

# SEWERAGE SYSTEM FOR TONCHIGÜE

Canton of Atacames, Province Esmeraldas

Ecuador is one of the richest countries in Latin America with regard to available water resources, yet the nation remains poor in terms of adequate wastewater treatment infrastructure. Currently, the vast majority of wastewater is discharged untreated into rivers or the ocean, or treated under anaerobic conditions, i.e in septic tanks, negatively impacting the environment and the general health situation. An environmentally benign treatment of wastewater is fundamental to reduce health problems among the most vulnerable caused by contamination and pollution, as well as to mitigate climate change risks.

Ecuador identified the treatment of solid and liquid waste as a key sector for mitigation of greenhouse gas (GHG) emissions in its Nationally Determined Contribution (NDC).

To achieve a reduction of GHG emissions, proper and safe management of wastewater is essential. This includes sewerage networks and wastewater treatment plants.

## Wastewater Management in Atacames

The canton of Atacames is located in the province of Esmeraldas, on the northern coast of Ecuador and has approximately 55,000 inhabitants. Its economic activity is focused on tourism and fishing.



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### FELICITY in a nutshell

“Financing Energy for Low-carbon Investment – Cities Advisory Facility” is an initiative of GIZ and the European Investment Bank (EIB) to support low-carbon infrastructure projects in cities that significantly contribute to sustainable development and climate change mitigation. As a project preparation facilitator, FELICITY offers technical assistance to cities in designing and structuring their infrastructure investment projects.

FELICITY prioritises the interests of cities and incorporates the perspective of international financiers.

78% of the population is considered poor. The town of Tonchigüe is part of the canton. Tonchigüe has neither a sewerage network nor an adequate wastewater treatment system. Inhabitants use household latrines, cesspits, or discharge the wastewater directly and untreated into the ocean.

This has negative repercussions on the environment and society, such as damage to the fishing and tourism sector of Tonchigüe.

In order to provide the entire population of Tonchigüe with a sewerage system, the project “Sewerage System for Tonchigüe” was developed. The new, centralised sewerage system foresees the installation of PVC pipes in the primary and secondary networks, a pumping station, and a wastewater treatment plant for a design flow of 16.07 l/sec.

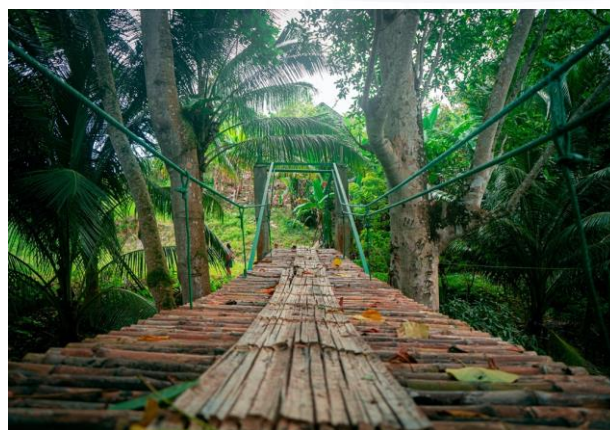
The project will benefit the 9,285 inhabitants of Tonchigüe. The quality of life of the population will be improved by the better sanitation services. In addition, the collection and treatment of wastewater will reduce soil and water pollution, facilitating the recovery of flora and fauna, as well as contributing to economic activity (fishing, tourism). Wastewater treatment will also reduce GHG emissions, particularly methane.

## FELICITY's support to Atacames

FELICITY supports and capacitates the project promoter, i.e. the Autonomous Decentralised Municipal Government of Atacames, in preparing a bankable project in line with international financing requirements and by facilitating the project's funding. FELICITY's technical assistance addresses crucial challenges in project preparation, such as feasible and best-fit technological options, net GHG emission reductions, environmental and social impact assessments, clear and sound funding schemes, as well as required institutional arrangements.



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