

What has been done? Did it work?

There are international and national measures that guide the identification, assessment and mitigation of the potential impacts for marine works, including offshore wind-farms. If these measures are followed it is possible that many of the potential problems in Table 2 and discussed above can be resolved for a specific application. However, as already stated in this report as the rate and scale of OWF development increases beyond 2010 levels additional measures may become necessary.

The EU EIA Directive (85/337/EEC, as amended by 97/11/EC) requires Member States to adopt all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. In line with the requirements of the Directive an EIA is to be carried out in support of applications to develop certain types of project as listed in the Directive at Annexes I and II. Offshore wind-farm developments are listed in Annex II as 'installations for the harnessing of wind power for energy production (wind-farms)'. Projects listed in Annex II shall be made subject to an assessment where Member States consider that their characteristics so require. For the majority of offshore wind-farm developments in the OSPAR area contracting parties have decided that an EIA is necessary (OSPAR, 2008a).

EIA is essentially a predictive tool involving the systematic assessment of a project's likely significant environmental effects. The purpose of the EIA process is to ensure that all the likely effects of a development are fully understood and taken into account before a development is permitted to go ahead. The approach to EIA should be:

- to provide a complete and objective description of the development;
- to provide as complete as is possible description of the existing environment;
- to provide as systematic and objective an account as is possible of the direct and indirect environmental effects to which the project is likely to give rise;
- to describe and present the data gathering and interpretation that underpins the assessment of the identified environmental impacts;
- to provide an overview of the available knowledge and identify what effect knowledge gaps may have on the certainty of predicting environmental effects;
- to formulate evidence based conclusions supported by the information gathered in the EIA process.

All these steps should be reported in an Environmental Statement to a level of detail sufficient to provide the public and competent authorities with a proper understanding of the importance of the predicted effects and the scope for reducing them.

By following the EIA process OSPAR Contracting Parties have been able to consent and construct OWF within their national waters (OSPAR 2007). In this context the existing measures at the international level for EIA are sufficient and have been shown to work. However, the importance of guidance in the identification and assessment of impacts at both the international and national level has been highlighted.

National guidance has been (and is being) developed to assist developers and regulators in the assessment and consenting process, examples include:

- Standards for Environmental Impact Assessments of Offshore Wind Turbines on the Marine Environment (StUK 3). Issued by Bundesamt für Seeschifffahrt und Hydrographie, February 2007 (Germany);
- Offshore Wind-Farms – Guidance note for Environmental Impact Assessment In respect of FEPA and CPA requirements. Version 2 – June 2004 (United Kingdom);
- Nature Conservation Guidance on Offshore Wind farm Development – A guidance note on the implications of the EC Wild Birds and Habitats Directives for developers undertaking offshore wind-farm developments. March 2005. Defra (United Kingdom).

OSPAR is also developing guidance to assist contracting parties (in particular those that have yet to embark on the process of establishing offshore wind energy schemes) with the assessment and consenting of offshore wind-farm developments. Guidance on location, construction, operation and removal of offshore wind-farms has been produced and consolidated into a single guidance document to cover the whole life-cycle of an offshore wind-farm (OSPAR, 2008b).

This guidance (in parallel with the available generic EIA guidance) has proven invaluable in ensuring that the key marine environmental issues are identified and adequately assessed within the EIA and consents processes. It is important that such guidance is reviewed and updated in light of new and improved knowledge and understanding of the construction techniques and environmental effects.

All OWF developments in the United Kingdom and to the best of our knowledge in other OSPAR Contracting Parties require robust ship collision risk assessments to be undertaken. It is also an essential component of the licensing procedures that site-specific marine pollution contingency plans are developed and implemented. Employing such measures will assist in planning projects to minimise the risk of impacts.

The remainder of this section concentrates on the outputs of research and monitoring studies at offshore wind-farms and the assessment of peer-reviewed literature on analogous activities and how this information can be used in the assessment and consents process.

↪ Go to full QSR assessment report on the environmental impact of offshore wind farms (publication number 385/2008)