

**INTEGRATED SAFEGUARDS DATASHEET  
APPRAISAL STAGE**

**I. Basic Information**

Date prepared/updated: 05/05/2007

Report No.:

**1. Basic Project Data**

Country: Moldova	Project ID: P074139	
Project Name: ENVIRONMENTAL INFRASTRUCTURE PROJECT		
Task Team Leader: Takao Ikegami		
GEF Focal Area: International waters	Global Supplemental ID:	
Estimated Appraisal Date: February 27, 2007	Estimated Board Date: May 29, 2007	
Managing Unit: ECSSD	Lending Instrument: Specific Investment Loan	
Sector: Sewerage (100%)		
Theme: Pollution management and environmental health (P)		
IBRD Amount (US\$m.):	0.00	
IDA Amount (US\$m.):	0.00	
GEF Amount (US\$m.):	4.56	
PCF Amount (US\$m.):	0.00	
Other financing amounts by source:		
	BORROWER/RECIPIENT	2.13
	<u>GLOBAL ENVIRONMENT - Associated IDA Fund</u>	<u>3.21</u>
		5.34
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)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

**2. Project Objectives**

The overall objectives of the proposed project are to: (i) improve the quality of sanitation services in Soroca; (ii) reduce the discharge of pollutants, including nutrients, from Soroca municipal sources that flow into the Nistru River and, subsequently, into the Black Sea; and (iii) demonstrate and disseminate through feasibility studies and workshops cost-effective and affordable technologies for municipal wastewater treatment for the potential benefit of similar projects for Moldova's existing wastewater treatment plants, for those towns in Moldova that have no wastewater treatment, and for the countries that drain into the Black Sea.

The key indicators are:

1. The reduction of biological and nutrient wastes discharged from Soroca; and
2. The dissemination through feasibility studies and workshops of the experience from the appropriate technology pioneered through the Soroca project;

Monitoring and performance indicators will include:

1. the volume of wastewater effectively treated before and after the project completion (m<sup>3</sup>/year);
2. the reduction of pollutants (including suspended solids, BOD and P and N nutrients), calculated as the difference between the pollutants discharged before and after the project (tons/year); and
3. the number of proposed replications of the low-cost wastewater treatment technology in feasibility studies planned for Moldova and its neighboring countries.

### **3. Project Description**

The project consists of the following components:

Component 1-A. Water management in the Soroca municipality (US\$7.89 million). This component would finance: (i) the rehabilitation of water supply and wastewater collection system and the construction of wastewater treatment facility using constructed wetlands technology for the municipality of Soroca; and (ii) six month operations of the constructed wetland facility (CW) in order to train the Apa Canal staff in the proper operations and maintenance of the facility. The CW is a system in which the wastewater, after primary mechanical treatment, filters through a vegetated constructed soil layer where it is cleaned by a wide range of microorganisms at levels allowable to be discharged directly into the river. The proposed area required for constructing such CW in Soroca is about 5.5 ha including the additional area for mechanical pre-treatment, access road, and operational building.

Component 1-B Engineering Consultant and TA (US\$1.48 million) This subcomponent would support: (i) Engineering services for WWTP and sewer network design, procurement, supervision support, and a six months? operational assistance for WWTP; and (ii) Feasibility studies for 10 towns and pre-feasibility studies for an additional 5 towns, including replication of constructed wetland system in the studies.

Component 2. Dissemination and Replication Component (US\$0.10 million). This component targets the dissemination of experience and knowledge obtained from operation of the new Soroca WWTP. This is considered of particular importance due to the pioneering character of this GEF project, which could prove exemplary to many other WWTPs in Moldova and in Ukraine. To this end, the new operation building at the WWTP will include facilities suited for seminars and workshops. The annual water monitoring workshops would expand in scope and participation with the growing data base and with the progress of treatment of the Soroca wastewater. The first annual workshop in year 3 would likely mainly have Moldovan participation; the second annual workshop in year 4 might have Moldovan and Ukrainian participation, and possibly wider international participation in coordination with the Istanbul Commission.

