PROJECT FEATURES

Entities in charge
Government of the Dominican Republic

Benefiting Zone:
The Dominican Republic

Funded by:
The European Union through the Natural Disaster Risk Management Programme in the CARIFORUM.

Safer, more efficient and disaster-resilient aqueducts.

The main objective of the project is to set in place tools that can evaluate vulnerabilities and capabilities of the water supply system when natural or anthropogenic disasters threaten the Dominican Republic.

Context

The Dominican Republic is a country in the Caribbean with a population of 10 million inhabitants. It is located on the greater island of Hispaniola (which it shares with Haiti), south-east of the Florida coast. This region of the world is prone to natural disasters such as hurricanes, earthquakes and many others, some of which can be harmful enough as to leave the island without access to drinking water. Just one year ago the island was grazed by Hurricane Maria, a deadly Category 4 storm, narrowly escaping the devastation that struck neighbouring Puerto Rico. Similarly, the Dominican Republic lies on top of the same fault that saw Haiti hit by a catastrophic earthquake in 2010. The country must be prepared when disasters strike, and therefore this project should be seen as a priority for the well-being of everyone residing in it.

In order to assist the Dominican Republic in this preparation for the unpredictable, the European Union has designed a cooperation programme to help see through the objectives of the Safe Aqueducts Index, which is one of two components of the ACP-EU Natural Disaster Risk Management Programme in the CARIFORUM.
Objectives

The main objective of the Safe Aqueducts Index is to set in place tools that can evaluate vulnerabilities and capabilities of the water supply system when natural or anthropogenic disasters threaten the Dominican Republic. This will articulate different means of strengthening infrastructure and systems to increase security during natural disasters.

More specifically, the Index aims to:

• determine priorities for decision-making in times of emergency;
• improve aqueducts through a better understanding of the system’s properties and infrastructure.

Impact

In meeting these objectives, the programme will contribute to the achievement of high safety standards and preparedness for unpredictable disasters. An initial assessment will determine the current state of the system, including which elements might be functioning properly and thus be useful as benchmarks. In the process of improving infrastructure related to health care and drinking water, as well as the implementation of systems that rank decision making priorities, risk is significantly reduced.

The Dominican Republic’s exposure to periodic disaster risk, including floods, power outages, and food and water shortages, requires concerted planning and efficient execution in order to save lives and limit the loss of resources.

The Aqueduct Safety Index is a multi-variable equation with a combination of measurements that define the safety coefficient of an aqueduct, in terms of the number of inhabitants served by a particular sector of the infrastructure.

The first of these variables is vulnerability, as determined by physical, operative, organizational, environmental, cultural and socio-economic factors.

The second variable is the capability of the aqueduct, including management and coordination functions. This will be gauged through interviews, blueprints and technical observations.

The third variable is resilience, the ability to resist a certain degree of severity of any event. The system’s ability to prepare, adapt, resist and recover from any given event determines its resilience.

The goal of increased safety requires a great amount of interdisciplinary work, bringing various sectors of government and private enterprises together to improve the wellbeing of the Dominican population.

The EU, which is part of the International Health Partnership (IHP+), is committed to reducing the vulnerability of developing countries to global shocks such as climate change, natural disasters and the loss of natural resources. For these reasons the Dominican Republic is a focal part of the EU’s efforts in the Caribbean.