

# PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC18002

<b>Project Name</b>	Cairo Municipal Solid Waste Management Project (P152961)
<b>Region</b>	MIDDLE EAST AND NORTH AFRICA
<b>Country</b>	Egypt, Arab Republic of
<b>Sector(s)</b>	Solid waste management (80%), Public administration- Water, sanitation and flood protection (20%)
<b>Theme(s)</b>	Other urban development (50%), Pollution management and environmental health (50%)
<b>Lending Instrument</b>	Investment Project Financing
<b>Project ID</b>	P152961
<b>Borrower(s)</b>	Government of Egypt, Ministry of International Cooperation
<b>Implementing Agency</b>	Cairo Governorate
<b>Environmental Category</b>	A-Full Assessment
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<b>Concept Review Decision</b>	

## I. Introduction and Context

### Country Context

1. Since early 2011, Egypt has been experiencing a series of political, economic, and social upheavals and transitions. Socially inclusive economic development, job creation, governance, and transparency have become priorities to the Egyptian society and the post-January 25th Revolution governments. The Government faces the immediate challenges of restoring macroeconomic balance, fiscal sustainability, and political stability. It also faces more fundamental structural challenges, including addressing subsidies, improving its social safety net and delivery of social services in an environment where the Egyptian population grows by roughly one million people every eight months.

2. Egypt's population is largely concentrated along the shores of the Nile, in the Delta region where the Nile enters into the Mediterranean, and along the Suez Canal. Poverty is a persistent problem

around the country, with poverty rates reaching 60% in the Delta region and Upper Egypt. Urban poverty is also present in several districts of Cairo Governorate.

3. The Bank's approach to supporting municipal solid waste management (MSWM) infrastructure in Egypt aims to help the country in leveraging its own public resources, attracting private sector engagement and building effective sector institutions to deliver services. This project is consistent with the draft Country Partnership Framework's (CPF) (FY2015-2019) key drivers of increasing shared prosperity and reducing extreme poverty through investing in infrastructure and sustainable development, with focus on, among others, solid waste management. In the MSWM sector, this would be achieved through institutional reform and capacity building of the key sector institutions, whether at the national or local levels. The Bank's support will be in an incremental and pragmatic manner considering the current country instability context, and anchored in a coherent medium to longer term program.

### **Sectoral and Institutional Context**

4. The solid waste sector requires attention and upgrades across virtually the entire country. In 2012 Egypt generated nearly 90 million tons of agricultural waste, construction and demolition debris, municipal solid waste, and other industrial and hazardous materials. Nearly 20 million tons of this material is municipal solid waste, generated by households and businesses around the country, with generation increasing at a rate of approximately 3.4% per year. The vast majority of Egypt's municipal solid waste stream consists of organic/food waste. (Waste Composition by type: Organic: 50-60%; Paper and Cardboard: 10-25%; Plastic: 3-12%; Glass: 1-5%; Metals: 1.5-7%; Textiles: 1.2-7%; Others: 11-30%)

5. Municipal Solid Waste (MSW) disposal facilities are substandard, with just 2% of the country's waste managed in state-of-the-art sanitary landfills. The balance is primarily managed at controlled and uncontrolled dumpsites, where environmental controls are minimal, and open burning of the waste is commonplace. The disposal situation stems from the absence of any definitive national guidance or rules on disposal facility operations. The rules under which most facilities operate are generally crafted as part of the environmental impact assessment and siting approval process specific to each facility.

6. Waste collection systems are also sub-par in the vast majority of the country. MSW collection systems capture less than 25% of the waste in rural areas and between 30-85% of the waste generated in urban areas. In Cairo, the collection rate is roughly 65%. The remaining material accumulates in and around residential and commercial areas and is often dumped into rivers and abandoned canals, attracting vectors, creating odors, and diminishing local quality of life.

