

During **July – December 2020**, the landfill received 92214.46 tons of Municipal Solid Waste (MSW); the average received waste is 501 ton/day or 15369 ton/month. Table (2) shows the monthly received quantities during the reporting period.

Table 2. Existing Al-Fukhary Landfill Quantities

Month	July	August	September	October	November	December	Total	Average Ton/month
Quantity (ton)	17372.44	15863.27	13524.18	15324.37	14879.1	15251.1	92214.46	15369.08

The control room and the weighbridge are located near the entrance and are to be manned at all times. The following data are obtained from all vehicles entering the site which carry waste:

- time and date
- vehicle registration details
- weight
- type of waste

The control room employee asks about the type of wastes entering the site initially, and the observer (flagman), who manage the filling of waste at the disposal cell, observes the type of waste as a second level of observation. The landfill was designed to receive only municipal

solid waste, as well JSC-KRM regulations state a list of waste which is not acceptable to be received at the landfill. The list of prohibited wastes is printed and installed in front of the landfill gate. Table (3) shows the list of prohibited waste.

Table 3. List of prohibited waste in Al-Fukhary (Sofa) Landfill

Joint Service Council (JSC-KRM) shall not be obliged to collect, transfer or dispose of hazardous solid wastes classified according to the Basel Convention of 1992 including:

- Untreated Health-Care Waste.
- Residues from industrial waste disposal operation which contains heavy metals, or residues from pharmaceutical facilities.
- Wastes from production, formulation and use of inks, paints, oils, dyes, varnish.
- Detergents.
- Waste terry residues arising from refining, distillation, and any pyrolytic treatment.
- All types of Batteries.
- Tires.

Photo 1. Reception of Waste at Al-Fukhary Landfill

2.2 Waste Compaction

Al-Fukhary (Sofa) Landfill receives an average 501 ton/day. The Filling sequence is followed as planned in the operational manual. The density of the first layer was 935 kg/m^3, and 1090 kg/m^3 in the second layer. Hence, Landfill equipment including Bulldozer (D8) were used in the second layer, but they were not used in the first layer in order not to damage the liner. Table (4) shows the volume of each layer and the received quantities as well the density. Waste compaction aims at expanding the life span of the landfill.

Table 4. Waste Density at Al-Fukhary Landfill

Layer	Duration (from – to)	Quantity (Kg)	Volume (m3)	Density (Kg/m3)
1st Layer	15/7/2019-19/3/2020	134783686	144135	935
2nd layer	19/3/2020- 17/9/2020	103939490	94540	1090
3rd Layer	Ongoing	-	-	-

2.3 Daily Coverage of Waste

The construction of Al-Fukhary Sanitary landfill resulted in excavation of 1,350,000 m3 of excavated material. Part of the excavated soil is stockpiled within the boundary of the landfill site to be used during operation of the landfill as daily cover. The waste is covered by a 20 - 30 cm layer of sub-soil at the end of each working day to prevent odors, pests, and for better atheistic conditions. The average daily volume used for the daily cover is 140-200 m3, so that the estimated clay volume used for the daily cover in the reporting period is 21029 m3.

2.4 Groundwater Monitoring

Four groundwater piezometers were installed during the construction period around Al-Fukhary sanitary landfill, the frequency of testing is 6 months. The quality of groundwater was tested chemically before operating the new landfill, and it was found that all samples are slightly basic and have a high concentration of Chloride (CL). The concentration of Nitrates (NO_3) is slightly high in one sample only. Other parameters were tested, and they were found they are under the limit of EQA regulatory standard of the drinking water. The high concentration of Total Dissolved Solids (TDS) is reasonable and expectable due to the high turbidity of all samples of the new piezometers and the high concentration of Chlorides. In 2018, a water sample was also collected from a near groundwater well owned by (Hassan Mohammed Al Amour) to be compared with the previous collected samples from Al-Fukhary site. The well is far about 800 m from the existing dumpsite. It was found results of both the site GW and the outside GW are close. Table (5) shows the groundwater quality during the reporting period.

