



Australian Government

Australian Maritime Safety Authority

WORKING BOATS

May 2018

One system to navigate

Your guide to National System services

FV Wild Card

Bruce Davey reflects on 43 years in the fishing industry

Survival at sea

Do you have the skills to survive overboard?

Reduce your impact

on the marine environment by managing pollution at sea



Australian Government

Australian Maritime Safety Authority

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Message from the CEO

There are just two months before we take on responsibility for full service delivery of the National System, signalling a new era of operation for our organisation. I'd like to thank each of the state and territory marine safety agencies for their assistance leading up to this point, as well as industry members for their advice, support and patience.

AMSA's investment in our readiness to deliver services has offered a unique opportunity to modernise and enhance our capability. Final touches are being made to service-delivery arrangements, including our shopfronts in states and territories, AMSA Connect and online services.

We also welcome new staff around Australia, some of whom come to us from local marine safety agencies. They bring with them a wealth of experience and industry knowledge—an invaluable asset as we strive to deliver safety regulations that are relevant and practical for different parts of the industry.

While there is more to be done to improve safety, it has certainly come a long way over the years thanks to the work of marine safety agencies, technology and individual operators putting safety first. Under the National System we will continue to build on this.

In this edition of *Working Boats* read about some of this progress and the exemplary work being done by operators who put safety first.

A handwritten signature in black ink, appearing to read 'Mick Kinley'.

Mick Kinley

Chief Executive Officer

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**NATIONAL
MARITIME
SYSTEM**

Industry update

National System for Domestic Commercial Vessel Safety

We're bringing services together to create one truly national system. From 1 July 2018 you can access domestic commercial vessel safety services from one place—AMSA.



Making it easier

A single point of contact for domestic commercial vessel services.



Personalised service

Through a single overview of your business we'll prioritise and target information and services to your job, and your type of operation. We'll ensure you know what you need to do to comply.



Help and reminders

We'll tell you when you need to renew, when rules have changed and work with you to comply before things go wrong.



Save time

You will save time by doing tasks and completing certificate services online. Our smart forms will guide you through the steps.

Services designed for busy people. We'll make it easy for you to interact and transact with us.

One
set of rules

One
point of
contact for
services

One
consistent
voice for
advice

One
set of fees

Our interaction and transaction points from 1 July 2018

There will be many ways to interact and transact with us and our service partners.

Access services online

amsa.gov.au has a variety of new features and information. From July 2018 you'll be able to transact online at a time that suits you.

Find self-service tools and resources to help keep you up to date with your safety obligations.



Visit us in person

Regional services will be available from one of our 19 offices around Australia.

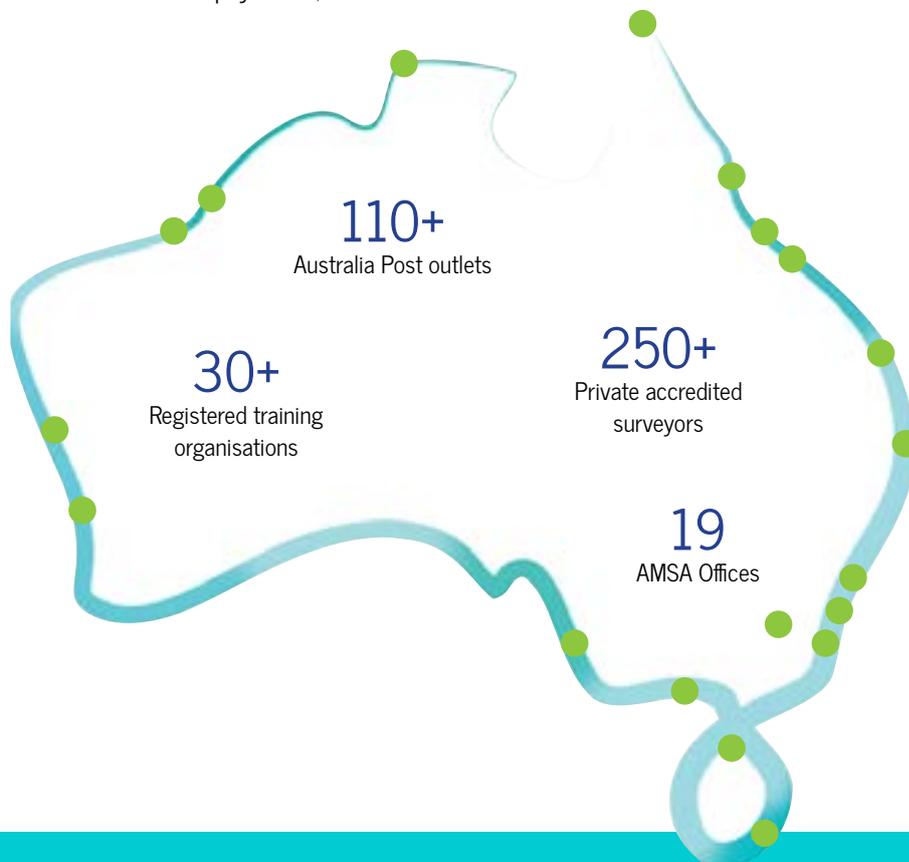
Our staff will be on hand to give you technical advice and assist you with your safety management systems. They'll also conduct higher-level assessments and perform compliance and enforcement activities.