7. Uncollected MSW and substandard disposal practices are estimated to result in adverse health impacts across Egypt equivalent to 1.5% of GDP. Inadequate waste management practices give rise to diminished air and water quality, unsightly conditions, and adverse impacts on tourism, trade, and the attractiveness of Egypt as a place to do business. The poor are more vulnerable to the burdens imposed by inadequate solid waste systems, given that uncollected waste appears to be a more prominent problem in poor neighborhoods. Many low income individuals increase their risk exposure as they engage in scavenging, seeking to recover and resell materials from the waste stream with economic value.

8. Organic material is the largest fraction of the waste stream, making up roughly 50 - 60% of

MSW around the country. Attempts to manage this waste through composting initiatives have largely been unsuccessful. There are 65 composting facilities around Egypt built by the government, but only a handful are still operational. Plastic, glass, metal, and paper/cardboard discards – all highly recyclable materials – make up another 15-50% of the waste stream, although recycling levels are just 4% nationally. Some of the diverted recyclable material is converted into new products in Egypt, but they also feeds into global material recycling markets, and depending on who is paying the best price, Egyptian discards may end up being reprocessed halfway around the globe.

9. Underfunding of the formal municipal solid waste system is a perennial problem. A 2010 Regional Solid Waste Exchange of Information and Expertise Network in Mashreq and Maghreb networks (SWEEP-Net) report concluded there is a 35% funding gap between the cost of operating the current municipal solid waste management system in Egypt and the revenues that are raised through user fees imposed on households and businesses. Given low household income levels in much of the country, fees are capped at 1-10 LE /month for households in urban areas and 1-4 LE/month for households in rural parts of Egypt. Shops and other commercial establishments are typically charged between 10-30 LE/month for collection services. To facilitate payment, the same law allowed municipalities to charge for solid waste collection via a surcharge on electricity bills, reasoning that households were more likely to pay their electric bill because service can be cut off for failure to pay. By contrast, in the case of waste services, illegal dumping of household waste is a means of avoiding tipping fees at landfills. The electric utility passes on collected revenues to the municipality for use by the local waste management agency or authority.

10. Efforts to increase service quality through the use of private collection firms have been met with mixed results over the past decade. Beginning 2002, private firms took over responsibility for MSW collection in all or portions of Cairo, Alexandria, and Giza Governorates. In some cases, difficulties arose immediately from conflicts with longstanding, informal waste collection arrangements and complaints that the service requirements were greater than that called for under the bid document contracts. Slow payments by the Governorate were also reportedly a contributing factor to one firms' decision to abandon its contract to provide waste collection services in Alexandria.

11. The informal sector plays a significant role in Egypt's collection and recycling sector. As a result of the poor service by the formal waste collection and street cleaning programs, many households and businesses make informal waste collection arrangements to ensure reliable collection service directly from their front door. These informal systems are most common in places where municipal collection services are poorly managed or the logistics of transporting household waste down the stairs or block to a designated disposal point is too onerous or inconvenient. The 96,000-person strong Zaballeen community is well known for its role providing much of the informal waste collection services in place around Egypt with major concentration in Cairo and Giza Governorates. One recent UNESCO study estimated that the Zaballeen collectively manage 10% of the country's waste. Many Zaballeen also run commodity-focused recycling businesses, targeting specific materials (e.g. certain types of plastic, metal, textiles, etc.) which are then bundled and sold off to others in bulk or reprocessed on site to convert them into higher value material. In many cases, these processing sites employ sophisticated processing equipment, but health and safety concerns appear to be of secondary concern, putting workers and other community members in the vicinity of these businesses at risk. Zaballeen are largely perceived by local communities as effective service providers who offer waste door-to-door collection service in Cairo and Giza Metropolitan areas.

12. Other informal waste related activities have also been growing during recent years. These informal activities include the segregation and recovery of valuable recyclable materials from any uncontrolled waste spots by scavengers/waste pickers. These spots could be street containers, collection points on streets, transfer stations or uncontrolled disposal sites. The reasons for the growth of these informal activities are the poverty conditions in the country and the increasing value of recyclable materials, combined with a lack of control and inefficient management of waste. There are no formal accurate figures on the total number of scavengers/waste pickers.