Table 5. Groundwater quality results – Al Fukhary Sanitary Landfill (Sept. 2020)

Well Number	Depth	pH	EC	TDS	COD	BOD	CL	NO_3	NH_3-N
	m	-	µS/cm	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
EQA Regulatory Standards of drinking water	-	6.8-8.5	-	1500	NA	NA	600	70	0.5
Well (1)	30.15	7.39	13950	9000	80	<10	2950	42	0.2
Well (2)	28.3	7.52	9000	5900	20	<10	1640	46	NIL
Well (3)	29.4	7.29	19180	13200	120	18	4360	44	NIL
Well (4)	30	7.52	16000	10000	50	18	3660	56	NIL
Water well from surrounding lands (far about 800 m from the existing dump site) - 2018	-	7.052	14,080	9,855	150	<10	4,293	51	Nil

2.5 Stormwater and Leachate Management

Leachate is collected through the geo-composite layer (AFTIX) to the lower point by gravity, and it is pumped to the leachate lagoon which is lined and has a capacity 6,800 m^3. The leachate is pumped automatically. The leachate was planned to be treated biologically by aeration before sending to the adjacent WWTP for additional treatment, but this plan is not meeting the requirements of WWTP for the received wastewater.

In order to decrease the formation of leachate, the collection of external stormwaters was designed by constructing a ditch surrounding the landfill. The collected stormwater is collected by gravity to the stormwater lagoon which is lined and has a capacity 10,500 m^3. The collected stormwater is still not planned for any purposes, but it can be used for irrigation of green areas inside the landfill site, and evaporation of the remaining quantity.

Leachate quality was tested in September 2020 in two points (Sub location and from the leachate lagoon); results are shown in Table (6).

Table 6. Leachate Quality at Al-Fukhary site (September, 2020)

Parameter	Unit	Sample (Sub)	Sample (Lagoon)
BOD_5	mg/L	980	550
COD	mg/L	4600	3000
TSS	mg/L	1300	950
pH	-	8.08	8.46
NO_3	mg/L	3	0.5
T-N	%	2200	750
TDS	mg/L	22000	17000
CL	mg/L	5800	5500
SO_4	mg/L	175	170
NH_4	mg/L	1800	570
TOC	%	-	-
CN	-	ND	ND
As	mg/L	ND	ND
Fe	mg/L	3	3
Mn	mg/L	0.24	0.2
Ni	mg/L	0.64	0.58
Pb	mg/L	0.009	0.005
Cd	mg/L	0.08	0.08
Zn	mg/L	2.8	2.4
Cr	mg/L	0.28	0.23

During the reporting period, The quantity of leachate pumped to the leachate lagoon is 4852 m3 with a monthly average 808 m3/month. Table (7) shows the monthly pumped volumes of leachate. Hence, during the reporting period, only 3 Rainy days were reported.

Table 7. Leachate Volumes at Al-Fukhary site

Month	July	August	September	October	November	December	Total	Average M3/month
Volume (m3)	2701	1282	0	803	0	66	4852	808

2.6 Dust Control

Dust is noticed at dry days due to the passage of waste trucks, inside the cell or besides the soil stockpiling place only, since the other paths and roads inside the landfill are paved. The dust is managed basically by water spraying by a jitter- vacuum or washing vehicle they were used for 87 days during the report period . Although there are no complaints received from neighbors, but the dust is controlled once it is noticed in dry days. The used water is taken from the stormwater lagoon.

2.7 Pest Management

A pest management plan has been prepared for Al-Fukhary Landfill during operation. The plan categories the source of pesticides and level of required measure as shown in Figure (2).

