

**INTEGRATED SAFEGUARDS DATASHEET  
APPRAISAL STAGE**

**I. Basic Information**

Date prepared/updated: 06/20/2007

Report No.: AC2252

**1. Basic Project Data**

Country: Tunisia	Project ID: P095012	
Project Name: Tunisia: Sustainable Municipal Solid Waste Management Project		
Task Team Leader: Dahlia Lotayef		
Estimated Appraisal Date: November 15, 2006	Estimated Board Date: March 13, 2007	
Managing Unit: MNSSD	Lending Instrument: Specific Investment Loan	
Sector: Solid waste management (78%);Central government administration (17%);Sub-national government administration (4%);Other social services (1%)		
Theme: Pollution management and environmental health (P);Other urban development (P);Climate change (S);Environmental policies and institutions (S);Other human development (S)		
IBRD Amount (US\$m.):	22.00	
IDA Amount (US\$m.):	0.00	
GEF Amount (US\$m.):	0.00	
PCF Amount (US\$m.):	0.00	
Other financing amounts by source:		
Borrower		5.40
		5.40
Environmental Category: B - Partial Assessment		
Simplified Processing	Simple <input type="checkbox"/>	Repeater <input type="checkbox"/>
Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**2. Project Objectives**

The development objective of the project is to support the Government of Tunisia in strengthening the key elements of sustainability of municipal solid waste management. This will be achieved through the operationalization of a planning and implementation system of solid waste management at the national and local levels and the rehabilitation of a number of environmentally damaging dumpsites. These actions will allow the Tunisian Government to gain access to the emerging global market of carbon finance under the Clean Development Mechanism (CDM) of the Kyoto Protocol.

More specifically, the project aims at:

- (i) strengthening the institutional and financial frameworks for solid waste management;
- (ii) implementing a pilot activity on inter-communality collaboration between municipalities;
- (iii) developing adequate optimization and cost recovery mechanisms;
- (iv)

closing and rehabilitating seven dumpsites (v) buying verified emission reductions (VERs) generated from ten controlled landfills.

### **3. Project Description**

The project consists of 2 main components:

I- Component 1 : Institutional Support and Capacity Building Component (US\$ 2.00 millions)

The main objective of this component is to provide the necessary technical support and capacity building activities to the national and municipal organizations involved in the project and concerned with development, planning, implementation and evaluation of the policies and programs / projects in the area of municipal solid waste management. This component will include the development of regional waste management master plans in eight governorates, the implementation at a pilot scale of an inter-communality project and the development of progressive introductory measures for costs optimization and recovery. Technical assistance will be provided under this component to the national agency for environmental protection (ANPE) as stipulated in the context of the equivalence and acceptability report on the use of country system for environmental assessment in the field of municipal solid waste.

This institutional support component will be executed through 4 sub-components:

Sub-component 1.1: Institutional support and capacity building of ANGED (US\$ 0.66 millions)

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The project will support the newly established national agency for solid waste management (ANGED), to fulfill its functions and to carry out its responsibilities as defined in its establishment Decree No. 2005-2317 of August 22, 2005. The project will more specifically support the finalization of the organizational structure of the agency; the preparation of operational manuals; identification and planning for capacity building activities; support the creation of the new units within ANGED: Planning & International Cooperation Unit and Support to the Municipalities; initiate the development of appropriate systems for procurement of integrated municipal solid waste management services including collection, transport and final disposal; proposing cost optimization and financial monitoring systems; preparing a techno-economic study on the optimization of the use of Djebel Chekir site; and the initiation of a computerized management system for the monitoring and control of emission reductions and CDM activities of the Project.

Sub component 1.2: Regional Planning, Inter-communality and cost optimization (US\$ 1.04 millions)

The objective of this sub-component is to disseminate at a pilot scale regional solid waste management; promote inter-communality and propose the necessary tools for participatory planning and sustainable solid waste management. This sub-component will

mainly focus on developing the necessary expertise for increasing the economies of scale, reducing the costs through a better understanding of the cost drivers in solid waste collection and the costs allocation in the municipal budget, reducing the costs through an increased use of the private sector.

Proposed activities include: (i) Development of Master plans for the sustainable management of waste in the Governorates of Bizerte, Nabeul, Sousse, Monastir, Kairouan, Sfax, Gabes and Medenine; (ii) Design intercommunality schemes for the eight governorates and implement one of them as a pilot activity in Nabeul Governorate, which has been the subject of a study on inter-communality conducted by METAP. It is planned to have 10 to 15 municipalities participate on a voluntary basis in this pilot activity.

