Australian Government
Australian Maritime Safety Authority

WORKING BOATS

Summer 2016 Issue 8

In this issue

WORKING BOATS
CONTENTS

Front cover image
A Yellow Water Cruise boat at dawn.

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COLLABORATION IS KEY

AMSA's approach to providing regulatory services to the domestic commercial vessel industry involves two-way collaboration.

We strive for a relationship where owners, operators and other industry members can work with AMSA to create a truly National System that aligns safety outcomes with more consistent regulation.

We are cultivating this relationship in a number of ways; from asking industry what they think about proposed changes to legislation and the way we plan to offer services from July 2017, to inviting suggestions for streamlining initiatives.

Involving the domestic commercial sector in driving change talks about all the channels AMSA uses to engage with industry, providing some key contacts and ways for industry to have a say on issues.

For example, on page 13 we invite you to tell us what you think about proposed changes to regulations about crew qualifications.

Another priority area is ensuring industry members meet national safety standards. And when things do go wrong, we encourage you to be proactive in making improvements to guarantee future safety. Our feature article — *Close call prompts safety overhaul for Yellow Water Cruises* — is a great example of the benefits that come with being proactive, especially in tourism.

Our profile this issue on page 17 is about cray fisherman Bruce Cockman, who talks about promoting safety in a small operation and its challenges.

Improvements to AMSA's search and rescue distress beacon response talks about exciting new developments in search and rescue that will speed up AMSA's emergency response when a beacon is activated.

On page 31 we also bring you a story about Baba Marda Abrolhos Live Rock, an entrepreneurial company in Western Australia that has found a way of regenerating reef systems by creating a substrate for coral spore to land on.

I look forward to what this year has to offer in terms of working with you to achieve safety, and finding out what you think about the way we propose to offer services under the National System.

Mick Kinley
AMSA Chief Executive Officer

INVOLVING THE DOMESTIC COMMERCIAL SECTOR IN DRIVING CHANGE

AMSA is preparing to deliver all regulatory services (such as certificates, approvals and unique identifiers) nationally from 1 July 2017. This is no small feat, as the domestic commercial industry is diverse and geographically dispersed; and AMSA is working to deliver a system that serves the whole of the domestic commercial industry.

To give some background, AMSA became the national regulator of domestic commercial vessels in 2013, making the rules and regulations for domestic commercial vessels consistent around Australia.

Since then AMSA has worked hard to streamline the regulations (based on advice from industry members), and then to consult with industry on AMSA's proposed solutions before they are implemented. As with any regulatory change, two-way interaction between industry and AMSA is vital. Here are some of the ways AMSA engages the domestic commercial sector in driving change.

AMSA WEBSITE (INCLUDING CONSULTATION)

The AMSA website is the first point of call for customers. Here you can find 24/7, all information and resources for domestic commercial vessels and people working with these vessels, at **www.amsa.gov.au/domestic**.

Also, when AMSA comes up with a proposed way of improving a regulation or providing a service, there is a period of time in which AMSA invites the public to provide feedback on the proposed changes. This process (known as 'consultation') takes place via the website at **www.amsa.gov.au/community/consultation**.

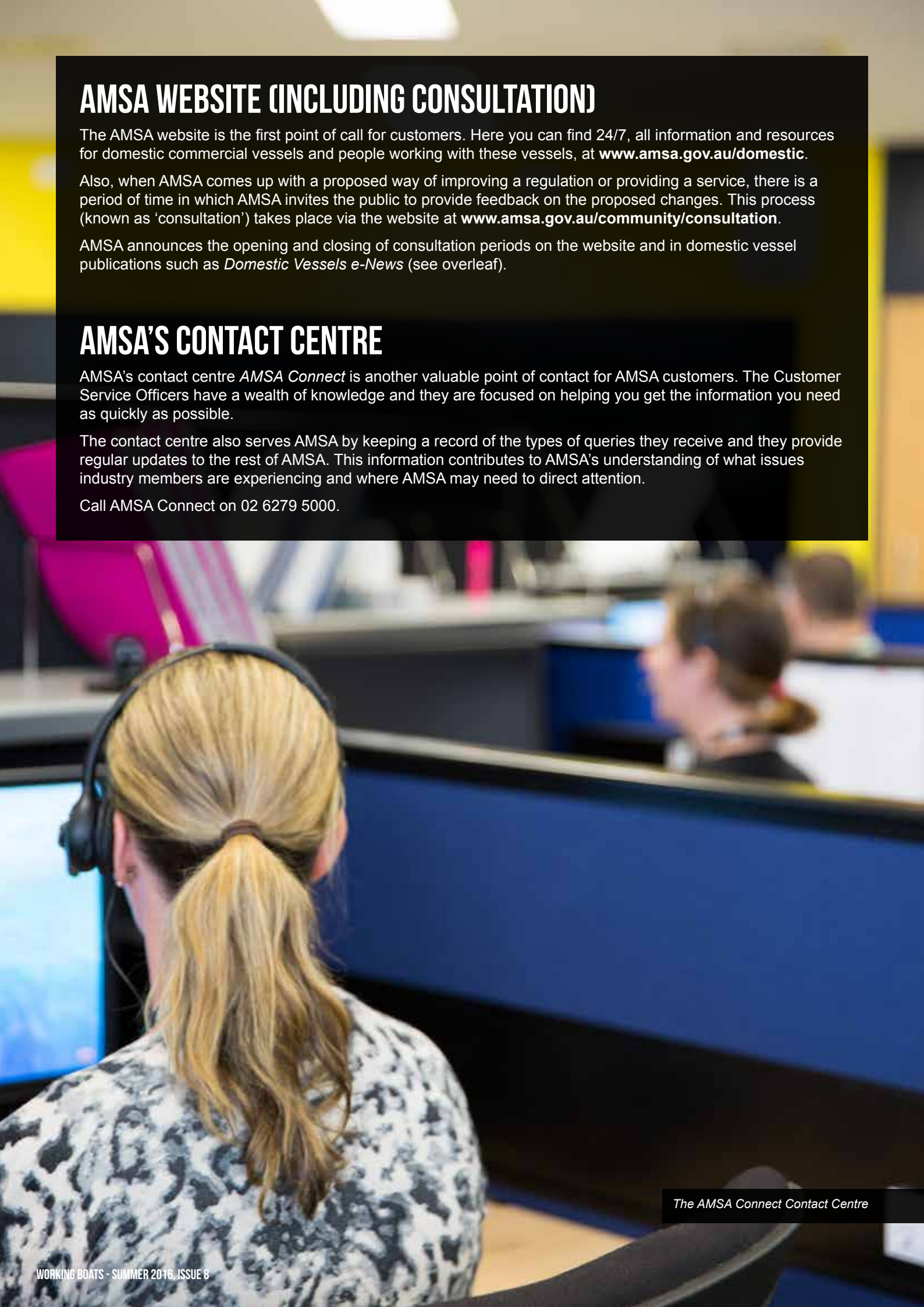
AMSA announces the opening and closing of consultation periods on the website and in domestic vessel publications such as *Domestic Vessels e-News* (see overleaf).

AMSA'S CONTACT CENTRE

AMSA's contact centre *AMSA Connect* is another valuable point of contact for AMSA customers. The Customer Service Officers have a wealth of knowledge and they are focused on helping you get the information you need as quickly as possible.

The contact centre also serves AMSA by keeping a record of the types of queries they receive and they provide regular updates to the rest of AMSA. This information contributes to AMSA's understanding of what issues industry members are experiencing and where AMSA may need to direct attention.

Call AMSA Connect on 02 6279 5000.



The AMSA Connect Contact Centre

DOMESTIC VESSEL LIAISON OFFICERS

There are Domestic Vessel Liaison Officers in each state and the Northern Territory. They have a deep knowledge of the domestic commercial sector in their region and they work closely with industry bodies, state services, organisations and individual seafarers to promote the integration of the National System in their region. They regularly send feedback from members of industry to AMSA, to help AMSA make improvements.

Contact your local Liaison Officer using the emails provided below. To speak to a Liaison Officer by phone, call AMSA Connect to be forwarded to the Liaison Officer in your region.

Liaison Manager
Keith Brightman
keith.brightman@amsa.gov.au

Tasmania
Claire Cunningham
claire.cunningham@amsa.gov.au

Victoria
Wes Oswin
wes.oswin@amsa.gov.au

South Australia
Brad Milic
brad.milic@amsa.gov.au

Western Australia
Chris Battel
chris.battel@amsa.gov.au

Northern Territory
Steve Whitesmith
steve.whitesmith@amsa.gov.au

Northern Queensland
Mick Bishop
mick.bishop@amsa.gov.au

South Queensland
Justin Williams
justin.williams@amsa.gov.au

New South Wales
Anthony Bradstreet
anthony.bradstreet@amsa.gov.au

WORKING BOATS MAGAZINE AND DOMESTIC VESSELS E-NEWS

Domestic Vessels e-News is an electronic newsletter, which is sent out monthly to our growing mailing list. It is a good place to find out about regulatory changes, consultation, workshops and seminars, current news about the domestic vessel sector, as well as new and updated resources on the AMSA website.

Working Boats is published quarterly and focuses on a mixture of stories about industry and AMSA developments.

Subscribe to *Working Boats* and *Domestic Vessels e-News* at **www.amsa.gov.au/domestic**.

SOCIAL MEDIA (TWITTER AND FACEBOOK)

Liking the Australian Maritime Safety Authority Facebook page and following the AMSA Twitter account (**@AMSA_News**) are also great ways of staying up to date with AMSA. Here you will find the latest news, events, safety appeals, commemorations and invitations to provide feedback on certain issues, such as when consultation periods open on particular topics.

EVENTS (WORKSHOPS AND SEMINARS)

AMSA often hosts free workshops to talk to local seafarers about the benefits of implementing a safety management system (SMS) for safe operation for their vessels. The workshops talk about how to identify and manage risk and then develop and implement a simple but effective SMS.

Often the workshops are tailored for specific vessel types or sectors. View the current list of coming workshops at:
www.amsa.gov.au/domestic/training/workshops

ROADSHOWS

Occasionally AMSA undertakes a roadshow to consult with people in many locations within an area about a possible change. These only take place when AMSA needs to hear the views and suggestions of a very wide section of industry across a geographical area, about a very important issue affecting industry.

USEFUL LINKS

Domestic vessel section on the AMSA website
www.amsa.gov.au/domestic

Consultation page on the AMSA website:
www.amsa.gov.au/community/consultation

Subscribe to Working Boats and Domestic Vessels
e-News: www.amsa.gov.au/forms-and-publications/environment/publications

Commercial Vessel Risk and Safety Management Workshops
www.amsa.gov.au/domestic/training/workshops

AMSA Twitter:
@AMSA_News

AMSA Facebook page:
www.facebook.com/AustralianMaritimeSafetyAuthority

USEFUL CONTACTS

AMSA contact centre:
AMSA Connect 02 6279 5000

Queries about safety workshops and seminars:
operationalsafety@amsa.gov.au

Comments and feedback about the National System:
national.system@amsa.gov.au

Domestic Vessel Liaison Officers
See contact list on previous page.

