Consenting and Environmental Challenges for Ocean Energy

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MaREI
Marine Renewable Energy Ireland

Consenting processes: current status

- Ocean energy still tends not to have a dedicated consenting process
  - Internationally, none in 11 out of 14 countries
  - UK and USA have 'modified' consenting processes
- Ocean energy developments are "only beginning to appear"
- Progress on improving consenting procedures varies internationally
- Governance system is a major influencing factor

Consenting processes: development scale

- Different consenting procedure in place for demonstration projects, test centres and full scale developments
  - Australia, China, Denmark, Mexico, Portugal and the U.S.A.
- Many existing test centres in the European Union are pre-consented
  - Scotland and Ireland
- Alternative is to have different types of consents (leases) e.g. U.S.A.
  - Commercial leases,
  - Limited leases and
  - Research leases

Consenting processes: decision-making

- Few countries have a dedicated consenting authority
- Can vary according to proposed development location and size
- Responsibility tends to be split according to the physical elements of a development
- Formal coordination mechanisms are lacking in most places:
  - Some MOUs exist between Ministries
- Few true 'one-stop shops'

Consenting processes: timeframes

- Little consistency in the length of time taken to obtain development consent:
  - Site investigations = months,
  - Full consent = years!
- Reasons for variation:

1. Ocean energy is ‘new’ hence regulatory authorities treat it with caution;
2. Incomplete applications and inappropriate administrative procedures;
3. Uncertainty or doubt surrounding environmental impacts and their assessment.

Lessons so far

- Legislation is fit for purpose, administrative procedures are not
- Move towards 'one stop shop' in Scotland, Denmark
- Different process for different scales of development: UK, Sweden, USA and Ireland
- National targets can drive the industry and its regulation forward
- Same EU legislation but different application in the Member States especially in relation to EIA

Consenting 'Barriers'

- Member States have ultimate responsibility for consenting
- Current status of the industry
- Objectives can 'conflict' with each other and with industry objectives
- Still a lack of coordinated and integrated planning approaches
- Often no defined timelines
- Can be poor communication between regulators and industries = duplication of effort

RESULT = Perception of regulatory risk

Opportunities for Improving Consenting

- More integrated and inclusive approaches to planning
- Full implementation of Maritime Spatial Planning?
- Allocated development zones?
- Clear[er] guidance for developers and stakeholders?
- Novel approaches to consenting?

EU MSP Directive

- Member States required to establish and implement MSP
- Defined as a "process by which the relevant Member State authorities analyse and organize human activities in marine areas to achieve ecological, economic and social objectives"
- Applies to 'marine waters' of Member States only not 'coastal waters'
- MSP "shall take into account land-sea interactions"
- Identify the spatial and temporal distribution of existing and future activities and their interactions
- To be reviewed at least every 10 years

Environmental Context

- New activities in a relatively unknown environment
- Different legal obligations: renewable energy targets versus conservation
- Perception that regulators are "too cautious"
- Main legal drivers are:
  - EU EIA and SEA Directives
  - EU Birds and Habitats Directives
  - *Potentially also* EU Marine Strategy Framework Directive and Environmental Liability Directive

Strategic Environmental Assessment

- Limited uptake of SEA for MRE across Europe
- Can promote more appropriate site selection
- First stop for developers when looking for environmental information
- Assists forward planning

Country	SEA
Denmark	No
France	No
Ireland	Yes
Portugal	No
Spain	Yes (of NREAP)
Sweden	No
UK	
England & Wales	Yes
Scotland	Yes
Northern Ireland	Yes

Experience with EIA

- EIA requirements for Ocean Energy tend to be the same or modelled on those for offshore wind;
  - Portugal – dedicated procedure for EIA of ocean energy
- Developers (SME) view costs associated with EIA as prohibitive
- Parameters included are heavily influenced by location
- Seemingly less rigorous requirements for:
  - Small-scale developments
  - Time-limited developments
- Little or no consistency in methodologies
- Little or no requirement to consider socio-economic impacts