#### The Case of Municipal Solid Waste Management in Cairo Governorate

13. In terms of population, Cairo Governorate is the largest Governorate in Egypt, and one of the largest and most congested cities in the world. With a population of about 9 million people, at the heart of Greater Cairo Metropolitan Area of more than 17.8 million, Cairo Governorate faces significant solid waste management challenges, many of which are exacerbated by its dense development patterns and narrow streets.

14. Collection is by far the greatest solid waste problem facing Cairo, with just 65% of the 15,000 tons per day (tpd) of MSW generated locally ultimately picked up for processing and disposal/treatment. The volume of uncollected trash in some neighborhoods is sufficiently large that the Cairo Governorate is considering different emergency steps to remove this material, although it is unclear where the resources would come from to pay for this cleanup.

15. Daily waste collection strategies vary across the Governorate, thanks to a system that divides Cairo into four service territories, each of which has different collection arrangements overseen by the Cairo Cleaning and Beautification Authority (CCBA). In the Northern, Eastern, and Western zones of the Governorate, collection has been contracted out to private firms since 2002. CCBA directly delivers solid waste management services in the southern part of Cairo, splitting this responsibility with a private firm.

16. In the Northern and Western zones, the waste contractor is AMA Arab Environment Company (a partnership between an Italian and an Arab firm). AMA in turn subcontracts the bulk of the collection work to the Zaballeen. AMA Arab focuses on street cleaning, container collection, and transport to the designated disposal facility. In the Eastern zone, the Spanish firm Enser won the contract in 2002, but by 2006 they had shut their operation for financial reasons. The contract has since been taken over by the Spanish firm Fomento de Construcciones y Contratos SA (FCC), through a subsidiary known as Egyptian Environmental Services (EES). In the Southern section of the city, a public company named Al Fostat was formed by the CCBA and given responsibility for collecting household waste. But this company was dismantled in 2011. The Southern area of Cairo is divided to two main subsections, namely the first subsection including the districts of El Saieda Zainab, Mesr El Qadima, El Khalifa, El Mokattam, Dar El Salam and El Basatin and the second sub-section including the districts of El Maadi, Torah, El Masarah, Helwan, and El Tebin. The households' waste collection in the first subsection is largely managed through 74 contractors/middlemen/mota'ahedeen\* who are contracted by CCBA. CCBA maintains the responsibility of street sweeping, removing waste accumulations, emptying waste containers and transferring waste to the final disposal site. For the second subsection, two main large companies are involved in the service delivery, namely Europe 2000 in Maadi and Torah and Nahdet Masr in El Masarah – Helwan. The districts of El–Tebin is served by 2 contractors/middlemen/mota'ahedeen. Each

collection system is slightly different, but households in much of the city are now obliged to carry their waste and recyclables to centralized collection containers located every few blocks around their neighborhood. In others, Zaballeen or other small firms are sub-contracted to provide collection-at-the-door service. \**“Mota’ahedeen”* are small groups with compatible legal position that allows them to enter formal waste business. These groups used to be largely of informal waste collectors (Zaballeen).

17. Current collection contracts expire in 2017, and it is important that steps be taken now to establish new bidding procedures for the new contracts that will result in both cost efficiencies and increased service coverage. This work necessarily forms a portion of the work program proposed below. One strategy that may prove helpful is to unbundle these very large collection contracts to include some with smaller service territories, thereby enabling more direct participation by SMEs.

