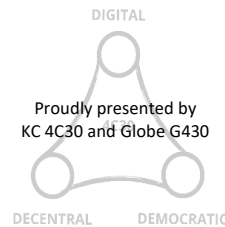


# Pre-feasibility study to strengthen climate and environmental monitoring systems to improve drinking water management



## Potential Climate/ Disaster Impacts addressed and Justification for this Approach

Climate change is impacting the hydrological cycle, thus changing the frequency and intensity of rainfall, resulting in extreme flooding and drought events. This has a direct impact on the quantity and quality of water resources in the city of Cuenca, overburdening the water catchment system and impacting the water utility's performance. Despite the efforts made by the municipality, there are still technical limitations on the generation and interpretation of climate information. Furthermore, the rise of climate change means that previous hydrological records can no longer accurately project future conditions. Improved, water-related climate data is required to understand the relation between climate change and the changes in the water cycle, as well as the current and future climate-related risks and vulnerabilities. Furthermore, it will help improve the quality of information on which investment decisions are made.

## Process of Implementation

After shortlisting the city, the Gap Fund conducted a detailed assessment that was approved by the TS. The team prepared a ToR with the city and later on, the TA was implemented and supervised by the GF team. Throughout the process, all relevant stakeholders were engaged.

### Project Title

Support for Project Preparation for Urban Progress (SuPPUrbP) - City Climate Finance Gap Fund

### Project Number

20.9118.9-001

## Results and Impacts

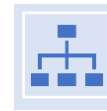
Development of a pre-feasibility study to improve the early warning system of floods and droughts, and contribute to the improvement of decision-making in the Yanuncay and Tomebamba river basins, including: 1) Analysis of current hydrometeorological network, 2) calibration, validation and implementation of hydrological models to evaluate climate change scenarios, 3) analysis of alternatives for flood prevention (such as nature-based solutions), 4) development of standards, processes and protocols for the handling, interpretation and use of information for planning and operation of water utility.



**TYPE OF APPROACH**  
Framework conditions



**COUNTRY**  
Ecuador



**LEVEL OF INTERVENTION**  
city



**TYPE OF RISK MANAGEMENT**  
prevention



**MAIN HAZARDS ADDRESSED**  
Flood, Drought



**URBAN FUNCTION PROTECTED**  
Basic existential functions (water, electricity, etc.),  
Public administration



**SPHERE OF INTERVENTION**  
socio-political sphere/ governance



**RESOURCES REQUIRED**  
3 experts, 80-110 working days each



**COOPERATION PARTNERS**  
Municipality of Cuenca, Municipal authority for telecommunications, drinking water, sewage, and sanitation, environmental authority.