



Marine  
and Coastal

National Environmental Science Program

## Scoping Study: Horizon scan of key science questions in the decommissioning of offshore oil and gas infrastructure

Project 1.19

### Project Summary

This project will address the growing global issue regarding the decommissioning of end-of-life offshore oil and gas (O&G) infrastructure. This project aims to provide informed, scientifically robust, and transparent decision-making regarding the fate of decommissioned offshore O&G infrastructure. The project will generate a collaborative high-impact scientific paper for publication within an open-sourced international peer-reviewed journal. The paper will outline the top pending questions, together with a comprehensive road map, for the coming decade on research priorities for this topic.

### Problem

There are many unresolved science questions yet to be addressed to inform decision-making and best practice regarding the decommissioning options for end-of-life offshore oil and gas infrastructure. These include full removal of the assets for re-use, recycling, or disposal onshore; abandonment of the assets in-situ, either toppled or towed to another marine location, for re-use as an artificial reef or other purpose; or partial removal/abandonment, involving a mix of the former options. Such infrastructure include platforms, pipelines, and other associated equipment on the seabed. To date, no global consensus has been reached on what these priority questions are, and how they should be addressed.

### How Research Addresses the Problem

This project will provide 'A horizon scan of key science questions in the decommissioning of offshore oil and gas infrastructure' seeks to directly address this gap by providing a collaborative scientific paper on the top pending science questions regarding the decommissioning of offshore O&G infrastructure and a comprehensive road map of research priorities for the coming decade.

## General Project Information

The project team will identify a group of global experts in the field of offshore O&G infrastructure decommissioning from academia, policy, and industry to freely contribute, from their perspective, the top pending questions and research needs relating to the decisions on how to decommission offshore O&G infrastructure. The project team will ensure representation within the experts from across five key categories, environmental,



societal, safety, technical, and economics, ensuring spread across global regions where offshore O&G activities occur. Expertise across the various disciplines and jurisdictional scopes involved in making such decommissioning decisions will also be included. The responses received will then be collated, themed, and presented at an online workshop where experts will vote and agree upon a final list of key questions to include within the project deliverable. The project team will form and lead response participants within writing teams as based on their expertise, each team addressing an individual key question. These writing teams will contribute towards the writing of a high-impact paper to be published in a peer-reviewed scientific journal, with the combining of the team's efforts coordinated, collated, and managed by the project team. The paper will be written for a broad audience to ensure that the research findings and recommendations are accessible to all stakeholders concerned with the decision-making process regarding the fate of decommissioned offshore O&G infrastructure.



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*A number of Australia's O&G infrastructures will reach the end of their operational life requiring decommissioning in the next ten years. This raises complex issues on whether to remove these structures, either fully or partially, from the seafloor or leave them in-situ. On one hand, such offshore structures have some of the highest recorded biodiversity, but leaving these structures in place, once decommissioned, could also bring long term issues with biosecurity and potential hazards for our marine environment. This project will consider and prioritise research needs for addressing this topic. Photo Credit: Shutterstock image 155349644*

## Project Leads

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