WORKING BOATS

100 years of national management of lighthouses

Have you ever wondered where Australia's first lighthouse was? Why lighthouse design differs between states? How did they come to be managed by AMSA?

This year marks the centenary of the Australian Government's management of lighthouses and other aids to navigation in Australian waters.

Within just a few years of the colony's founding in 1788, convicts built Australia's first marine light on South Head at the entrance to Sydney Harbour. This was simply an iron basket on a tripod which was finally replaced in 1818 by Australia's first lighthouse – Macquarie Light.

Prior to Federation, the various colonies of Australia built, maintained and manned their own lighthouses. As the colonies were independent, both in terms of government and geographical distance, the style of their lighthouses greatly differed. Designs were based on local conditions and used local building materials wherever possible.

In June 1911, the Lighthouses Act came into effect and Captain C.R.W Brewis was commissioned to report on the condition of existing lighthouses and to recommend any additional lights that may be needed. On 1 July 1915 the Commonwealth officially accepted responsibility for all light stations around Australia.

From the Commonwealth Lighthouse Service's inception in 1915, through various Commonwealth agencies (including AMSA since 1991), the Australian Government has been responsible for the provision of an extensive network of aids to navigation around the coastline, now comprising nearly 490 aids at approximately 350 sites.

Lighthouses hold a special place in Australian history, and in the hearts of many Australians. Located on some of the most scenic parts of our coastline, and often very isolated, lighthouses are often regarded as romantic symbols.

They have featured in poetry, literature, films and television. But first and foremost, they are a symbol of safety – ensuring safe passage for ships traversing our often treacherous coastline.

Throughout the centenary year, AMSA will join Australian lighthouse enthusiasts in celebrating this important anniversary.

To mark the anniversary we have released an AMSA calendar featuring various heritage lighthouses. We will also be hosting various open days at our lighthouses around the country, some of which are rarely open to the public. Details of these open days will be made available as they are confirmed.

To introduce our younger generation to the history and importance of lighthouses, we have produced cardboard kit models of lighthouses at Tasman Island, Bustard Head and Flinders Island, Point for their lighthouse open days. The kits will be distributed to school children in each site's local area and will be a feature of specific lighthouse curriculum topics in school, leading up to the open days.

In addition to our activities, other organisations will be commemorating the anniversary. Australia Post is having a commemorative stamp and coin set, due for release in mid-2015, and the Royal Australian Mint is issuing a lighthouse-focused commemorative coin.

We encourage anyone with an interest in lighthouses to be involved in events throughout the year and take the opportunity to learn more about these important structures.

Further information on AMSA's aid to navigation (including lighthouses) is available on our website.

This year marks the centenary of the Australian Government's management of lighthouses and other aids to navigation in Australian waters

WORKING BOATS

Lyndon O'Grady, AMSA Heritage Officer, checking the lens at Macquarie Lighthouse, Sydney

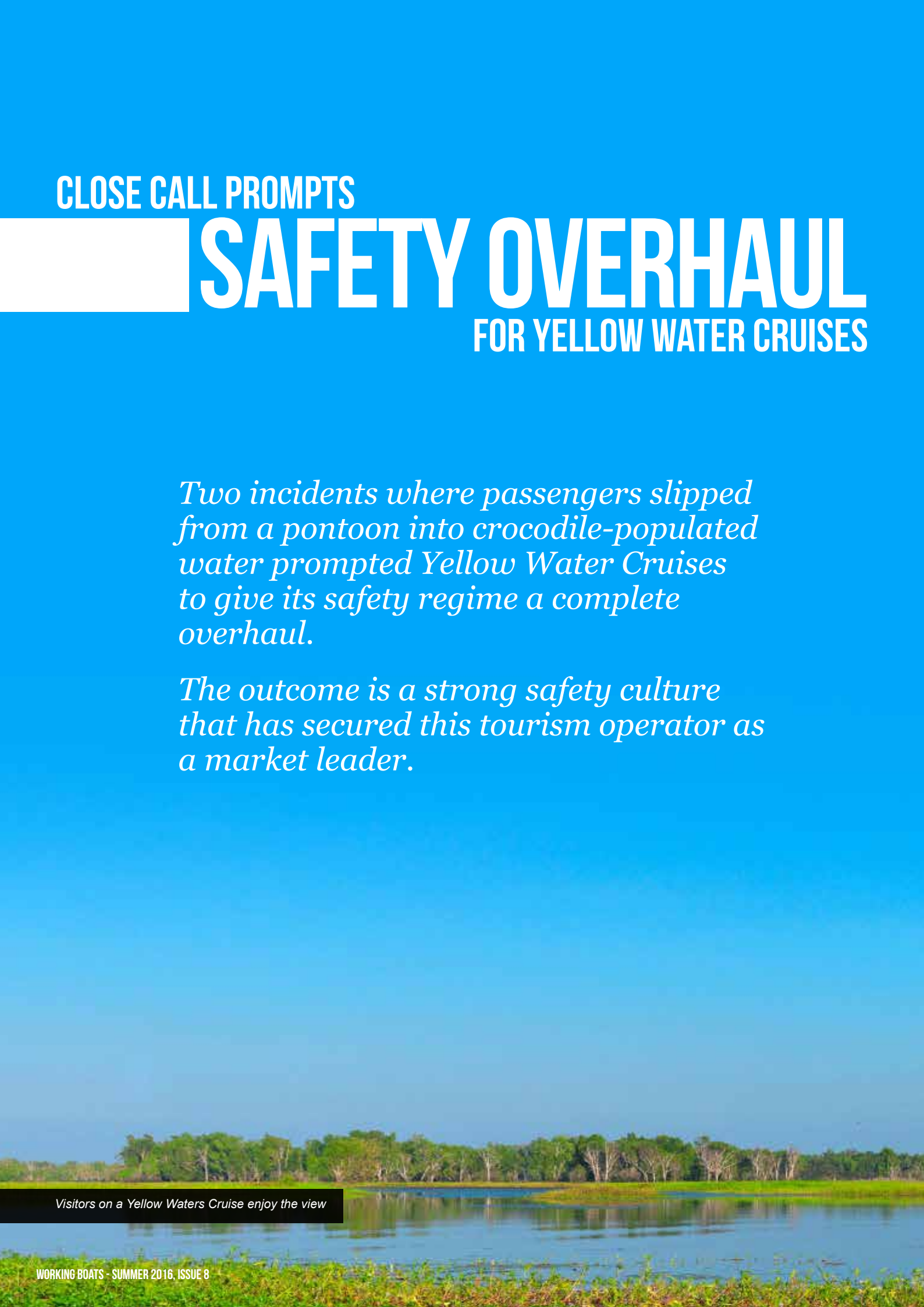
CLOSE CALL PROMPTS

SAFETY OVERHAUL

FOR YELLOW WATER CRUISES

Two incidents where passengers slipped from a pontoon into crocodile-populated water prompted Yellow Water Cruises to give its safety regime a complete overhaul.

The outcome is a strong safety culture that has secured this tourism operator as a market leader.



Visitors on a Yellow Waters Cruise enjoy the view

Operating in the heart of the Northern Territory's Kakadu National Park since 1982, Yellow Water Cruises promises a cultural and natural experience of the highest calibre. Gliding through the rich biodiversity of Kakadu, including one-third of Australia's bird species and salt-water crocodiles, passengers learn about how the local indigenous populations — the Bininj people — use the flora and fauna to support their way of life.

In recent years, Yellow Water Cruises has increasingly improved its safety measures to ensure potential risks are avoided and visitors receive high standards of safety. Visitors can enjoy experiencing the wonders of the area, knowing they are safely removed from the dangers lurking over the side.

'Guests have the confidence that they are being well cared for, and in safe and competent hands. This is a vital element on any vessel, but when in waters that have a large population of salt-water crocodiles, it is even more important to support the message of safety to guests and staff,' said General Manager Brett Skinner.

This shift was triggered by two incidents of passengers slipping from the pontoon into the water when they were boarding the passenger vessels. Fortunately on both occasions the passengers escaped. But for the cruise operator and AMSA, these incidences signified a need for greater precaution.

Following the first incidence, AMSA's delegate, Northern Territory Liaison Officer Steve Whitesmith and marine safety inspectors met with the operator and issued a Direction Notice. The operator provided details of its embarkation and disembarkation procedures, crew-training records, and evidence of how it ensured the safety of passengers. Then the second incident occurred 11 months later, indicating that additional precautions needed to be taken.

This time AMSA's local marine safety inspectors issued a Prohibition Notice, with directions to dedicate a staff member solely to loading and unloading each vessel, giving priority to children and their accompanying adults. But Yellow Waters Cruises went above-and-beyond these directions to ensure the wellbeing of their passengers.

'The operation now has fully enclosed pontoons, with an aluminium mesh to stop anyone falling off. Walkways that swing on to the vessels have also been installed with handles and guides, ensuring that passengers embark and disembark vessels safely. We also placed full lockable marine gates before the pontoons, limiting access to these areas to staff only,' said Brett.

'Another new procedure is loading only one person at a time. The dedicated staff member assists each person while they board,' he said.

'The message to staff about safety has been strong. We now have a culture that's all about continuous improvement and having an eye for detail. Staff members provide a monthly update and we update safety procedures as required. Our safety-conscious team are always coming up with new ways to operate and improve our processes to ensure the wellbeing of our passengers.'

Remote inland operations like Yellow Water Cruises face a number of unique challenges, and these had to be addressed in their safety regime.

'One of our unique challenges is that when the flood waters rise, we need to move our operation to another billabong, as access to our original pontoon is closed. Walkways become too dangerous, flood waters can rise over two metres, and there is no vehicle access to the Yellow Water carpark.

The operation then moves to our second pontoon at Home Billabong, with an amazing guest experience, as our boats drive through monsoonal paperbark forests in a natural channel to get access to Yellow Water and the South Alligator River. As a result of this, all of the engineered safety mechanisms had to be implemented in both locations,' said Brett.

Brett said carrying out repairs on all five passenger vessels in this remote location also poses a challenge.

'With safety at the forefront of our operation, we remove the vessels from the water before any repairs are made. This limits the risks to our staff, such as the local crocodiles and other environmental risks,' he said.

'Being an operation this large, we have two full-time mechanics, welders and an electrician on site to keep the vessels running efficiently and to meet the demand for tourism in the area.'

'Tours in the dry season run all day, with seven cruise times including sunrise, sunset and our cultural cruise — Yellow Water under the stars — departing at night. We also have an allocated eight-metre fishing vessel that runs twice a day through the dry season. In the wet season we conduct up to four cruises during the day.'

Staffing such a seasonal operation is also a major challenge.

