

Environmental alert

Fauna entanglement



NOPSEMA
Australia's offshore
energy regulator

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What happened?

A recent recordable incident report from a titleholder to NOPSEMA has documented a fauna entanglement incident that could present a common risk for other submerged equipment activities.

During a subsea survey, the operator of a remotely operated vehicle (ROV) noticed a shark caught in a pre-existing rope loop attached to an electrical flying lead (EFL). Fortunately, the shark was alive when found, and the rope was able to be cut using an ROV knife, allowing the shark to swim away. No additional harm was caused while releasing the shark.

It is common industry practice during installation of some subsea equipment (such as EFLs and concrete mattresses) to affix rope loops or other installation aids to equipment to enable ROVs to maneuver the equipment into position, minimise the risk of damage to the equipment, and/or assist with later removal.

NOPSEMA is also aware that other adverse fauna-equipment interactions have occurred in the industry, including interactions directly with ROVs; and that these have been inconsistently reported or not reported to the regulator.

What could go wrong?

If installation aids are not removed, cut, or otherwise made safe (e.g. by design), they can present a risk of entanglement to marine fauna, including species protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In addition to installation aids, other subsea equipment that uses lights, cables or thrusters has potential to attract attention from marine animals which may result in entanglement or other adverse interactions. While in this incident the shark was released safely, it is considered likely that a similar incident could result in serious injury (as an animal attempts to free itself) or death to the animal.

Key lessons

It is the responsibility of the titleholder to ensure that environmental impacts and risks of petroleum activities continue to be identified and reduced to a level that is as low as reasonably practicable (ALARP). Credible risks (such as fauna entanglement or interaction) should be evaluated when identified, and control measures should be implemented to reduce those risks to ALARP levels.

Control measures that should be considered include:

- Implementation and verification of requirements for the removal/recovery of installation aids or other subsea debris during installation, construction, and ongoing inspection/maintenance/repair (IMR) activities.
- Alternative design of installation aids, such as monkey fist knots, clamps or lifting pads, including those that can be made safe when not in use.
- Design of equipment or installation of protective guards that prevent interaction with thrusters and other mechanisms of potential injury.



NOPSEMA expects that titleholders will evaluate the potential for this risk to be credible (including consideration of the use of existing information such as as-left video footage and operational experience) and take steps to ensure that existing controls (e.g. contractual requirements) have been implemented effectively, or new control measures are implemented if required. This evaluation should consider equipment that is planned or expected to be used, as well as subsea debris that may have been unplanned.

Finally, incident reporting is mandatory under the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023, and where relevant under the *Environment Protection and Biodiversity Conservation Act 1999* and associated Regulations 2000. Injury or death of a protected species must be reported to NOPSEMA as a reportable incident and to the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

The legislation

The Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 require that:

- Regulation 22(2)(a): “The implementation strategy must contain.... specific measures to be used to ensure that, for the duration of the activity:
 - (a) the environmental impacts and risks of the activity continue to be identified and reduced to a level that is as low as reasonably practicable...”.
- Regulations 47(1) and 50(1): “A titleholder commits an offence of strict liability if:
 - (a) the titleholder undertakes an activity under the title; and
 - (b) there is a reportable [47] or recordable [50] incident for the activity; and
 - (c) the titleholder does not notify NOPSEMA of the reportable [47] or recordable [50] incident in accordance with subsection (2)”.

The Environment Protection and Biodiversity Conservation Regulations 2000, Regulation 9.03 states that:

- (1) A person must not take an action:
 - (a) that results in the death or injury of a member of a protected species; or
 - (b) that involves the taking, trading, keeping or moving of a member of a protected species.
- (2) An offence against subregulation (1) is a strict liability offence.

Related documents

[Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans \(2018\) - DCCEEW](#)

[Notification and Reporting of Environmental Incidents \(A710941\).pdf \(nopsema.gov.au\)](#)

[Notification of activities affecting listed species or ecological communities in or on a Commonwealth area - DCCEEW](#)

Contact

Enquiries should be directed to alerts@nopsema.gov.au and quote 'Environment Alert #6'.