You'll have access to all of the same services wherever you're located.

Talk to an operator

AMSA Connect will be available from 8 am to 5 pm Australia-wide so you can talk to one of our highly skilled customer service team when you need to.

They will answer most of your questions on the spot or refer you to AMSA's technical operators for more complex questions. They will also guide you through the application process, take payments, and book assessments.



AMSA Connect 1800 627 484

amsa.gov.au

What will be different for me from 1 July 2018

The National System for Domestic Commercial Vessel Safety has been in place since 2013. Anyone operating within the National System will continue to meet their safety requirements under the law.

There are some things that may be different depending on your type of operation or the work you do.



I own a commercial vessel operating in Australian waters

What's different for me?

- A simplified vessel survey regime with greater flexibility and alignment to other vessel maintenance
- All vessel surveys must be carried out by an AMSA accredited surveyor
- Incidents must be reported directly to AMSA
- You will be responsible for holding and maintaining your own records
- A new national levy with no payment required until July 2019
- One national schedule of fees for services, including exemptions.



I'm a crew member of a working boat

What's different for me?

- AMSA will issue you a reminder notice when your certificate is due for renewal
- Your certificate will be issued by AMSA
- You will need to submit and pay for your application at any participating Australia Post outlet and show proof of identification
- Practical assessments will be contracted by an AMSA approved RTO for coxswain 1 and 2, Master<24, Master inland waters, marine engine driver 2 and 3 certificates
- One national schedule of fees for services including your certificate of competency.



I'm a fisher, run an aquaculture business, charter a tourist boat, hire out boats, ferry passengers or operate a barge

What's different for me?

- You can operate across borders under one Certificate of Operation
- Incidents must be reported directly to AMSA
- Guidance and assistance will be available online, over the phone or from one of our regional offices
- You will be responsible for holding and maintaining your own records
- One national schedule of fees for services, including Certificates of operation and exemptions.



I am a private accredited surveyor

What's different for me?

- A direct point of contact within AMSA for advice
- A dedicated audience page on amsa.gov.au with specific instructions, resources and guidance materials
- Regular workshops and training
- Advance notification about changes to vessel standards
- Ability to submit survey reports online.

Accessing services until 30 June 2018

Remember—for now it's business as usual and you should continue to access services from your local marine safety agency.

Local waterways management, pollution, navigation aids, and mooring management will continue to be provided by your local marine safety agency.

Share your views

We welcome your views as we work towards taking on National System services. Have your say about National System funding, the cost recovery levy, fees, accessing services, finding information or changes to vessel, operations and crew safety requirements.

Your feedback will help us to continue to improve services for the domestic commercial vessel industry.

Visit amsa.gov.au/share-your-views



Go to amsa.gov.au/transition for more information, to view the advice and updates about these changes, including the proposed levy model.



