Box 8.1: Case Study: Transboundary EIA in the construction of the fixed links across the Danish straits (Source: ARTWEI Case Study Database; http://www.balticlagoons.net/artwei/?page_id=1770)

Experiences that can be exchanged
In the case of the Sound fixed link, a transboundary EIA was carried out in 1994 when the construction process had already been going on for three years. Despite these constraints, the project was successfully completed and is now seen as a model of environmental sensitivity and protection. In the case of the Fehmarn Belt link, a transboundary EIA is currently under way, taking into account mistakes and lessons learned from the controversies of the Sound fixed link.
Overview of the case
In 1991, the construction of a fixed 16 km long link carrying both road and rail traffic across the Sound between Denmark and Sweden commenced. The link includes a 4 km submerged tunnel, an 8 km, two-deck bridge, and a 4 km artificial island, which links the tunnel and the bridge. The bridge and tunnel were opened for traffic in 2000. Its opponents claimed that the bridge piers, landfills and an artificial island might reduce water exchange in the Baltic Sea. The original design of the fixed link was such that it would have reduced the flow of water through the Sound by 2.5% (EIA 1994). As the Sound is one of the key transitional water straits linking the Baltic Sea with the North Sea, pressure from environmental organizations had led to substantial changes in the design decreasing the reduction of the water flow to 0. Connecting Denmark to Germany, the Fehmarn Belt fixed link will be the largest infrastructure project in Europe. The project consists of a double-track rail line and a four-lane motorway. Initial geological and environmental investigations to determine the fixed link have been initiated after the Fehmarn Belt link treaty was signed by Ministers of Transport of Denmark and Germany in 2008. The Danish and German parliaments have also approved the project. The fixed link will either be a 19 km cable-stayed bridge, or a 20 km submerged tunnel. According to the German Nature Protection Society, the bridge would obstruct 90 million migratory birds every year, and damage the Baltic region's ecosystem (Fehmarn Belt Link 2011).
ICZM tools
In the case of the Sound fixed link, politicians had to engage in promotional activity in search of public consensus and to respond to environmental groups' opposition. The EIA of the fixed link was triggered by Greenpeace, which was granted legal standing in a case concerning absence of a proper EIA for the project. The case resulted in a favourable decision of the Swedish Water Court and, ultimately, approx. € 0.5 billion have been spent to conduct a comprehensive EIA and amend the project accordingly. In the case of the Fehmarn Belt fixed link, Denmark and Germany have informed Sweden of a planned fixed link well in advance, in accordance with the Espoo Convention. In preparation for the project's EIA, a scoping report has been drafted to describe the preliminary content of the continued work (EIA Scoping Report 2010). The Swedish Environmental Protection Agency is the agency responsible for submitting and receiving notifications, and in other ways fulfilling obligations regarding the EIA in transboundary contexts. It has compiled and submitted a summary of requests and remarks from a broad array of Swedish stakeholders that might be affected by the construction of the fixed link – from the Swedish Fishermen's Association to the City of Malmö, the County Administrative Board of Skåne County and the Swedish Maritime Administration. The Swedish EPA, however, was not responsible for balancing any views against each other or submitting a comprehensive statement on behalf of Sweden. The key issues suggested by the Swedish stakeholders for the inclusion into the environmental report were: exchange of water, related to salt concentration and oxygen content between the North and the Baltic Seas, effect on the Natura 2000 areas and endangered species, influence on the fishing and tourist industries from a regional perspective, etc.
Success and failure factors
Success factors: 1. Prompt establishment of a multilateral expert panel. 2. Close cooperation among all interested states. 3. Greenpeace, backed by other environmental organizations, experts and the Swedish Water Court, succeeded in bringing major amendments to the project. Failure factors: 1. EIA of the Sound fixed link was made at such a late stage, that it could not possibly have influenced the final decision (Falkenmark 1999). 2. The search for alternatives of the Sound fixed link was problematic since the objectives for the project were widely dispersed, varying, fluid, and changing over time, and the purposes of the project were manifold and diverse (Markus & Emmelin, 2003).