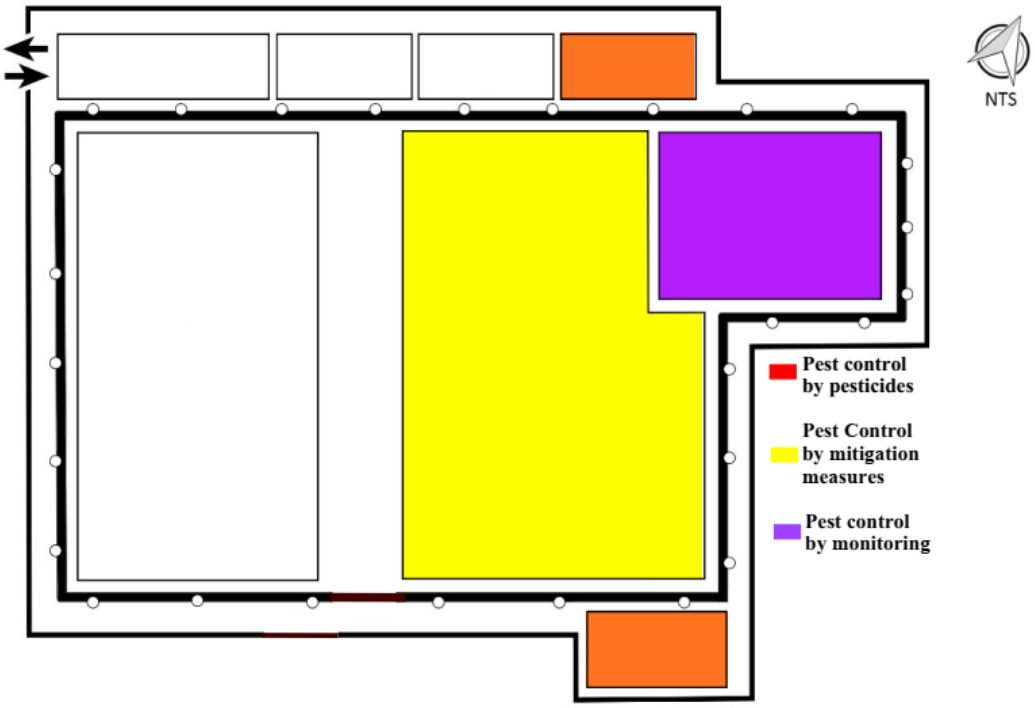

Figure 2: Levels of pest management at Al-Fukhary (Sofa) Sanitary landfill

During the reporting period, a quantity of 26 liter of BTI was used for pest management The frequency of using the pesticides is 4 times per month , and It was stoped in the beginning of October cause winter arrives .

Photo 2. Pest management of leachate lagoon

2.8 Health and Safety of Workers

The health and safety of workers is the top priority at Al-Fukhary site. Workers were provided by training related to precaution measures regarding to COVID-19, as well they were provided by daily safety instructions. Workers at al-Fukhary landfill was provided with a full PPE (Vest, Safety Shoes, Masks, hats, gloves). No injuries were reported during the reporting time, knowing that Insurance on workers and landfill equipment was issued.

Photo 2. Training of COVID-19

First Aid Boxes are also provided in the maintenance warehouse and the admin building for any potential accidents. Furthermore, fire extinguishers are provided in the maintenance warehouse; it is used for only fires at the workshop or the admin building.

2.9 Grievance Redress Mechanism at The Site

The landfill is one of the facilities, which are included inside the comprehensive GRM system in JSC-KRM, and this system is known for all the community around the landfill and the drivers and workers who could pass to the landfill. The available GRM tools which are active to receive complaints from the landfill are:

1- Complaint box: there is a complaint box installed on the control room wall, in front of the main path for all the vehicles, and all the community and workers could reach it easily.
2- Phone Number: the direct mobile number for the landfill manager is registered on the adhesive brochures, which were distributed on all the SW collection vehicles (39 Municipal vehicle +11 UNRWA vehicle and 15 JSC-KRM vehicles), and they can contact him directly in anytime.
3- E-complaint application: this tool is available for all people, and it is uploaded on the official website of JSC-KRM (www.jsc-krm.ps) and its link is published through all the printings and during the community meetings.
4- Facebook Page: JSC-KRM has an active F.B. page and all the local community around the landfill used to follow it and send their complaints through the inbox to the JSC-KRM manager.

