

the REGULATOR

National Offshore Petroleum Safety and Environmental Management Authority



NOPSEMA

Australia's offshore energy regulator

ABOUT NOPSEMA

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is Australia's independent expert regulator for health and safety, environmental management and structural and well integrity for offshore petroleum facilities and activities in Commonwealth waters.

By law, offshore petroleum activities cannot commence before NOPSEMA has assessed and accepted detailed risk management plans that document and demonstrate how an organisation will manage the risks to health and safety to as low as reasonably practicable (ALARP) and the risk to the environment to ALARP and with acceptable environmental impacts.

For more information visit our website at nopsema.gov.au.

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FEEDBACK

NOPSEMA welcomes feedback from our stakeholders. Please direct all enquiries about this publication to communications@nopsema.gov.au.

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Message from the Chief Executive

The expectations of the public have never been greater and independent oversight and accountability has never been more important. It's striking to note that there are currently more than 100 public inquiries being run by federal parliamentary committees.

NOPSEMA is subject to a range of external scrutiny through inquiries conducted by parliamentary committees, the Australian National Audit Office, the courts, administrative tribunals, the Commonwealth Ombudsman, the Freedom of Information Commissioner and Senate Estimate hearings. A recent example is the independent audit of NOPSEMA's consideration of exploration in the Great Australian Bight by Australia's Chief Scientist. NOPSEMA welcomed the recent release of the audit report by the Government. The findings of the final audit report were positive overall, recognising NOPSEMA as a "highly skilled, professional and competent regulator" with "appropriate processes and practices to ensure environment plans are assessed against relevant, sufficient and complete scientific and technical information". NOPSEMA continues its independent assessment of Equinor's drilling proposal for exploration in the Great Australian Bight.

Over the next 12 months NOPSEMA will be subject to ongoing examination through the independent operational review of NOPSEMA's regulatory performance, in bringing about improvements in occupational health and safety, environmental management and well integrity. Further, an independent EPBC Act streamlining review will also be conducted to assess NOPSEMA's compliance with the environmental management authorisation process (the Program) endorsed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). NOPSEMA will also contribute to the upcoming inquiry into the impact of seismic testing on fisheries and the marine environment. NOPSEMA will continue to use these opportunities to demonstrate its effectiveness as Australia's offshore energy regulator.

In the spirit of continuous improvement NOPSEMA believes there are opportunities to apply learnings identified through findings of the banking royal commission. Commissioner Kenneth Hayne highlighted



the important role regulators have in the supervision of organisational culture, governance and remuneration. Hayne also noted the importance of boards getting the right information, and challenging management where necessary. As part of a broader program to promote the critical role senior executives have in maintaining oversight of safety and environmental management controls, NOPSEMA will commence a range of activities, including management inspections. NOPSEMA is currently identifying initiatives to support the rollout of this program and will communicate more information about the program later this year.

A handwritten signature in black ink, appearing to read 'Stuart Smith'.

Stuart Smith, CEO

Independent Audit confirms NOPSEMA as an effective regulator

On 16 May 2019, the Liberal-National Coalition announced that if re-elected they would initiate an independent audit of NOPSEMA's consideration of exploration in the Great Australian Bight.

Australia's Chief Scientist, Dr Alan Finkel AO FAA FTSE was appointed to undertake the audit which involved examining NOPSEMA's assessment and decision making processes for environment plans, including those for proposed exploration activity in the Bight. The purpose of the audit was to provide independent assurance to the public that NOPSEMA's process for assessment and decision making is consistent with the requirements of Environment Regulations and its regulatory obligations. As part of the audit process, the Chief Scientist and his team of experts met with industry representatives, government bodies, fishing associations, environmental interest groups, community groups and traditional owners to provide a stakeholders perspective on the environment assessment process administered by NOPSEMA.

The audit provided NOPSEMA with an opportunity to demonstrate its integral role in assessing and overseeing compliance for individual activity proposals to ensure impacts and risks are reduced to as low as reasonably practicable and are acceptable.

NOPSEMA welcomed the joint release of the audit report by the Minister for Resources and Northern Australia, Matthew Canavan and the Minister for the Environment, Sussan Ley on 20 September 2019. The findings of the report were positive overall recognising NOPSEMA as a "highly skilled, professional and competent regulator" with "appropriate processes and practices to ensure environment plans are assessed against relevant, sufficient and complete scientific and technical information".

Upon releasing the report Minister Canavan noted "Australians can be confident that offshore oil and gas activities are regulated by NOPSEMA in a way that meets our stringent environmental regulations, and that the environmental risks and potential impacts of a proposed activity are taken into account."

The Chief Scientist identified several opportunities for NOPSEMA, industry and government to provide additional information to local communities and improve the public's understanding of the offshore oil and gas regulatory regime.

NOPSEMA appreciates the importance of regulatory transparency and stakeholders understanding how matters protected under the *Environment Protection and Biodiversity Conservation Act 1999* and ecologically sustainable development are considered. NOPSEMA will develop a series of strategies in collaboration with industry and government to address opportunities identified, including greater information on how NOPSEMA considers environmental impact and risk to be as low as reasonably practicable and acceptable.

