FUNCTIONAL INTERACTIONS AND REGULATORY PREROGATIVES

THE MUTUAL ACCOMMODATION OF OFFSHORE WIND FARMS AND INTERNATIONAL NAVIGATION AND SHIPPING

Aldo Chircop & Peter L’Esperance
Marine & Environmental Law Institute
1. Introduction
2. Issues
3. Balancing coastal State and other user rights
4. Roles of maritime regulation
5. Conclusion
1. Introduction

- OWFs: A new ocean industrial use on a fast growth curve
  - Initially in TS, now going offshore to 100+nm
  - Impacts on other ocean uses and generates conflicts
  - Raises maritime safety concerns for other users and OWF/workers themselves
  - Necessity of marine spatial planning
Research questions

• How does the law of the sea balance the interests of coastal States in establishing & operating OWFs with the interests of other ocean users and neighbouring States?

• To what extent and in what manner might maritime safety regulatory approaches and tools be employed to address the needs of OWFs and help avoid and/or manage potential conflicts?
2. Issues

• Exclusive & long-term occupation of large ocean spaces:
  – Multiple turbines & surface structures (up to 700 meters apart)
  – Safety zones
  – Subsea structures
  – Cables & grid

• Possible impact on local wind & visibility conditions
Issues continued

- Displacement of international shipping and inshore navigation routes
- Impacts on low overflight
- Possible displacement of fishing activities
- Danger of allisions with array and collisions in narrower channels
- Interference with radar functionality
Issues continued

• How to classify OWF vessels (construction & maintenance)?
  – New types of ships and/or new types of installations & structures?
  – Applicable safety standards?
  – Not subject to port State control?

• What is the status of OWF workers?
  – Occupational health, safety standards?
  – STCW training standards?
  – Maritime Labour Convention?
Analogies with offshore oil & gas sector?

**Similarities**
- Space intensive use
- Installations & structures huddled in clusters (array) & use of cables (instead of pipelines)
- Grid network (similar to pipeline network)
- Necessity of exclusive safety zone
- Unique categories of workers (i.e., cannot be described as seafarers)

**Differences**
- Reduced capability to accommodate personnel & equipment
- Wider dispersal of workers, with fewer at any one site
- Less use of aircraft
- Greater reliance on shipping and serves as accommodation & for storage
- More frequent movements
- Vessels & cables cross boundaries

Chircop & L'Esperance, 2014

11/3/2014
### 3. Balancing coastal State and other user rights

<table>
<thead>
<tr>
<th>Zone</th>
<th>Coastal State jurisdiction</th>
<th>International rights</th>
<th>Regulatory consequences for OWF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal waters</strong></td>
<td>Sovereignty</td>
<td>No international right of navigation&lt;br&gt;Exceptions: treaty applies; former high seas now enclosed as internal waters [8(2)]; places of refuge</td>
<td>National regulation&lt;br&gt;International navigation rules and standards applied at discretion of coastal State&lt;br&gt;Port State regimes apply</td>
</tr>
<tr>
<td><strong>Archipelagic waters</strong></td>
<td>Sovereignty</td>
<td>Archipelagic sealanes passage&lt;br&gt;Existing international cables not making land fall to be respected [51(2)]</td>
<td>National regulation&lt;br&gt;International navigation rules &amp; standards apply&lt;br&gt;Archipelagic State to permit maintenance &amp; replacement of cables on the basis of notice [51(2)]</td>
</tr>
<tr>
<td><strong>Territorial sea (12M)</strong></td>
<td>Sovereignty, including straits used for international navigation&lt;br&gt;Right to establish TSS&lt;br&gt;May suspend innocent passage when essential for security&lt;br&gt;Right to establish conditions for cables &amp; pipelines entering territory &amp; territorial sea [79(4)]</td>
<td>TS: innocent passage&lt;br&gt;Straits (1): transit passage in straits&lt;br&gt;Straits (2): innocent passage [Art. 45]&lt;br&gt;Distress</td>
<td>National laws &amp; regulations apply&lt;br&gt;International navigation rules &amp; standards apply&lt;br&gt;Re TSS, to take into account IMO recommendations&lt;br&gt;Must not hamper international navigation</td>
</tr>
<tr>
<td><strong>EEZ (200M)</strong></td>
<td>Seabed, subsoil &amp; water column&lt;br&gt;Sovereign rights over natural resources and to explore and exploit wind energy&lt;br&gt;Jurisdiction re establishment &amp; use of AIIS&lt;br&gt;Jurisdiction re establishment &amp; use of AIIS&lt;br&gt;Exclusive right to construct, authorize &amp; regulate construction, operation &amp; use of AISS for wind energy and installations &amp; structures that interfere with the exercise of its rights&lt;br&gt;Exclusive jurisdiction, including for customs, fiscal, health, safety &amp; immigration</td>
<td>Freedoms of navigation, overflight submarine cables and pipelines&lt;br&gt;Other internationally lawful ocean uses related to these freedoms compatible with LOS Convention</td>
<td>National regulation applies limited to EEZ powers&lt;br&gt;AIIS:&lt;br&gt;-Due notice of AIIS construction requirement&lt;br&gt;-Abandoned or disused installations &amp; structures to be removed taking into account international standards; to take account of other uses; to be publicized if not fully removed&lt;br&gt;-Reasonable safety zones for safety of navigation and islands, installations &amp; structures; up to 500 metres, unless authorized by generally accepted international standards or as authorised by IMO&lt;br&gt;-Due notice of safety zones&lt;br&gt;-AIIS may not be established where they interfere with international navigation&lt;br&gt;-All ships to respect safety zones &amp; to comply with international standards&lt;br&gt;International navigation rules &amp; standards apply</td>
</tr>
</tbody>
</table>
5. Roles of maritime regulation

• Roles:
  – Standard-setting
  – Balancing of rights and duties
  – Conflict avoidance & management

• Key actors:
  – International Maritime Organization (IMO): a competent international organization
  – International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA): a technical & professional body
  – Classification societies
The tool box

• IMO under the SOLAS Convention:
  • Construction and personnel standards:
    – Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989
    – Code of Safety for Special Purpose Ships, 2008
  • Area-based management tools & operations rules:
    – Collision avoidance regulations, 1972 (COLREGS)

Chircop & L'Esperance, 2014
More tools

Other international organizations

• IHO: Chart Specifications
• IALA: Channel Management by AIS Service, 2011
• IALA: Marking of Offshore Man-Made Structures, 2013

Classification societies

• DNV/GL, ABS
• Design & construction standards for offshore wind turbines and related vessels
Purpose: to improve the safety of navigation in converging areas where freedom of movement of shipping is inhibited by restricted sea room and the existence of obstructions to navigation.

The new TSS eastern boundary is outside the TS and is aligned with the planned Galloper wind farm, an extension of the Greater Gabbard (GG) wind farm under construction.
Belgium: Area To Be Avoided in the vicinity of the Thornton and Bligh Banks, EEZ (IMO, 2011)

54 turbines, 10% of Belgian energy production by 2020
Netherlands: 8 proposals for new & amended routeing measures between Texel & North Hinder (IMO, 2012)
6. Conclusion

• Law of the sea as a framework to balance interests:
  – Challenges of a new ocean use not fully anticipated at UNCLOS III
  – International navigation
  – Scope for bilateral & regional cooperation?

• Maritime regulation for conflict avoidance & management:
  – IMO as a forum to balance interests
  – Proliferation and duplication of maritime regulations: development of non-mandatory guidelines re application of IMO instruments to OWF vessels
  – Integration, precaution & marine spatial planning