Sub component 1.3: Institutional Support and capacity building to ANPE (US\$ 0.22 millions)

This component will undertake the institutional support activities identified in the context of the equivalence and acceptability analysis conducted in conjunction with the piloting of the use of the Tunisian System for Environmental Assessment in the municipal solid waste sector: Review of the Terms of Reference of the Municipal Solid Waste Sector, development of sectoriel guidelines for EIAs, and build the necessary competences for the review of EIAs in the waste sector.

? Sub component 1.4: Mitigation of social impacts (US\$ 0.1 million)

This sub-component will support initiation of activities to improve the livelihood of waste collectors and mitigate social risks related to the closure and rehabilitation of the dumpsites. Due to the potential impacts on the garbage collectors of the closure of the dump sites, and based upon the experience of the GoT to date in addressing this issue, i) a detailed census will be conducted of all garbage collectors/recyclers working on the affected/relevant dumps; ii) in-depth consultations will be undertaken with the garbage collectors to discuss their options for reinsertion either by the private operators or by ANGED; and iii) awareness raising campaigns will be launched to educate the garbage collectors on safety issues relating to environmental health and hygiene.

II- Component 2: Investments for the construction of solid waste landfilling infrastructure, collection and treatment of landfill gas and rehabilitation of dumpsites (US\$ 21.84 millions)

This component consists of 3 distinct sub-components aiming to improve the management of the landfills and the dumpsites, while maximizing the opportunities of reduction of methane emissions.

? Sub-component 2.1 ? Construction of cell no.5 of Djebel Chekir landfill in greater Tunis (US\$5.3 millions)

The construction of cell no.5 of Djebel Chekir landfill will be financed under this component. The location of this cell has already been determined on the basis of previous pre-feasibility studies commissioned by ANGED to capitalize on the topography of the site. The study considered alternative technical options and possible variants in order to

optimize the operation of the whole landfill, notably with regard to the treatment of the leachate, the collection and the flaring of the landfill gas and the overall management of the site. Exploitation of the Cell and all discharge operations will be entrusted to the same operator of Cell No 4.

? Sub-component 2.2 ? Collection and treatment of landfill gases (US\$ 9.2424 millions)

The project will finance the conception, the construction and the operation of a system of gas collection and flaring of the biogas for all 5 cells of the Djebel Chekir landfill and the first cell of each of the 9 new landfills of Bizerte, Sousse, Monastir, Kairouan, Sfax, Gabes, Jerba, Nabeul and Medenine. This component will essentially comprise: (a) the development of the detailed design of the system of management of gases in accordance with international standards and norms; (b) the covering and the encapsulation of completed cells; (c) the installation of a system of gas management for the collection, the extraction and the flaring of gases produced in the landfill; and (d) the operation and maintenance of the gas management system.

These 2 Clean Development Mechanism Projects (Djebel Ch?kir and the 9 landfills) have been validated by an independent operational entity accredited by the Executive Board of the CDM. Moreover, the Djebel Chekir project has already been registered.

The good management and the performance of these degasification systems require a very close coordination with the operator in charge of waste exploitation, and a clear division of responsibilities among these 2 operators. For the implementation of this sub-component, the ANGeD has adapted the model tender document recently developed by the Bank for a Design, Build and Operate contract for solid waste infrastructure in the Philippines.

? Sub-component 2.3 - Rehabilitation of dump sites (US\$ 7.30 millions)

The rehabilitation of seven dump sites in Sousse, Monastir, Nabeul, Bizerte, Hammamet, Hammem Sousse and Djerba will be financed under this component. The techno-economic studies commissioned by ANGeD for the dumpsites of Nabeul, Monastir, Sousse et Bizerte have been completed and validated by the Bank, and the bidding documents are currently under preparation.. The recommendations of the Environmental Impact Assessment reports will be integrated into the scope of rehabilitation of each dumpsite, including the decontamination of the surrounding parcels not officially considered within the boundaries of the dumpsites, but where wastes have gradually accumulated.

#### **4. Project Location and salient physical characteristics relevant to the safeguard analysis**

The different project locations are all already existing sites that have been previously allocated from government land.

Nine new sanitary landfills have been (or are being) constructed under separate European Investment Bank (EIB) and German Reconstruction Bank (KfW) financing arrangements.

The sites are already fenced except for the dumps that will be rehabilitated. On the latter sites, the first measures to be implemented by the project will be fencing of these sites in order to avoid injuries and prevent illegal constructions or use of these sites.

