



Regulating Underwater Noise-Generating Offshore Energy Activities in Australian Commonwealth Waters

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ABSTRACT

The regulation of environmental management for offshore energy projects varies globally depending upon the legislation, regulatory frameworks, and the particular environmental values and sensitivities that may be impacted. Irrespective of any jurisdictional differences, the level of attention given to underwater noise impacts around the world continues to increase, reflecting a growing recognition of underwater noise as a complex and potentially significant environmental stressor.

In Australia, environmental regulation of offshore petroleum, greenhouse gas storage and renewable energy activities in Commonwealth waters is provided for under a number of pieces of different legislation, including the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), *Offshore Electricity Infrastructure Act 2021* (OEI Act), *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act), and their associated regulations. This arrangement necessitates engagement and coordination among key responsible agencies, including the Department of Climate Change, Energy, the Environment and Water (DCCEEW), the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) and the Offshore Infrastructure Regulator (OIR).

Among the many things that proponents and regulators need to consider during the preparation and assessment of environmental permissioning documents is whether environmental impact and risk predictions are adequately informed by scientific evidence and reasoning. Proponents also need to give consideration to Australian Government policies, relevant guidelines and standards for environmental management, and documentation relevant to matters protected under Part 3 of the EPBC Act. This includes demonstrating, with evidence, that activities will not be undertaken in a manner that is inconsistent with recovery plans for listed threatened species, such as the National Recovery Plan for the Southern Right Whale and the Blue Whale Conservation Management Plan. In situations where there is a threat of serious or irreversible environmental damage and scientific uncertainty is present, the proponent must demonstrate consideration and application of the precautionary principle.

Therefore, appropriate scientific rigour is important to reduce uncertainty, enhance confidence in environmental impact predictions and support better environmental outcomes. Enhancing knowledge through research on species (e.g. their habitat utilisation, behaviors and ecology) as well as foundational parameters that underpin tools used to make impact predictions (e.g. acoustic propagation models) has a key part to play in addressing these scientific uncertainties.

NOPSEMA and OIR have published a Research Strategy that promotes a collaborative approach to research that enhances environmental management of offshore energy projects. Examples of priority topics for research relevant to management of underwater noise impacts include improving baseline data on threatened and migratory marine mammals, investigating the noise levels and contextual factors that may trigger significant behavioural responses, and improving detection, monitoring, and mitigation techniques. DCCEEW funds research projects that inform environmental decision-making through the National Environmental Science Program (NESP). The DCCEEW Renewables Environmental Research Initiative (RERI) aims to deliver a suite of projects to support renewable energy proponents and environmental decision makers, including targeted research on threatened species, new and updated regulatory guidance, and other useful tools and data. There are also benefits and opportunities for proponents who invest in targeted research, as this has substantial potential to unlock greater efficiency, certainty, and flexibility in project planning and execution.