

# Chapter 10

## Key Questions and Recent Research Advances on Harmful Algal Blooms in Fjords and Coastal Embayments



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### 10.1 Introduction

Fjords and coastal embayments are coastal systems that are partially surrounded by land. As such, they tend to be heavily affected by terrigenous runoff, sediment transport and other land–sea interactions. When the international Programme on Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB) was initiated more than 10 years ago, it was thought that we should pay particular attention to these systems, because harmful algal blooms (HABs) often prevail and because some of their characteristics differ from those of other systems examined in the GEOHAB Programme. As an example, coastal embayments are often shallow and thus particularly affected by the link between the water column and bottom sediments. Fjords on the other hand are characterized by estuarine-type circulation patterns, which may provide good retention areas for benthic cysts and subsequent vegetative growth of some harmful species.

The Core Research project (CRP) on HABs in Fjords and Coastal Embayments was initiated with an Open Science Meeting in April 2004 in Viña del Mar, Chile. This meeting served to examine the various types of coastal systems where HABs were recurrent and to identify key features of these systems (Cembella et al. 2005; GEOHAB 2010). The other major goal of that meeting was to identify key questions for research that should promote advances in our understanding of the

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