'In the dry season, we need an additional 10 guides and they must be trained on the property; vessel safety and standard operating procedures; Kakadu knowledge; licences; product knowledge; training; and the cultural knowledge needed to provide a first-class guest experience. Training takes a minimum three weeks and the cost is estimated to be five thousand dollars for each new, seasonal guide,' said Brett.

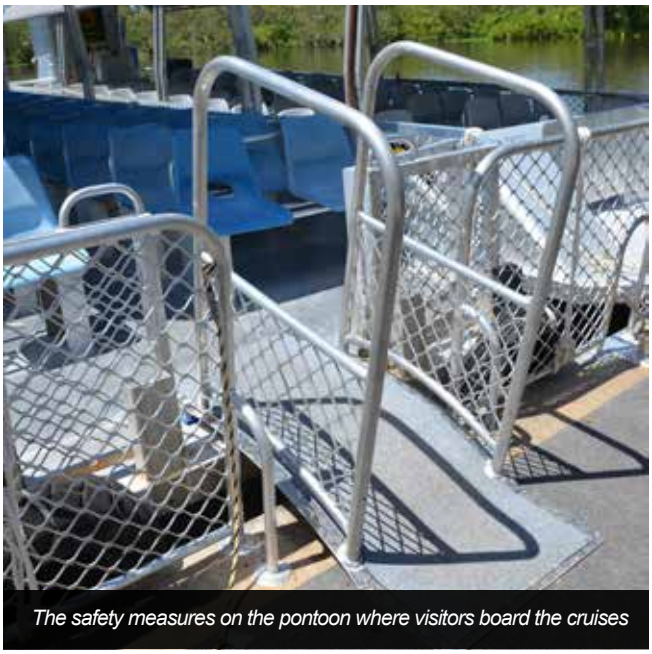
But the benefits of the changes are clear to Brett and the staff at Yellow Water Cruises.

'We have a duty of care to our guests when they make a decision to travel with us. The provisions we have implemented — with fully enclosed pontoons to safeguard passengers from falling in the water, as well as additional staff training — has upheld safety as our number-one priority. Our safety focus also illustrates how proud we are of what we do and our dedication to ensuring our guests enjoy their time discovering the Northern Territory, so that our brand continues to be a market leader.

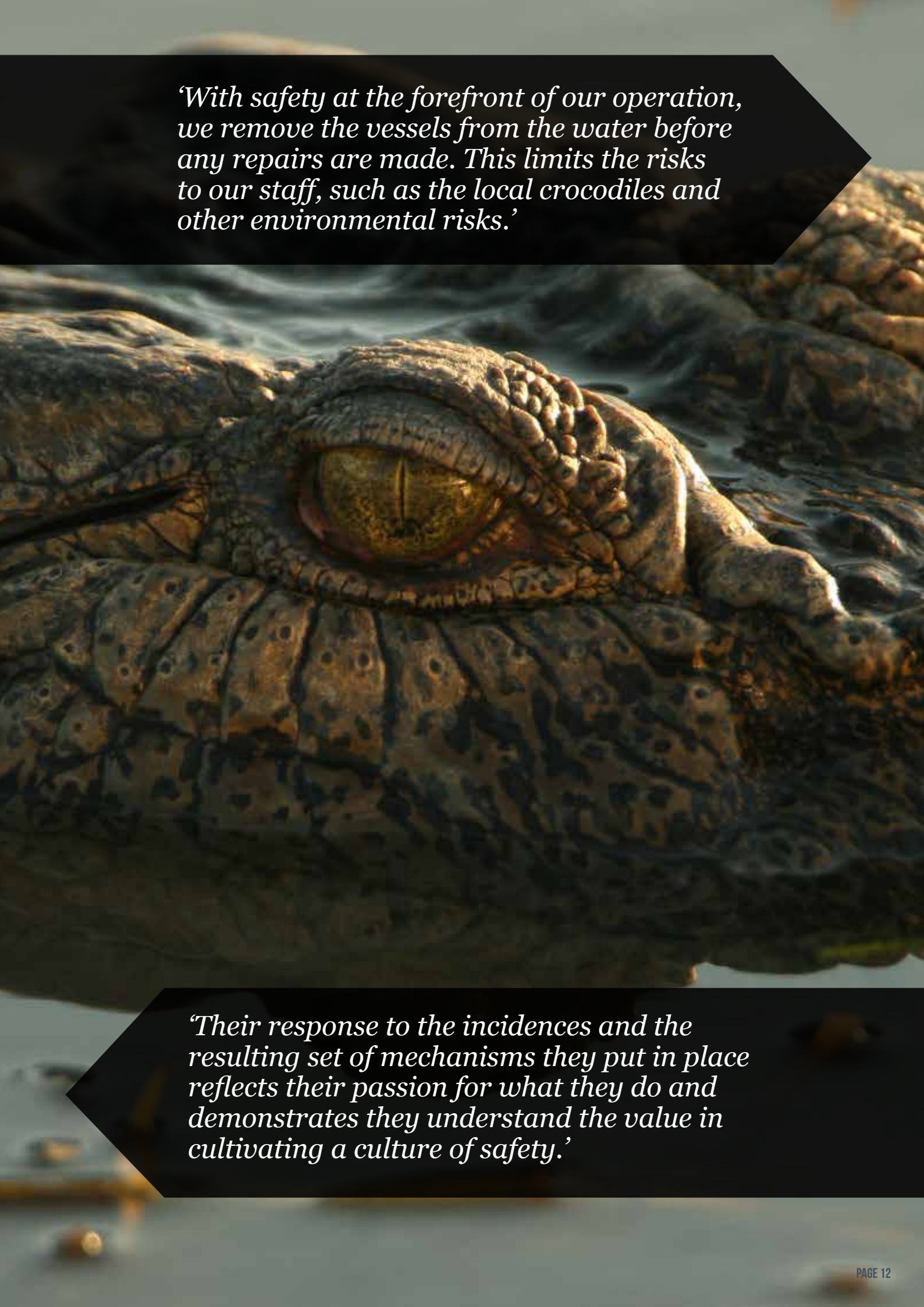
AMSA has been impressed with the improved approach to safety and encourages people to play an active role in responding to safety incidents.

'Yellow Water Cruises took AMSA's directives and further identified risks present in their environment and operation. Their response to the incidences and the resulting set of mechanisms they put in place reflects their passion for what they do and demonstrates they understand the value in cultivating a culture of safety,' said the Manager of Domestic Vessel Compliance and Enforcement, David Marsh.

Visitors boarding a Yellow Waters Cruise



The safety measures on the pontoon where visitors board the cruises



'With safety at the forefront of our operation, we remove the vessels from the water before any repairs are made. This limits the risks to our staff, such as the local crocodiles and other environmental risks.'

'Their response to the incidences and the resulting set of mechanisms they put in place reflects their passion for what they do and demonstrates they understand the value in cultivating a culture of safety.'

TELL US WHAT YOU THINK ABOUT PROPOSED CHANGES TO REGULATIONS ABOUT QUALIFICATIONS

AMSA is proposing changes to Part D of the National Standard for Commercial Vessels (NSCV) and Marine Order 505, affecting certificate of competency requirements.

The proposed changes are based on advice from the domestic commercial vessel industry during working groups to look at how we could improve regulations for industry. Read on about the proposed changes and tell us what you think by going to **www.amsa.gov.au/community/consultation**

Consultation closes on 31 March 2016.

CHANGES AFFECTING THE REQUIREMENTS FOR A CERTIFICATE OF COMPETENCY

1 A NEW DUAL CERTIFICATE OF COMPETENCY (DECK AND ENGINEERING) – THE COXSWAIN GRADE 3 NEAR COASTAL (NC)

This new certificate of competency will sit between a General Purpose Hand and Coxswain Grade 2 NC, permitting the holder to operate on a range of domestic commercial vessels performing simple duties including operational limits and training and assessment.

Seafarers already performing the duties that a holder of a Coxswain Grade 3 NC certificate of competency may perform will be recognised for their experience.

Reference: MO505 s7(1)(b),s14(1)(b), s15(a), s30(b); s31(a), Schedule 1 Item 13; Part D s1.3, s2.1(c), s3.1(3)(a), s4.5(1)(b), Schedule 1 s1.6, Schedule 2 Item 2.6.

2 THE DESCRIPTION OF 'ENGINEERING DUTIES' AND 'SEA SERVICE' WILL BE CONSISTENT ACROSS QUALIFICATIONS

This will clarify that sea service accrued on a recreational vessel is acceptable for a MED 3 NC certificate of competency, and can be accepted to remove the restriction to outboard motor requirements.

The new Part D will also clarify the minor duties for all near coastal engineering certificates.

Reference: Part D Schedule 1 s1.2 – 1.5, Schedule 2 Items 2.2-2.5

3 REMOVAL OF THE SHELTERED-WATER RESTRICTION FOR THE MATE <80 M NC CERTIFICATE OF COMPETENCY

This will provide seafarers with a better career pathway. For example, a General Purpose Hand to a Mate operating to the outer limits of the Australian exclusive economic zone (EEZ) will be able to operate on a wider range of vessels and gain qualifying sea service towards new certificates.

Reference: Removed from Part D Schedule 1 s1.12

4 CHANGES TO NATIONAL LAW REQUIREMENTS FOR PEOPLE HOLDING A CURRENT OR EXPIRED (WITHIN 5 YEARS) CERTIFICATE OF COMPETENCY ISSUED BY COMMONWEALTH, STATE OR TERRITORY

- The Near Coastal Coxswain 1, Coxswain 2, proposed Coxswain 3, MED 3, MED 2 , Master <24 m, Master (Inland waters) will all need a certificate of medical fitness or a self-declaration; an eyesight statement; and (if required) a first aid certificate. There will be no requirement to provide sea service; a course certificate; or to complete a final assessment.
- The Near Coastal Master <35 m, Mate <80 m, Master <80 m, MED 1 and Engineer Class 3 all need a certificate of medical fitness, eyesight statement, sea service and a first aid certificate. There will be no requirement to provide a course certificate. If sea service requirements are met a final assessment will not be required.

Reference: MO505 s14 - 18

5 CHANGES TO NATIONAL LAW REQUIREMENTS FOR PEOPLE HOLDING A COMMONWEALTH, STATE OR TERRITORY ISSUED CERTIFICATE OF COMPETENCY THAT EXPIRED MORE THAN 5 YEARS AGO

- The Near Coastal Coxswain 1, Coxswain 2, proposed Coxswain 3, MED 3, MED 2 , Master <24 m, Master (Inland waters) will all need a certificate of medical fitness or a self-declaration; an eyesight statement; final assessment; and (if required) a first aid certificate. There will be no requirement to provide sea service or a course certificate.
- The Near Coastal Master <35m, Mate <80 m, Master <80 m, MED 1 and Engineer Class 3 will all need a certificate of medical fitness; eyesight statement; sea service; final assessment; and first aid certificate. There will be no requirement to submit a course certificate.