18. Informal diversion of recyclable commodities remains an important part of Cairo’s waste picture. Street scavengers sift through both public and private waste containers, stripping them of virtually any saleable commodity. In many parts of Cairo, the Zaballeen also maintain many of their long-standing door-service collection arrangements that predate the 2002 start date of these 15-year private sector collection contracts. Material collected on these routes is brought to the Zaballeen’s sorting and processing facilities in Manshiyet Nasr and five other locations around the Cairo Governorate, where it is cleaned and baled or reprocessed before it is sold off into domestic and international commodity markets. Until 2009, the Zaballeen were also focused on the diversion of food waste from households, using the material to feed 200-300,000 pigs maintained by the Zaballeen for their own consumption and for domestic sales. During the Swine Flu epidemic of 2009, however, the Egyptian government ordered the culling of the entire herd as a safety measure. This measure altered the way the Zaballeen worked and the absence of pigs from households resulted in loss of interest in organic waste. As a result, and instead of carrying all collected waste to their homes, the Zaballeen now tend to perform preliminary segregation of the waste near the source leaving the organic waste in street containers. This change in the dynamics of the collection and transfer process resulted in a significant reduction in income for the Zaballeen community. It also forced Cairo Governorate to explore other options for handling the disposal of food waste, which makes up roughly 50% of Cairo’s waste stream.

19. Waste generated in Cairo is disposed of at three different locations. Two are controlled dumpsites serving the western (2,000 tpd) and southern (5,500 tpd) districts of the Governorate. The Cairo Governorate would like to shut down both of these facilities by 2017 due to their substandard nature. These facilities would be replaced by a 7,500 tpd sanitary landfill and composting/Refuse-derived fuel (RDF)/recycling sorting and processing facility on a 714 feddan (300 ha) site in Belbis region. A third facility, known as the 15th of May site and operated by the Egyptian Company for Solid Waste Recycling (ECARU) serves districts in the southern portion of the Governorate, accepting material from the private companies, contractors, and trucks operated by the CCBA. Roughly 175 vehicles tip at that facility each day, averaging 6-7 tons/truck.

20. The 15th of May facility currently has a 2,000 tpd capacity at its landfill, and 1,600 tpd at its on-site composting facility. With a natural Bentonite clay liner at the bottom of the landfill, a leachate collection system, and a gas recovery system, some characterize it as a sanitary landfill, although the lack of a separate impermeable plastic liner on the base of the landfill causes others to say it does not qualify for this designation. Despite its rated tonnage capacity, the facility reportedly only receives 1,500 tpd, 60% of which is organic material. The 40% of the material that is not

composted either ends up in the adjacent landfill or is solid off to nearby cement kilns as RDF. The RDF material, which consists primarily of plastic, paper, and wood, has a 7,000 kcal/kilo value making it a good fuel material for use in these kilns. ECARU receives 150-250 LE/ton for RDF material that it delivers to local cement kilns. The organic material that is composted is stored in windrows and periodically turned by a large composting turner. The moisture content and temperature of the material is closely monitored to optimize the natural decomposition of the waste. Compost is typically produced within 45-90 days, and undergoes multiple screenings to try to eliminate inert materials (glass, stone, etc.) and plastic film. The produced compost is sold in local markets as a soil enhancer. Given its highly integrated approach to waste process – finding the highest value use for material entering the facility – the 15th of May facility represents a potential template for the new facility planned for Belbis.

21. The CCBA pays ECARU 30 LE/ton of waste processed at the 15th of May site. Under the terms of an earlier contract, ECARU was guaranteed payment for 1,600 tpd, regardless of whether the material was actually delivered to the facility. Today payment is based on actual scale data, which is sent to the CCBA on a monthly basis.

#### The Solid Waste Institutional and Policy Environment

22. Municipal solid waste policy environment in Egypt is muddled, with responsibilities over different aspects of the issue falling to different ministries, Governorates, and agencies. The Egyptian Ministry of State for Environment Affairs (MSEA) establishes the overall direction of national waste policy, including tariff policies, the role of the private sector, disposal facility operation design and guidance, and regulatory enforcement, which is handled through its Egyptian Environmental Affairs Agency (EEAA) subunit. EEAA engages most directly with municipal government through its role in the environmental impact assessments that must be prepared for all disposal and transfer facilities. The Ministry of Local Development (MoLD) is responsible for policy development related specifically to municipal solid waste, and works directly with Governorates responsible for implementation of these policies on the ground. MoLD also sees itself playing a technical assistance role to improve service quality in Governorates around the country. The Ministry for Urban Renewal and Informal Settlements (MURIS) has responsibility for issues associated with the informal waste sector, skill development of local waste pickers, and efforts to help better integrate them into the formal waste system.

