

## C.11 Securizing water needs

Face-to-face training session

3 days in Montpellier  
10 to 12 February 2021

### ▪ OBJECTIVE:

To master the methods allowing to evaluate the resource needs assessment of the service, in the present situation and in a prospective way.

Refresh and complete the knowledge on the different water resources that can be mobilized for urban water supply (conventional and non-conventional).

Underline the specificities of resource mobilization projects (long project cycle, key success factors, etc.).

Defining the concept of greenhouse gases, climate change and the consequences on the functioning of a company as well as on its activities and on the daily life of each employee.

Distinguishing the main categories of renewable energies and economic constraints

The Impact of Energy in Resource Projects

Understand the legal and institutional prerequisites for securing the resources of an urban agglomeration (in quantity and quality)

Acquire tools for multi-criteria analysis of options for ensuring sufficient water resources (including economic, political and environmental feasibility).

### ▪ CONTENT:

**Introduction to IWRM:** Diagnosis of situations faced by auditors with regard to resources (quantitative and qualitative tensions, identification of stakeholders, conflict resolution modalities, etc.). Legal principles applied to water resource management and conflicts of use; authorisations for abstraction, discharge, charges. Concrete illustration of different aspects of IWRM, through a river basin organisation.

**Surface water resources:** variability over time, impact of climate change, management of mobilization and storage facilities, quality protection. Economic comparison of possible options

**Groundwater resources:** methods of searching for water, techniques for exploiting boreholes and well fields and sustainable management of an aquifer in terms of quantity and quality

**Non-conventional resources:** reuse of urban wastewater (which quality for which uses? health risks and corresponding quality standards; conditions for the success of projects); Desalination of brackish or sea water (available techniques, costs and corresponding **energy requirements**; prerequisites for the use of desalination in low-income countries)

**Analysis of resource mobilization strategies by a few cities of the world** representative of various situations

### ▪ ACQUIRED SKILLS:

Ability to guide and supervise pre-project studies for water and energy projects

Ability to realistically compare structural and non-structural solutions, conventional and non-conventional options,

Knowledge of cases similar to those encountered in the auditor's home department, and lessons learned from the development of actual projects.

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