

**INTEGRATED SAFEGUARDS DATASHEET  
APPRAISAL STAGE**

**I. Basic Information**

Date prepared/updated: 05/27/2006

Report No.: AC2359

**1. Basic Project Data**

Country: Tunisia	Project ID: P099811	
Project Name: TN-TUNIS WEST SEWERAGE (PHASE1)		
Task Team Leader: Mohammed Benouahi		
Estimated Appraisal Date: May 22, 2006	Estimated Board Date: June 29, 2006	
Managing Unit: MNSIF	Lending Instrument: Specific Investment Loan	
Sector: Sewerage (100%)		
Theme: Pollution management and environmental health (P);Other financial and private sector development (P)		
IBRD Amount (US\$m.):	66.00	
IDA Amount (US\$m.):	0.00	
GEF Amount (US\$m.):	0.00	
PCF Amount (US\$m.):	0.00	
Other financing amounts by source:		
<u>BORROWER</u>		5.00
		5.00
Environmental Category: A - Full Assessment		
Simplified Processing	Simple <input type="checkbox"/>	Repeater <input type="checkbox"/>
Is this project processed under OP 8.50 (Emergency Recovery)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**2. Project Objectives**

The project will help achieve the following objectives:

- (i) Improve the quality of sanitation services in Greater Tunis, and preserve the achievements of the sector;
- (ii) Induce beneficial environmental effects on both local and international tourism, particularly in the Greater Tunis coastal area;
- (iii) Promote the reuse of treated wastewater in irrigation on a sustainable basis and in significant quantities, which is very important given the severity of water scarcity in Tunisia, and
- (iv) Enhance ONAS performance through financial and operational management capacity building.

**3. Project Description**

The project comprises of the following components:

- a) A Sewerage component, which includes the construction of :
  - (i) a Sewage Treatment Plant in El Attar in the western part of Great Tunis. This plant of 60,000 m3/day capacity in its first phase will provide secondary treatment;
  - (ii) a System of mains and pumping stations to transfer raw sewage to the treatment plant; and

(iii) a System of mains to transfer treated sewage to Oued Meliane with valves for connection to irrigation basins;

(iv) Technical assistance for construction supervision.

The sewerage component will allow the transfer and the treatment of the sewage produced for the equivalent of 750,000 people. It will allow the extension of the sewerage networks in the areas of Sidi Hassine and El Agba in Tunis West. It will also allow water reuse in a first phase on 2000 ha of irrigated land farmed for fruit and fodder growing in an area where water is scarce and the water table is salty.

b) Institutional Building component includes:

(i) Technical assistance to ONAS for environmental management of the Project;

(ii) The preparation of strategic technico-economic studies for sanitation for about 100 small towns of less than 10,000 inhabitants.

(iii) The establishment of customer's management system. It was decided to integrate this ONAS system with the one being developed in SONEDE, the national water supply agency, in order to avoid duplication of efforts and ensure better coordination between the two agencies.

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

The project will be located in the Greater Tunis area. More specifically, it will cover Tunis West basin, including Al Attar, Sejoumi, Mghira and El Allef sites.

#### **5. Environmental and Social Safeguards Specialists**

Mr Jaafar Sadok Friaa (MNSRE)

Ms M. Yaa Pokua Afriyie Oppong (MNSRE)

<b>6. Safeguard Policies Triggered</b>	<b>Yes</b>	<b>No</b>
<b>Environmental Assessment (OP/BP 4.01)</b>	<b>X</b>	
<b>Natural Habitats (OP/BP 4.04)</b>		<b>X</b>
<b>Forests (OP/BP 4.36)</b>		<b>X</b>
<b>Pest Management (OP 4.09)</b>		<b>X</b>
<b>Cultural Property (OPN 11.03)</b>		<b>X</b>
<b>Indigenous Peoples (OP/BP 4.10)</b>		<b>X</b>
<b>Involuntary Resettlement (OP/BP 4.12)</b>	<b>X</b>	
<b>Safety of Dams (OP/BP 4.37)</b>		<b>X</b>
<b>Projects on International Waterways (OP/BP 7.50)</b>		<b>X</b>
<b>Projects in Disputed Areas (OP/BP 7.60)</b>		<b>X</b>