23. Governorates/Municipalities have limited capacity to deliver a solid waste management service satisfactory to its citizens. This is despite Egypt's decentralization strategy which mandates Governorates with: a) responsibility for solid waste management service delivery, either directly or through the contracting of services to private firms; b) the development of local or regional solid waste management plans; and c) the siting of solid waste management facilities, monitoring of operational quality, and public awareness. Few Governorates have a dedicated department responsible for solid waste management planning and delivery, and the organizational setup will vary across the country. In some Governorates, including Cairo and Giza, formal Cleaning and Beautification Authorities were established by Presidential decree as far back as 1985 to serve as the focal point for street cleanliness and other local solid waste collection and disposal issues.

24. The most comprehensive strategy document focused on solid waste management was released back in 2000, prioritizing the delegation of solid waste management services to the private sector, the application of the polluter pays principle, enhanced community awareness and participation in waste management systems, and efforts to attach economic value to waste to

enhance the level of waste recovery and diversion. Implementation of that strategy was admittedly weak, however, and over the past three years, a new National Solid Waste Management Plan (NSWMP) including strategic direction and a vision has been prepared with support from the German Development Bank (KfW), and it is currently under consideration by the Cabinet.

25. The NSWMP is designed to drive forward development of the waste management sector across Egypt, through a comprehensive set of measures ranging from institutional reform and development of policy and legislation, to investment programming and implementation, professional capacity development, improving services and facilities, and civil society participation. It has several key goals, including improving SWM infrastructure and overall service quality in selected Egyptian Governorates; building the capacity of the institutional partners at multiple levels; formulating national SWM policy; and establishing procedures for integrating relevant players from civil society and the private sector.

26. The NSWMP is by design an ‘open programme’ with an overall intention to act as a catalyst for development of the sector. Many of the activities to be implemented under this program will facilitate access to the sector for other international and national organizations, businesses and financiers.

27. The proposed project to be financed by IBRD will support implementing elements of this Plan especially at the decentralized level starting with Cairo Governorate. This is consistent with the World Development Report 2011: Conflict, Security and Development, which cautions not to let perfection be the enemy of progress—embrace pragmatic, best-fit options to address immediate challenges. The project adopts a programmatic municipal solid waste management approach that would be carried out over a 10 – 15 year time frame in Egypt, starting with Cairo Governorate.

28. Key among the goals articulated by the new draft policy are finding a role for the informal sector in the waste management systems; improving the quality of local waste collection efforts and waste disposal facilities; implement new economic instruments to promote waste prevention and ensure higher rates of cost recovery; and take steps to ensure the private sector maintains its rightful place in service provision.

29. There is strong demand for a modern and efficient Integrated SWM system in Egypt. Elements for integration currently exist but are not fully organized on a national scale or the local government scale. The current status shows a growing demand for purchasing recycled waste products such as those from recycled plastics, cardboards and papers, compost generated from recycling organic wastes, and energy produced from recycled plastic materials. Introduction of system upgrades and efficiencies would enable even greater reduction of the residual solid waste requiring final disposal; create employment, and generate revenues for many of the participants in the waste value chain. Through the proposed project, the Bank can support the Government of Egypt in formulating and piloting an integrated solid waste management scheme that could become a model/prototype for the government’s replication.

### **Relationship to CAS**

30. The proposed project is fully consistent with the three pillars of the World Bank’s Interim Strategy Note (ISN) of June 2012 i.e. economic management, jobs, and inclusion. The objectives of measures to be carried out under the three proposed pillars of the ISN are: (i) improving economic management through control of the fiscal deficit and initiating reforms to enhance transparency in

Government operations; (ii) job creation, through direct emergency lending and initiating steps to improve the environment for private sector-led growth and job creation; and (iii) fostering inclusion, which involves ensuring broader access by disadvantaged segments of the population - women, youth, the poor, and lagging geographical regions in local services infrastructure and social services, within Cairo Governorate. The project will also enhance citizen and community participation in the design, implementation, and monitoring of Government operations.