NOPSEMA will continue to assess Equinor's drilling proposal for exploration in the Great Australian Bight and make expert, independent decisions based on science and facts to assure the protection of lives and the environment. The read the audit report visit industry.gov.au.



Australia joins inaugural meeting of offshore wind regulators

As part of ongoing cooperation and support to the Department of Environment and Energy, NOPSEMA's Head of Environment, Cameron Grebe represented Australia at the inaugural meeting of the global offshore wind regulators forum (GOWRF) earlier this year. Participating in the forum enabled Australia to build further connections with jurisdictions that have substantial offshore wind regulatory experience including the United States (USA), Great Britain, Denmark, Scotland, Germany, The Netherlands, Norway and Canada. The forum also provided a valuable opportunity to gain insight into issues related to the growing industry of offshore renewables.

Offshore wind technology has evolved rapidly in recent years with major advances in innovation and cost reductions making it a competitive option for electricity generation in a wide range of locations. In some locations, offshore wind has already become the most competitive option with further efficiencies expected from economies of scale and additional innovation. Countries such as Great Britain have already installed capacity of almost 8,000 MW, with plans to expand capacity to over 27,000 MW in the decade. The USA is following this experience with large scale investment in areas like the north west of the Atlantic coast, including large scale floating wind technology deployment, and it is expected that another 21,000 MW of capacity will be installed within the next decade.

The GOWRF was founded off the back of similar networks for offshore petroleum safety (International Regulators' Forum) and environmental management (International Offshore Petroleum Environmental Regulators) and was led by the United States Bureau of Ocean Energy Management (BOEM). While Australia has only started the journey to progress an offshore wind regulatory framework, early engagement with regulatory counterparts has enabled leading practices and improvements to be identified at the outset.

Engaging with other countries has also highlighted that existing regulatory frameworks in Australia offer a streamlined way to support offshore wind development and create a platform to resolve challenges in the marine environment (such as marine spatial planning, strategic assessment, approvals and regulation).

Interest in the offshore renewable sector in Australia will continue to grow. Recognising this potential NOPSEMA's CEO Stuart Smith recently completed a Churchill fellowship looking at leading international practice in the regulation of offshore renewables. As part of this fellowship Mr Smith prepared a report outlining leading practice in offshore renewable regulation for adoption in Australia. For more information or to read the report visit: churchilltrust.com.au/fellows/detail/4403/Stuart+Smith

NOPSEMA will continue to work with the Department of Environment and Energy and provide input on good practice regulatory models and approaches to ensure responsible future development of this promising renewable energy resource.

Future directions: Australia's offshore energy regulator

Nearly eight years ago, on 1 January 2012, the National Offshore Petroleum Safety Authority's remit was extended to include the regulation of well integrity and environmental management for offshore activities. The organisation was rebadged the National Offshore Petroleum Safety and Environmental Management Authority, more commonly known as NOPSEMA.

In February 2014, NOPSEMA became the sole Commonwealth environmental management regulator for offshore oil and gas activities when the Commonwealth Minister for the Environment endorsed NOPSEMA's environmental management authorisation process under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). NOPSEMA has undertaken 1119 inspections across safety, well integrity and environmental management, issued 10,815 recommendations and assessed 3240 permissioning documents for the period 1 January 2012 to 30 June 2019.

NOPSEMA is now coming up to six years as the single independent regulator for offshore energy industries in Australia. During this relatively short timeframe, NOPSEMA has observed an unprecedented period of change in the industry from the downturn of the oil price in 2014, through to record levels of commissioning in 2017. There has also been significant advances in technology with the introduction of floating liquefied natural gas (FLNG) and other large-scale offshore facilities in 2018. The expectations of the public have also never been greater with information now more readily available than ever before. In 2012 an estimated two billion people were using the internet. Fast forward to 2019 and that number has more than doubled. Society has never had more outlets to express their views, their likes and their dislikes.

Throughout this period, NOPSEMA's vision of a protected offshore workforce and environment has remain unchanged, but much like trends in industry, NOPSEMA's goals have continued to advance.

Consistent with changes to community expectations there has also been an increase in external scrutiny on regulators and NOPSEMA has not been exempt from this. The most recent example includes the independent audit of NOPSEMA's consideration of exploration in the Great Australian Bight by Australia's Chief Scientist. NOPSEMA is consistently found to be

an effective regulator and capable of providing expert, consistent, independent regulatory actions and making decisions in accordance with the law.

NOPSEMA recognises however there is always room for improvement. For example, NOPSEMA is currently looking at its inspection processes and compliance monitoring more broadly to identify opportunities for increased effectiveness and efficiency. In addition to effective inspection priorities, transparency and effective stakeholder relationships are also playing an increasing role in NOPSEMA's objectives.

NOPSEMA has always been an advocate for transparency, and believes that sharing insights and knowledge are essential elements of continuous improvement. The public want to know what NOPSEMA are doing to protect the lives of offshore workers and the environment, and a more streamlined, strategic and responsive way to influence, oversee and enforce compliance will be an essential part of future inspection processes. NOPSEMA will also continue to communicate information to stakeholders, and publish data on industry-wide safety and environmental performance.