Reference: MO505 s10

6 CHANGES TO MEDICAL REQUIREMENTS

- Colour vision requirements will be clarified, including that an MED 1 NC and Engineer Class 3 NC must pass the engineering colour vision test.
- 'Medical fitness' will include meeting eyesight requirements.
- Applicants with insulin-dependent diabetes will be required to obtain a medical practitioner's certificate stating that their condition will not affect their ability to operate the vessel safely.
- People needing a hearing aid to meet the medical-fitness requirement will have to continue wearing a hearing aid on duty when appropriate.
- Certificates of medical fitness and eyesight statements for Near Coastal certificates of competency will be valid for up to 5 years.

Reference: NSCV Part D s4.2(2), s.4.23; MO505 s12(g)

7 CHANGES TO DUTIES

- The duties for Coxswain Grade 1 NC, Master <24 m NC and Master <35 m NC certificate holders will include a number of duties currently provided for by exemptions.

Reference: Part D Schedule 2 Item 2.8, Item 2.9, Item 2.1

- The inboard engine endorsement for the Coxswain Grade 2 NC <500 kW will no longer require an application if all of the relevant requirements (engineering training and sea service) are met.

Reference: Part D Schedule 2 Item 2.7

- Certificate holders will be able to perform all relevant subordinate duties.

Reference: Part D Schedule 2

8 ISSUING OF A COXSWAIN GRADE 2 NC CERTIFICATE OF COMPETENCY

A person may be issued a Coxswain Grade 2 NC certificate of competency if they have been performing similar duties with a state or Northern Territory certificate of competency (however described).

Reference: MO505 Schedule 1 item 12

9 CHIEF ENGINEER DUTIES

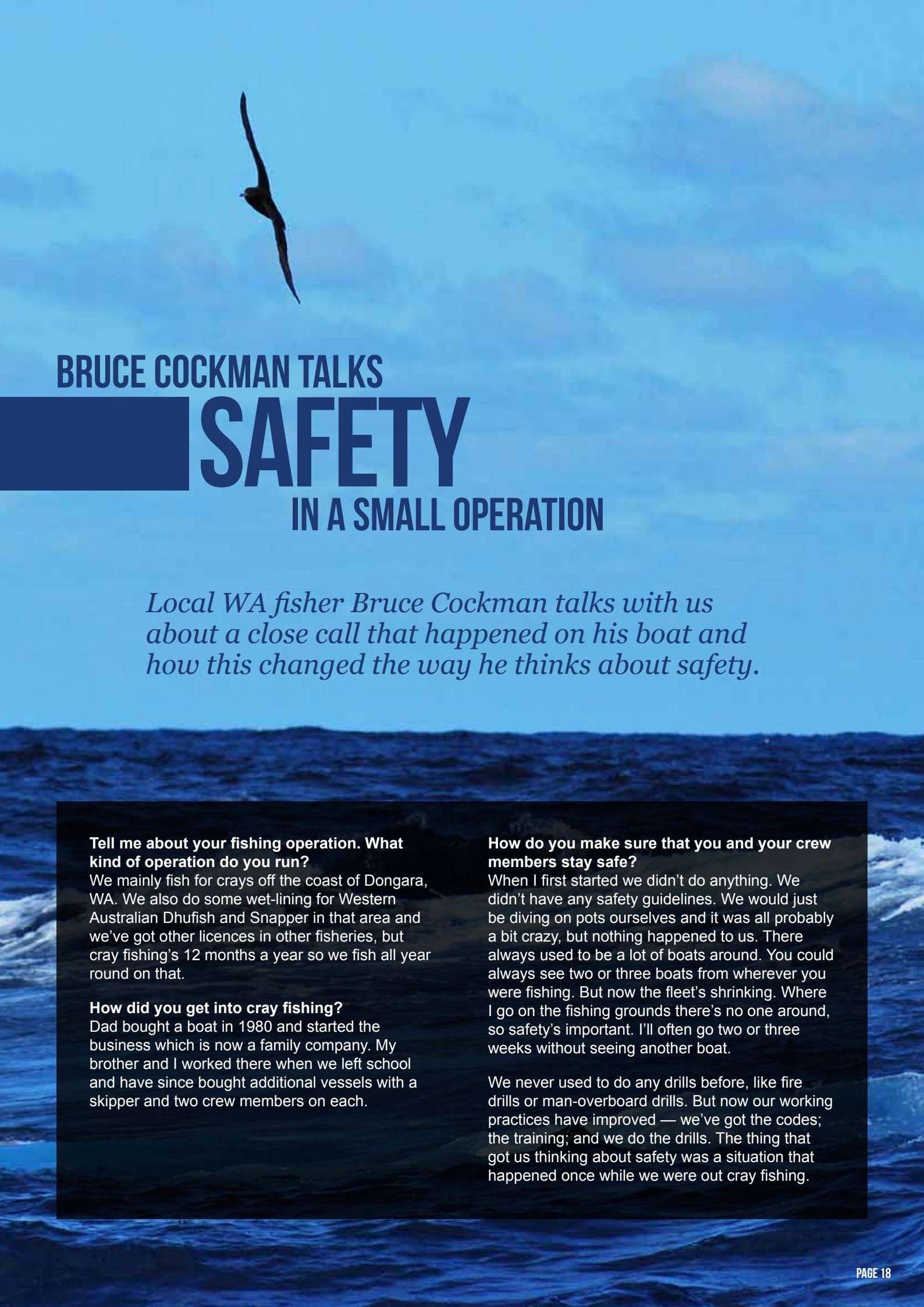
A Chief Engineer can only operate non-steam propulsion vessels. Chief Engineer's needing to operate steam-powered vessels will continue to require an endorsement.

Reference: Part D Schedule 2 Items 2.2 – 2.5

MORE INFORMATION

- Visit **www.amsa.gov.au/community/consultation** for more information about the proposed changes and to tell us your opinion
- Call **AMSA Connect 02 6279 5000**

Bruce's vessel Night Stalker



BRUCE COCKMAN TALKS SAFETY IN A SMALL OPERATION

Local WA fisher Bruce Cockman talks with us about a close call that happened on his boat and how this changed the way he thinks about safety.

Tell me about your fishing operation. What kind of operation do you run?
We mainly fish for crays off the coast of Dongara, WA. We also do some wet-lining for Western Australian Dhufish and Snapper in that area and we've got other licences in other fisheries, but cray fishing's 12 months a year so we fish all year round on that.

How did you get into cray fishing?
Dad bought a boat in 1980 and started the business which is now a family company. My brother and I worked there when we left school and have since bought additional vessels with a skipper and two crew members on each.

How do you make sure that you and your crew members stay safe?
When I first started we didn't do anything. We didn't have any safety guidelines. We would just be diving on pots ourselves and it was all probably a bit crazy, but nothing happened to us. There always used to be a lot of boats around. You could always see two or three boats from wherever you were fishing. But now the fleet's shrinking. Where I go on the fishing grounds there's no one around, so safety's important. I'll often go two or three weeks without seeing another boat.

We never used to do any drills before, like fire drills or man-overboard drills. But now our working practices have improved — we've got the codes; the training; and we do the drills. The thing that got us thinking about safety was a situation that happened once while we were out cray fishing.

‘Our working practices have improved — we’ve got the codes; the training; and we do the drills.’

Bruce Cockman

What happened?
The boat broached down a big wave at Big Bank, north of the Abrolhos Islands. The boat was sideways and the decky was 20 metres off the boat in the water hanging on to the deck hose and all the pots fell over into the water.

We hadn’t done any drills at the time and there was nothing to throw him because the ropes were all tangled. The life ring was above our heads, but we didn’t think of that at the time. That’s where doing drills comes in; nothing like that has ever happened since, but if it does, we’ll know what to do.

For the man-overboard drill we’ve now got harnesses and a procedure to pull people on board so next time we’ll remember the safety equipment.

People are lax and they say ‘The boat next to me isn’t doing the drill’; and the crew are saying, ‘Well why do I have to do it?’ But things do happen and we want to be ready for them when they do.

It’s a bit embarrassing doing the drills at first; I feel a bit silly and everyone’s rolling their eyes. But when things go pear shaped you’re glad you’ve done them.

What about EPIRBs (emergency position-indicating radio beacon stations) and PLBs (personal locator beacons)?
We didn’t have EPIRBs but we’ve got them now and we talk about how to activate it if the boat sinks. It’s no good just me knowing it, the crew have to know what to do too. Also, we used to have a rigid life raft. Now we anchor out a lot, and inflatable life rafts are a good thing. If you’re going to go over you want to be in one of them.

Have you got all your safety procedures written down?
We’ve got a safety management plan, which we’ve had for the last couple of years. A consultant came on the boat and helped us make a basic plan. The next step will be to upgrade it, but the drills are there.

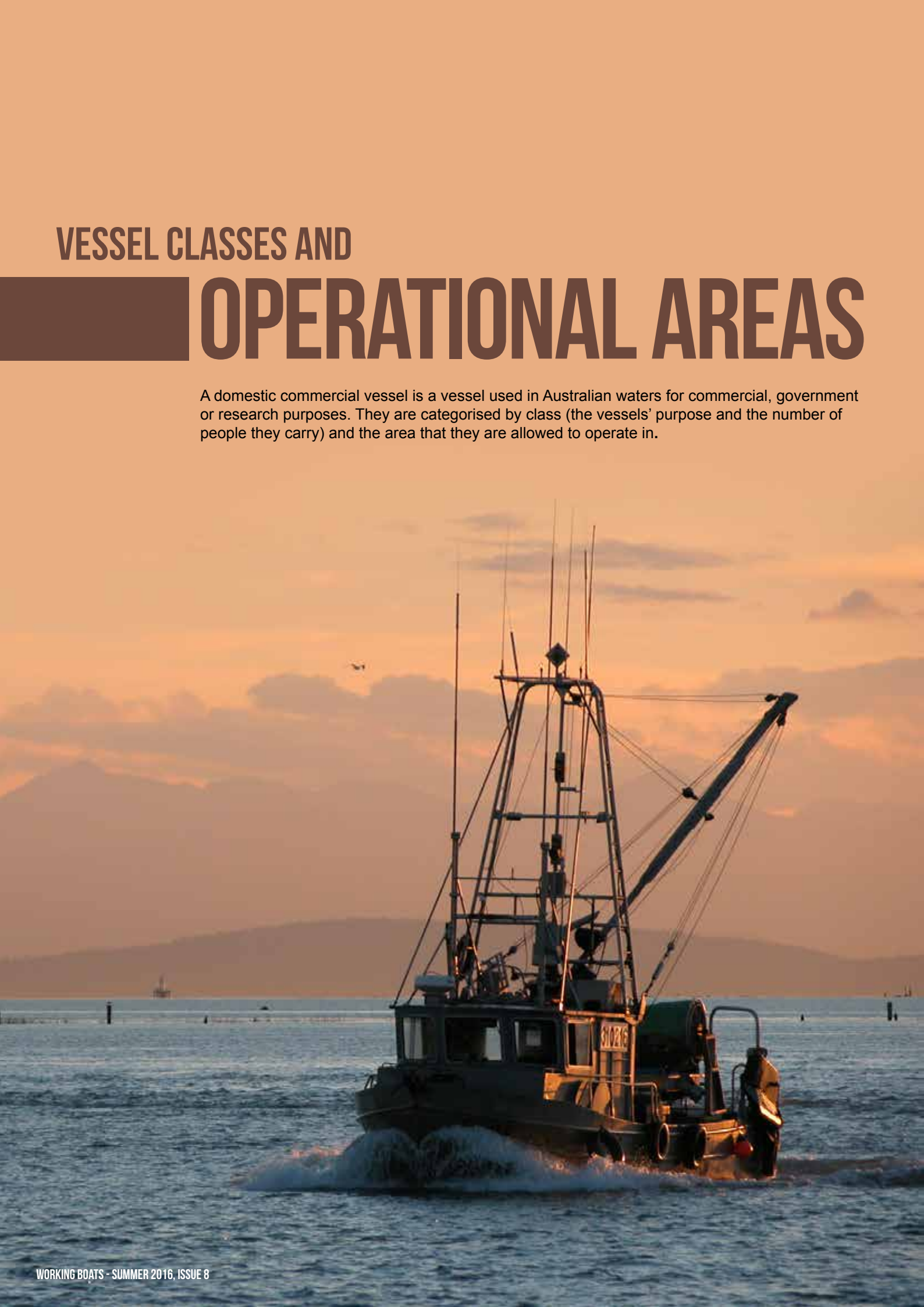
Going back to the man-overboard at Big Bank — what happened in the end?
Well we had about 50 pots on the boat; 30 of them had fallen off and both the crew were injured. The guy in the water had hurt his leg and couldn’t stand up. Adrenaline kicked in and we ended up man-handling him over onto the boat. That’s why now we’ve got the harness. Now we would put the harness and the rope on him. It took about three hours to sort it all out — it was a huge mess.

