

The use of bioassays for an assessment of ecological risk in the bottom sediments

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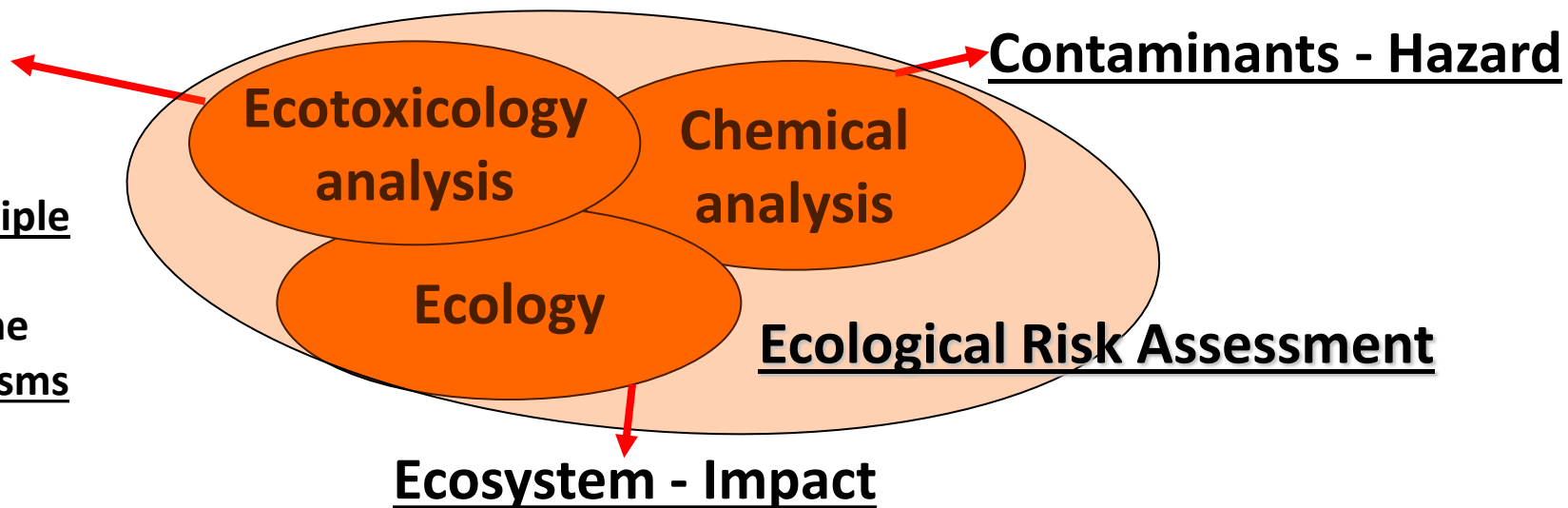
Bioassays - Toxic effect

- useful, cost-effective and rapid tools,
- assess real risk from the presence of multiple stressors in sediments,
- integrate the biological response under the different substances in non-adapted organisms

Battery of bioassays

Trophic level	Organisms	Test	Test reaction
Producers	<i>S. alba</i>	Phytotoxkit	Root growth inhibition
Consumers	<i>H. incongruens</i>	Ostracodtoxkit	Mortality, growth inhibition
Consumers	<i>T. platyurus</i>	Rapidtoxkit	Inhibition of food ingestion
Decomposer	<i>V. fischeri</i>	Microtox®	Luminescence inhibition

- organisms belong to various taxonomic groups,
- represent various levels of the food chain,
- different sensitivity,
- different endpoints and time exposure
- phases of sediments (solid phase, pore water)



The aims of study were to evaluate the ecotoxicity of the sediments and to integrate chemical analyses and toxicity bioassays in order to assess the risk connected with the presence of pollutant in the sediments