

CIESM Congress Session : Harmful Algal Blooms (HABs)

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Moderator's Synthesis

Harmful algal blooms (HABs) can potentially have large negative impacts on human health and the introductory talk focused on the quantification of such impacts and their possible mitigation. Shellfish testing for algal toxins has prevented many cases of shellfish poisoning. However, it is unclear how many cases of shellfish poisoning could not be prevented, due to wild-picking of shellfish. The flash presentations showed new findings on the distribution and toxicity of potentially harmful algae species in Turkish, Lebanese and Tunisian waters, particularly of *Pseudo-nitzschia* and *Ostreopsis*. Furthermore progress was shown on Q-PCR measurements of *Ostreopsis* across Mediterranean waters and on the vulnerability of *Pseudo-Nitzschia* to pollution with polycyclic aromatic hydrocarbons.

We discussed present knowledge gaps that hamper the understanding and mitigation of human health impacts of HABs. One important issue is that many symptoms of shellfish poisoning, like diarrhoea, fever and vomiting can also be due to other causes and are therefore likely not to be recognized by patients and doctors. Many people are even unlikely to visit a doctor when they experience these symptoms. And if they do, the doctors will not report these cases to databases for research. Therefore, it is hard to estimate the human health impact of HABs and how it can be reduced. Another aspect is that we often do not know the distribution of harmful algal species in coastal waters and how toxins are transferred through the food-web. We discussed how fast Q-PCR methods can help to get more and cheaper measurement on the distribution of harmful algal species to enable reliable early warnings. The advantage of Q-PCR is that if you want to analyse many samples of a specific species, it is cheaper and faster than traditional analyses with the microscope. However, if you are also interested in other species and have relatively few samples, using a microscope is cheaper and more informative.