31. The proposed project can be linked to the first pillar through supporting the Cairo Governorate's structuring of service contracts with the private sector through a transparent and inclusive process, and establishing an effective monitoring and verification system. It can also be linked to the second pillar of job creation through supporting service contracts for labor-intensive waste collection and sorting schemes. Lastly, this project is expected to improve the service delivery of waste collection especially in poor and under-served communities and neighborhoods within the Governorate.

32. This project is not gender specific, since improving waste collection and disposal will yield benefits to both males and females in Cairo. However, SWM, in general, entails a gender dimension in terms of domestic labor distribution for waste collection and disposal. Women are key players in the decisions related to how waste is being managed on the household level, and sometimes in decisions on the methods of waste intermediary disposal. Women and girls are also key players on the level of the informal waste management activities, particularly those performed by the informal waste collectors (Zaballeen) communities. The Social Impact Assessment (SIA) that will be prepared as part of project preparation will examine these aspects in detail. The SIA will specifically assess the current role of women in the process, potential project impact on women, and opportunities for their engagements. For example, Call Centers for public outreach under the project could give priority employment to women. The design of awareness campaigns would also include specific messages to women on improving domestic behaviors related to waste generation, packaging (and sorting if applicable) and disposal.

33. The project directly addresses the development of the private sector, and there are areas for cooperation with IFC as part of the joint Bank-IFC commitment in the CAS and to the Government of Egypt. One strong area of potential IFC support is to assist in development of small and medium sized industries (SMEs) for collection services and recycling, which are areas of new asset creation. SME development is a high employment generator that is a key CAS and project objective. One of the lessons learned in project identification is that the informal sector would benefit from IFC assistance in basic business advisory services (e.g. proper accounting procedures, obtaining licenses, competing for contracts, helping to manage generational transitions within family-owned businesses, etc.). Also IFC could assist with assessing the overall employment generation by conducting market analyses of the waste and recycling sector in the Egypt/MENA region, identifying current market structures nationally and internationally, niche business opportunities, demand from overseas markets for bulk semi-treated recycled materials (etc.). IFC could and should clarify if grant funding is available to support this intervention above and their experience in co-financing with other donors in Egypt.

34. At this PCN stage, it is clear the government will use the private sector for the large integrated waste management facilities, through a publically financed mechanism under a Design-Build Operate (DBO) process as described below. The DBO procurement process to be followed would be World Bank procedures, which are less familiar to IFC. Also as there are many qualified



firms available to provide feasibility and transaction services to the government, it is planned that an open international procurement process will be used to select an appropriate firm. IFC value added services would be most useful for the development of SME solid waste sector.

## II. Proposed Development Objective(s)

### Proposed Development Objective(s) (From PCN)

The proposed Project Development Objective (PDO) is to support the improvement of Municipal Solid Waste Management in the targeted areas in Cairo Governorate.

### Key Results (From PCN)

38. The Key Performance Indicators (KPIs) supporting the achievement of the PDO would include: (i) The percentage of waste generated from Cairo Governorate that is disposed of in an environmentally and sanitary sound manner; (ii) Amount of municipal solid waste recovered for recycling purposes each year as a result of the project; (iii) Hectares of contaminated land managed or dump sites closed under the project ; (iv) Percentage increase in cost recovery achieved for Cairo's solid waste program budget; and (v) the number of people in Cairo Governorate with access to regular solid waste collection services.

