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BACKGROUND

Countries around the world are embracing offshore wind. The global installed offshore wind capacity is expected to reach more than 600 gigawatts (GW) by 2050.

An expansive growth in renewable energy, including offshore wind, is needed to address fatal climate change. Unfortunately, in many countries there is inertia in the process of consenting and permitting, and it often takes 10 years from a political decision to an OWF is in operation.

There are many reasons for this; including resources, complicated processes and complaints, tender processes as well as lack of acceptance.

OBJECTIVE

NIRAS has looked at permitting/licensing processes in a number of countries (APAC and Europe), and worked extensively with development of offshore wind globally.

By sharing these global experiences, we can jointly learn from each other and in that way find the most effective – and needed - way forward.

METHODS

- Permitting and environmental impact assessment systems have been studied for numerous countries (United Kingdom, Ireland, Taiwan, Japan, Denmark and Sweden)
- The countries above represent both mature countries in terms of offshore wind development, and countries where offshore wind is a more immature industry.
- The study is based on practical experience from working globally with offshore wind development, as well as desk studies and interviews with regulatory bodies in many countries.

RESULTS & LEARNINGS FROM DIFFERENT COUNTRIES

United Kingdom:

In UK OWF (>100MW) is defined as Nationally Significant Infrastructure and set out a rigid timeframe for the assessment, consultation and determination of consent applications, including public hearings. The process from submission of application to consent typically takes 12-18 months.

However, this is only the permit application phase. Much of the overall timeframe occurs before this, including identification of lease areas (2-3 years), environmental surveys (regulators demand 2 years of baseline survey data for birds), and EIA preparation (1-2 years).

A more streamlined approach to site identification, strategic assessment, survey and EIA could increase speed.

Denmark:

Most large scale OWF's in Denmark are developed under the Danish Energy Agency's (DEA) tender scheme, as part of political agreements. The DEA announces a site-specific tender for an OWF of a specific capacity. Next to that is an open-door-scheme where developers take the initiative to establish an OWF. This scheme is mainly used for smaller OWF's located closer to shore.

DEA is a "one-stop-shop"-authority in the establishment of OW. It often takes 7-10 years from a political decision to an OWF is in operation

DEA has just initiated a tender process for conducting a strategic screening and evaluation of the potential offshore wind farm capacity, including sensitivity analysis and evaluation of cumulative impacts. Will hopefully increase speed and secure a more holistic approach to mitigation actions (not solely looking at single OWF).

For both **Denmark, UK and other European countries as Sweden and Germany** the legislation that has had the biggest impact on survey and assessment requirements has been the Habitats Directive – is used by Government Departments and NGOs to justify higher standards (and duration) of surveys, more detailed (quantitative) impact assessment and has been a main source of legal challenges. Requirements for an up to three years survey programme is not unusual.

APAC:

1. Vietnam: Ministry of Environment is trying to pause OWF development, because permit path is unclear. The Power Development Plan has been stalled for nearly 2 years.
2. Japan: The current EIA system not up to OWF demands – the government is working on adjustments.
3. Taiwan: A flexible permitting process has led to the demise of one project, and a delay in another. A quite chaotic approach to site planning has led to an overheating of the market (too many developers competing; for example, one OW site was developed by 6 developers, all doing their own consenting, e.g., EIA)
4. Philippines: Has just started with applications, but with no permitting and consenting pathway, and road to market is unclear. But good progress in process.
5. Korea: Has a pathway but everything gets stuck after the Electricity Power License, because the scheme is not "fit for purpose" and too sketchy.

In APAC there are generally a lack of spatial and holistic planning from the governments. Auction systems have been implemented – very often it is the dream of cheap vs extracting most value. Most countries do not have a one-stop-shop model. Results in splintered consenting – often single permits become extremely important. As OWF is new, existing regulations are often used – which might be too flexible and leave too much room to interpretation – prolonging the process.

Be Brave!

- There will be environmental consequences as part of the development of OW, but what is the 'do nothing' alternative?
- Dare to ease the pressure on affected birds and mammals by introducing restrictions on other activities than OW (as hunting and commercial fishing)
- Countries must work together to get an overview and uniformity in requirements, and to secure handling of cumulative effects.
- Derogation processes (i.e., consenting projects where adverse effects on European sites cannot be ruled out) could add (many) years to affected projects. To provide compensation measures at any significant scale it seems inevitable that some sort of habitat (or species) banking process will be needed.

MR. BRAVE

By Roger Harrgreaves



"Politicians discussing global warming" – a sculpture in Berlin made in 2011 by Isaac Cordal. Equivalent to the inertia in the process of consenting and permitting we see in many countries. Increased speed is needed to avoid fatal climate changes.



Factors needed to increase speed – not just a permitting issue!

CONCLUSIONS

Increased speed is not a stand-alone goal! Maximum efficiency for the lowest effort, is what we should aim for.

Look at all parts of offshore wind development; both the offshore infrastructure, the transmission system, storage etc. Crucial that the produced electricity can be utilized.

Cross-boundary cooperation and planning of energy supply is required – can be countries in Europe, states in the US or countries in APAC. Development of OW is not solely a national matter but affects energy supply on the larger scale.

Conduct strategic screening and evaluation of the potential offshore wind farm capacity on national level, including sensitivity analysis and evaluation of cumulative impacts

Offshore wind affects among other birds and marine mammals. The same species are affected by hunting of ducks and catching mammals in nets during commercial fishing. Have the courage to ease the pressure on affected birds and mammals by introducing restrictions on other activities than OW.

For Europe, Habitat Regulation (also EU's Water Framework Directive) is a huge challenge – used by Government Departments and NGOs to justify higher standards (and duration) of surveys, more detailed (quantitative) impact assessment and has been the main source of legal challenges.

Place OWF's far from coast lines to minimize visual, noise and light impacts on population – avoid NIMBY-effects.

If society wishes to substantially ramp up power from renewable energy, we need to assess our priorities. There will be environmental consequences, but when we evaluate these, we perhaps need to do a better job of assessing the 'do nothing' alternative. Impacts should not be ignored, but there should be an openness to ideas such as strategic compensation, non 'like-for-like' measures etc. And perhaps have a slightly higher bar when it comes to adverse effects.

A "one stop shop"-model, with a single appointed responsible national authority often means an easier, uniform, coordinated and faster handling of the development of OW.

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