## 5. Environmental and Social Safeguards Specialists

Mr Hocine Chalal (MNSSD)

Ms M. Yaa Pokua Afriyie Oppong (MNSSD)

Ms Tiguist Fisseha (MNSSD)

6. Safeguard Policies Triggered	Yes	No
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

## II. Key Safeguard Policy Issues and Their Management

### A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts: At PCN, the project was screened as a Category A project because the project components would have included (a) construction of landfills in new sites, (b) Landfill gas extraction from dumps; and (c) a medical waste management and disposal of PCBs.

During project preparation, the project components were modified at the request of the Government of Tunisia. So that (a) there will not be construction of new landfills but the construction a landfill cell within the boundaries of the landfill of Djebel Chekir for which an EA was available but also was updated as part of project preparation; (b) there will not be any gas extraction from the existing dumps, and (c) the medical waste management and PCB disposal will be separate project for which an EA would be prepared. Furthermore, during project preparation, the Government of Tunisia agreed to pilot the use of country system for environment assessment. Based also on the justification below, the project was re-screened at the QER of March 31, 2006 as a category B project.

Of the eight World Bank safeguard policies included in the UCS pilot program, EA and OP4.12 on Involuntary Resettlement are applicable to the project. Implementation of the project does not impact natural habitats, forests, Indigenous Peoples, cultural property, pest management or safety of dams, as all proposed activities are to be conducted within the footprint of these existing landfill sites. Rehabilitation of existing landfills involves coverage, closure and fencing and is not anticipated to involve any change in land use. Based on these criteria, the project has been screened as Category B.

#### Environmental Safeguards: OP 4.00

With respect to the Bank's safeguards, Environmental Assessment in particular, preliminary reviews of Tunisia's conformity with the Operational Principles of OP 4.00 and independent comparative studies of Tunisian and other EA systems in the MNA region demonstrated that Tunisia was an appropriate candidate for piloting the Use of Country Systems for Environmental Assessment. Tunisia has a relatively advanced environmental regulatory framework, institutional capacity and performance as also indicated by previous World Bank diagnostic studies, and in addition to that it is among the first countries in the region to have invested in the entire chain of integrated solid waste management activities.

The Equivalence and Acceptability Analysis conducted during project preparation has identified a number of gap-filling measures to respond to the requirements of OP/BP 4.00 and the Clean Development Projects. An agreement has been reached with the Tunisian Government on the actions and a specific time schedule to fulfill these measures. In that respect, the EIA for Djebel Chekir has been up-dated, and EMPs for all nine landfills included in the investment component have been submitted to the Bank. A public consultation took place in Tunisia on February 14 and 15, 2006 on the use of country system and on the documents submitted to the Bank, have been disclosed in Tunisia and the InfoShop on March 31, 2006.

The only foreseen impacts on the landfill sites on which the project will intervene are related to potential nuisances from the management of the waste. It is not expected that the landfill gas flaring would generate substantial nuisances. It is not expected that the project will generate large scale or irreversible impacts.

On the sites concerned with rehabilitation work, measures to be included in the scope of work of the contractors will ensure that risks are limited. Environmental impact assessments have been carried out and have defined appropriate mitigation measures.

The Safeguards Policy on Involuntary Resettlement (OP 4.12) is triggered in this project; which applies specifically to the sub-component 2.3 "Rehabilitation of Dump sites" of the project.

Overall, the dump sites are located on public lands that belong to the respective municipalities of Ezzouhour Sousse, Monastir, Bizerte, Nabeul, Hammamet, Hammam Sousse and Djerba. However, some of the dumpsites extend onto parts of private lands. Given that the dump sites will keep receiving more wastes until the project is launched and the sites fenced, it is impossible to determine at this stage the exact land size (public and private) that will be covered by the waste ,and hence the precise areas that will be

affected by the implementation of the project. Therefore, a Resettlement Policy Framework (RPF) has been prepared by ANGED, in close collaboration with the Bank to ensure that in the case that private land may be acquired for the rehabilitation of the dumpsites, it is done so appropriately, in consultation with the land owners, and potential adverse impacts mitigated, in compliance with OP 4.12

Below is a brief description of the land status:

- Nabeul, Hammem Sousse, Bizerte and Djerba: these dump sites are on public land and hence would not require any land acquisition; the respective Governors have given their authorization for ANGED to close and rehabilitate these sites.
- Monastir: the dumpsite is mainly on public land and partly on private land; the private owner has granted permission for ANGED to operate on their land.
- Hammamet and Hammem Sousse: these sites are on public land and partly on private lands that belong to several owners.

The RPF favors a policy of minimizing private land acquisition. No expropriation of private property is anticipated, and has in principle been avoided during the selection process of the sites, and that in accordance with the Bank's policy OP 4.12 and the Tunisian law, which requires public infrastructure projects of any nature to make maximum use of public land, and only to resort to expropriation when there is no alternative. Additionally, provisions will be taken by ANGED to avoid disturbing existing structures, in particular residences, farms, areas of religious or cultural heritage, or other areas of public value.

