Offshore - Windenergy

Legal Framework and Current Situation
Blank: The Continental shelf/ Exclusive Economic zone

Nordsee: Festlandsockel/ausschließliche Wirtschaftszone (AWZ)
German EEZ in the North Sea: Existing and Perspective Uses and Nature Conservation
German EEZ in the Baltic Sea: Existing and Perspective Uses and Nature Conservation
Horns Rev;  80 Turbines;  
20 sqkm
The German EEZ

Baltic Sea: 4,500 km²

North Sea: 28,600 km²
BSH - Competence within the German Exclusive Economic Zone (EEZ)

maritime area beyond the 12 sm-border (up to 200 sm)
not German territory
• under consideration of the United Nations Convention on the Law of the Sea (UNCLOS)
• Legal base for approval: „Seeanlagenverordnung“ SeeAnlV (Federal Maritime Facilities Ordinance)...
also applies in the EEZ to the power cables for the grid connection.
• Legal base for economic conditions:
Renewable Energy Sources Act (Erneuerbare Energien Gesetz, EEG) of 1998
Infrastructure Planning Acceleration Act of 2006
Administrative borders

Offshore Windpark "Borkum-West" mit Kabelanbindung
UNCLOS Article
60

• *Artificial islands, installations and structures in the exclusive economic zone*

• 1. In the exclusive economic zone, the coastal State shall have the exclusive right to construct and to authorize and regulate the construction, operation and use of:
  • (a) artificial islands;
  • (b) installations and structures for the purposes provided for in article 56(1 (a)=“...production of energy...”) and other economic purposes;
  • (c) installations and structures which may interfere with the exercise of the rights of the coastal State in the zone.

• 2. The coastal State shall have exclusive jurisdiction over such artificial islands, installations and structures, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws and regulations.
Article 58
Rights and duties of other States in the exclusive economic zone

1. In the exclusive economic zone, all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and compatible with the other provisions of this Convention.
Traffic lights, Feuer W rot

WEA Breitling
Approval criteria from UNCLOS

Art 60
7. Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation.
Character of the approval (§ 3 SeeAnlV):

**non-discretionary administrative act**
- no discretion (legal claim for approval if conditions are met)
- no legal basis for balancing of interests

**no concentration-effect**
- further approvals necessary (coastal sea, other agencies)
Approval-Process Offshore Windenergy

§ 3 SeeAnlV: There are just two reasons for refusal!

The project may not impair the safety and efficiency of navigation
  - prior consent of regional Waterways and Shipping Directorate (WSD)
Risk to the maritime environment, including the bird migration
  - environmental impact assessment
  - if necessary: assessment according to the Birds-Directive and Fauna-Flora-Habitat (FFH)-Directive
Shipping lanes

The AIS approach
Research Issues; safety of shipping

Simple research campaign:
Impact of radar visibility?

First scientific approaches:
analyzing of potential risks;
(How many years between 2 collisions)

Collision-friendly Foundations
Approval-Process Offshore Windenergy

Assessment of marine environment

- **intensive investigations** of the condition of the project area in the sea before approval (1 year)
- **monitoring-program (several years)** after approval (effects on animals ?)

  - *investigated subjects*
  - Birds (resting birds, migratory birds)
  - Fish
  - Benthos (animals on the seabed)
  - Marine mammals (porpoise, seals)
  - natural scenery
  - cultural assets
The habitat approach

High densities of long-tailed duck, Clangula hyemalis, in the Pomeranian Bay in 2000

Source: Skov 2000, unpublished
Decision criteria: habitat loss

High densities of four common bird species in the Pomeranian Bay in 2000

Source: Skov 2000, unpublished