

# Monitoring networks

## Synopsis

Water quality monitoring is an important tool for assessing and managing water resources. This multidisciplinary course will present the different types of water quality monitoring networks established within the European regulation.

## Aims

To provide a sound approach to the water quality monitoring cycle: from water management to data analysis and information utilization.

## Objectives

At the end of the Unit, you should:

- 1) Understand and apply the different steps of the monitoring cycle in waterbodies
- 2) Apply common statistical techniques for water quality data evaluation
- 3) Design sound and sustainable water quality monitoring and assessment programmes under specified conditions

## Key Skills Acquired

At the end of this Unit, you should master :

1. The key points for the implementation of a relevant water quality monitoring network
2. The methodology for analyzing data from these networks

## Syllabus

Topics covered include:

- Concepts of monitoring and assessment: basic rules
- Description of different monitoring networks in different matrices : freshwater, groundwaters, littoral waters, biomonitoring
- Case study on different types of water

## Learning & Teaching

- Lectures: 20 hr
- Seminars (for case studies and applications): 20 hr

**Teaching Staff :** T Pigot (Coord)

**Semester:** 1

**Timetable slot:** To be advised

**ECTS:**4

**Level:** Optional

## Bibliography

- Bartram, Jamie, Ballance, Richard, World Health Organization & United Nations Environment Programme. (1996). Water quality monitoring: a practical guide to the design and implementation of freshwater quality studies and monitoring programs / edited by Jamie Bartram and Richard Ballance. London: E & FN Spon.
- Daoling Li, Shuangyin Liu, (2018) Water Quality Monitoring and Management , 1st Edition Basis, Technology and Case Studies, Academic press
- Water Quality Monitoring Network Design (1999), Harmancioglu, N.B., Fistikoglu, O., Ozkul, S.D., Singh, V., Alpaslan, M.N., Springer

## Assessment

- Written theory examination (50%)
- Case study and oral presentation (50%)

## Course Evaluation

By completion of University Unit Evaluation Questionnaire by students, annual assessment by Unit Coordinator.