## **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:  
Environmental Safeguards:

Environmental Assessment: The project has been classified as Category A because of the construction of a wastewater treatment plan, its potential environmental and social

impacts as well as because of the vulnerability of the receiving water bodies. Hence, during project preparation, a full Environmental Impact Assessment report (EIA) was prepared in compliance with the requirements of the Tunisian regulations as well as the World Bank Guidelines and Procedures, including Operational Policy OP 4.01 ?Environmental Assessment?. This EIA report covered three major areas: (i) project description, legal and regulatory framework, and baseline conditions; (ii) analysis of impacts, site selection and design alternatives; and (iii) environmental management plan (EMP).

Potential adverse impacts associated with the project and mitigation measures are:

**Effluent quality and temporary polluting discharges:** Since, the discharge of treated wastewater (in case of partially reuse) will reach some vulnerable water body like Oued Melian and Gulf of Tunis, special attention has been paid in designing El Attar WWTP.

In order to ensure acceptable quality of treated effluents that can be safely discharged into water bodies, special features have been incorporated in the design of the treatment facility to increase its performance and reliability, which will include the provision of: (a) Biological Nutrient Removal (BNR) for controlling nitrogen and phosphorus to minimum levels achieved by biological treatment systems, (b) emergency treatment lines in case of upset in plant performance, and (c) a maturation basin (15 ha) for additional bacteriological treatment. Meanwhile, regular monitoring at WWTP and discharge levels will be required to ensure strict adherence Tunisian standards, which are essentially equivalent with the prevailing international standards. At the request of the Bank, ONAS has initiated the preparation of additional analysis on possible impacts of treated wastewater effluents on seawater quality (in Gulf of Tunis) and on the groundwater table of Mornag.

At the request of the Bank, ONAS has initiated the preparation of additional analysis on possible impacts of treated wastewater effluents on seawater quality (in Gulf of Tunis) and on the groundwater table of Mornag. The preliminary results of these analyses (mathematic models) showed that there is no significant negative impact neither on water quality of Gulf of Tunis nor on Mornag Groundwater; however more information will be documented during appraisal mission.

Furthermore, no raw wastewater discharge will be allowed under any circumstance. To this end, the two planned pumping facilities have been equipped with emergency equipments in order to avoid any discharge of raw wastewater into the environment and water bodies. Those facilities include emergency pumps, double transfer pipes, emergency generator, etc.

**Sludge management:** Sludge treatment in Tunis West treatment plant will be achieved through blending, thickening, and anaerobic digestion, and dewatering by belt filter presses to 30% dry solids content. Projected stabilized sludge quantity is estimated to 30 m<sup>3</sup>/day at year 2008 and will be disposed of in an off-site facility.

Any quantity of sludge produced in Tunis West WWTP and not reused in agriculture will be temporarily disposed on site. To this end, the project will include the construction of a well designed and managed sludge disposal facility within the WWTP site. This facility will be funded under the present project and relevant cost will be reflected in the project budget.

For the longer term solution, the under-finalization action plan for addressing the sludge issues in Greater Tunis area, it is expected to be implemented within the 11th Development Plan. Considering the linkage of this action plan to be implemented by ONAS in relation to Tunis West Sewerage project, a dated covenant will be included in the Loan Agreement. This dated covenant will ensure consistency with the World Bank Safeguard Policies, thereby ONAS will submit for Bank review the EIA study, the site selection and a detailed implementation schedule for the planned Greater Tunis sludge disposal facility.

In parallel, a draft decree and guidelines (cahier de charges and norms/standards) have been prepared and their final version has been submitted (in May 2005) to Prime Ministry review. The present project will help promoting the use in appropriate and safe manner of such sludge by ensuring compliance with the applicable guidelines and by raising farmers and other involved parties awareness on proper use of these sludges.

#### Social Safeguards:

Involuntary Resettlement: The Safeguards Policy on Involuntary Resettlement (OP 4.12) is triggered in this project. Therefore, a Land Acquisition Plan has been prepared, in compliance with OP 4.12. Overall, the project requires the acquisition of a total of 74 ha of public land, including 70 hectares for the construction of the wastewater treatment plant, and 1 hectare and 3 hectares for the two pumping stations. All of the land plots needed for the project belong to the State, including where the sewerage lines will be laid which will be entirely in public rights of way/road sides already belonging to the municipality. The Ministry of 'Domaines de l'Etat', which is the custodian of all state assets, has allocated all the necessary plots to ONAS for the execution of the project.