What are your thoughts about the National System and how it affects your operation?
As long as the National System brings consistency between all the boats it will be positive. At the moment, going from a state-based system to the National System there are a few issues around what is required, like stability booklets and surveying requirements.

Bruce operates off the coast of Geraldton, Western Australia

VESSEL CLASSES AND OPERATIONAL AREAS

A domestic commercial vessel is a vessel used in Australian waters for commercial, government or research purposes. They are categorised by class (the vessels' purpose and the number of people they carry) and the area that they are allowed to operate in.



CLASSES OF DOMESTIC COMMERCIAL VESSELS

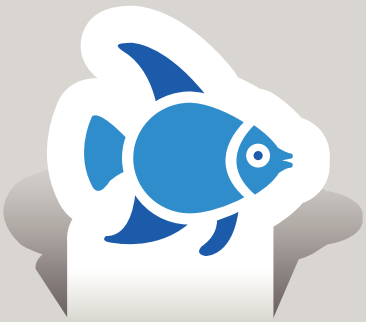
We divide domestic commercial vessels broadly into four groups:

CLASS 1 – PASSENGER VESSELS

Passenger vessels are certified to carry more than 12 passengers. These operators range from larger publically listed companies through to small, family owned and operated companies. Crew responsible for navigation and engineering duties are trained and qualified. A large number of support crew (i.e. deck hands, bar staff, wait staff and chefs) are also employed.

CLASS 2 – COMMERCIAL VESSELS THAT DON'T FIT IN CLASS 1, 3 OR 4 (OTHER)

Other commercial vessels that may carry up to 12 passengers but are not a passenger vessel, fishing vessel, or hire-and-drive vessel. This is the most diverse group. Operators range from large companies, through to single-person operations.



CLASS 3 – FISHING VESSELS

Fishing vessels used in fishing operations (i.e. catching and processing; support activities such as fish storage and transport; and provision of crew equipment and transport to/from fishing operations). This is a diverse group of operators ranging from larger companies through to single-person operations.

CLASS 4 – HIRE-AND-DRIVE VESSELS

Hire and drive vessel used by the hirer only for recreational purposes. Hire-and-drive vessels are those that are let for hire or reward or for any other consideration, including vessels provided in conjunction with holiday establishments or hotels for use of guests or tenants.

There are many small businesses and single-person operators in this group, although many have considerable experience in this industry. Staff for smaller, less complicated vessels (i.e. canoes, 4-metre runabouts) are often employed on a casual basis. Some may hold a recreational boating licence.

Often boats fit into more than one of the aforementioned classes. When this is the case, the vessel must comply with the requirements of both classes.

EXAMPLE 1

Michael owns a large fishing boat and he operates around Heard Island and the McDonald Islands fishing for Patagonian Toothfish. Due to the nature of the operation Michael's fishing vessel Longbow accommodates up to 15 seafarers. Although there are more than 12 people onboard, the vessel is considered a Class 3 vessel, as these people are either crew or special personnel who are on the vessel to perform or assist the performance of the special work being carried out on board the vessel.

EXAMPLE 2

Little Roamer is a commercial charter sailboat in Queensland. It can carry up to eight passengers at any given time, including the skipper and one deckhand. Because the total number of passengers is under 12, the boat is considered to be a Class 2. If Little Roamer is hired out to a group of people who know how to sail and the operator is not required on board, then it is also a Class 4 vessel.

OPERATIONAL AREA OF THE VESSEL

The 'operational area' is the geographical area that a vessel can operate in. AMSA assigns the operational area according to the vessel type and the type of operation it carries out. Vessels must meet the requirements of the category of operational area.

Vessels operating before the introduction of Part B of the National Standard for Domestic Commercial Vessels (NSCV) can operate in the equivalent operational area listed below.

Operational areas	Categories
Extended offshore operations beyond 200 nm seaward from the baseline of the Australian mainland, Tasmanian mainland or a recognised island and in waters to the outer limits of the EEZ.	B Extended
Offshore operations within 200 nm seaward from the baseline of the Australian mainland, Tasmanian mainland or a recognised island and in waters to the outer limits of the EEZ.	B
Restricted offshore operations not beyond the outer limits of the EEZ and • within 30 nm seaward of the baseline of the Australian mainland (other than Queensland), Tasmanian mainland or a recognised island • within the Great Barrier Reef Region, or • the Torres Strait zone, or • 50 nm seaward from the baseline of the mainland of Queensland, or • 30 nm from the parent vessel of the vessel.	C
Restricted offshore operations within specified areas including smooth waters, partially smooth waters or a specified area determined by the National Regulator	C Restricted
Partially smooth water operations as designated under State or Territory waterway management legislation	D
Smooth water operations as designated under State or Territory waterway management legislation	E
Category A (unlimited domestic operations) is no longer available. It is only referred to in an historical context.	A

Service category (vessel class and operational area)	Description
Class 1A**	Seagoing passenger vessel for use in all operational areas up to (and including) unlimited domestic operations.
Class 1B extended	Seagoing passenger vessel: (a) for use beyond 200 nautical miles from the baseline of any of the following except in waters to the outer limits of Australia's Exclusive Economic Zone: (i) the Australian mainland (ii) the Tasmanian mainland (iii) a recognised island*, and (b) that complies with NSCV requirements for passenger vessels for use in the operational area 'unlimited domestic operations'.
Class 1B	Seagoing passenger vessel for use in all operational areas up to (and including) offshore operations.
Class 1C	Seagoing passenger vessel for use in all operational areas up to (and including) restricted offshore operations.
Class 1D	Sheltered waters passenger vessel for operations in partially smooth, and smooth waters only.
Class 1E	Sheltered waters passenger vessel for use in smooth waters only.
Class 2A**	Seagoing non-passenger vessel for use in all operational areas up to (and including) unlimited domestic operations.
Class 2B extended	Seagoing non-passenger vessel: (a) for use beyond 200 nautical miles from the baseline of any of the following except in waters to the outer limits of Australia's Exclusive Economic Zone: (i) the Australian mainland (ii) the Tasmanian mainland (iii) a recognised island*, and (b) that complies with NSCV requirements for non-passenger vessels for use in the operational area 'unlimited domestic operations'.
Class 2B	Seagoing non-passenger vessel for use in all operational areas up to (and including) offshore operations.
Class 2C	Seagoing non-passenger vessel for use in all operational areas up to (and including) restricted offshore operations.
Class 2C restricted	Seagoing non-passenger vessel for use in: (a) smooth waters, or (b) partially smooth waters, or (c) a specified area decided by AMSA.
Class 2D	Sheltered waters non-passenger vessel for operations in partially smooth, and smooth waters only.
Class 2E	Sheltered waters non-passenger vessel for use in smooth waters only.
Class 3A**	Seagoing fishing vessel for use in all operational areas up to (and including) unlimited domestic operations.
Class 3B extended	Seagoing fishing vessel: (a) for use beyond 200 nautical miles from the baseline of any of the following except in waters to the outer limits of Australia's Exclusive Economic Zone: (i) the Australian mainland (ii) the Tasmanian mainland (iii) a recognised island, and (b) that complies with NSCV requirements for fishing vessels for use in the operational area 'unlimited domestic operations'.

Service category (vessel class and operational area)	Description
Class 3B	Seagoing fishing vessel for use in all operational areas up to (and including) offshore operations.
Class 3C	Seagoing fishing vessel for use in all operational areas up to (and including) restricted offshore operations.
Class 3C restricted	Seagoing fishing vessel for use in: (a) smooth waters, or (b) partially smooth waters, or (c) a specified area decided by AMSA.
Class 3D	Sheltered waters fishing vessel for operations in partially smooth, and smooth waters only.
Class 3E	Sheltered waters fishing vessel for use in smooth waters only.
Class 4C	Seagoing hire-and-drive vessel for use in all operational areas up to (and including) restricted offshore operations.
Class 4D	Sheltered waters hire-and-drive vessel for operations in partially smooth, and smooth waters only.
Class 4E	Sheltered waters hire-and-drive vessel for use in smooth waters only.

* Recognised islands include: Lord Howe Island, Abrolhos Island, King Island, Three Hummock Island, Hunter Island, Robins Island, Furneaux Group, Kent Group, Maatsuyker Islands Group, Bruny Island, Maria Island, Schouten Island, Tasman Island, Waterhouse Island and any island that is a part of the Northern Territory.
** Category A of the operational areas is no longer available. It is only referred to in an historical context.