Immediately after receiving any complaint from any of the above tool, the person in charge register it in the database file then refer the complaint to the related department in the JSC-KRM or if it is related to the municipality service, it refers to the related municipality to take an action.

As soon as the operational phase in the landfill started, the complaints categories in the GRM system has been updated to include the potential complaints, which may receive from this facility as shown in photo (4).

Figure 3. The potential complaints related to the landfill as shown in the E-GRM

During the reporting period, there were two of complaints about the landfill operation.

2.10 Stakeholder Engagement and Communication Activities

Table (8) shows the list of groups/institutions who visited the landfill site during the reporting period. Hence, for any site visit, visitors are invited to the hall for a presentation then they have a tour at the landfill site. Hence, since September 2020, no site visits were received due to the COVID-19 procedures.

Table 8. Summary of Site visits during the reporting period (July – December 2020)

Date of Site visit	Institution	No. of Males	Number of Females
14/7/2020	environmental club of the Abasan Al-Kabira town	8	8
20/7/2020	Culture and free though association CFTA), Al Nowwar Center	0	20
25/7/2020	Association of engineers, rafah branch	40	0
23/8/2020	Members of the General Assembly	17	0

Photo 3 Members of the General Assembly

Photo 3 Association of engineers, rafah branch

Also Utilizing JSC website and the social media page (Facebook and YouTube), as a platform for publishing awareness content, which included:

- A total of 31 awareness image posts were shared from the relevant pages.
- A total of 28 awareness video posts were shared from the relevant pages.
- A total of 6 awareness image posts were prepared by JSC.
- A total of 2 awareness video posts were prepared by JSC.

2.11 Flora and Fauna

The landfill site is secured by a fence (height 2.2 m), and has only one gate for accessibility, yet number of stray dogs were noticed within the landfill perimeter site from the early days. Their number was not exceeding 10 dogs in the beginning, but they increased to be more than 20 dogs at one point. The stray dogs were harmless at the early stage, until two incidents occurred at the landfill site in April 2020; when workers reported aggressive behavior by some stray dogs.

Stray Dogs at Al-Fukhary (Sofa) Landfill site

Solution Development:

MDLF and JSC-KRM start looking at solving the problem of stray dogs since April 2020, and with the reported aggressive behaviors of some animals the JSC sought the advice of the Mufti (authorized Islamic jurisprudence expert) of Khan Younis Governorate, who permitted the possibility of putting the aggressive dogs to sleep given their aggressive behavior. On the other hand, World Bank Policies pressed to explore harmless solutions such as finding shelter for the dogs.

After research, an NGO named (Sulala) was found to be the only animal shelter in Gaza (dogs and cats only), and the NGO welcomed receiving the stray dogs in their place in Gaza City.

About SULALA:

- SULALA started their activities in 2006 for few months in a limited scale in a place located in Al-Zahraa town - Middle Area. Sulala resumed in 2016, and in January 2020, Municipality of Gaza made available a governmental land (Area 2,000 square meter) for the use of SULALA in order to commence and expand their activities, and to work jointly with the Municipality of Gaza to receive and care for the stray dogs, knowing that stray dogs constitute a problem across Gaza strip where large numbers wandered the city streets especially at night.
- SULALA built a shelter for dogs in the lot, and they already have more than 200 dogs in that shelter. SULALA relies on volunteers, who care for animal rights in their

work, where the volunteers provide care and food for the animals and collect donations for this cause.