As a result of the changing environment, NOPSEMA has needed to maintain an agile and contemporary approach to regulation and keep pace with leading international jurisdictions. By ensuring there are robust systems and resources to support the delivery of services, now and into the future, NOPSEMA will continue to provide efficient, effective, economical and ethical corporate support services, oversight of risk management and a capable workforce to deliver outcomes.

For more information on NOPSEMA's vision and focus areas, see nopsema.gov.au.

Inspection focus areas for 2019-20

NOPSEMA's vision of a protected offshore workforce and environment relies on a comprehensive compliance monitoring regime. To complement our risk-based inspection programme, NOPSEMA sets inspection priority focus areas each year. The focus areas are selected due to the level of known risk and seek to provide NOPSEMA with insight into where industry is performing well and where further improvement and attention is required.

Throughout 2019-20 NOPSEMA's inspection focus areas will include:

Preventing major accident and loss of containment events

- Assurance of performance standards – duty holder assurance, management of change and reporting against performance standards for safety critical equipment
- Third party equipment and services – duty holder oversight and assurance against performance standards
- Ageing facilities and assets – maintenance of ageing facilities and planning for end of facility life

Preventing and managing a loss of well control

- Kick tolerance – industry standards for determining and reducing risk of well kicks

Improving effective incident response and spill source control

- Incident management capability – training and competence

Improving oil spill preparedness arrangements

- Exercise and testing of oil spill response arrangements
- Dispersant selection, supply, application and monitoring

Other

- Maintenance and removal of property and/or equipment
- Pre-survey planning for seismic surveys.

Duty holders can expect to see one or more of the above mentioned topics included as part of NOPSEMA's planned inspection regime until the regulator is satisfied that industry collectively has the capacity and willingness to reduce risks on all focus areas to as low as reasonably practicable.

As part of a broader program to promote the critical role senior executives have in maintaining oversight of safety and environmental management controls, NOPSEMA will commence a range of activities, including inspections. Management inspections will be informed by relevant compliance information, and will involve NOPSEMA senior executives leading inspections of executive line of sight to, and leadership of, major accident hazard control. Inspections will consider corporate scorecards, target setting and reward structures for key personnel, transparency and visibility to senior management of relevant performance indicators, and the status of internal governance and oversight of operations responsible for safety and environmental management. Results from inspections will be shared with company Chief Executives or equivalents to ensure appropriate response. More information on the broader program will be available later this year.

The importance of planning for decommissioning during the life of an activity

Section 572 of the OPGGS Act requires that property brought into the title area is removed when not in use and that it is maintained in good repair (*Commonwealth Offshore Petroleum Decommissioning Guideline*).

To meet legislative requirements, titleholders are expected to plan early for removal of property in a safe and environmentally responsible manner. The planning for full removal of property must be documented in the environment plan from the point at which property is brought onto the title area through to subsequent activities during the life of the offshore project (e.g. from exploration, installation and operations through to cessation and decommissioning).

NOPSEMA recognises that explicitly describing the intentions for property at the end of its economic life in environment plans can be challenging during installation and operations phases. However, titleholders have an obligation to demonstrate through environment plans how legislative requirements including those for maintenance and removal of equipment will be complied with.

Alternative arrangements to full removal may be contemplated in environment plans where a titleholder can demonstrate that the proposed option will deliver equivalent or better environmental outcomes to full removal of property.

Decommissioning is a step in the offshore petroleum project lifecycle involving removal or otherwise satisfactorily dealing with equipment and property previously used to support operations. To date, only a few facilities have been decommissioned in Commonwealth waters. NOPSEMA expects this to change over the next two decades, and is increasing its focus on decommissioning during environment plan assessments and activity inspections. This may include a focused assessment of how arrangements for removal will be met in environment plans during all stages of activities.

Through inspections NOPSEMA verifies that titleholders have adequate processes in place to maintain and remove property in a title area. NOPSEMA inspectors also seek assurance that titleholders are planning and undertaking removal when property is no longer in use, and that it is being adequately maintained prior to removal.

Industry is also reminded of their obligations under the Safety Regulations to provide for the decommissioning stage in the life of a facility through submission of a safety case revision.

NOPSEMA encourages early engagement by titleholders to discuss the specific circumstances regarding removal of property from a title area and compliance with the OPGGS Act.