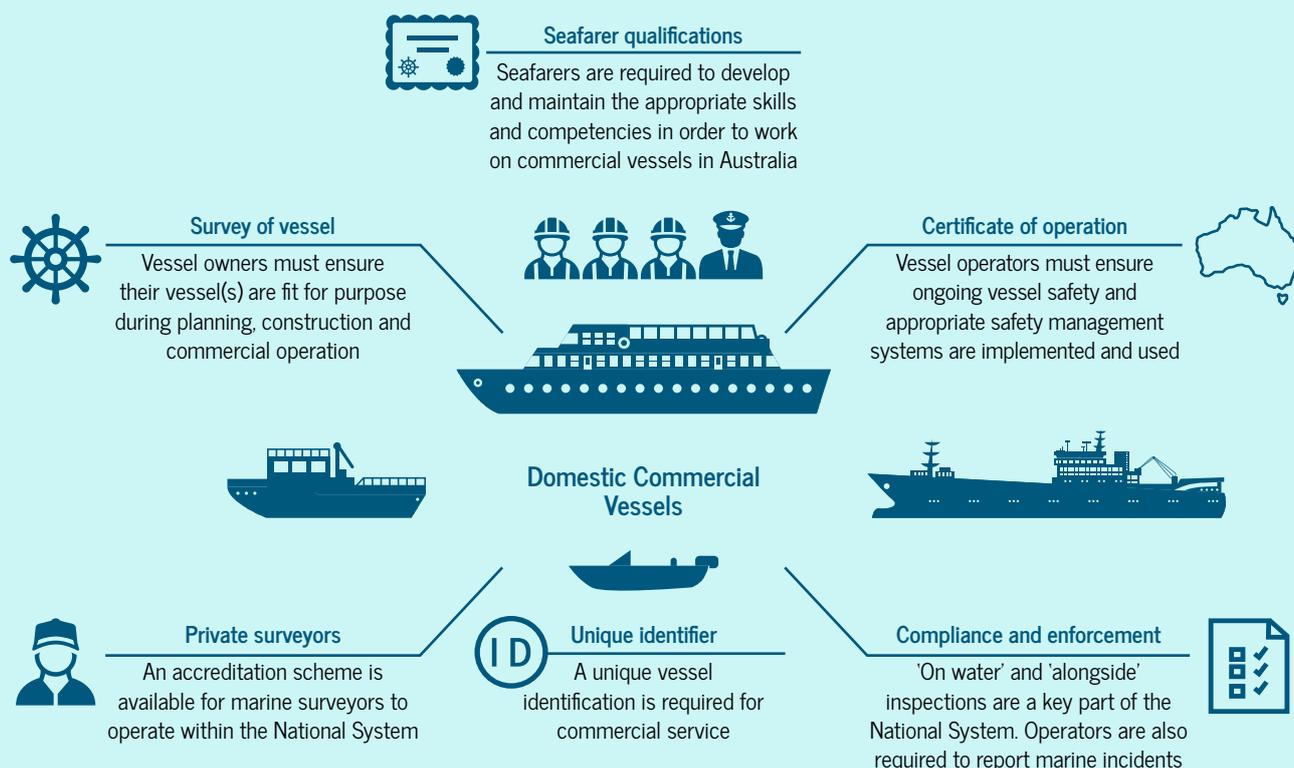
Call AMSA Connect on 1800 627 484



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National System—services and activities

The National System includes a range of core services and activities aimed at promoting safety culture in close collaboration with vessel owners, operators and crew, as well as third-party service providers and industry stakeholders.





SAFETY

you've got to live it

Late one night in 2017 a prawn trawler was operating off the West-Australian coast. The weather was rough and the crew were busy bringing in the nets from the latest run. One of the crew had hold of a lazy line when it became caught on the winch.

It was a common occurrence and he knew that a quick tug on the line would probably have it jump free. But this time it didn't work and as he gripped the rope, it lifted him up off the deck and the rough swell swung him over the side of the boat and into the water.

An hour earlier that crewman had been working on deck when the weather began to worsen. He went inside to grab his lifejacket before returning to work. That decision probably saved his life.

James Clement is the Chief Operating Officer of Mareterram Limited, a vertically-integrated agribusiness based in Fremantle, Western Australia. Mareterram operates 10 prawn trawlers out of Carnarvon, more than half the Shark Bay Prawn Fishery fleet.

'One of the first things we did [when we took over the business] was to overhaul our safety management systems to the hilt,' James said.

'What we really wanted to do was start introducing mandatory wearing of lifejackets at sea, which is very difficult culturally within an industry that traditionally hasn't enforced it.'

As part of their safety gap analysis, Mareterram introduced inflatable lifejackets for all crew, in addition to the required SOLAS lifejackets, and encouraged them to wear them when they were on deck.

The crew member in question was in the water for more than 40 minutes. The trawler crew had to turn around and it was only by listening out for the jacket's emergency whistle that they were able to locate him.

James said that while the crewman survived, there were additional lessons that could be learnt from the incident.

'While the PFD [personal flotation device] certainly worked, it had no strobe light and no ability to pinpoint that crew member,' James said.

After the incident, Mareterram reviewed its operation to see if it could reduce the risk of future man-overboard incidents. Some of the changes identified also included the introduction of the Automatic Identification System (AIS) on all vessels, automated strobe lights, and personal beacons on all lifejackets that link with the rest of the fleet via AIS to pinpoint the position of crew if someone does go overboard.