- The person in-charge at SULALA has a good experience in caring for animals, and the initial communication revealed a clear personal commitment of Mr. Saeed Al-Err for helping animals; a cause he dedicated his time and effort to serve.

On August 4th, 2020, JSC-KRM landfill workers and guards collected 22 dogs and transferred them to the Shelter in Gaza City under the project's environmental officer supervision.

The Landfill guards were requested to prevent any of stray dogs to access to the landfill from the gate, knowing that the gate is the only possible place for accessibility of dogs, and also to report any new animals entering the site to repeat the exercise with respect to coordinating with the animal shelter.

ANNEX I: Environmental and Social Compliance Summary Sheet (July – Dec. 2020)

Environmental and Social Management Matrix for Al-Fukhary (Sofa) Landfill Site During Operation Phase

Potential Impact	Proposed Mitigation Measures	Summary of Progress
General Impacts	Standard Operation Procedures (SOPs) and operation manual should be followed	
Odor Impacts	Upgrade the rates of compaction and application of soil cover	
Deterioration of air quality by Dust/smoke	• Apply the daily cover to prevent any of waste self-burning at the site	
	• Reject any burnt waste to be received at the disposal cell to prevent the distribution of fires	
	• Ensure the waste filling schedule is followed as per the operation plan, as well the daily and final cover to be applied. The gas collection system will be installed at the landfill closure phase.	
	• All vehicles and heavy equipment working in the site should be maintained according to the maintenance schedule recommended by the manufacturer/supplier. Any vehicle that has high smoke emissions visibility detected should be promptly repaired.	
	• Water spraying especially in the dry days when dust is noticed.	•
	• Keep stable slopes of the stockpile	•
	• Distribute safety signs around the stockpile site	•

Potential Impact	Proposed Mitigation Measures	Summary of Progress
	• Install red tap around the stockpile area to secure the access to the risky area	•
Impacts on groundwater and soil	• The leachate pond should be regularly de-sludged and the removed sludge should be transferred back to the landfill.	•
	• The leachate collection pumping station and correspondent piping network should be adequately maintained to ensure smooth operation.	•
	• Regular testing of the groundwater quality at the downstream and upstream areas	•
	• Regular maintenance shall always be planned during the non-rainy period. Spare pumps shall be available at the site to be used in the event of accidental breakdown of the operating pumps.	•
	• Secure the site by fence and monitor the site by CCTV to prevent leachate stealing	•
Risks of receiving hazardous wastes	• Workers of the landfill should receive adequate training on the permitted and prohibited list of waste to be received/rejected at the landfill site based on the JSC-KRM bylaws.	•
	• Awareness of hazardous waste generators regarding the sorting at source in order to avoid a mixing of hazardous and non-hazardous waste.	•

Potential Impact	Proposed Mitigation Measures	Summary of Progress
	• The list of prohibited waste should be clearly shared with municipalities	•
Risks to occupational Safety, health and hygiene	• The Safety Plan of the operation of the landfill should be followed, as well the emergency response plan.	•
	• More specific training program shall be conducted to the workers about safe working methods and good hygiene practices. Updating the program in accordance to the workers performance is necessary.	•
	• Prevention of unauthorized admission to the landfill specially the waste pickers.	•
	• Vaccination of all workers against Tetanus	•
	• Smoking is not allowed at the landfill site	•
	• Follow the health and safety plans instruction during the operation.	•
	• All workers in the landfill should be provided with anti-puncture gloves, Safety shoes, overalls and masks.	•
	• Securing the deep areas by a fence to prevent the drowning in the storm water lagoon/ leachate lagoon.	•
	• All of injuries should be documented, as well a report should be written after any of accident	•
Pests Impacts	• Follow the pest management plan instruction during the operation.	•
	• Apply pesticides as needed through an application plan that would give preference to biological pesticides, then to	•