However, the public land identified for the location of the wastewater treatment facility is an agricultural land that has been leased out to a private tenant on a long-term basis with a contractual provision that the state can claim back plots for the public interest. The tenant, which is an Agriculture Development entity that is cultivating the land, will be losing 70 hectares out of 370 hectares that it is leasing from the government. Hence, the Land Acquisition Plan has been prepared by ONAS, in consultation with the Bank for this single case to ensure that the acquisition of land is appropriately conducted, in consultation with the tenant, and potential adverse impacts mitigated. The LAP favors a policy of minimizing private land acquisition.

The expropriation of private property has been avoided 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 have been taken by ONAS 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 does not pose any threats to incomes or livelihoods, or create/intensify poverty or vulnerability. The main mitigation measures that will be implemented under the LAP include, among others:

? The possession of the 70 hectares of land for the works will be acquired after the harvest season in order to avoid destroying the crops of the current tenant.

? The negotiations of a revised contract will be made on a voluntary basis between the tenant and the State, represented by the Ministry of ?Domaines de L?Etat?, and acceptable to the Bank for the release of the 70 ha, in accordance with the LAP. As such, provisions are being taken by ONAS, in consultation with the tenant, to ensure that an arrangement to revise and prepare a lease contract according to the new land size, and that is suitable both to the tenant and the State. This will be a condition of effectiveness.

? Systematic/ongoing and timely dialogue between the targeted municipalities/communities and the project implementing agency and the contractor agency to ensure an effective coordination of civil work activities in the community.

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

One of the most substantial indirect and long term benefits is related with the rationalization of water and wastewater utilization. The planned wastewater treatment plant was sited within a large area of land suitable for irrigation. It was also designed to provide suitable treated wastewater complying with the national standards and norms related to wastewater reuse in Tunisia (NT 106 003). A program of treated wastewater reuse is being finalized by the Ministry of Agriculture in coordination with ONAS and would consist of an initial phase covering about 2000 ha (under the 11th Development Plan) to be gradually extended. Therefore, the project will contribute to the provision of new water resources to medium farmers through the reuse of treated wastewater, enabling them to increase yields and grow crops with higher returns.

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

Different site selection alternatives for the sewerage component of the project have been considered. The site selection of the new wastewater treatment facility was guided by three major factors: (i) cost-benefits analysis for the optimization of the main project components (transfer, treatment, and discharge of treated wastewater) taking into consideration environmental, social and economic aspects; (ii) potential demand for reuse of treated wastewater; and (iii) absence of conflicting land uses and minimization of private land expropriation. Four sites namely, Al Attar, Sejoumi, Mghira and El Allef as well as their corresponding discharge points and the whole circuit of treated wastewater effluents were investigated and analyzed.

The Al Attar site was selected mainly due to: (a) it is large and isolated with limited potential social and environmental impacts; (b) the excess treated wastewater that may not be reused will have a longer route before reaching the Gulf de Tunis with the advantage that more nutrients will be naturally treated in Oued Melian; (c) the potential for treated wastewater and sludge reuse is the greatest with the possibility of creating 6,000 hectares of irrigated perimeters.

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. An Environmental Management Plan (EMP) has been developed as part of the EIA study, with the objective to identify feasible, cost effective measures that may be used to mitigate any adverse environmental impacts that might occur during the construction and operation of the project. The mitigation measures that have been identified will help ensure that the defined objectives of the project are achieved whilst preventing and reducing any adverse environmental and social impacts.

The 'Department d'Assistance Technique et de Coordination' of ONAS was designated to ensure the implementation of the mitigation actions and will address any additional issues that might be identified during project execution as part of its role in the monitoring of the project. For the implementation of the EMP, about US\$ 300,000 will be required. During preparation, ONAS has committed to carry out the EMP whose cost estimate for its implementation was reflected in the overall project budget.

The EMP will be closely monitored during Bank supervision missions, and will be presented as part of the progress report to be submitted by the government. The Tunisian EPA will also undertake periodic inspections.

