

ICES WGMRE REPORT 2018

HUMAN ACTIVITIES, PRESSURES AND IMPACTS STEERING GROUP

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Interim Report of the Working Group on Marine Renewable Energy (WGMRE)

17–18 April 2018

Runde, Norway



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Executive summary

The 2018 meeting of the ICES Working Group on Marine Renewable Energy (WGMRE) took place on 17–18 April. It was hosted by Runde Environmental Centre in Norway and attended by 6 participants representing 5 countries.

The WGMRE members gave presentations providing summaries of the developments in MRE in their respective countries, including consenting processes, management tools and relevant research programs. Our host arranged for an afternoon seminar which provided an opportunity to consider in detail the active research associated with development of marine renewable energy in Norway: <http://rundecentre.no/wp-content/uploads/2018/04/Afternoon-seminar-Wed-18April-at-Runde-programme.pdf>

Presentations were provided by ICES attendees, Norwegian researchers and representatives of marine energy development. Experiences on best practice were shared with a focus on more fully understanding the opportunities and challenges associated with the Norwegian experience.

A manuscript drawing on these issues was progressed during the meeting. Consideration has also been given to future work required in order to provide input in relation to a potential request to ICES from OSPAR to “review the current state and knowledge of studies into the deployment and environmental impacts of wet renewable technologies and marine energy storage systems”. This is likely to be the priority for next year’s meeting.

1 Administrative details

Working Group name

Working Group on Marine Renewable Energy (WGMRE)

Year of Appointment within current cycle

2017

Reporting year within current cycle (1, 2 or 3)

2

Chair(s)

Finlay Bennet, United Kingdom

Meeting dates

17–18 April 2018

Meeting venue

Runde, Norway

2 Terms of Reference

- a) Summarise and analyse the state of development of the marine renewable energy sector, covering offshore wind energy, in-stream tidal energy, wave energy and tidal barrages, updated on an ongoing basis, and including 'horizon scanning' to identify future issues for marine environmental management.
- b) Report on developments in consenting procedures for marine renewable energy.
- c) Review the development of decision-support and management tools for planning and regulation of marine renewable energy developments, considering the relevance to new technology, cumulative effects and the application of risk-based ecosystem approaches to management.
- d) Identify monitoring priorities associated with potential mechanisms of effects that are assumed within cumulative assessment frameworks, and how monitoring is integrated into the development of decision-support tools and regulatory requirements. Report on development and standardisation of post-consent monitoring methods that promote efficient use of resources within ICES community and can provide robust results at single MRE locations and through use of meta-analysis approaches at multiple locations.
- e) Foster strong collaborative working relationships with other ICES Expert Groups, ensuring integration across topic areas and identifying priority issues and science applications based on regulatory and planning needs in relation to marine renewable energy.

3 Summary of Work plan

Year 1	<ul style="list-style-type: none"> - Provide annual report against ToRs, revising format as necessary - Invite chairs and members of other EGs to participate in the WG meeting and identify cross-cutting issues; reviewing relevant material in other EG reports - Report on the development of tools and approaches that can be used to align Policy with Evidence in a manner that promotes risk-based decision making when addressing societal trade-offs between the upscaling of marine renewable energy with impacts to wildlife populations, habitats and ecosystem services - Report on research priorities and approaches to study design and standardisation of monitoring in order to meet the needs of risk-based decision making in an efficient and robust manner - Draft manuscript for publication in a peer reviewed journal based on the output of multi-annual ToRs - Collaborations with other EGs (mainly via video-conferencing) - Review multi-annual ToRs for years 2 and 3 and adjust as appropriate
Year 2	<ul style="list-style-type: none"> - Provide updates to annual report against ToRs - Submit manuscript to a peer reviewed journal - Review multi-annual ToRs for year 3 and adjust as appropriate
Year 3	<ul style="list-style-type: none"> - Provide updates to annual report against ToRs - Undertake outstanding work to ensure manuscript is accepted by peer reviewed journal e.g. addressing peer reviewers' comments

4 List of Outcomes and Achievements of the WG in this delivery period

Bullet points of main outcomes/achievements during delivery period:

- Production of country reports, updated on an annual basis, summarising state of development of MRE, development of assessment methods and scientific evidence relating to impacts, and changes in regulatory processes informing impact assessment of plans and projects.
- A seminar held in Runde, Norway bringing together experts from industry, academia and environmental consultancies associated with the above issues in Norway. Presentations including ones by ICES group members followed by discussions on sharing best practice.
- Development of a draft manuscript. The current draft is an “opinion piece” offering perspectives on how risk based approaches can be adopted to address the challenges.

5 Progress report on ToRs and workplan

Under **ToR a)**: The Working Group has focused on sharing experience on best practice, particularly in relation to assessing the impacts of marine renewable energy. Horizon scanning has identified developing cumulative assessment frameworks with presentations on what these are, how they can be developed to be applied consistently across different licensing regimes of Member States and how risk-based decision making can facilitate an adaptive management approach that allows the frameworks to become progressively more robust and informative over time, as data are gathered on the parameters feeding into the framework. The latter relating to ToR b).

Under **ToR c)**: During the first year of the current reporting cycle the group met in Lisboa, Portugal. The focus of this meeting being exchange of information flowing from the [Ricore Project](#) (EU H2020 funded project on risk-based decision making for marine renewable energy). For the 2018 meeting in Norway, we focused on gathering and sharing information on the Norwegian approaches, particularly in the context of testing single devices. The workshop confirmed the challenges associated with undertaking robust monitoring (with sufficient statistical power to meaningfully answer a question) at single device test sites.

The main activity that provides progress against the ToRs is the provision of annual reports on the status of marine renewable energy development and the assessment of impacts at a national level. This resource provides information that the group intend to use to deliver a peer reviewed paper. They illustrate the significant differences in marine renewable development across ICES members with North Sea countries having large offshore windfarms and a focus on developing consistent frameworks for assessing cumulative impacts for key species (especially seabirds and marine mammals).

With regard to **ToR d)**: where single wave and tidal energy devices are being tested and deployed the focus is on the need for strategies that enable cost effective yet meaningful monitoring of environmental interactions. Risk-based approaches using broad scale data and marine spatial planning to avoid highly sensitive locations are both regarded as essential aspects. Progress with the draft manuscript is underway, and this is a specified deliverable in the ToRs.

Looking forward, consideration has also been given to future work required in order to provide input in relation to a potential request to ICES from OSPAR to “review the current state and knowledge of studies into the deployment and environmental impacts of wet renewable technologies and marine energy storage systems”. This is likely to be the priority for next year’s meeting. Intention is to hold a joint session with WGMRED. This has clear synergies and builds upon the current ToRs.

6 Revisions to the work plan and justification

Potential new ToR: provide input in relation to a potential request to ICES from OSPAR (to be confirmed).

7 Next meetings

The 2019 meeting will take place in Belgium (possibly in association with WGMBRED). Exact venue and dates are to be confirmed.

Annex 1: List of participants

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