Potential Impact	Proposed Mitigation Measures	Summary of Progress
	other pesticides with negligible impact on humans and minimum impact on untargeted species and the environment	
Noise impacts	• Key noisy equipment (such as generators, trommels, conveyor belts … etc.) should be selected with minimum noise;	•
	• Optimize the use of machines and noisy equipment (i.e. switching off when idle);	•
	• In case the landfill manager received complaints from neighboring areas regarding noisy operations acoustic barriers should be placed between the noise source and the location of the complaining neighbor.	•
Visual impacts and aesthetics	• Provide adequate buffer area, such as trees, or fences, between the facility and potential receptors	•
	• apply the daily cover to conserve the aesthetics conditions"	•
	• Compaction of waste at the disposal cell to maximize the landfill lifespan and capacity	•
Impacts of the incoming and outgoing waste vehicles (Traffic)	• Drivers should not exceed the driving limit 20 km/hr inside the landfill site	•
	• Traffic barriers and signs should be installed to decrease the speed of driving	•
	• The unauthorized vehicles should be rejected to access to the landfill site	•
	• Washing the waste vehicles and the place of washing should be approved by the landfill manager	•

Potential Impact	Proposed Mitigation Measures	Summary of Progress
Fauna and Flora ex: distribution of dogs / birds at the landfill site	Communication with animal welfare societies to deal with them.	
Inconvenience to local community	• Grievance uptake Channels to be created in the site for any coming complaints during operation	•
	• Conduct periodic consultation sessions with the local community in Al-Fukhary to share information about the operational activities and the implementation of the mitigation measures, in addition to record their new concerns.	•
	• Develop and Implement a strong communication plan to share information with the community in the service area.	•
	• Use the multimedia and the social media to share photos and videos about the daily work to share it with the community.	•
	• Following up and managing the complaint system in JSC-KRM day by day.	•
	• Invite the stakeholders to visit the facility to strengthen the relationship with JSC-KRM and exchange the knowledge with the related parties.	•
	• Restrict the communication between workers and the surrounding local community.	•
Labor Rights	• Ensure that all the workers in JSC-KRM are covered by the insurance	•

Potential Impact	Proposed Mitigation Measures	Summary of Progress
	• Ensure that all the workers can get the allowance according to the Palestinian Labor Law.	•
	• Sexual exploitation and abuse and sexual harassment should be controlled	•
	• Review the code of conduct of the workers in the facility and update it when it needed according to the registered accidents, behaviors and concerns and ensure that all the workers are aware about it.	•
	• Provide all the required hygiene and cleaning materials for the workers and enforce them to use it specially before taking their meals inside the facility.	•
	• Provide all the required first aid tools and store it in suitable and easily accessible place.	•
	• Conduct periodic meetings with the workers to listen to their concerns and encourage them to use the complaint system.	•
	• Provide suitable rest place for all workers at the site, and assign a rest hour for all workers	•
	• Prevent any child under the legal age to work at the site. Age verification should be conducted when engaging project workers and it should be monitored to be not less than 18 years old.	•
Beneficiaries Communities parti	• Awareness raising and building local communities' knowledge about issues	•

Potential Impact	Proposed Mitigation Measures	Summary of Progress
	related SWM and the associated costs and the roles of local communities in sustaining the systems.	
	• Raising the profile of SWM including strengthening the recyclables market and encouraging community-based initiative in segregation at source	•
	• Municipalities and JSC to maintain the system of exempting/subsidizing poor families	•
Potential impact on the social and economic activities of the neighboring communities	• In order to mitigate this impact, adherence to the proper management practices in various sites should be strictly considered in order to minimize transferring any negative impacts – to the extent possible - from outside the borders of the landfill and TSs. Full adherence to the management practices will help in reducing the negative impacts on the surrounding social and economic activities.	•
	• Assist local communities in establishing community-based monitoring committees in order to follow up and report feedback on the management system and impacts on the communities to the PMU	•