

Sector characteristics

### Offshore wind farming

Offshore renewable energy is the fastest growing sector of the blue economy in Europe.

Although growth is still greatest in northern Europe, offshore wind farms are also being developed in the Mediterranean.

The risk of accidents caused by vessels are a major concern for the sector. Many countries do not allow vessels and fishing activities in offshore wind farms.

Areas suitable for offshore wind farming are often also important for fish reproductive biology.

### Commercial fisheries

Commercial fisheries represent an important economic sector in many EU countries.

Fleet capacities have been reduced, but the sector is generally profitable at present.

Access to reliable fishing grounds is an important prerequisite for sustainable fisheries, especially small-scale fisheries near the coast.

Preserving spawning and nursery areas is likely to be of increasing importance in the face of climate change. Yet important fish habitats are often also preferred sites for offshore wind farm construction.

Conflict description

#### Accidental damage and ship strikes

A key element of conflict is accidental damage to turbines and cables and ship strikes. Especially bottom trawling may cause damage to subsea cables.

#### Exclusion and displacement of fisheries

Although this is changing, many countries do not allow navigation near wind farms for safety reasons. Most types of fishing are prohibited in offshore wind farms, also for safety reasons and concerns about cable damage.

#### Socio-economic and environmental impacts of closures

Fishers may be forced to re-allocate their fishing effort to alternative sea areas with lower profits and/or less reliability in catches. Harvesting fish resource in alternative locations might run the risk of catching vulnerable elements of the stock. Displacement of small scale fisheries can increase operational costs and threaten their livelihoods

Drivers of conflict

#### Offshore wind farm expansion

The EU, as well as the EU member states have set themselves ambitious renewable energy targets. This, together with technological developments and cost reductions, leads to the projected expansion of offshore wind farming into larger areas and areas further offshore.

#### Similar spatial requirements

The main source of conflict between offshore wind farms and fisheries is the fact that both sectors have similar spatial requirements, including specific depth ranges, sediment types, and proximity to coast.

#### Safety concerns

Safety zones around offshore wind farms restrict vessel traffic generally, including fishing vessels. During offshore wind farm construction, and also during operation, fishing may be totally excluded from the area.

Possible solutions

### Prevention

- 1 Use high-level policy to ensure impacts are considered
- 2 Acknowledge the special status of fishers in the MSP planning process
- 3 Draw on fishers' knowledge to create an evidence base
- 4 Choose suitable offshore wind farm locations with care
- 5 Set up a liaison group for MSP early on.
- 6 Use the MSP plan to favour synergies and co-existence

### Mitigation

- 7 Allow some types of fishing in offshore wind farms under certain conditions
- 8 Support fisheries by designating migration corridors
- 9 Allow fishing vessels to transit offshore wind farms
- 10 Align construction phases with fisheries seasons.
- 11 Support collaborative agreements
- 12 Use an adaptive approach based on coordinated research.
- 13 Produce guidance notes and licensing materials
- 14 Consider technical solutions

Future trends

Offshore wind developments in the EU will continue to increase mainly in the Baltic Sea and the North Sea, while the Mediterranean is also expected to have its first developments.

Floating wind turbines are of interest for the future development of the sector, especially in the deep-sea areas (i.e. Mediterranean and the Atlantic).

Changes in risk perception and different wind farm design may make it more likely that some types of fishing will be allowed in offshore wind farms.

More environmentally friendly fishing practices may mean less bottom trawling as this has major environmental impacts, therefore reducing conflicts with offshore wind farming.

There is also a fundamental shift within the industry, with fewer persons entering the profession and an overall reduction in the size of the fleet.

Synergies may increasingly be explored between the two sectors, leading to new concepts of multi-use (e.g. tourism, using fishing vessels for servicing).