Adding to the HSR toolbox: Learning about bowties at the HSR Forum

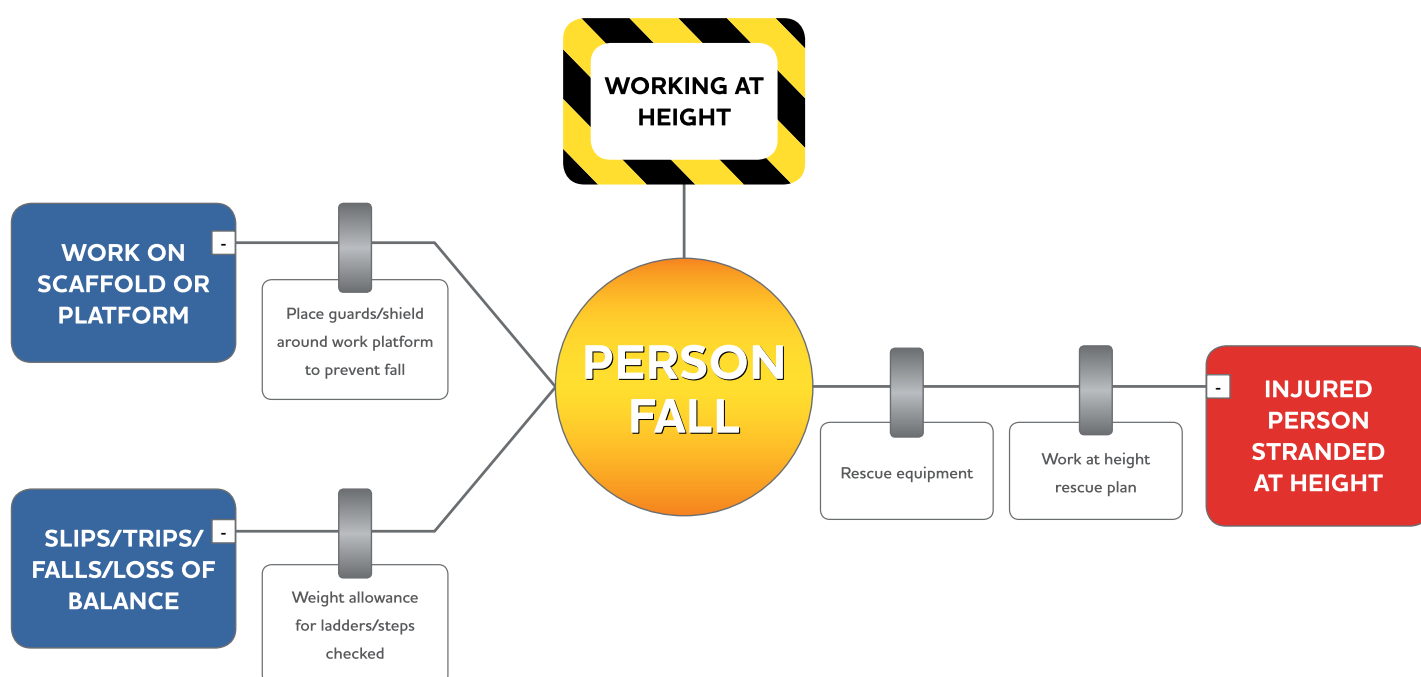
The bowtie diagram is one of the tools the offshore oil and gas industry commonly uses to describe potential major accident events (MAEs), and the control measures that are in place to prevent and mitigate such events. In preparing for the recent Health and Safety Representative (HSR) Forum, HSRs were asked to review a bowtie from the safety case for their facility, identify the critical information and think about how they would communicate this information to their working group peers.

A large cross section of HSRs comprising representatives from production, maintenance, drilling, diving, and catering services attended the forum, however most of the attendees had not seen a bowtie before, either in their primary role or as a HSR. The HSRs reported that familiarising themselves with a bowtie was a valuable exercise, providing them with greater insight into how major hazards are controlled and the importance of having multiple barriers in place. HSRs also suggested it would be useful to refer to bowties during job planning with their work groups as *"It provides context about why we do what we do"*.

A range of ideas were shared about how bowties could be better used to improve safety on facilities. Operators could for example, provide a learning module on the safety case, and bowties and toolbox talks could include a review of the relevant bowties for the job.

Industry could develop a common template that each facility could use to build a summary bowtie, assisting contractors to easily move between facilities and get up to speed on major hazards and control measures. HSRs also suggested that workpacks could reference relevant MAEs and their bowties.

Overall feedback from HSRs suggests that the bowtie is a useful tool. HSRs can use bowties to help their workgroups build a better understanding of the risks involved in their work, and to check that the right controls are in place. NOPSEMA encourages HSRs to look for opportunities to review bowties with their workgroups and also encourages facility operators to make bowties available to the workforce, to improve their knowledge of potential MAEs and control measures.



A simplified example of a bow-tie diagram



How to make effective public comment on environment plans

The public comment process for proposed seismic and exploratory drilling activities provides the community with an opportunity to have their say on the environmental management of an activity before NOPSEMA commences its assessment.

To ensure that your comment is relevant and taken into account, comments must be provided within the 30 day public comment period and relate to the information contained in the environment plan. Comments could relate to how the existing environment is described in the environment plan or the environmental impacts and risks of the proposed activity. Comments may also relate to measures the titleholder has proposed to reduce the environmental impacts and risks, or proposed methods for monitoring the environmental performance of the activity.

Community members are reminded NOPSEMA cannot consider information that is outside the scope of the Environment Regulations and NOPSEMA's decision making criteria. Examples of irrelevant information includes petitions, statements of fundamental objections to oil and gas development, SPAM mail and comments that pose questions to NOPSEMA and/or the titleholder. Comments containing personal threats

or profanities will not be tolerated and may be referred to relevant authorities if NOPSEMA believes there are grounds to do so.

Once the public comment period has closed, the titleholder and NOPSEMA must consider the comments that directly relate to the environment plan. The titleholder is also required to prepare a report on public comment providing a response, in general terms, to the key matters raised and indicate whether the environment plan has been modified as a result of comments received. NOPSEMA will consider public comment in its assessment process and prepare a report on how information received was taken into account by the regulator. Both the titleholder's report and NOPSEMA's report on public comment will be published on NOPSEMA's website.

