

AMSA webinar Q&A

Managing operational stability risks in commercial fishing

Q: There are not too many fishing vessel skippers who will have the ability to calculate vessel stability using trimmed hydrostatics, so is it really required that the vessel stability book adequately presents a range of realistic loading cases?

A: Yes, the stability book should have a range of conditions that reflect the intended operation of the vessel and loading conditions that will be encountered. This will avoid the skipper having to make these calculations themselves. They only have to check that their vessel load is reflective of what is in the book and they will know they are within the limits.

Q: How does AMSA simplify the system for vessel variations to be approved? A simple solution is more likely to be applied and make an impact.

A: In most cases, owners should first speak with an accredited marine surveyor. Surveyors work with vessel variations daily, understand vessel documentation, and can assess how a particular variation may affect compliance. They are also usually familiar with your vessel and how it operates.

Surveyors can then contact AMSA for clarification or written confirmation where required—particularly for complex or unusual cases. This ensures that survey requirements are clear before any costs are incurred.

Engaging a surveyor early helps avoid situations where owners spend money on modifications that later need to be changed or removed.

Q: There has been work completed on the impact of trim on directional stability. If a vessel is trimmed by the head, the speed at which the vessel becomes directionally unstable could be within its normal operating speed, potentially leading to capsize. Is trim considered?

A: Yes, it is, during initial design trim in each loading condition is considered. However, there are not specified limits for heel. It is worth mentioning that directional instability does not necessarily lead to a capsize. In-fact many vessels are directionally unstable, from a manoeuvring perspective. However, heel due to turning can and does also lead to capsize. Stability assessment do consider the heeling moments applied. One of these is the heeling arising from the inertial forces of the vessel turning.

Q: How can AMSA overcome the shortage of accredited marine surveyors?

A: There are around 200 accredited marine surveyors nationally, with approximately half being highly active. However, coverage varies across Australia, and some regions experience shortages.

Owners may be able to reduce travel costs by coordinating with other operators—such as through local associations—to arrange group survey visits. Some surveyors already undertake regular circuits around parts of the country on this basis.

In many cases, naval architects in private practice can prepare key documentation, which can then be submitted to accredited marine surveyors for approval.

AMSA also considers geographic coverage when assessing applications for new surveyor accreditations. In remote areas, such as the Torres Strait, local organisations have successfully coordinated surveyors' travel and assessment programs for community fleets.

Q: Should the lightship declaration be made more simple?

A: I think the simplicity of the current system is sufficient. The AMSA 752 form itself is simple, though does contain a lot of legal terminology. While the legal wording could be a little hard to interpret. The form asks for a list of anything that has been altered, then a signature to declare that the completion is true and accurate. There may be room to simplify further and provide more clarity in the legal terminology.

Q: Rob, can you talk about fishing boat stabilisers (e.g. angel wings / paravanes) and what they do to vessel stability, especially when retrofitted?

A: A common misconception is that stabilisers improve a vessel's stability. In reality, they primarily **reduce rolling motion**—they act like the shock absorbers on a car.

Stabilisers do **not** increase stability, and in some circumstances can reduce it. Raised or stowed stabiliser arms add weight higher up, increasing the vessel's vertical centre of gravity and reducing stability.

A slow, gentle roll may feel more comfortable for crew, but comfort does not always equal safety. A vessel that feels "tender" or "drunk" can indicate dangerously low stability.

Operators should consider having a naval architect reassess the vessel's vertical centre of gravity—particularly when new or heavier equipment has been fitted. Modern hull scanning methods have made generating new stability information faster and more affordable than in the past.

Even where a stability book is not strictly required, voluntarily obtaining one can help owners meet their safety obligations and assess the effects of future modifications before installing new equipment.

Q: How much detail should I include in my SMS around stability risks such as hook-ups, lifting, and managing free surface?

A: The level of detail in a Safety Management System (SMS) is not prescribed, but your SMS must include a stability risk assessment relevant to **your** operations.

Different fishing activities involve different stability threats—for example, trawlers commonly face hookups and sudden loadings, whereas other operations may mainly deal with rough weather steaming.

Your SMS should identify stability hazards, outline the controls in place, and document operational procedures, training, emergency actions, and physical measures such as freeing ports and watertight integrity. The SMS is primarily a tool for you, not AMSA, so the level of detail should be sufficient to keep your crew informed and safe.

Q: This is a good argument why vessels should have a float-free, GPS-enabled EPIRB fitted. If something happens and you can't activate a manual EPIRB, at least emergency services are notified. AIS-enabled EPIRBs can also alert nearby vessels. Is this worth the investment?

A: Yes. AMSA legislation sets minimum requirements, but operators are encouraged to adopt additional safety measures where appropriate. Many operators, particularly in the fishing industry, already use equipment and procedures that exceed the minimum legal standard because they see the practical safety benefits.

Float-free GPS EPIRBs and AIS-enabled EPIRBs are excellent examples of equipment that can significantly improve survival chances but are not always legally required.

Q: How do I know whether a lift is within my vessel's safe operating limits when I'm on the job?

A: First refer to your vessel's approved stability book or the lifting chart placed at the crane or derrick.

If you do not have approved stability data, a competent person must determine the vessel's safe lifting capacity. This may include the master, provided they have relevant training and access to the vessel's hydrostatic data.

It is critical to remember that once the load clears the deck, its centre of gravity effectively acts at the top of the crane or derrick, not at the load's physical height. This can significantly raise the vessel's overall centre of gravity and reduce both GM and the righting lever (GZ), increasing the risk of capsizing.

Q: Why do we allow company General Managers to sign 752 forms when their boating experience may be minimal?

A: The national law places responsibility on the **Owner**, defined as the person with overall control and management of the vessel. This may not be the vessel's financial owner.

While a General Manager may legally be able to sign a 752, it is essential that whoever signs fully understands the vessel and can attest to the accuracy of the information submitted. A signature should not be a formality—providing false or misleading information can have serious legal and safety consequences.

If the signatory is not familiar with the vessel, they must obtain accurate information from those who are. Crew also have a responsibility to ensure the signatory has the correct information.

Q: Does AMSA impose any restrictions on vessel operability in relation to sea conditions?

A: Yes. These are built into the **service categories** (e.g. 3A–3E for fishing vessels), which specify the conditions vessels are expected to operate in. Wave height, wind pressure, and water conditions are all factors.

Some vessel designs—such as those built to class rules like Lloyd’s—also include specified operational limits.

Where a naval architect determines a vessel has more restrictive limits, these will be included on the certificate of survey and noted in vessel documentation.