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Biological Effects of Environmental Pollution in Coastal Marine Ecosystems : the BEEP project.

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Biological markers allow the direct determination of pollutant impact on living organisms in aquatic systems. While new emerging biomarkers are actually under evaluation, some common markers are in a validation-phase and may be used as assessment tools for the quality of the marine environment. The goal of this research programme is to evaluate the use of biological markers determined in marine organisms as a means of assessment of chemical contamination and to investigate the socio-economic implications of chemical contamination for certain selected zones for coastal communities dependent from sea resources.

This integrated multi-disciplinary, -site and –marker research project combines special European expertise in biology, biochemistry, ecotoxicology, environmental chemistry, data handling and economics which will enable a comprehensive study of selected coastal European environments and their responses when exposed to varying levels of pollution and numerous chemical contaminants (heavy metals, pesticides, hydrocarbons, chlorinated compounds).

Different types of coastal European environments (Baltic Sea, North Atlantic Sea, Mediterranean Sea) will be investigated by 30 participants who will co-operate on the three selected environments through a long term study.

The specific objectives of the project are :

- Develop new biological markers ranging over different levels of biological organisations.
- Validate the use of selected biomarkers in specific sites for both routine assessment of chemical contamination and for the improvement of national and international monitoring programmes
- Validate a methodology for the biomarker exploration in ecological risk assessment
- Prepare information and advices for user group, policy-makers and fishery institutions about biological effects of chemical contamination on coastal marine resources,
- Establish a network of biomarker researchers through European countries.

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