Introduction session:
Make marine sediment extraction sustainable by mitigation of related processes with potential negative impacts

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Marine sediment extraction in the North Atlantic, including Baltic and North Sea has shown a spectacular increase from a few hundred thousand m³ per year in the early '70's to tens of millions in the '90's and about hundreds millions m³ in recent years. Due to large projects in the Netherlands and Germany in 2010 a peak of 170 million m³ was reached.

In a strict sense, marine mineral extraction is not sustainable, because the extracted minerals are lost for the marine system. In fact the extraction of marine sediments can even cause negative effects on the marine environment by accompanied processes like the removal of sediments including benthic fauna, introducing a sand blanket in the vicinity of the extraction, introducing high concentrations of suspended matter in the surrounding area and increasing the level of underwater sound.

Nevertheless, the way the minerals are extracted can be sustainable in the sense that the negative effects on the ecosystem are minimized by mitigation measures that are beneficial for the recolonization of the benthic fauna and recovery is fulfilled in an acceptable period of time after extraction.

Concerning marine sediment extraction several issues are addressed like resource mapping, mitigation measures, results of monitoring, harmonization of data, incorporation of archaeological and cultural heritage values, guidelines for EIA's and policy and legislation in the member countries.

The major aim of the session is to discuss in what way the extraction of marine sediments can become more and more a sustainable activity with minimal and preferably temporal effects on the ecosystem in line with the MSFD.

Keywords: marine sediment extraction, effect monitoring, resource mapping

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