EXAMPLE

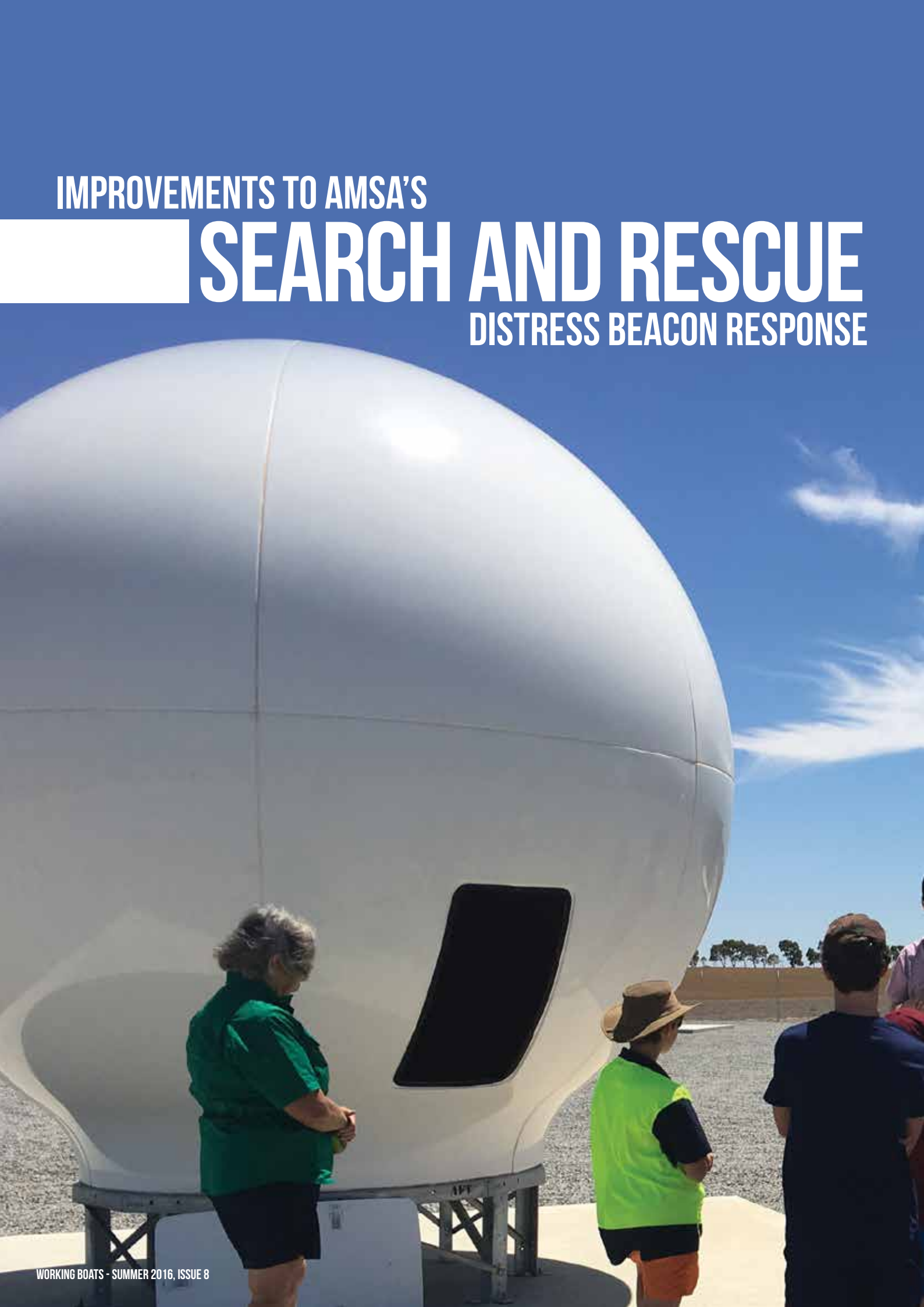
Derrick owns a large commercial yacht that can carry up to 20 passengers at any given time. The yacht operates within a bay that has been designated partially smooth waters by his state. Because the yacht can carry over 12 passengers it's a Class 1 vessel. Its operational area falls in partially smooth waters and so the yacht has a service category of 1D.

This information has been taken from Part B of the *National Standard for Commercial Vessels* (NSCV). This is available at **www.amsa.gov.au/domestic** > standards and legislation > National Standard for Commercial Vessels > click on 'General requirements' in the first line of the table.

For more information:

- on the boundaries of sheltered waters in your state or territory, contact your local marine safety agency
- visit **www.amsa.gov.au**
- call **AMSA Connect 02 6279 5000**

IMPROVEMENTS TO AMSA'S SEARCH AND RESCUE DISTRESS BEACON RESPONSE



A new international satellite system and satellite tracking station in the Western Australian outback could soon reduce AMSA's search and rescue response time for distress beacon incidents from hours to minutes.

Australia manages the second largest 406 MHz distress beacon database in the world with more than 423,000 beacons registered. Of these registered beacons 65 per cent are equipped with Global Positioning Satellite (GPS), providing precise location information and minimising the search time required.

In 2015, 189 lives were saved due to distress beacon activations. Distress beacon alerts are received by AMSA Search and Rescue in Canberra and operate under the international COSPAS SARSAT satellite system.

The international COSPAS SARSAT programme has developed the new Medium-altitude Earth Orbit Search and Rescue (MEOSAR) satellite system to replace the current Low-altitude Earth Orbit Search and Rescue (LEOSAR) satellites, which have provided Australia's distress beacon coverage since 1982.

Once fully operational, the MEOSAR system will reduce beacon detection times to within 10 minutes, 95 per cent of the time. The MEOSAR satellite system will become effective in Australia in 2017 and the existing LEOSAR satellite system will be phased out in the coming years.

The new system includes a satellite tracking ground station in Western Australia and central processing equipment in Canberra. The tracking station has six-antennas, each built to track a specific MEOSAR satellite.

AMSA Search and Rescue COSPAS SARSAT Adviser John Ophel, commented on the cooperation between the Australia and New Zealand's satellite tracking ground stations to achieve overlapping coverage of the Australian and New Zealand Search and Rescue Regions (SRR).

'When someone is in a life threatening situation and activates their distress beacon, the ground station in Mingenew receives the data from overhead satellites and forwards it to AMSA Search and Rescue in Canberra,' Mr Ophel said.

'If your beacon is registered, AMSA Search and Rescue can immediately ring your emergency contacts to obtain useful information that assists search and rescue authorities to coordinate the most effective response. So it is essential to keep your registration details up to date'.

Locals attending the community open day at the new satellite tracking station in Western Australia

HOW TO PREPARE YOUR BEACON BEFORE HEADING OUT ON THE WATER

1. **Register your beacon**

   AMSA has recently improved the online beacon registration system to make it more mobile friendly and accessible for registering and updating your beacon information from your mobile, tablet or laptop.

2. **Save your proof of registration**

   When required by law, providing proof of registration is easy. The four options are:

   - **SMS**
     Save your SMS registration confirmation on your mobile phone
   - **Email**
     Save your confirmation email on your mobile phone or tablet
   - **Print**
     Print your registration confirmation, or if you have no email, request a printed copy to be sent via mail
   - **Online**
     Check your beacon registration status online

   Note: If you have an existing beacon registration sticker it will remain valid until it expires.

3. **Update your registration details**

   Make sure your details are up to date in your online beacon registration account. This includes your contact details and emergency contacts. You can also now upload details about your trip plans and photos of your vessel or vehicle to help us identify you in an emergency.

4. **Check your battery expiry date**

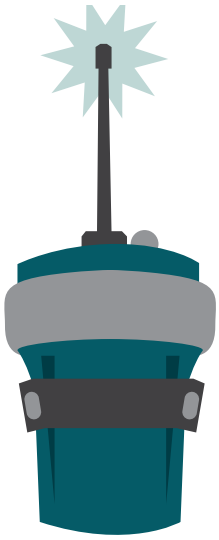
   Regularly check your battery expiry date and test your beacon as per the manufacturers' instructions. Note that even if the light operates when you are testing your beacon after the battery expiry date, this does not guarantee your beacon will work correctly in a distress situation. So make sure you service and replace the battery before it expires.

   Having a registered beacon could make all the difference in a life threatening situation.

   To update your registration or for more information on beacons:

   - visit **www.amsa.gov.au/beacons**
   - call **1800 406 406**

How the search and rescue satellites pick up your beacon's distress call and mobilise emergency services



