

Effects on the seabed and associated benthic communities and habitats

The physical impact of bottom tending gear on the benthos remains a concern, particularly with respect to the damage to coral reefs. In the Norwegian Sea (Region I), damage to deep-water coral reefs has been documented in the eastern shelf areas and has resulted in area closures for bottom trawling. It is estimated that 30–50% of the coral areas may be damaged or negatively impacted (Fosså *et al.*, 2002; ICES, 2008b).

Effects on other bottom fauna could be expected from bottom trawling activities in the eastern shelf areas. On the Faroe Plateau trawling activity has caused a significant reduction of the distribution of corals (e.g. *Lophelia pertusa*) on the shelf and bank slopes, prompting the Faroese authorities to close three coral areas for trawling in 2004 (ICES, 2008a). This species also forms large bioherms or reefs on the offshore banks (Rockall and Hatton) in Region V (Freiwald, 1998; Rogers, 1999) and may occur on the seamounts in this region. Many areas remain to be surveyed for *Lophelia pertusa* and so the full extent of damage due to fishing gears has yet to be evaluated.

Fishing is a major disturbance factor of the continental shelf communities of OSPAR Region IV and in some areas the area disturbed has increased. The Great Mud Bank (Grande Vasière) stretching from north to south in the centre of the Bay of Biscay is heavily trawled especially by the *Nephrops* trawler fleet. On average, the northern part is swept six times a year and this is suspected to have changed the sediment grain size through resuspension of fine materials, causing a decrease in the proportion of muds found on the Grande Vasière grounds (Bourillet *et al.*, 2004; Bourillet *et al.*, 2005; ICES, 2008a). Such changes to the physical habitat have the potential to cause substantial and long-term changes to benthic ecosystems, including negative impacts on burrowing animals such as *Nephrops* (ICES, 2008a). In the heavily exploited areas, the dominant benthic species are opportunistic carnivorous species of minor or no commercial interest and there were no fragile invertebrates (Blanchard *et al.*, 2004).

➔ *Go to full ICES assessment on impact of fisheries on the marine environment of the OSPAR maritime area (ICES Advice 2008, Book 1, section 1.5.5.9)*