Component 3. Institutional Strengthening Component (US\$0.15 million). This component would finance: (i) the development of a communication strategy and capacity building for media campaign and community and civil- society outreach to prepare for

the necessary increase of a sewage treatment surcharge; and (ii) Apa Canal staff training for operational efficiency improvements;

Component 4. Project Management(US\$0.28 million). This component would support management and implementation of the project, including auditing services, by PIU in the ACTD.

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

The town of Soroca is located on the border with Ukraine on the Nistru River, about 400 km from its inflow into the Black Sea. The Nistru River is a source of the water intake for the town. The wastewater from Soroca sewage was once treated at upriver ponds before being discharged into the Nistru River. Some time ago this approach was discontinued and sewage was piped across the river for treatment down river in Ukraine. This second approach has also been discontinued, and the raw and untreated sewage is discharged currently directly into the Nistru River. The project would rehabilitate the pumps and sewage lines and build a receiving station, and constructed wetlands at the site of the former treatment ponds. The elimination of the raw sewage discharge would improve the quality of water in the Nistru (which is used as a water source for numerous communities in both Moldova and Ukraine), thus resulting in positive impact on the river front of Soroca, and especially benefit a downstream recreation area.

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

Mr Lucian Bucur Pop (ECSSD)

Ms Ruxandra Maria Floroiu (ECSSD)

<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>Physical Cultural Resources (OP/BP 4.11)</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: The proposed project is classified as environmental assessment category B in accordance with the Bank's Operation Policies. The infrastructure investments financed under the project are triggering the World Bank Safeguard Policies related to Environmental

Assessment (OP/BP 4.01) and Projects on International Waterways (OP/BP 7.50). The environmental impact of the project is mostly expected during the construction stage of the proposed investments including rehabilitation of sewerage network and constructed wetland facility. In order to deal with the potential adverse impacts related to these investments, the Government of Moldova has prepared an Environmental Impact Assessment (EIA) with affiliated Environmental Management Plan (EMP).

The EIA for the project specified that there were no impacts that would not be covered by the mitigation and monitoring plans and found no large scale, significant and/or irreversible impacts. Furthermore, the EIA concludes that there would be no impacts on the immediately surrounding natural habitats, and downstream natural habitats would benefit from eliminating discharges of untreated wastewater to the adjacent waterway.

Although the project location is near by the Nistru River, an international waterway, the specific infrastructure investments proposed under the project are only for rehabilitation and improvements of existing sewage lines and wastewater treatment system in the town of Soroca, which is not expected to change the quality or quantity of water in this waterway. Consequently, the project falls within the exception set forth in paragraph 7 (a) of OP7.50 as: (a) it will not adversely affect the quality or quantity of water flows to the other riparians; and (b) it will not be adversely affected by other riparians' water use. Therefore, given the rehabilitation nature of the activities under the project, it has been decided that no notification to other riparian states is required under the Bank policy.

Accordingly, an exemption from notification has been prepared for and approved by the office of the ECA Vice President on March 2, 2007.

There are no land acquisition or resettlement issues. The former pressure sewer pipeline that runs from the pumping station to the treatment site will be replaced. The pipe runs under an existing access road, and the right of way is secured by the municipality. The route runs through an open area, and no structures or trees are located near the alignment. The now-abandoned sewerage pond system was located on 10 hectares of land. This is sufficient space for the proposed receiving station and the constructed wetlands. The land is to be transferred from Egoreni Commune to Soroca Municipality based on a Local Council Decision issued by the Egoreni Commune on March 30, 2007. This area is owned by Egoreni Commune and it is open land with no squatters and no informal use.

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

The potential environmental and social implications of the physical investments to be supported under the project are described in the EIA and EMP. The investments supported are intended to improve priority urban infrastructure in Soroca municipality that will reduce sewage and wastewater pollution of the Nistru River. The project complements the current GEF agricultural pollution control project to aim at reduction of nutrient pollution of the river that flows into the Black Sea. No significant indirect or long-term environmental impacts are expected.

