

Workshop 4. Non-Conventional Water Resources: Wastewater Reclamation and Reuse

Description: The course will deal on the role of the non-conventional resources (NCR) in the holistic management of water at basin or town level.

The last approaches of the use of NCR, and especially reclaimed wastewater, are based on the risk and economic features of the practice. The tools to govern that use are the technology, economy and social as well as health aspects. The rest of approaches and assessments are devoted to support the main ones, like the analytical tools.

The trainees will be provided with a clear understanding of the role that NCR can play at the town or basin, from the safety of the resources in terms of quantity and quality to the increase of water bodies' resilience.

Hazard Analysis and Critical Control Points (HACCP) concept as well as other risk-related ones, like Sanitation Safety Planning (SSP), multiple barriers, ISO... should be familiar to the students.

Based on the Circular Economy approach of the EU, other reuse tools will be discussed.

Keywords: water resources, non-conventional water resources, reclaimed water, environmental and socio-economic approaches, reclaimed water quality, greywater, water resources mix.

Outcome of the course

The participants will be able to use the tools to define the NCR characteristics and have the knowledge on how to control reclamation facilities (mainly for reclaimed wastewater and greywater).

The students will also be familiar with the rules, regulations and recommendations that can be applied to NCR. The work of international bodies (WHO, FAO, EU) on that topic will be familiar to the students after the course. The social and economic aspects will also be known.

The insertion of NCR not only in terms of increasing the available water resources but also on the maintenance of the water bodies' quality will be a matter of study and the students should be familiar with all the concepts developed around these approaches.

Teaching methodologies: The course will employ theoretical and practical perspectives to gain knowledge on how to define the possible uses of non-conventional water resources, and especially reclaimed wastewater, at the town or basin level.

Four specific working groups will be developed, on social, economic, treatment and quality issues.

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