'God forbid if we do have another incident, the lifejacket will keep his head out of the water and the strobe



Clockwise: Mareterram prawn trawler video stills; James Clement speaking about his experience of the incident.



'Like anything with safety, you've got to live it.'

— James Clement.

Mareterram introduced inflatable lifejackets for all crew, in addition to the required SOLAS lifejackets.

and the AIS should make sure that they're not in the water for 40 minutes. Hopefully, it's 5 to 10 [minutes] at the absolute most,' James said.

He added that changing your safety management system or providing life jackets was one thing but the real challenge was getting people to wear them when they're out at sea.

'You obviously get an immediate response,' James said, noting the change in behaviour following an incident.

'You suddenly have a lot of crew—if not the majority of the crew—within your entire fleet wearing that sort of equipment. That said, when it's not front of mind and there have been no incidents for the rest of the season, it would be prudent to assume that the use of PFDs has dropped off, which is extraordinary.'

The key according to James is addressing the safety culture in the industry. While it's essential to have proper procedures and safety systems, the industry needs to go deeper and touch on it culturally so that crew not only wear their safety equipment all the time but refuse to do the job without it.

'Like anything with safety, you've got to live it.'

'If they [the crew] see the owner of an operation or the skipper of an operation living the safety message and that safety management system, day-in day-out, and themselves wearing things like PFDs they've got no excuse not to live and breathe safety.'



Check out the full interview with James on AMSA's YouTube channel:
www.youtube.com/watch?v=22YZ7Rso8A0



Survival *at sea*

One moment you're in the boat, the next you've fallen overboard. Your boat disappears and suddenly you're alone in the water. Are you prepared to survive at sea?



Masterclass: survival at sea group training exercise.

We take a look inside a masterclass in survival at sea and discover the factors affecting your timeframe for survival. We'll explain what you can do to extend your timeframe and maximise your chance of rescue.

Calculating timeframe for survival

Environmental conditions, a person's age, fitness, clothing, last food and drink, physical injuries, and their mental and emotional disposition are all factors that affect how long a person can survive in a life-threatening situation—like falling overboard.

Australian anaesthetist Dr Paul Luckin AM has a unique perspective on human strength and endurance in the most extreme circumstances. With a career in retrieval paramedicine that has spanned across decades and continents he has profound insight into this field.

Dr Luckin draws on his understanding of human physiology and years of training and experience to estimate time frames for survival during search and rescue operations.

AMSA, state, territory and federal police, as well as authorities in Papua New Guinea, Solomon Islands, Manus and Nauru all defer to Dr Luckin for advice on the survivability of missing people.

Dr Luckin's calculations influence the decision by authorities on how and where to search for missing people and whether to continue or end search activities.

Crunching the numbers

Environmental factors play a critical role in calculating timeframe for survival.

They can mean the difference between surviving 10 hours in the water or just 10 seconds. Here are the six most heavily weighted factors in a marine environment:



- 1 wave height
- 2 water temperature
- 3 time until last or first light
- 4 wind speed
- 5 white caps
- 6 likelihood of predation by shark or crocodile.



Life jacket: the most important item for survival.

Maximising your chances



The single most important determinant of survival in the water and the first question Dr Luckin asks when his phone rings, is whether or not the missing person was **wearing a lifejacket** when they entered the water.

'A lifejacket supports you in the water, lessening fatigue,' he says.

'By lifting your airway above the water it decreases the risk of drowning.'

'A lifejacket lifts you with the waves, rather than having each wave wash over your head.'

'It also makes you visible to search-and-rescue teams.'

Dr Luckin stresses the importance of donning a lifejacket before you step on deck, even if it's just for a minute.

'If you want to see your family again, wear a lifejacket—it's as simple as that.'



Communicating your distress to authorities is paramount.

'Your job is to stay alive until rescue can reach you—which means wearing a lifejacket and a personal locator beacon (PLB),' Dr Luckin says.

Lifejackets can be fitted with a PLB.

Anyone wearing a lifejacket with a PLB who goes overboard has a means of alerting search-and-rescue authorities to their situation immediately, decreasing the response time and increasing the likelihood of survival.



Another important determinant of survival in the water is **appropriate clothing**, which touches on a common misconception that people in warm water aren't at risk of hypothermia.

'Water below 35°C will cause you to become hypothermic—it takes longer in warmer water but eventually it will happen,' Dr Luckin says.

Even a small item of clothing like a hat or beanie can make a big difference in heat retention.

'Air blowing across your head and shoulders has a marked cooling effect,' Dr Luckin says.