## III. Preliminary Description

### Concept Description

39. The Project will support a combination of: (i) strategic infrastructure investments in MSWM (i.e. collection, transport, intermediate processing, and sanitary disposal), (ii) institutional strengthening and capacity building that should greatly enhance Cairo's oversight of solid waste issues in the years to come, as well as (iii) skills and technology development. The total cost of the project is estimated to be US\$150 million to be financed through an IBRD loan to Cairo Governorate. The loan would be guaranteed by the Ministry of Finance (MoF). The Project components and their subcomponents are as follows:

Component 1: Upgrading of Solid Waste Management Facilities around Cairo Governorate. This component will support improvements to solid waste management transfer and sanitary disposal systems capacity and efficiency through financing of the following short-term and long-term investments, including: (i) rehabilitation and sanitary closure, or, conversion of selected dumpsites into strategically equipped waste transfer stations; (ii) planning, construction and operation of a new sanitary landfill and supplying of solid waste management equipment (for collection and for the new MSWM facilities); (iii) pavement of access roads to the new landfill and transfer stations; (iv) composting facility upgrades and the targeting of organic waste from vegetable markets; and (v) the preparation of a feasibility study for an eco-park designed to facilitate higher rates of, and safer, recyclable materials recovery and processing.

The proposed approach assumes that many of the current collection challenges are linked to the inadequacy of current transfer station locations, which drive up costs by forcing haulers to spend extra time traversing local traffic to tip loads rather than collecting waste. This approach also seeks to consolidate waste processing and disposal services at larger facilities where quality control can be closely monitored. With the proper facility design and use of modern sorting and turning equipment, higher rates of organic waste recovery will occur, delivering significant material diversion and environmental quality benefits. New waste collection vehicles will also be procured under this project for use by the new collection contractors, a provision identical to the current

contract.

**Component 2: Capacity Building and Public Awareness:** This component will support the streamlining and enhancement of the institutional, monitoring, and financial management capacities of the municipal solid waste management enabling and oversight agencies within the Egyptian government and Cairo Governorate. To enable improvements in Cairo's waste policy and delivery infrastructure, the following technical assistance activities are envisaged: (i) comprehensive analysis of current national and local institutional environment for solid waste management services; (ii) public management systems reform, including review of existing system costs and tariff structure; development of new tariff structuring guidelines; implementation of new tariff systems in Cairo Governorate and development of a financial Management Information System to support enhanced cost recovery levels; (iii) introduction of Management Information Systems (MIS) to support rationalization of service delivery and provision of timely information to support real-time decision making. This could include developing and implementing a Geographic Information System (GIS) - based fleet monitoring and logging systems on a pilot basis; developing a pilot waste collection management plan, development of performance-based tariff collection procedures; review of the existing private sector service delivery contracts; (iv) technical and design studies and standards development for landfill operation, transfer operations, composting and other processing facilities.

This component will also support (iv) the development and implementation of public awareness activities and Grievance Redress Mechanism (GRM) to enhance citizen engagement, based on the concept of co-responsibility among citizens, operators, and government entities. In particular, community-based monitoring tools (scorecards, web or ICT based reporting mechanisms (such as the use of text messaging and social media platforms such as Facebook) could be used as means to assess and provide feedback on the quality of local solid waste management services in Cairo. A functioning project GRM would ensure that clarifications about the project are responded to, problems with implementation are resolved, and complaints and grievances are addressed efficiently and effectively.

**Component 3: Project Management, Monitoring and Evaluation (M&E):** This component will finance arrangements required to support the successful management, monitoring, and evaluation of all Project activities, including: (i) the establishment of a Project Technical Operations Unit (TOU) at the Cairo Governorate that would rely primarily on key staff of the SWM departments; (ii) consultants to support the core functions of the TOU and help build staff capacity through on-the-job-training related to coordination and facilitation, fiduciary (procurement and financial management), environmental and social safeguards supervision, monitoring and evaluation (M&E); (iii) Project-related incremental operating costs for the TOU, and (iv) other independent consultancies, including citizen satisfaction surveys, implementation of the Project Environmental and Social Impact Assessment (ESIA), RAP/Abbreviated RAP, and Beneficiary Assessments.

