

Working Group on Marine Renewable Energy (WGMRE)

2016/MA2/SSGEPI03 The Working Group on Marine Renewable Energy (WGMRE), chaired by Finlay Bennet, UK, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2017	11–13 April	Lisbon, Portugal	Interim report by 30 June to SSGEPI	
Year 2018			Interim report by Date Month to SSGXXX	
Year 2019			Final report by Date Month to SSGXXX	

ToR descriptors

ToR	DESCRIPTION	BACKGROUND	SCIENCE PLAN TOPICS ADDRESSED	DURATION	EXPECTED DELIVERABLES
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.	<ul style="list-style-type: none"> Science Requirements: the marine renewable energy sector is rapidly emerging as a new user of marine space. There is a need for up-to-date, information on developments and on current research activities to determine potential interactions with ecosystems and other sea users. Advisory Requirements: Advice to OSPAR and other customers requires access to latest research outcomes and experience of developments in this emerging science area. Requirements from other EGs: marine renewable energy developments will impact or interact with topics considered by other EGs, for example marine mammals, seabirds, benthos. 	11,12, 13, 14, 23 & 27	Ongoing	National reports, on marine renewable energy developments and associated research, updated and extended annually. The product will be developed into a manuscript to be submitted to a peer-reviewed scientific journal.
b	Report on developments in consenting procedures for marine renewable energy.	As for ToR a) above.	11,12, 13, 14, 23 & 27	Ongoing	As for ToR a) above.
c	Review the development of decision-support and management tools for planning and regulation of marine renewable energy developments, considering	As for ToR a) above	11,12, 13, 14, 23 & 27	Ongoing	As for ToR a) above..

	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.	As for ToR a) above.	11,12, 13, 14, 23 & 27	Ongoing	As for ToR a) above.
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.	As for ToR a) above.	11,12, 13, 14, 23 & 27		As for ToR a) above.

Summary of the 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 - Based on collaborations with other EGs, develop advise e.g. scope proposals for topic based workshops as appropriate - 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

Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the ecosystem effects of marine renewable energy, especially with regard to the application of the Precautionary Approach in the context of risk-based decision making and the need to reduce scientific uncertainty associated with the impacts of new and established marine renewable technologies. Consequently, these activities are considered to have a high priority.
Resource requirements	The research programmes which provide the source material for this group already exist or are underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The Group is normally attended by approximately 12 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and group under ACOM	There are no obvious direct linkages.
Linkages to other committees or groups	There is a very close working relationship with the Working Group on WGMBRED, WGMME and a range of other WGs who consider the impacts of marine renewable energy within their ToRs.
Linkages to other organization	