

MONITORING OF TOXIC PHYTOPLANKTON AND BIOTOXINS IN SHELLFISH GROWING AREAS OF THE CATALAN COAST. YEARS 2016-2017.

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Abstract: Along the Catalan coast, there has been a decrease in HAB events during the last years. The last important closure due to blooms of *Dinophysis sacculus* in Alfac Bay was in 2012 (García-Altres et al. 2016). A reduction of closures of shellfish harvesting areas, to some extent, is due to the application of new methodologies for the analysis of toxins (LC-MS for lipophilic toxins), changes in the regulated limits of toxin contents in shellfish and a decrease in the phytoplankton cell abundance for some toxic species. During the years 2016 and 2017 a total of 2608 phytoplankton samples were analysed. In the same period, samples of molluscs and echinoderms were collected for the analysis of toxins: 643 for lipophilic toxins including DSP (Diarrhetic Shellfish Poisoning) toxins, 620 for PSP (Paralytic Shellfish Poisoning) and 421 for ASP (Amnesic Shellfish Poisoning) toxins. Two preventive closures were enforced due to the presence of *Alexandrium minutum* over alert levels in the area of Vilanova. There were no closures due to detection of toxins over regulatory levels. The presence of *Pseudo-nitzschia* in high abundances is frequent in the Ebro delta embayments where blooms of *Pseudo-nitzschia* last over months in the area (Andree et al., 2011) while domoic acid in shellfish has never been detected over regulatory levels. The phytoplankton alert level for *Pseudo-nitzschia* in embayments and enclosed areas was increased 2015 from 200,000 to 2.10⁶ cells/L in order to avoid false alerts which were frequent in the past, while in the open shore is maintained in 200,000 cells/L.

Key words: Mediterranean Sea, HABs, Biotoxins, Shellfish growing areas, Catalonia.

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