



C1. CEDIMENT QUALITY AND RISK ASSESSMENT IN HARBOURS AND POLLUTED AREAS

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Course outline-lectures

1. Introductory issues

- Definition of sediments and sediment quality
- International Conventions and European Directives on sediment management and ecological risk assessment

2. Dredging operations in harbour areas

- Conceptual problem
- Defining sampling and analytical design
- Classification of sediment quality
- Choice of management options for dredged sediments

3. Characterization and remediation of highly polluted sites or environmental emergencies

- Conceptual problem
- Defining sampling and analytical design
- Characterization of sediment quality
- Elaboration of remediation project

4. Ecological Risk Assessment (ERA) procedure

- Definition of conceptual problem
- Screening ERA
- Detailed ERA
- Discussion and criteria for deciding appropriate, site-oriented lines of evidence

(LOEs)

- Qualitative decisional matrices
- Quantitative Weight Of Evidence (WOE) approach
- Logical flow-charts and mathematical algorithms
- Hazard indices for different LOEs (sediment chemistry, bioavailability, ecotoxicological bioassays, biomarkers, benthic communities)
- WOE elaboration and integrated Risk assessment
- Risk communication



ERACOM

JOINT MASTER PROGRAM IN
ENVIRONMENTAL RISK ASSESSMENT
AND COASTAL MANAGEMENT

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5. Discussion and application of real, field case-studies

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