For further information see NOPSEMA's Public comment on environment plans brochure at nopsema.gov.au/publications.

Consideration of risks from earthquake events

Australia is not as geologically stable as people assume. Several earthquake hotspots exist, including key areas for offshore petroleum production such as the Northwest Shelf and the Bass Strait.

On 14 July 2019, Australia experienced its largest earthquake since reliable measurement began. The 6.6 magnitude earthquake occurred offshore Broome and involved three sizeable aftershocks in the first 24 minutes. Over the next fortnight, 118 quakes were to follow in the same area.

Magnitude, as a measurement for assessing the impact of quakes, is not always indicative of consequences since a number of factors influence the ultimate impact. Other types of measurement include peak ground acceleration and intensity.

While seismic design criteria for fixed steel and concrete offshore structures are well established in standards (such as ISO 19901-2:2017), industry guidance for long-term well integrity is limited. Earthquakes have the potential to cause plugs and cement sheath cracking, leading to sustained annular pressure and potentially leakage. Additionally, metal to metal seals inside wellheads, subsurface safety valves and Christmas trees on producing or closed-in wells could be disturbed.

After a significant seismic event the duty holder should conduct follow-up monitoring to confirm well integrity. If they have completed a baseline survey, they can establish through a follow-up survey whether any natural seeps have occurred.

Possible actions to manage the well integrity risks associated with earthquakes could also include decommissioning a well(s) with a geological timeframe in mind. However, it is vital that best practices for decommissioning wells are followed particularly for barriers and plug sizes/verification to ensure double barriers and cap rock restoration. Refer to the Oil and Gas UK and NORSOK standards for more information.

While cement is the best plug and abandonment material with 2000 years of testing, duty holders could consider using new technologies such as sand plugs, barite plugs and bismuth plugs. Duty holders should also consider the use of open-hole sections between plugs versus filling the hole full of cement (which could prop open a flow-path) to allow the hole to collapse naturally overtime.

Pipelines and flowlines, by their nature, can extend for hundreds of kilometres, and can subsequently be impacted by earthquakes, particularly if seabed breakage occurs, leading to tsunamis or seabed displacements. Pipelines and flowlines that are physically pinned to the seabed, such as tie-in points at subsea systems or production facilities, mid-line tees or pipeline crossings are particular areas of concern. They are of concern because they cannot move to accommodate the stresses from seabed movement. Seabed shaking might cause slippage of rock or gravel structures leading to loss of pipeline stability. Additionally, pipelines that are routed across steep slopes, such as escarpments, are particularly vulnerable should slope failure occur. It should be noted an earthquake might not lead to immediate loss of containment, but could lead to a structure being left vulnerable to future loading and fatigue failure at some point.

Floating and partially buoyant structures in shallower offshore locations may be vulnerable to tsunamis arising from seismic events. Platforms, jackets and risers are also vulnerable to seabed movement that can be amplified through the structure resulting in deck accelerations that are much higher than the earthquake excitation.

Design codes and standards permit yielding in steel and tensile cracking in concrete during extreme level earthquake (ELE) events. Abnormal level earthquake events however are permitted to cause considerable damage but the overall integrity of the structure should be maintained to prevent structural collapse. As such, structures should be routinely inspected after any earthquake.

