

ALARP & Acceptable

for environmental impacts and environmental risks



NOPSEMA

Australia's offshore
energy regulator

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Offshore petroleum and greenhouse gas storage activities (offshore activities) in Commonwealth waters are required by law to be undertaken in manner that continually reduces environmental risks and impacts to a level that is as low reasonably practicable (ALARP) and acceptable.

What is ALARP?

ALARP is based on the concept of *reasonable practicability* where the level of environmental impact or risk is compared to the "cost" (time, money or effort) required to implement measures to reduce those impacts or risks.



ALARP is achieved when all practicable measures to reduce environmental impacts or risks are implemented and any further measures not implemented are demonstrated to be grossly disproportionate in "cost" when compared to the reduction in impact or risk reduction gained.

For example, a dutyholder is preparing an environment plan (EP) proposing to drill an exploration well. In the EP, the dutyholder must identify the risk of a well blowout resulting in an uncontrolled release of oil entering the environment. In the rare and unlikely event all measures to prevent a well blowout fail, the dutyholder must have in their EP a number of proposed measures to respond to a well blowout. These response measures may include deploying an overseas capping stack to temporarily stop the flow of oil, while a relief well is drilled to permanently stop the flow of oil and safely plug and abandon the well. To ensure environmental impacts are reduced to a ALARP, the dutyholder must consider additional measures such as positioning the capping stack closer to the activity or arranging for additional air charters to deploy the capping stack in a much shorter timeframe. For each additional measure, the dutyholder must demonstrate in their EP how they have determined the "cost" and potential reduction in impact or risk.

Environment means ecosystems and their constitute parts, including people and communities; natural and physical resources; the qualities and characteristics of locations, places and areas; the heritage value of places; and the social, economic and cultural features of all of these matters.

Impact means any change to the environment, adverse or beneficial, that wholly or partially results from an activity.

Risk means the actual or potential threat to the environment of adverse impacts from an offshore activity.

How does NOPSEMA decide what is ALARP?

NOPSEMA can decide whether impacts or risks are ALARP where a dutyholder has proposed measures to suitably reduce the consequence, severity or likelihood of those impacts or risks and in doing so referred to the relevant Australian laws and conventions, published guidance, and industry standards. Where impacts and risks may be more complex, NOPSEMA evaluates whether the dutyholder has considered other measures, such as adopting a new technology or changing established practices.

The requirement to reduce impacts and risks to ALARP is continual. This means that a dutyholder must review their adopted measures throughout the life of the offshore activity to ensure the measures adopted continue to be effective; this is of particular importance when a change has been made to the offshore activity, relevant laws or conventions, published guidance or industry standards.

Acceptable

Different plants, animals, and ecological communities; and their social, economic and cultural features; all have their own level of sensitivity and resilience to the changes caused by an offshore activity. Given this, deciding what is an acceptable level of environmental impact or risk will vary according to the specific environmental receptor being considered and type of offshore activity being undertaken.

For example, a dutyholder is preparing an environment plan (EP) proposing to conduct a seismic survey over a period of 20 days. While consulting with relevant persons, local fishing license holders have asked the dutyholder to avoid an important fishing area during the winter fishing season, as their activities would be interrupted, causing unacceptable commercial impacts. In the EP, the dutyholder must define what the acceptable level of impact to the concerns raised by the local fishing license holders would be. The dutyholder may decide that acceptable level of impact would be to not displace any fishing activities during the winter fishing season. To ensure this level of impact is achieved, the dutyholder may then commit in the EP to wait until after the fishing season before they begin surveying the fishing area and to have place a plan with the fishers to communicate and confirm any boat movements closer to the time of the survey.

How does NOPSEMA decide what is acceptable?

NOPSEMA can decide whether impacts or risks are acceptable where a dutyholder has suitably defined an acceptable level or impact or risk and proposed measures to reduce the consequence, severity or likelihood of those impacts or risks to that defined level while referring to the relevant Australian laws and conventions, published guidance, industry standards, and best practice guides.

For example, a dutyholder must demonstrate to NOPSEMA in the EP how the principles of ecologically sustainable development, as promoted in the *Environment Protection and Biodiversity Conservation Act 1999* have been applied, as well as any applicable recovery plans for protected species.

A dutyholder must also address the information provided through, and agreed outcomes of, the public comment process and consultation with relevant persons.

Where environmental impacts and risks may be more serious or complex, or there is a level of uncertainty about the effectiveness of established measures, NOPSEMA carefully evaluates how a dutyholder has predicted the level of impact or risk and defined what is an acceptable level of impact or risk. In some cases, NOPSEMA may require a dutyholder to verify any predictions made in the EP while the offshore activity is underway and to implement adaptive management where necessary to ensure acceptable levels of impact and risk are being met.

The requirement to reduce impacts and risks to an acceptable level is continual. This means that a dutyholder must review their adopted measures throughout the life of the offshore activity to ensure the measures adopted continue to be effective; this is of particular importance when a change has been made to the offshore activity, relevant laws or conventions, published guidance or industry standards.

For more information see NOPSEMA's *Environment plan decision-making guideline* published at nopsema.gov.au