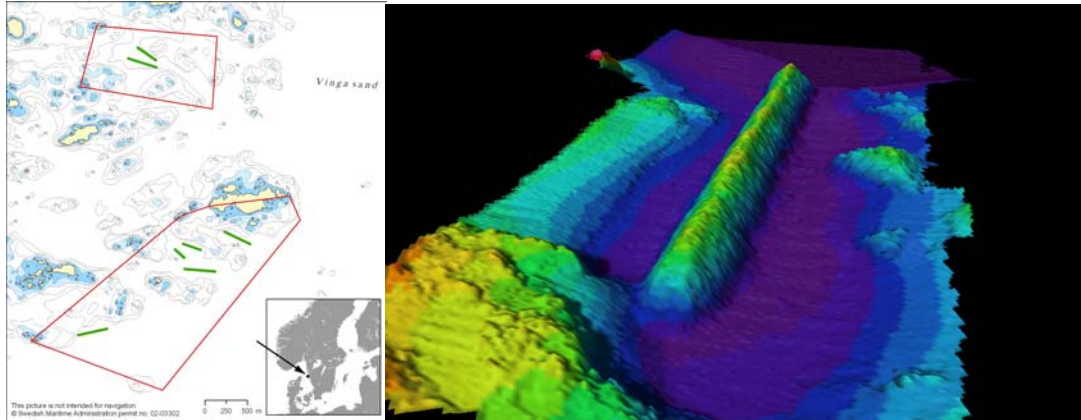


Case study – Gothenburg reefs

Location: Within two protected areas (Tanneskar and Buskar) outside of Gothenburg Harbour, Sweden, on a sandy bottom and in depths between 20 and 37 metres.



Authorisation: a permit was issued by the Swedish Environmental Protection Agency following an environmental impact assessment.

Date of construction: 2003.

Purpose of reef: to compensate for the loss of habitat caused by the deepening of the shipping channel into Gothenburg Harbour, in particular habitat utilised by lobster.

Size, design and materials: The project involved the construction of 7 reefs, each 130 – 380 metres long, 30 – 45 metres wide and 4 – 14 metres high. They were made of approximately 800 000m³ of rocks excavated during the deepening of the shipping channel.



Monitoring programmes: A significant monitoring programme to track the development of biological communities on the reefs – and to assess their effectiveness in terms of increasing productivity of particular species (lobster, brown crab, cod, saithe, pollack and whiting) - was conducted with EU funding between 2002 and 2007.

Did the reef fulfill its purpose? The monitoring programme showed that certain species – including lobster and commercial fish species such as cod – were strongly attracted to the reefs. Lobsters, for example, migrated onto the reefs within 4 weeks of construction. However, the monitoring period was too short to allow conclusions on increases in productivity.

Environmental impacts: biodiversity was negatively influenced by heavy sedimentation at some parts of the reef and, at some sites, by the development of sulphur bacteria, indicating a lack of oxygen.

Further reading/information: <http://www.lansstyrelsen.se/vastragotaland/English>

→ Go to full QSR assessment report on construction or placement of artificial reefs (publication number 438/2009)