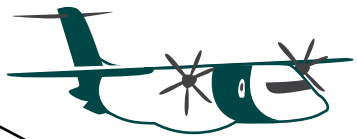
1 DISTRESS CALL UTILISING EMERGENCY DISTRESS BEACON

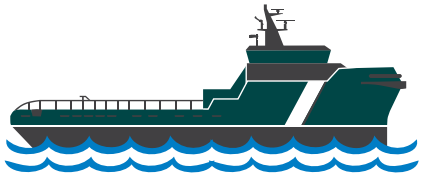
MARITIME, AVIATION, OUTBACK

2 SEARCH AND RESCUE SATELLITES

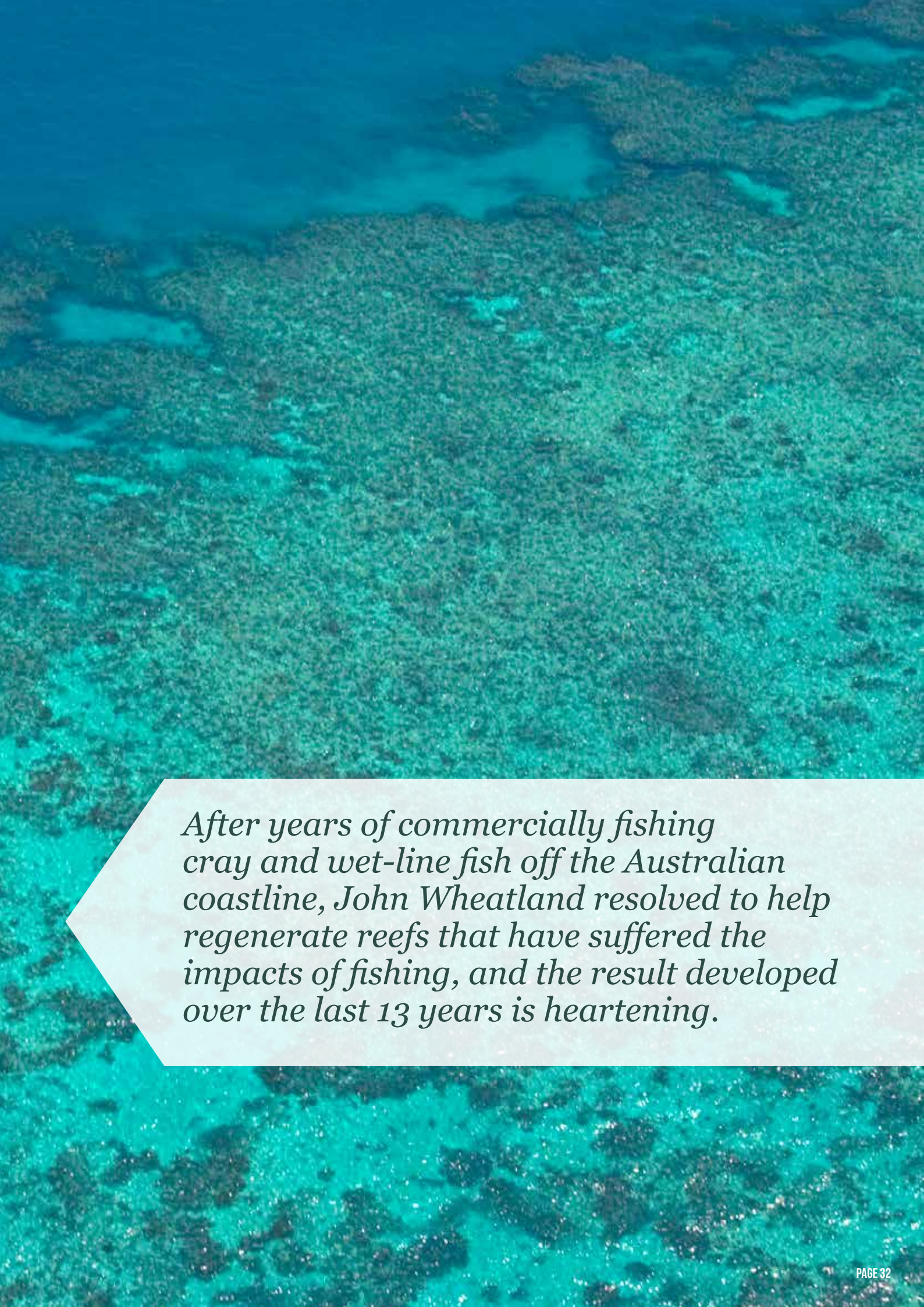
3 LOCAL USER TERMINAL

4 AMSA SEARCH AND RESCUE





GIVING BACK TO THE SEA



After years of commercially fishing cray and wet-line fish off the Australian coastline, John Wheatland resolved to help regenerate reefs that have suffered the impacts of fishing, and the result developed over the last 13 years is heartening.

'We simply wanted to mimic Mother Nature, to create a substrate for the coral spore to land on and grow into a reef system.'

'I've caught a lot of fish over the years and I've seen the damage done by taking most of the lobsters off one reef. It creates an imbalance which then turns the reef upside down. The reef goes into decline pretty rapidly after that,' said Wheatland.

So thirteen years ago John teamed up with old friends and traditional owners of country, Eugene Witby and Shane Bonney, who share John's passion for the ocean and are keen to protect it for future generations. Together they started up Baba Marda Abrolhos Live Rock in Geraldton, WA ('baba marda' means 'water rock' in Yamitji, the local Aboriginal language).

'We simply wanted to mimic Mother Nature, to create a substrate for the coral spore to land on and grow into a reef system,' said John.

A 'substrate' is a surface on which an organism attaches itself and grows. In this case, a limestone base is used, which then accumulates coralline algae.

'We make the substrate using limestone and other ingredients, and we pump seawater through until it reaches the same acidity as limestone found in the ocean. Then alkaline algae start growing on it within about two months, depending on the water temperature.

The algae attracts coral spores [known as 'planula larva'] to settle on the rock, where they can feed on the algae. Most countries have a coral spawn cycle; it's just a matter of working out when the big one is and when the little one is. At the [Abrolhos] islands the big one is in March, and the little one is in October.'

The trio developed their successful substrate through trial and error, as well as an affiliation with research facilities such as the Batavia Coast Maritime Institute, Mauritius University and researchers from Chennai in the south of India.

Although the substrate is created in Geraldton, field trials take place at the Abrolhos Islands.

'We have one boat, which we use to reach the Abrolhos Islands where we carry out research trials,' said John.

Combining the ingredients that make up the substrate

Creating reef-like formations with the substrate

‘For us the National System is just another challenge in the course of what we do, but if it improves safety then it’s good.’

When it comes to vessel safety, John, Eugene and Shane take a common-sense approach, and they are pragmatic about the National System.

‘For us the National System is just another challenge in the course of what we do, but if it improves safety then it’s good.’

‘We have between three and 12 people working, depending on the stage of production. We have safety protocols in place and when seasonal workers come on board we do inductions. We just keep reiterating the protocols, and know where everyone is on the boat at all times.’

‘We also do a fair bit of diving off the boat to photograph the growth on the substrate, and we have a dive plan for that,’ said John.

Photographs reveal that the trio’s process for creating the substrate and introducing it to ecosystems is highly successful, recieving interest from governments and large corporations around the world.

‘Its nothing short of sensational. We still need to continue our trials to obtain results, but what we have created so far has received a lot of interest internationally. We have shipped live rock to Mauritius.’

‘We’ve had interest from the Minister of Fisheries in Chennai, who is interested in grafting the live rocks into a marine park around the Andaman Islands. We’ve also had interest in using live rock to line a break wall being built at a Dubai resort,’ said John.

Meanwhile, the work of Shane, Eugene and John continues to open up new possibilities for further research and development.

‘One of our priorities is to research carbon capture in corals. Soft and hard corals drag carbon out of the reef and store it for billions of years. This kind of research could make a big difference to climatic research into global warming,’ said John.

‘We’ve also made a little thing called an eco turtle (a plastic turtle) designed to float around with the currents and give us readings about currents, salinity and temperatures etc. It’s got a righting lever on it so when it tips upside down, it automatically rights itself up with the next wave,’ he said.

A new batch

Coral growth on the substrate

FREE RISK AND SAFETY MANAGEMENT WORKSHOPS

Commercial Vessel Risk and Safety Management Workshops assist owners and operators of domestic commercial vessels to identify risks in their operation/s and manage these risks through the implementation of an effective safety management system (SMS), which is a requirement of the National Law.

Participants learn about the different types of safety culture (peoples' attitudes toward safety; their values and behavior). They also gain the skills to identify and manage risk and then develop and implement a simple but effective SMS.

The workshops are free of charge but we appreciate it if you register in advance to assist AMSA to plan for catering and other aspects of the workshops.

To register for a workshop:

- email **operationalsafety@amsa.gov.au** or
- call **AMSA Connect 02 6279 5000** (option 3).

To learn about additional workshops around Australia and for more information about each workshop visit **www.amsa.gov.au/domestic/training/workshops**

Workshops tailored for operators of fishing vessels

New South Wales

Location	Venue	Date	Time
Coffs Harbour	Coffs Harbour Yacht Club, 30 Marina Drive, Coffs Harbour	Friday 11 March	9am – 2pm
Newcastle	Newcastle SLSC, Newcastle Beach, Newcastle	Tuesday 22 March	9am – 2pm
Foster-Tuncurry	Tuncurry Bowling Club, 21 Parkes St, Tuncurry	Wednesday 23 March	9am – 2pm
Port Macquarie	Panthers, 1 Bay St, Port Macquarie	Thursday 24 March	9am – 2pm

Tasmania

Location	Venue	Date	Time
Dover	Dover RSL,16 Chapman Ave, Dover	Thursday 26 April	8:45am – 2pm
Hobart	Royal Yacht Club of Tasmania, Marieville Esplanade, Sandy Bay	Wednesday 27 April	8:45am – 2pm
Eaglehawk Neck	Lufra Hotel, 380 Pirates Bay Drive, Eaglehawk Neck	Thursday 28 April	8:45am – 2pm
Triabunna	The Recreation Room, 38 Vicary Street, Triabunna	Wednesday 11 May	8:45am – 2pm
St Helens	St Helens Marine Rescue, The Esplanade, St Helens	Thursday 12 May	8:45am – 2pm
Launceston	Australian Maritime College, Maritime Way, Newnham (meet out front)	Friday 13 May	8:45am – 2pm
Devonport	Mersey Yacht Club, Anchor Drive, East Devonport	Monday 16 May	8:45am – 2pm
Stanley	Stanley Seaview Inn, 58 Dovecote Road, Stanley	Tuesday 17 May	8:45am – 2pm
Strahan	The Henty Room at Strahan Village, The Esplanade, Strahan	Thursday 19 May	8:45am – 2pm

CARBON MONOXIDE POISONING A SERIOUS CONCERN

AMSA is urging people that own, operate and work on vessels to lookout for causes of carbon monoxide gas leakages to prevent this silent killer from claiming further victims.

Recent on-board deaths in Australia and in other countries caused by carbon monoxide poisoning are a sober reminder that we must be proactive in avoiding these deadly gas leakages.

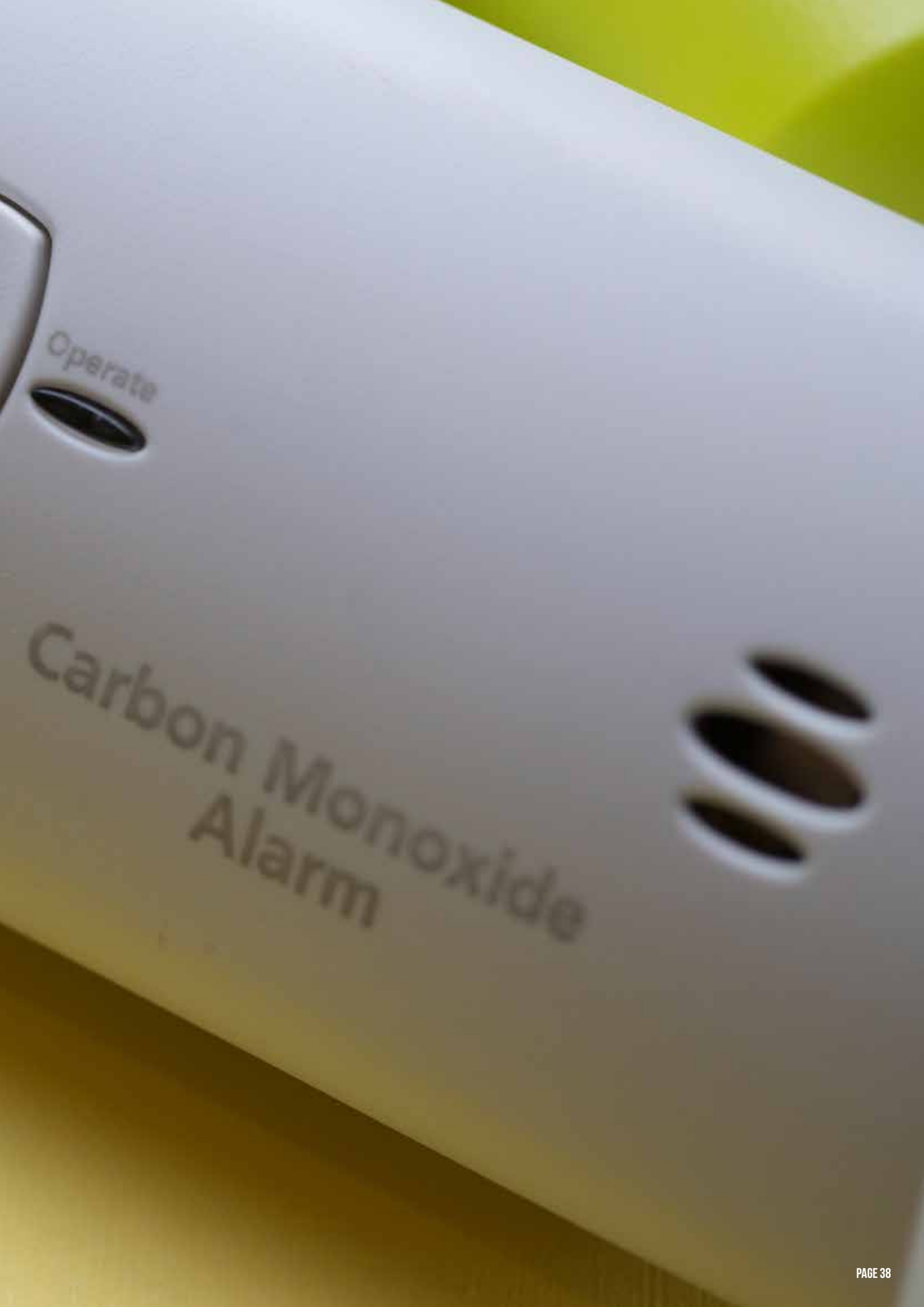
In Australia, AMSA is aware of a number of issues resulting in carbon monoxide poisoning, including inappropriate installations of generators; exhaust leakages; other vessels exhausts and 'back drafting'; and gas heaters without flues scavenging oxygen from inadequately ventilated areas. Some of these situations have resulted in near misses, but many have resulted in death and serious injury.