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

The Agency for Construction and Territorial Development (ACTD) carried out a feasibility study of three alternatives: Activated Sludge (AS), Extended Aeration (EA) and Sequencing Batch Reactor (SBR). Out of the three options SBR is too sophisticated and involves too many risks for failure under the specific environment in Soroca. The other two options studied, AS or EA, are feasible but will pose operational challenges for the Apa Canal staff whose skill level is limited. More serious, the level of operations and maintenance costs of either treatment method is about US\$ 300,000 annually which would require a sewage treatment surcharge of MDL 11 per cubic meter of wastewater, or about US\$ 0.85 per m<sup>3</sup>. This surcharge would be around 125% of the average water tariff at present and about 170% of the domestic water tariff. The surcharge is so high that it is unlikely that the population would be willing to pay it which in turn would make the financial and operational sustainability moot.

Under the circumstances, the Apa Canal and the ACTD have opted for low cost appropriate technologies to reduce BOD, SS and nutrient loads. The most suitable alternative was found to be "constructed wetlands" that are non-mechanized, robust and within the capacity of the Apa Canal staff to operate, conditional on additional training being provided.

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.

As part of project preparation, the Government has prepared an EIA to address potential environment and cultural property issues affiliated with the infrastructure investments. The ACTD has taken a lead role in the contracting and supervision of the preparation of the EIA. This document meets the current Moldovan legislation and the World Bank's operation policies on EA. The PIU that will implement the project has established experience with safeguard issues as a result of its work on previous Bank project (the Pilot Water Supply and Sanitation Project). The PIU has taken action to clarify issues and established liaison with the other government stakeholders. The project will also support capacity building to PIU and the Soroca municipality for further strengthening their environmental capacity to supervise affiliated investments, including provision of equipment (monitoring, office furniture) and training especially for the constructed wetland operation and maintenance activities.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The Agency for Construction and Territorial Development, the Ministry of Environment and Natural Resources, the Ministry of Health, and the Ministry of Agriculture are the four major Government stakeholders. The local municipal administration, the Apa Canal, and the NGOs serving as surrogate water user associations constitute the primary local stakeholders. Consultation with the Government Stakeholders took place throughout project preparation. Social surveys, focus groups, and disclosure of documentation took place in conjunction with the preparation of the EIA. Customer feedback will be elicited throughout the project by the Customer Service Offices of the Apa Canal.

The EIA public consultation meeting held in the premises of Mayor Office in Soroca on June 6, 2006 discussed the overall project goal and the four possible treatment options applicable to Soroca WWTP. About 25 people attended the meeting representing NGOs, local environmental agencies, academia and local authorities attended this meeting but no major concerns were raised. Participants expressed their support for the proposed project investments and assured of their constant participation during the project implementation. The revised EIA report including the final treatment option has been publicly disclosed at the PIU office in Chisinau (in Romanian) and announced locally in the "Monitorul Oficial al Republicii Moldova" on February 23, 2007. Furthermore, a brief public information session in Soroca was held on March 15, 2007 to inform citizens and NGOs about the selected constructed wetland solution. The revised EIA has been disclosed in Washington, DC Infoshop on March 21, 2007. The final EMP will be revised once the detail design for the proposed constructed wetland facility is available.

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***B. Disclosure Requirements Date***

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

Date of receipt by the Bank	03/20/2007
Date of "in-country" disclosure	02/23/2007
Date of submission to InfoShop	03/21/2007
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	

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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 7.50 - Projects on International Waterways**

Have the other riparians been notified of the project?	No
If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?	Yes

Has the RVP approved such an exception? 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:	Mr Takao Ikegami	02/16/2007
Environmental Specialist:	Ms Ruxandra Maria Floroiu	03/09/2007
Social Development Specialist	Mr Lucian Bucur Pop	03/12/2007
Additional Environmental and/or Social Development Specialist(s):	Mr Bernard Baratz	02/12/2007
	Mr Philip W. Moeller	
<b><i>Approved by:</i></b>		
Sector Manager:	Mr Sumter Lee Travers	03/15/2007
Comments:		