EIA Parameters

Parameter	AMETS	*bimep*	Lysekil	Ocean Plug	SEM-REV	Wave Hub
Bathymetry	X				X	X
Geomorphology	X			X	X	X
Hydrodynamics	X	X		X	X	X
Noise		X	X			X
Benthos	X	X	X		X	X
Fish/shellfish		X	X			X
Plankton						X
Marine mammals	X	X	X	X		X
Birds	X			X		X
Visual impacts	X					X
Archaeology						X
Navigation/ Shipping	X					X
Fisheries	X			X		X
Economics						X
Tourism						X

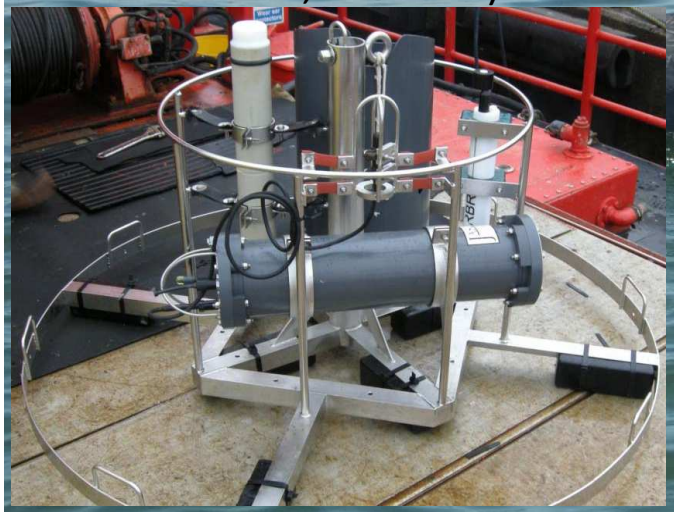
Example: Marine Mammal Monitoring

T-PODs & C-PODs (WaveHub; EMEC; AMETS; offshore wind)

Boat-based surveys (WaveHub; Pilot Zone)

Land-based surveys (EMEC)

Static hydrophones (WaveHub; BIMEP; Reunion)



Towed hydrophone surveys (AMETS)

Aerial surveys (Pilot Zone; tidal sites)

‘Issues’ with Conservation legislation

- Lots of sites!
- Definitions
- Need for certainty
- Costs
- Precaution
- Who decides?

Environmental 'Barriers'

- Member States interpret and apply EU legislation in differently
- Uncertainty of effects/impacts often translates into 'onerous' environmental monitoring
- Legal system operates around 'populations'
- Are we asking the 'right' questions?
- Limited 'real' examples / confidentiality
- Cumulative impacts are problematic… or not included
- Multiplicity of methodologies may limit ability to learn from experience
- No best practice yet

Environmental 'Opportunities'

- We have almost 30 years of EIA data and information *somewhere*
- Lots of other marine monitoring data available or forthcoming due to different reporting requirements
- Increase in efforts to disseminate information and generate knowledge
  - IEA OES Annex IV *Tethys* database, project databases, ICES Working Group, EEA Atlas
- Existing Test Centres and demonstration projects

Opportunity to learn but have we a mechanism?

Revised EU EIA Directive [1]

- One-stop shop: where appropriate, coordinated / joint procedures are available i.e. single assessment is possible
- Amended screening procedure:
  - MS may set thresholds/criteria to decide when projects have/have not to undergo screening or EIA
  - CA decision within 90 days from the date of submission
- EIA Report must be prepared by "competent experts"
- Relevant information must be electronically accessible to public
- Can be no less than 30 days public consultation

Revised EU EIA Directive [2]

Monitoring

- Member States must ensure that measures to avoid, prevent or reduce and … offset significant adverse effects on the environment are implemented by the developer
- The type of parameters to be monitored and the duration of the monitoring shall be **proportionate** to the nature, location and size of the project and the **significance of its effects** on the environment
- Existing monitoring arrangements can be used, if appropriate

Other Matters

- ‘Social’ licence
- Integration of electrical / grid elements
- Development of standards
- Insurance and Liability
- Decommissioning

Beaufort Research

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