A Land Acquisition Plan (LAP) has been prepared to ensure that the acquisition of land for the implementation of the project is appropriately conducted, in consultation with the tenant, and its potential adverse impacts mitigated, in compliance with the safeguard policy OP 4.12.

In terms of institutional and legal capacity in the area related to the Environment, the Tunisian system is in general relatively advanced, and this is why Tunisia was proposed as one of the two MNA countries for piloting the use of the country systems for environmental assessment. ONAS has the necessary capacity to address the issues related to safeguards. Under previous Bank funded projects, ONAS staff participated in safeguard policies training, and hence the staff is familiar with the Bank's policy. Furthermore, capacity improvement activities will be undertaken as part of the implementation of component 2 of the project (Institutional strengthening- Environmental Management of the project).

As for issues related to land acquisition, ONAS has a department (Service des Affaires Foncières et Juridiques) staffed by competent personnel with in-depth knowledge of the Tunisian legislation on expropriation. The Bank's team provided onsite training and

technical support sessions with ONAS 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 local communities and their respective municipalities, Civil Society organizations, NGOs, Cooperatives and Associations representing different interest groups (environment, agriculture, sewerage, etc) ? the private sector, and key government agencies.

In view of the assigned category and the importance of this project in the Greater Tunis area at the economic, social, and environmental levels, a one day workshop ?Journ?e de concertation et d'information? was held on February 27, 2006 under the auspices of the General Director of ONAS (with Bank representatives being present) and with the participation of several institutions and concerned stakeholders, including various NGOs, farmer groups and associations, municipalities, parliament, governmental and professional institutions. The workshop attracted a large audience to whom the project in its different aspects and components, including the EMP, was presented and discussed. Valuable comments and recommendations were received. The latter, examined and supported by the Bank mission, were incorporated into the design of the project. The public consultation results are included in the EA report.

In the context of the preparation of the Land Acquisition Plan, the World Bank's team and representatives of ONAS undertook site visits to screen for any resettlement issues. The team met and consulted with the tenant whose land will be acquired for the construction of the treatment plant to inform him about the project and the acquisition of the 70 ha of parcel. The tenant is fully aware about the project, and informed the Bank of its participation in the public consultation that was held in the context of the Environmental Impact Assessment conducted for the project, where key stakeholders gathered to discuss the design of the project, including the selection of the sites, the risk mitigation measures put in place and the implementation arrangements of the project.

The Bank's team also met with the Sidi Hcine municipality to discuss the project design and its benefits to the community. The poor state of sanitation throughout the region and the urgency of the project were again raised as important issues. The importance of timely and ongoing dialogue with the project implementing agency has also been highlighted as crucial to ensure coordination of civil work activities in the community.

Disclosure. The EIA report was disclosed on the Bank Infoshop as well as on the website of ONAS in Tunisia. The LAP has also be disclosed at the World Bank's Infoshop, and will be posted on ONAS' website and made available at a place accessible to the public concerned in Tunisia (i.e. relevant municipalities) prior to the finalization of project appraisal.

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***B. Disclosure Requirements Date***

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

Date of receipt by the Bank	04/13/2006
Date of "in-country" disclosure	04/20/2006
Date of submission to InfoShop	04/21/2006
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	04/21/2006

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

Date of receipt by the Bank	05/11/2006
Date of "in-country" disclosure	05/18/2006
Date of submission to InfoShop	05/19/2006

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**\* If the project triggers the Pest Management and/or Cultural Property, 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?

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Yes

***D. Approvals***

<b><i>Signed and submitted by:</i></b>	<b><i>Name</i></b>	<b><i>Date</i></b>
Task Team Leader:	Mr Mohammed Benouahi	05/17/2006
Environmental Specialist:	Mr Hocine Chalal	05/17/2006
Social Development Specialist Additional Environmental and/or Social Development Specialist(s):	Ms M. Yaa Pokua Afriyie Oppong	05/25/2006
<b><i>Approved by:</i></b>		
Regional Safeguards Coordinator:	Dr Sherif Kamel	05/25/2006
Comments:		
Sector Manager:	Mr Jonathan D. Walters	05/17/2006
Comments:		