

## Environmental and Social Data Sheet

### Overview

Project Name:	PANAMA CITY AND BAY WASTEWATER TREATMENT PROJECT
Project Number:	2015-0056
Country:	Panama
Project Description:	The Project will improve the environmental conditions of Panama City and Bay by doubling the current treatment capacity of 190 000 cubic meters per day to 380 000 cubic meters per day of the Juan Díaz Wastewater Treatment Plant.
EIA required:	yes
Project included in Carbon Footprint Exercise:	no

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The EIB proposed project will finance the largest component of the Panama City and Bay Sanitation Programme Phase II: the extension of the Juan Díaz Waste Water Treatment Plant (WWTP). The project will generally benefit public health by treating wastewater before discharging into the streams and/or straight into the Panama Bay. It will significantly contribute to the environmental improvement of the beneficiary area by doubling the existing treatment capacity of 190 000 m<sup>3</sup> per day to 380 000 m<sup>3</sup> per day. Wastewater is currently treated for only 35% of the population.

Located close to a RAMSAR site (319), it was designed to be built in three different phases. A full EIA covering the full treatment capacity of the WWTP was required by local legislation and approved in 2006 by the *Autoridad Nacional del Ambiente* (Resolution DIEORA IA 119-2006 of 23 November 2006) together with the Environmental and Social Management Plan ESMP. It would fall under Annex I of the EIA Directive 2011/92/EU thus an EIA would also be required.

The construction of the second phase of the WWTP doesn't entail major changes to the original design and hence to the EIA approved in 2006 by the competent authority for the construction of the first phase. The EIA comprised the 3 phases of the WWTP working at future full treatment capacity. A new EIA isn't required in compliance with local legislation for the construction of the second phase.

Notwithstanding, this operation has been classified as a Category B Project of the Inter-American Development Bank IADB, likely to cause mostly local and short term negative environmental and associated social impacts and for which effective mitigation measures are readily available. According to its environmental guidelines, the IADB has updated the EIA in 2015 –including new public consultations- and the ESMP for the construction of the second phase of the WWTP. It has also activated the IADB policy on Climate Change and Risk Disaster Management. The IADB carried out monitoring missions during 2013 and 2014 to evaluate the operation and the implementation of the ESMP for the first phase with a satisfactory result. The Action Plan to strengthen the environmental and social management of the Panama City and Bay Sanitation Programme has been consequently updated.

The Promoter received all project related construction permits including the deforestation and compensation measures for 2,73 ha. corresponding to the extension. The Promoter will ensure that the project is implemented in compliance with the ESMP and will follow the recommendations of the update of the EIA.

Both documents the EIA and its update by the IADB have been published on the EIB website.

The project is considered to be acceptable for Bank financing from an environmental and social perspective.

## Environmental and Social Assessment

### Environmental Assessment

The *Ley General del Medio Ambiente* -General Environmental Law No. 41 of July 1998- creates the National Environmental Authority (ANAM) as the entity responsible for the management of natural and environmental resources. The Government of Panama enacted Law 25 in March 2015, by which the Ministry of Environment assumed all the functions of ANAM. The Executive Decree of 2009 regulates the EIA approval process.

The Promoter is committed to respect the WWTP discharge in full compliance with Panama Regulations, mostly in line with EU requirements (see table below). The operation of the first phase of the WWTP shows significantly better quality indicators for the effluent than those required by legislation.

<i>Thresholds (mg/l)</i>	<i>EU Directive</i>	<i>Panama legal requirement</i>	<i>WWTP current influent</i>	<i>WWTP current effluent</i>
BOD <sub>5</sub>	35	35	104	9,68
COD	125	100	242	26
Total SS	35	35	104	14
P*	1	5	2,9	2,04
N*	10	10	19	0,9

\*required for EU declared sensitive areas

The production sludge of the WWTP is expected to be about 243 tonnes per day, to be disposed of in Cerro Patacón sanitary landfill. As the sludge disposal will considerably reduce the capacity of the landfill in the medium-long term, the update of the EIA has recommended a feasibility study on the reutilisation of sludge and treated wastewater.

The operation of the WWTP since 2013 seems to have had a negative impact over a mangrove forest area close to the treatment facility. It'll be closely monitored and analysed within the ESMP. Correction and/or compensation measures will be proposed and implemented. The eventual formation of chlorinated substances after disinfection in the Juan Diaz River and the sea has been also identified. These substances might impact the ecosystem and alternatives such as ultraviolet disinfection are being analysed.

The Promoter's UCP has shown to operate under good environmental and social practices. The UCP socio-environmental section is made up of 7 people out of the 45 people forming the UCP. There is a strengthening programme for the UCP which includes the environmental management and Occupational Health and Safety Management Systems certifications (ISO 14001 and ISO 18001 respectively).

### Social Assessment, where applicable

Social impacts of the project include the disruption to services, noise, temporary occupation of public or private space, traffic disruptions and safety hazards. The land corresponding to the three phases of the WWTP was already acquired thus no resettlement action plan is required.

Works will take place on a well-defined site so the above mentioned negative impacts will still be limited.

The Government of Panama has ratified all 8 ILO fundamental conventions and the Promoter shows awareness and compliance with health and safety conditions regulations.

### **Public Consultation and Stakeholder Engagement, where required**

Public consultation for the environmental impact assessment of projects follows national regulations, as described in Executive Decree No. 123 of 14 August 2009. The IADB carried out two public consultations for the extension of the wastewater treatment plant on 24 April and 05 May 2015.

The UCP is responsible for the Social Management Plan of the Panama City and Bay Sanitation Programme. It includes:

- ✓ Public Participation Plan
- ✓ Communication Plan
- ✓ Community Relations Plan
- ✓ Environmental Training Plan
- ✓ Operator's Communication Programme

As part of the Communication Plan, over 1 500 people visited the WWTP in 2014, including universities, institutions and NGOs amongst others. It has recently set up an automated system for complaint service "share point" for the Panama City and Bay Sanitation Programme Phase II as part of the Public Participation Plan.

### **Other Environmental and Social Aspects**

Climate change risks. The annual rise in sea level is estimated at 1.3 mm, which yields about 39 cm in 30 years. The WWTP is designed to reach a relative height of 4 m to avoid risks associated with extreme flood events. Maximum storm values recorded in the area have been also taken into account. The WWTP is protected by strip of mangrove forest area over 50 meters wide to prevent damages from tsunamis, storms and associated higher sea waves.