

Environmental Risk Assessment: Fundamentals

Synopsis

The students will be introduced to fundamentals of environmental risk assessment and will get basic training on assessing environmental risks based on case studies, simulations and team work.

Aims

To get fundamental knowledge and training on environmental risk assessment.

Objectives

At the end of the Unit, you should have:

1. Knowledge and training in the assessment, management and communication of environmental risks.
2. Know the European regulations, institutions, frameworks and procedures for environmental risk assessment, management and communication (e.g. REACH, CLP)
3. Training in the environmental risk assessment, management and communication in diverse situations and contexts (e.g. chemical spills in the marine environment, climate changes, bioinvasions, etc.)

Syllabus

Topics covered include:

1. Introduction to the course.
2. Introduction to environmental risk assessment. Prospective and retrospective environmental risk assessment. Problems and contexts. General frameworks.
3. European and national regulations, institutions/agencies and technical guidance documents in the scope of REACH and CLP. Emerging environmental contaminants.
4. Other regulations, institutions in charge and procedures (e.g. risk assessment of oil and other chemical spills in the marine environment). Risk management and communication.
5. Simulations in diverse contexts and situations.

Learning & Teaching

- Lectures: 10 hr

- Theoretical-practical: 11 hr
- group autonomous work on risk assessment with oral presentation

Teaching Staff

L. Guilhermino (Coord.)

Semester: 2

Timetable slot: To be advised

ECTS: 3

Level: Optional

Bibliography

- Barnthouse LW; Munn Jr WR; Sorensen MT 2007. Population-level Ecological Risk Assessment. SETAC & CRC – Taylor & Francis Group.
- Begon M; Townsend CR; Harper JL 2009. Ecology: From Individuals to Ecosystems. Blackwell Publishing.
- Newman, M.C.; Roberts, Jr., M.H.; Hale, R. C. 2002. Coastal and Estuarine Risk Assessment, Lewis Publishers, CRC Press Company.
- Simon T. 2014. Environmental Risk Assessment. A Toxicological Approach. CRC Press, Taylor & Francis Group.
- Sutter II, GW. 2007. Ecological Risk Assessment. 2nd Edition. CRC Press, Taylor & Francis Group.
- web sites, scientific articles and other documents supporting case-studies and simulations.

Assessment

- FINAL MARK = A + B

A) Continuous evaluation: (40%)

B) Creation of a risk simulation, presentation and discussion (autonomous teamwork): (60%)

Course Evaluation

By completion of University Unit Evaluation Questionnaire by students, annual assessment by Unit Co-ordinator.