

Detection and monitoring of biological effects of deliberately dumped chemicals at sea

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Deliberate dumping of wastes and hazardous chemicals at sea is currently strictly forbidden by international law. However, before the rise of environmental concern only half a century ago and the development of regulations sea dumping was common practice worldwide, and is still reality in many countries despite of this. Cases of illegal dumpings are today common news even in European countries where the regulations are supposed to be more carefully controlled than elsewhere. These "sins of the past" emerge as a potential environmental hazard when in the dumping spots the vials become corroded, broken and starting to leak their contents. This can have destructive effects on local ecosystems and may be largely unnoticed since the sites of illegal dumping are usually not known and cannot thus be monitored.

A special case currently raising high concern is the dumping of chemical warfare agents (CWA) from WWII. Some of the main dumping sites in Europe are known, and e.g. in the Baltic Sea research activities are currently ongoing in the CHEMSEA project. In addition to shells, ammunition, vials and ship wrecks containing CWA the dumping of regular ammunitions (containing e.g. TNT) is by some experts regarded as an even higher and more widespread environmental risk.

The proposed special session invites researchers with data and observations on biological effects measured on field in areas of known or suspected sea dumping of hazardous materials (however, not including dumping of dredged sediments). Presentations on effects recorded at different levels of biological organization (e.g. molecular, subcellular, physiological, organ, individual, population and community) and trophic levels are welcomed, including also presentations on planned activities on the research issue.