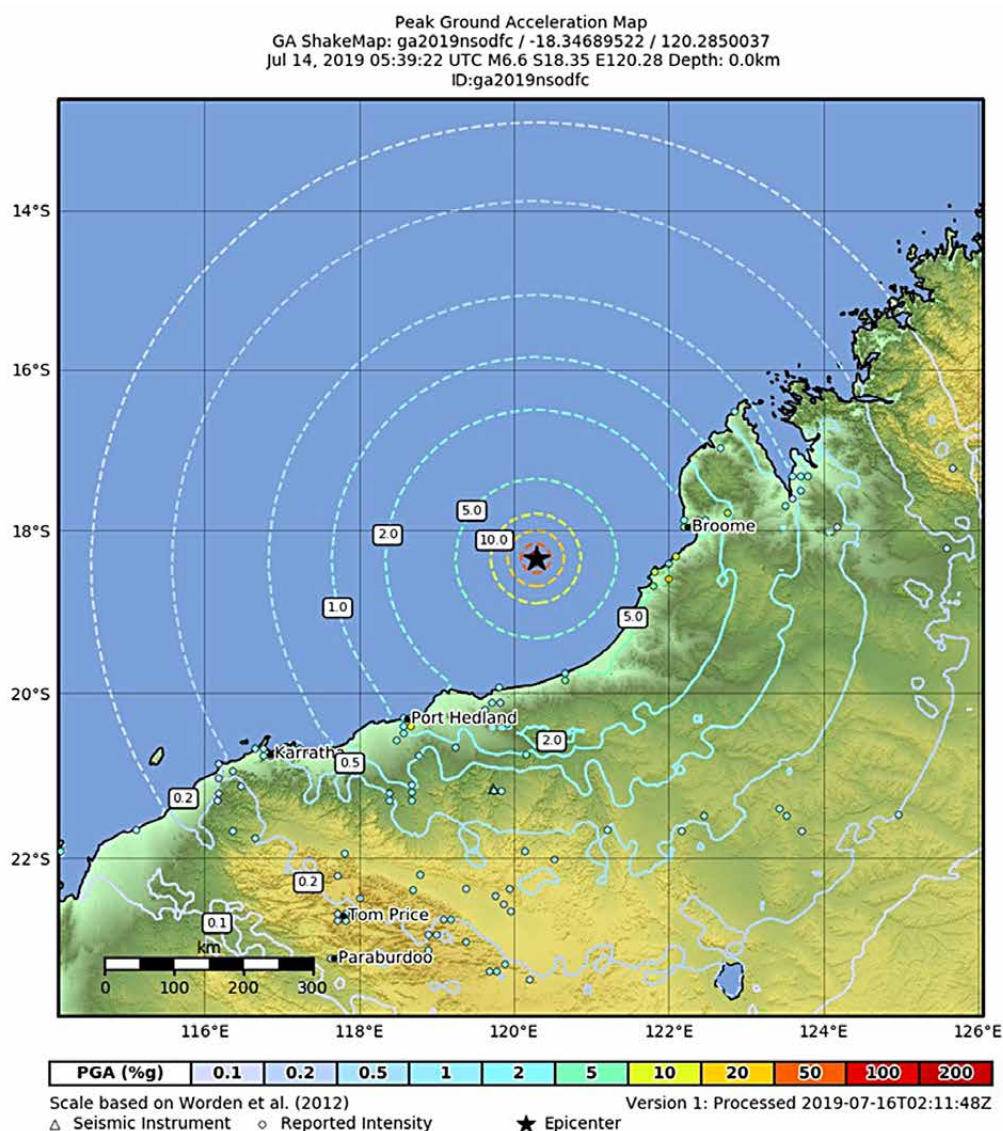
NOPSEMA is aware that titleholders and operators have well-developed cyclone response plans, but initial enquiries into duty holder arrangements for earthquake response indicates these emergency plans are less mature. While there was no direct evidence of damage to any petroleum related operations or activities following the earthquake off Broome, duty holders should take the opportunity to review their systems and procedures to ensure that clear arrangements are in place for managing the response to future seismic events.

Specifically, duty holders should outline how they will identify and monitor seismic events by observing readings from earthquake monitoring equipment or alert arrangements with Geoscience Australia or other third party organisations. Information obtained should be used by duty holders to determine whether petroleum facilities or wells may have been impacted as a result of an earthquake. Duty holders should review the 'trigger' criteria for each particular asset class including wells, conductors, flowlines, pipelines, jackets, riser turrets and above water structures to determine when to initiate further action. The basis of the 'trigger' criteria are likely to be described in design documentation that may be difficult to find quickly in the immediate aftermath of a seismic event, so it is prudent to identify this well in advance.

Duty holders should have plans in place for immediate and longer term response measures. Immediate actions might include close scrutiny of wellhead pressures,

flowline and pipeline pressures, leak detection systems or virtual pipeline software models. While longer term actions could include initiating a subsea infrastructure inspection to identify any leaks. A subsea inspection could also identify movement of equipment or other potential damage, particularly at vulnerable areas such as escarpments or fixed points (wellheads, manifolds or pipeline termination structures). Duty holders may also need to consider undertaking subsea and above water inspection of risers, tie-in spools, jackets and vulnerable areas of topsides (flare towers, derricks, cranes, etc.).

Duty holders are reminded of their obligation to ensure they have appropriately addressed all risks associated with the petroleum activity they are undertaking in their permissioning documents, including risks associated with earthquakes.



Criminal prosecutions and NOPSEMA's role

Each year NOPSEMA undertakes a number of investigations leading to a range of enforcement outcomes up to and including criminal prosecutions.

As a Commonwealth federal agency, NOPSEMA engages with the Commonwealth Director of Public Prosecutions (CDPP), an independent prosecution service established by Parliament to prosecute alleged offences against Commonwealth law. The process involves NOPSEMA submitting a brief of evidence to the CDPP for their review in relation to a specific matter. The CDPP then assess the brief against specific criteria contained in the Prosecution Policy of the Commonwealth and provides NOPSEMA with their initial observations of the evidence (prima facie) and advice on the matter.

The criteria assessment by the CDPP is a two-stage process. Firstly there must be sufficient evidence to prosecute the case; and secondly it must be evident from the facts of the case, and all the surrounding circumstances, that the prosecution would be in the public interest.

In determining whether there is sufficient evidence to prosecute a case the CDPP must be satisfied that there is prima facie evidence of the elements of the offence and a reasonable prospect of obtaining a conviction. The existence of a prima facie case is not sufficient.

The prima facie advice received from the CDPP may result in further investigation activities being conducted by NOPSEMA to gather additional evidence and may involve the engagement of expert witnesses, taking additional witness statements and conducting other activities to support a prosecution.

The outcome of a successful criminal prosecution by the CDPP will be a financial penalty on the relevant duty holder including companies or individuals. Any financial penalty is not retained by NOPSEMA but is passed to the Commonwealth federal government.

Expecting the unexpected: NOPSEMA responds to bridge collapse to ensure business as usual

NOPSEMA's emergency response plans were put to the test in June this year, following the collapse of a nine-year-old footbridge linking two buildings in Perth's CBD, where staff are based.

