

Artificial Intelligence System for advice on precautionary closures of the Vigo estuary due to lipophilic biotoxins

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The importance of aquaculture has been increasing in recent decades. Mussel farming is one of its main pillars at the international level. The main natural threat to this type of farming is harmful algal blooms (HABs). This is because these blooms produce toxins that, although harmless to the molluscs, accumulate in their flesh and pose a risk to humans after consumption. In Galicia, Spain's main producer of cultivated mussels, the opening and closing of production areas is controlled by a human-based monitoring programme. In addition to closures resulting from the presence of toxicity exceeding the legal threshold, in the absence of confirmatory sampling and the existence of risk factors, precautionary closures can be applied. These decisions are taken by experts without the support and formalisation of the expertise on which they are based. This study aims to create an application capable of predicting the appearance of harmful algal blooms. This will provide early support for decision-making in the management of mussel production areas.