#### 40. Expected Environmental and Social Safeguards issues:

- **Preliminary Stakeholder Consultations and Key Issues:** meetings and preliminary consultations with a range of governmental and non-governmental stakeholders, including representatives of the informal sector from the Zaballeen community and related NGOs in Manshiyet Nasr underscored the wealth of knowledge stakeholders have about solid waste management challenges and opportunities in Cairo. A key area that was emphasized is the need to adequately accommodate local communities' expectations and optimize waste utilization. The lack

of efficiency of the current collection system is one key challenge resulting in a high level of dissatisfaction among the local community. Similarly, a lack of clear regulation on waste transfer from street containers is resulting in waste piles on the street posing health hazards, poor aesthetics and traffic disruption across Cairo. Stakeholders also emphasized a need for building on the lessons learnt from the previous experience, particularly in the area of engaging the informal sector groups of waste collectors.

- At present, there are no institutionalized mechanisms for service recipients/residents to share their concerns about local solid waste issues in Cairo. Discussions with various stakeholders supported the view that strengthening channels of communication between citizens and the state about service delivery was important. This includes the need for effective communication campaigns dealing with subject matters related to household and community levels of waste management and disposal; issues related to public littering; and awareness-raising on macro level environmental and health consequences linked to effective solid waste management.

- Environmental and Social Impact Assessment: Preparation of an environmental and social impact assessment (ESIA) covered by the Bank's Operational Policy 4.01 covering Environmental Assessment is required for this project. The ESIA will analyze potential environmental and social impacts under the project and will propose mitigation measures to manage adverse impacts that may arise. It will also propose measures to augment positive environmental and social effects under the project. A Social Impact Assessment (SIA) will also be prepared in order to ensure setting a comprehensive approach for managing social issues related to the project. Through the SIA, a dialogue will be established with the Government for designing sustainable approaches to address the social aspects including an integrated manner for dealing with the Project Affected Persons (PAPs). The SIA results will be integrated in the ESIA report. The need to ensure that a qualified and reputable consulting firm is employed to prepare the ESIA and SIA was underscored to the Government counterparts. The ESIA process will therefore include thorough consultations (conducted in local languages) with all concerned stakeholders in the Cairo Governorate to elicit their views and inputs on the potential impacts of the project, and any proposed mitigation measures. The ESIA will need to be disclosed locally and on the Bank InfoShop before Project Appraisal. In the meantime, the Bank shared with H.E. Cairo Governor and his team sample consultant Terms of Reference (ToR) for the ESIA and SIA.

- Involuntary Land Acquisition and Resettlement Policy: The World Bank's Operational Policy 4.12 covers potential adverse impacts related to land acquisition and the need to relocate households and communities due to project effects. For the proposed SWM project, an early assessment is that the potential groups that might be affected includes owners or users of land (potentially including waste pickers) that are needed for the project on a temporary or permanent basis during the course of constructing or expanding/rehabilitating landfills, transfer stations, and setting access roads to any of these facilities. Under adverse social and economic impacts, the livelihoods of waste pickers utilizing existing dumpsites (if any), which may be adversely affected by the dumpsite closure financed by the project. In the meantime, according to Cairo Governorate and CCBA, the land that has been identified for sanitary waste management facilities near Belbis is in a publicly-owned area in the desert. The possibility of triggering OP 4.12 will be carefully examined through the SIA and decisions on preparing RAP/ARAP will be confirmed. The scope of the RAP/ARAP should cover direct social and economic impacts on owners or users for the land needed to establish the disposal facilities and the associated access roads. In case the rehabilitation

or closure of existing disposal sites and/or transfer station results in preventing certain groups from obtaining their livelihoods, RAP/ARAP should be also prepared for these groups.

#### IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04			x
Forests OP/BP 4.36		x	
Pest Management OP 4.09		x	
Physical Cultural Resources OP/BP 4.11			x
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12			x
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

#### V. Financing (in USD Million)

Total Project Cost:	150.00	Total Bank Financing:	150.00
Financing Gap:	0.00		
<b>Financing Source</b>			<b>Amount</b>
Borrower			0.00
International Bank for Reconstruction and Development			150.00
Total			150.00

#### VI. Contact point

##### World Bank

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##### Borrower/Client/Recipient

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##### Implementing Agencies

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**VII. For more information contact:**

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