On the day before the bridge collapse, NOPSEMA was advised by managers of the Alluvion building and Westralia Square that large cracks had appeared in the adjoining walkway and a decision had been made to cordon off the footbridge and restrict access to both buildings.

Upon receiving the advice, NOPSEMA's Office Manager, in consultation with the CEO and senior executives, acted quickly to execute the agency's internal response plans and procedures to prioritise staff safety and business continuity.

NOPSEMA's head office was evacuated as a precaution and staff were provided with information technology support to enable work from home arrangements while the office environment was affected. Contingency plans

were realised to accommodate existing commitments and engagements, with an Advisory Board meeting held off-site and preparations for the inaugural Health and Safety Representatives Forum managed remotely. Procedures to ensure the safety of visitors to the building, couriers and service providers were also implemented.

Key learnings from the experience will be reflected in regular training and exercises designed to assist staff to prepare for the unexpected.

NOPSEMA recognises that industry is also capable of meeting the needs that may arise from unexpected events through obligations to have in place tested procedures and practices.

Keeping up with NOPSEMA

Have you heard the news? NOPSEMA has recently enhanced its environment plan subscription service. You now have the ability to subscribe to environment plans that are open for comment, under assessment and have been approved by NOPSEMA. In addition, you can tailor your subscriptions according to regions, activity types and titleholders of interest.

What does this mean for you?

There are two environment plans which were submitted prior to 25 April 2019 and remain under assessment by NOPSEMA. These are:

- Stromlo-1 Exploration Program (Titleholder: Equinor Australia B.V)
- Blacktip Operations (Titleholder: Eni Australia B.V)

If you are interested in receiving updates about any of these proposals, you will need to subscribe to our new service. To do this simply visit the '[Under assessment](#)' page and click 'subscribe'.

If you are already subscribed to our new service, remember that you now have the added benefit of being able to tailor your subscription.

If you are not currently receiving updates from NOPSEMA about environment plans that are either 'open for comment' or 'under assessment' then you are not subscribed to the new service.

If you are looking for information about approved projects and activities, this is now available on the newly created 'Approved projects and activities' page. This provides greater visibility of individual activities and related offshore projects with the ability to follow the progress of activities/projects of interest. For more information or to subscribe, visit info.nopsema.gov.au.

NOPSEMA will also provide more in-depth coverage of environment plan proposals where there has been heightened public interest, so make sure you're subscribed to our [environmental management news service](#).



NOPSEMA forges closer relationship with the ANP

In August, representatives from NOPSEMA and colleagues from the Department of Industry, Innovation and Science travelled to Dili, Timor Leste to participate in a signature ceremony with the Autoridade Nacional do Petroleo e Minerais, Timor-Leste's public institution responsible for managing and regulating petroleum activities.

With oil and gas fields shared between Australia and Timor-Leste in the Joint Petroleum Development Area, the ceremony was an important step in continuing to strengthen the relationship between the two regulators.

NOPSEMA's CEO, Stuart Smith, participated in the ceremony which included the signing of a Memorandum of Understanding establishing permanent maritime boundaries between Australia and Timor-Leste, and a stable legal framework for the development of gas and oil resources in the Timor Sea.

NOPSEMA is continuing to strengthen ties with its international regulatory counterparts and will be hosting the 9th International Regulators Forum (IRF) offshore safety conference in Perth in October 2020. This event will provides a unique opportunity for industry and regulators to come together to address mutual challenges, and explore emerging trends in the upstream oil and gas sector. NOPSEMA will communicate more information about this notable event in due course.





The effects of noise on aquatic life conference – July 2019

In July 2019, representatives from NOPSEMA's Environment Division attended the Effects of Noise on Aquatic Life conference in Den Haag. The conference consisted of a broad technical programme covering the physical aspects of noise in the ocean through to complex interactions between noise and animal hearing, communication, behaviour and physiology. The conference programme also had a focus on new science relevant to environmental management decision making for noise generating offshore petroleum activities, including seismic surveys.

NOPSEMA presented in a session dedicated to regulation and management of aquatic noise, providing an opportunity to explain Australia's regulatory regime, compare approaches to other international jurisdictions and promote the concept of research designed specifically for the purpose of informing environmental impact assessment (EIA). NOPSEMA highlighted the unique aspects of the Australian regulatory approach including that new science is able to be applied to environmental impact assessments without the need for legislative or policy change.

NOPSEMA emphasised the importance of involving people responsible for undertaking and assessing environmental impact assessments in the scoping of relevant science programs. This can assist with ensuring that new science is targeted towards addressing complex issues that create challenges in the prediction and environmental management of underwater noise impacts.

There is significant research effort focused on the potential impacts of noise on fish and invertebrates, as well as furthering understanding of the impacts of noise on whales and other marine mammals. The scientific knowledge base is advancing rapidly and with an appropriate focus on EIA needs, this will improve industry's ability to predict and manage environmental impacts for offshore petroleum activities.

Interested stakeholders can access NOPSEMA's presentation at: nopsema.gov.au/assets/Presentations.

NOPSEMA also welcomes the opportunity to contribute to the upcoming Senate inquiry into the impact of seismic testing on fisheries and the marine environment.

