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Seafood safety in France: an assessment of the chemical contamination over the 2015-2020 period in the context of the MSFD

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In the frame of the marine strategy framework directive, France has developed a method to characterize the status of contaminants in seafood. Taking advantage of national consumption data, contaminant exposure in the French population and contaminant concentrations in seafood over the 2015-2020 period, we conclude on the status of chemical contaminants and marine biotoxins in the four French marine subregions using risk assessment methodologies.

At the national level, we find that 38.5% of the contaminants achieve good status for all types of seafood. At the regional level, lead and mercury are found at too high levels in fish of the Mediterranean sea. Similarly, lipophilic and paralytic shellfish toxins in molluscan shellfish of the Mediterranean lagoons are found at levels that could pose a risk to human health. In the Channel and Atlantic marine regions, the contaminants not reaching good status are cadmium in crustaceans and predatory fish, lead in molluscan shellfish, the sum of NDL-PCB in fish and the sum of dioxins, furans and DL-PCB in fish and molluscan shellfish but also lipophilic, paralytic and amnesic shellfish toxins in molluscan shellfish.

Our conclusions are in line with the previous assessment cycle (2010-2015) reinforcing the need for action to protect marine ecosystems from chemical pollution and therefore human health.

Keywords: trace elements; persistent organic pollutants; trophic level; monitoring

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