If you believe there is a cause for concern on your vessel, call a licenced technician that is specialised in the area that the leak originates from.

Carbon monoxide is a colourless, odourless and tasteless gas. Symptoms of carbon monoxide poisoning are headaches, dizziness, nausea, breathlessness, collapse and loss of consciousness.

If you suspect that you or someone else is suffering from carbon monoxide poisoning, get away from the source of the poisoning and go to the hospital emergency department immediately.

Around the world, on-board deaths as a result of carbon monoxide poisoning are unfortunately frequent.


Operate
Carbon Monoxide
Alarm

CARBON MONOXIDE CASE STUDIES

January 2014
Two fishermen aboard the fishing vessel Eshcol, died from carbon monoxide poisoning while they slept.

The grill of a butane-fuelled gas cooker was being used to heat the accommodation. The gas cooker was in poor condition and emitted high levels of carbon monoxide (a yellow flame on the grill indicates incomplete combustion). The fishermen were tired and cold and were not aware of the dangers of carbon monoxide poisoning. They had left the grill lit and closed the wheelhouse doors and windows. (MAIB, 2014)

2006–07
There were 365 public hospital cases for carbon monoxide poisonings recorded in Australia. (ACCC, 2016)

Each year in the US
Around 30 deaths and 450 injuries each year are related to accidental carbon monoxide poisoning. (ACCC, 2016)

STEPS TO PREVENT CARBON MONOXIDE POISONING

- Find out where the exhaust outlets are located on your vessel and make sure they are properly vented away from living areas
- Install a carbon monoxide detector alarm and test it before each trip
- Tell passengers about the symptoms of carbon monoxide poisoning, causes and areas to avoid
- As part of the monthly maintenance check, inspect components of the exhaust system and check the condition of rubber hoses. Look for any signs of leaks in the exhaust system including water leaks, rusts, corroded, cracked or loosened fittings
- As part of the annual maintenance check, have a qualified marine technician clean, inspect and confirm proper operation of the engine, generators and metallic exhaust components. Replace any worn parts and ensure the cooling systems are in proper working condition.

(RMS, 2016)

FURTHER INFORMATION

Department of Planning and Infrastructure
www.sa.gov.au

Maritime Safety Queensland
www.msq.qld.gov.au

Marine and Safety Tasmania
www.mast.tas.gov.au

Roads and Maritime
www.rms.nsw.gov.au

Transport Safety Victoria
www.transportsafety.vic.gov.au

References

Australian Competition and Consumer Commission (ACCC) (2016), Carbon Monoxide Safety, found online 3 Feb 2016 at www.productsafety.gov.au

Marine Accident Investigation Branch (MAIB) (2014), Infographic: carbon monoxide poisoning on a fishing vessel, found online 25 Jan 2016 at www.gov.uk

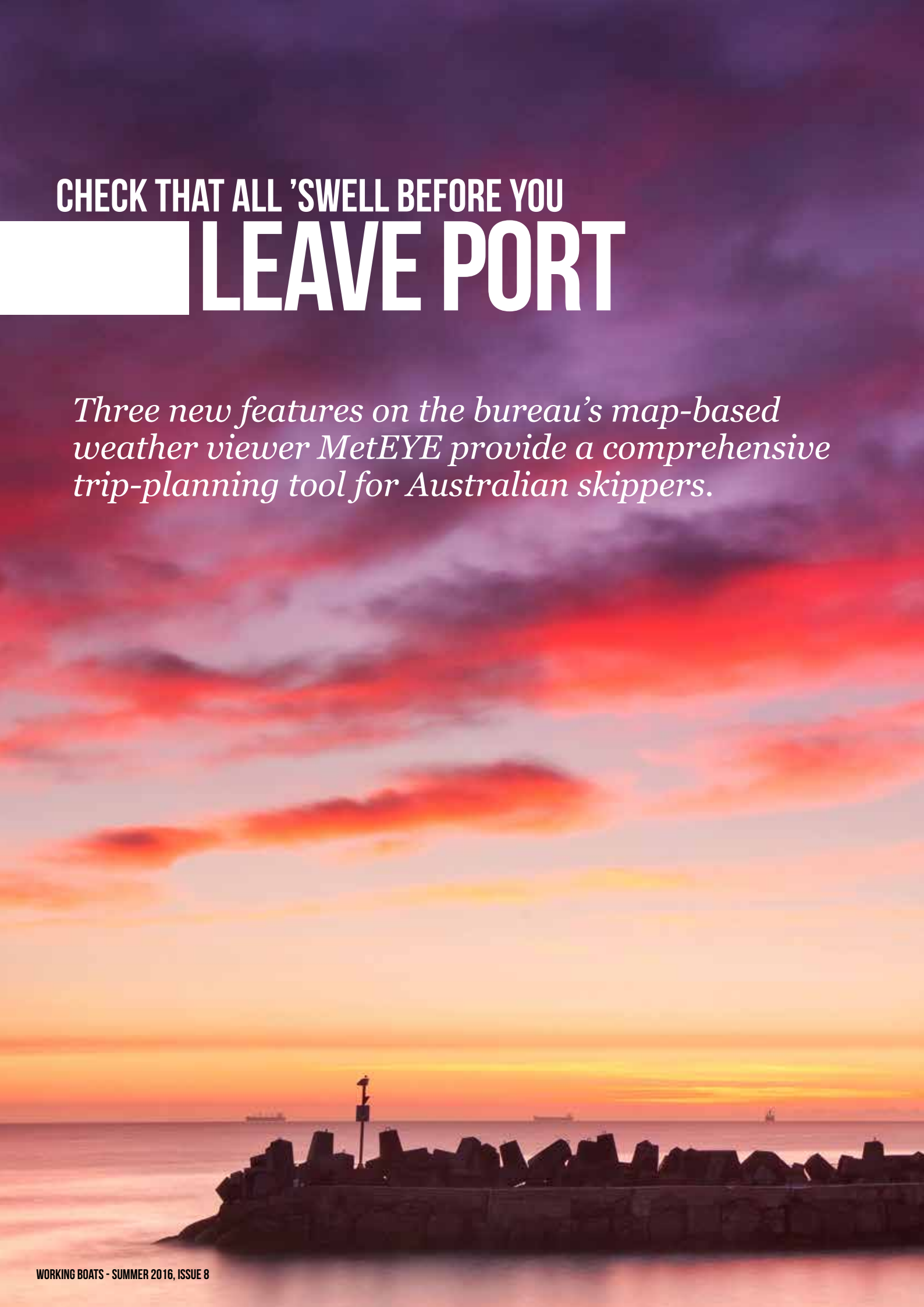
Roads and Maritime (RMS) (2016), Carbon Monoxide Poisoning, found online 3 Feb 2016 at www.rms.nsw.gov.au


INSTR LIGHT
BUS 2
ENGINE START
BUS 1
RADIO BATTERY
BUS 3
ENGINE
STOP
HOUSE BATTERY
ENGINE TEMP
ENGINE OIL
GEARBOX PRESSURE
AMPS
START BATTERY
JRC
MARINE PANEL

CHECK THAT ALL 'SWELL BEFORE YOU

LEAVE PORT

Three new features on the bureau's map-based weather viewer MetEYE provide a comprehensive trip-planning tool for Australian skippers.



Any mariner knows how dangerous our coastal waters can be when a sudden squall or rough seas wrecks a trip on the water and puts crew in peril.

Skippers around the country will now be pleased to see that MetEye, the Bureau of Meteorology's interactive map-based weather viewer, has been upgraded to provide a far more comprehensive wave-forecasting service for Australia's coastal waters. MetEye now provides specific information on the height and direction of swell, as well as wind waves and total wave height.

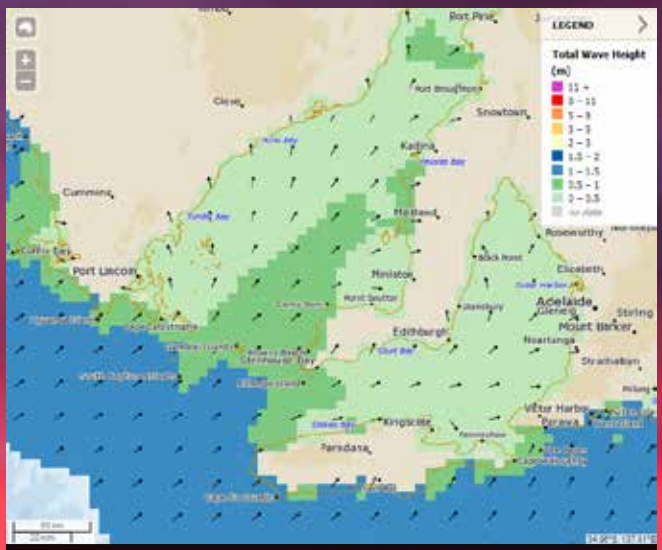
MetEye allows you to see how waves are expected to evolve off Australia's coast at three-hour intervals over the coming days at 6km resolution. Our meteorologists are continually monitoring and assessing the wave forecasts against the actual conditions, fine tuning the forecast when required.

The high resolution of MetEye forecasts, along with the ability for you to zoom to your location allows for local wind and wave effects to be visualised like never before.

An example of what to expect when using MetEye is shown below. The direction of swell is shown by the arrows and the height of waves (swell and wind waves combined) is shown by the colour scale.

Small changes in wave height over the Spencer Gulf and Gulf of Vincent are immediately visible in this example, when using MetEye.

To view MetEye, go to:
www.bom.gov.au/australia/meteye.



MetEye showing the direction of swell in the Spencer Gulf and the Gulf of Vincent, South Australia

Australian Government

Australian Maritime Safety Authority