2018 year in review

NOPSEMA's Annual Offshore Performance Report provides a stocktake of information on industry activities obtained through the full range of NOPSEMA's regulatory activities, including assessments, inspections and investigations.

In 2018, an unprecedented number of hours (16.9 million) were worked offshore by employees, contractors and marine crew attending a facility within NOPSEMA's jurisdiction. This was a 31 per cent increase on the 12.8 million hours worked in 2017 and is reflective of change in offshore activity, as new liquefied natural gas (LNG) facilities have come online and Australia's LNG exports have boomed. Experience shows that increased industry activity may increase risk and strain on industry resources, however, NOPSEMA was pleased to see that industry maintained its performance protecting workers and the environment, and most importantly for the sixth consecutive year there were no fatalities.

Despite the additional hours worked, the rate of occurrence for key industry performance data remained stable or decreased compared with 2017. For a reliable comparison of data over time, incident rates on offshore facilities are calculated as number of incidents per million hours worked to take into account variations in industry activity levels from year to year.

The duty to protect the offshore workforce is a shared responsibility across all industry participants, with NOPSEMA's role often to identify situations where inadequate or failed systems may lead to harm.

Industry recorded the lowest injury level to date in 2018, and this continues a reassuring downtrend in the recordable injury rate in recent years. Despite this positive trend, there was a small increase in the number of near miss incidents. Most of these incidents happened during pre-commissioning and hook-up activities for new facilities.

There were 14 accidents reported in 2018. Eight of these were serious injuries that resulted in hospitalisation (due to fractures, ruptured tendons, lacerations) and six other injuries resulting in three or more days lost time. This is a slightly higher increase than reported in 2017, with 0.83 accidents per million hours worked. NOPSEMA investigated these events, and is continuing to share lessons learned with industry through topic focussed inspections to mitigate future events. However, the day-to-day safety of the workforce should be at the forefront of all operations, and operators must also investigate the causes of all injuries to implement changes to prevent their reoccurrence.

In total, 386 dangerous occurrences were reported by operators in 2018, up from 291 in 2017. However, with the increase in offshore hours worked, the incident rate for dangerous occurrences remains almost equal with the previous year, which was the lowest recorded in five years.

In 2018 there was an increase in reportable environmental management incidents (from 12 in 2017 to 17 in 2018). NOPSEMA investigated each of the environmental incidents and found that none of the incidents resulted in serious environment harm, however, titleholders were required to implement measures to improve their environmental management practices as a result of the occurrences.

There were 60 well integrity incidents notified in 2018, and this may be related to ageing facilities. With more than half of Australian offshore facilities older than 20 years, and some exceeding 50 years, NOPSEMA recognises the prevalence of ageing assets, appropriate maintenance and the implications of late-life transfers as key regulatory issues for the offshore oil and gas industry. In response, NOPSEMA is increasing the number of well integrity inspections and working closely with The Department of Industry, Innovation and Science, and the National Offshore Petroleum Titles Administrator to develop guidance for a framework on late life assets and explore legislative and policy solutions. NOPSEMA also continues to share insights and exchange knowledge with other international jurisdictions on best practice around decommissioning.

NOPSEMA has released its inspection priorities for 2019-20 with a focus on some of these areas for improvement. For more information, see the Inspection priorities article on page 9 in this edition of the Regulator.

For more information or to read the Annual Offshore Performance Report for 2018, visit nopsema.gov.au.



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DETAILS ABOUT OFFSHORE ACTIVITIES

Looking for more on what's happening offshore? NOPSEMA publishes information about projects and activities that have been approved on the 'Approved projects and activities' page.

Activities listed on this page have an in force environment plan accepted by NOPSEMA, an overview of the activity, a location map and contact details for the titleholder.

Related environment plan assessment information is also available on this page. For more information, see info.nopsema.gov.au/home/underway_offshore

There is a variety of information and resources available on NOPSEMA's website.

This includes publications on topics that may be of interest to the community, such as fact sheets on marine seismic surveys, oil spill modelling, oil spill response strategies and arrangements.

NOPSEMA also continuously collects and publishes data on the safety, well integrity and environmental management performance of the industry, as well as its own regulatory performance and activity. On the Data and statistics page, members of the public can view annual and quarterly data on industry performance indicators, such as incident rates, hydrocarbon releases and international benchmarks. There is also the option to view and compare data from previous years.

In addition to this, a subscription service is available for interested stakeholders to sign up to receive the latest media releases, news announcements and regulatory alerts. For more information, go to nopsema.gov.au.



Upcoming events

October 2019

- 16** AMPLA annual conference, Brisbane
- 29-31** SPE/IATMI Asia Pacific Oil & Gas Conference and Exhibition, Bali
- 30-31** International Offshore Petroleum Environmental Regulators (IOPER)
Annual General Meeting 2019, Washington D.C

November 2019

- 13-14** Hazards Australasia Conference, Brisbane

December 2019

- 3-4** SPE Symposium: Decommissioning and Abandonment, Kuala Lumpur

Events listed are those at which NOPSEMA is presenting, exhibiting or has an organisational role.
For more information about any of the events listed email communications@nopsema.gov.au.
For presentations at past events visit nopsema.gov.au/resources/presentations.