In terms of adverse social impacts, the project will not create/intensify poverty or vulnerability. To improve the livelihood of waste collectors and alleviate adverse impacts related to the closure and rehabilitation of the dumpsites, social risk mitigation measures that target waste collectors will be implemented under Component 1.4 (see above)

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:  
see above

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.  
n/a

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described. The borrower is accustomed to complying with environmental assessment requirements. Most of the mitigations measures prescribed will be translated in work specification to contractors that will be monitored by the borrower.

In compliance with OP 4.12, the borrower has developed a Resettlement Policy Framework, which outlines the relevant policy on land acquisition, adequate risk mitigation measures and procedures to follow if there is a need to prepare Resettlement

Action Plans in case private land is acquired to implement the project. The RPF has been formulated, after consultation with the concerned stakeholders, including municipality representatives and community members.

In terms of institutional and legal capacity in the area related to land acquisition, ANGED has a sub-department staffed by competent personnel with knowledge of the Tunisian legislation on expropriation. The Bank's team provided onsite training and technical support sessions to ANGED staff giving an overview of the World Bank's policy on Land Acquisition and Involuntary Resettlement.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people. The key stakeholders include the targeted municipalities, local communities living around the dumpsites, Civil Society organizations–NGOs, Cooperatives and Associations, the private sector, and key government agencies.

The project followed the new pilot policy of the World Bank relative to the use of country systems. The Tunisian system for environmental assessment has been reviewed and found essentially equivalent to the Bank environmental policies and as being implemented satisfactorily. A Public consultation has been carried out to inform stakeholders of the results of the use of country system assessment and of the specific findings of the EIA and EMPs prepared for the project.

In the context of the preparation of the Resettlement Policy Framework, Representatives of ANGED and the World Bank safeguards specialist undertook site visits to screen for any resettlement issues. The team met and consulted with representatives of the concerned municipalities as well as private land owners who are in proximity to the dumpsites to inform them of the project and solicit their views.

Additionally, a social assessment was conducted in July/August 2005 as part of project preparation and consultations were held with garbage collectors, municipal representatives and the communities living in close proximity to the waste sites of Bizerte, Sousse, Sfax and Nabeul as well as new and existing sites in Grand Tunis. Garbage collectors, a socially excluded and marginalized population, who gain their livelihoods from collecting, sorting and recycling waste, will be provided with opportunities to participate in the project and a means to continue their income generation through waste recycling.

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### ***B. Disclosure Requirements Date***

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#### **Environmental Assessment/Audit/Management Plan/Other:**

Was the document disclosed <b>prior to appraisal?</b>	Yes
Date of receipt by the Bank	03/25/2006
Date of "in-country" disclosure	02/14/2006
Date of submission to InfoShop	03/31/2006

For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors

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**Resettlement Action Plan/Framework/Policy Process:**

Was the document disclosed <b>prior to appraisal?</b>	Yes
Date of receipt by the Bank	11/08/2006
Date of "in-country" disclosure	11/10/2006
Date of submission to InfoShop	11/10/2006

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**\* If the project triggers the Pest Management and/or Physical Cultural Resources, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.**

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**If in-country disclosure of any of the above documents is not expected, please explain why:**

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*C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)*

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**OP/BP/GP 4.01 - Environment Assessment**

Does the project require a stand-alone EA (including EMP) report?	Yes
If yes, then did the Regional Environment Unit or Sector Manager (SM) review and approve the EA report?	Yes
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes

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**OP/BP 4.12 - Involuntary Resettlement**

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?	Yes
If yes, then did the Regional unit responsible for safeguards or Sector Manager review the plan?	Yes

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**The World Bank Policy on Disclosure of Information**

Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes

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**All Safeguard Policies**

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes
Have costs related to safeguard policy measures been included in the project cost?	Yes
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes

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#### ***D. Approvals***

<b><i>Signed and submitted by:</i></b>	<b><i>Name</i></b>	<b><i>Date</i></b>
Task Team Leader:	Ms Dahlia Lotayef	11/15/2006
Environmental Specialist:	Mr Hocine Chalal	
Social Development Specialist	Ms M. Yaa Pokua Afriyie Oppong	
Additional Environmental and/or Social Development Specialist(s):	Ms Tiguist Fisseha	
<b><i>Approved by:</i></b>		
Regional Safeguards Coordinator:	Mr Sherif Kamel F. Arif	
Comments:		
Sector Manager:	Mr Narasimham Vijay Jagannathan	
Comments:		