

CIESM Congress Session : Metal distribution in sediments
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Moderator's Synthesis

The main points of the discussion were as follows:

- Studies on metal contamination are generally focused on hotspots located in coastal areas (urban and industrial districts, estuaries, mine tailings etc.) or offshore discharge sites. Research approaches have been developed for these point-based investigations and widely tested by scientists. Are the current research methodologies suitable to assess the impacts of large-scale contamination related to anthropic activities like, for instance, the increasing ship traffic in the open sea? Ship traffic is an important stress factor for the sea and has to be taken into account in the Mediterranean as well as in the Baltic Sea-North Sea regions. It is probably too early to observe evidence of these impacts on offshore sediments, and future scientific efforts for marine scientists should be focused on the development of new strategies to investigate these processes in the water column (i.e. inputs of particulate-bound metals along main ship routes) or in the topmost sediment.

- From the contributions presented in this session and in other parallel sessions of CIESM 2016 (sessions 11, 18, 21, 25), it seems that the practice of discharging contaminated materials in coastal and open waters is still widely used, surprisingly also by countries where strict EU regulations or other international conventions apply. Even buried deposits from the past (some date back to historic times and not just the industrial era) are still a threat the marine ecosystems as materials can be eroded and contaminants transported in contiguous or remote areas by natural processes like wave action, currents, cascading, submarine groundwater discharge. In some cases we are not fully aware of the risk associated to this secondary transport processes which can only be understood by integrating contamination studies with knowledge on water circulation both on local and basin scale.