'Keep your clothing on—don't discard it'



Wearing a lifejacket and appropriate clothing are both preventative measures that can help prolong your survival in the water.

Myth busting

Survival hangs on planning for emergencies and the ability to make good, informed decisions under pressure. Don't fall for the urban myths.

Salt water is better than no water. BUSTED.

Your body is not a desalination plant. To get rid of all the excess salt taken in by drinking seawater, you have to urinate more water than you drank. Drinking salt water actually speeds up dehydration.

Swim to keep warm. BUSTED.

You will lose more heat than you'll gain. Instead, pull your knees up and fold your arms across your chest to reduce heat escaping from your core. If you're in a group, huddle together, with smaller individuals and children in the centre.



Team huddle: linking arms in a group reduces heat loss.

'If you want to see your family again, wear a lifejacket—it's as simple as that.'

But once you're in the water, what else can you do?

It could be hours before you are rescued depending on your location, the time it takes authorities to register your distress and launch a response.

Fatigue and dehydration can set in, which is why Dr Luckin says preserving your energy by floating motionless in the water and abstaining from drinking sea water are critical.

'You need to keep yourself alive long enough for someone to detect that you are missing, search for you and rescue you,' Dr Luckin says. ▶

Masterclass in survival

Your chances of survival at sea in an emergency are much higher if you've trained for one. Australian Maritime College (AMC) Lecturer Ian Gabites has been throwing students in the deep end for nearly a decade as part of the college's renowned Shipboard Safety Skill Set course. It's a tough kind of love that might very well save their lives one day. In an interview with *Working Boats*, Ian shared some of his insights into survival at sea.

How large are the cohorts of students who complete the Shipboard Safety Skill Set course and how varied are the industries they represent?

People who complete the Shipboard Safety Skill Set come from a huge array of backgrounds and industries. The greatest share would have to be students studying to become a Coxswain, Master<24, Marine Engine Drivers or other near-coastal qualification.

That said, it isn't unusual to see recently retired couples embarking on a sea change as they begin their next adventure in life, or school leavers hoping to break into the nation's growing tourism industry. Basically we cater to anyone who is currently, or hoping to work, on any commercial vessel—from an aluminium dinghy up to an 80-metre coastal trader.

We try to maintain our shipboard-safety cohort to between 10 and 15 students to maximise learning opportunities and meet teamwork outcomes.

How important is teamwork in a survival situation and how do you manage those dynamics under pressure?

Teamwork in any crisis is paramount. We can't all be in charge nor can we all follow aimlessly like sheep. We need to appreciate our own strengths and weaknesses first and then recognise the same of our colleagues.

During the practical sessions it becomes clear to students very quickly that alone, there is very little you can do in a life-threatening situation. In the survival pool all but the strongest swimmers rapidly tire and everyone starts to get cold however, as we introduce more and more teamwork activities, they naturally band together and begin to achieve much more, more quickly, more safely, and more easily.

What insights have you gained about the nature of people under pressure?

I've been teaching with the AMC for eight years or so and specialise in the emergency-response field and it is always interesting to see how different people react in differing circumstances.

Teamwork: survival at sea is a concerted team effort.



Lifeboat: attendees working through a survival plan.



Survivors: attendees at the Shipboard Safety Skill Set course. (Image credits: Australian Maritime College)

During the practical sessions it becomes clear to students very quickly that alone, there is very little you can do in a life-threatening situation.

With specialised survival and firefighting facilities we are able to recreate some of the stress of dealing with an emergency—after all, people do put out real fires and launch real life rafts in the course.

In the scenarios we present to students we expect some aspects of the training to be confronting to everyone in one way or another. I think the key to this type of training is to expose students to enough of those stresses to appreciate the risks, respect the hazards and to build confidence in handling a variety of emergencies in the safest way.

What environmental factors place people at the most risk in a survival situation and how can you mitigate these in the moment?

There are many situations that will heighten the risk of injury or death to people at sea but there is a relative constant when we think of this question in a Tasmanian context, which is water temperature.

Except in very rare conditions, anyone who ends up in the water will, sooner or later, suffer the effects of hypothermia. To lessen or slow the effects of hypothermia put on extra clothing if time allows, correctly fit a lifejacket, assume the Heat Escape Lessening Position (HELP) or if with others, huddle together with interlocked arms. It is surprising what a difference these techniques can make to reduce heat loss.

So, what is the key to survival at sea?

Survival at sea is based on sound principles of safe work practices, fire prevention and awareness and of course, sound boat handling, navigation and maintenance. Part of that process includes building and maintaining your personal knowledge and skills as well as those of your crew.

We can't stress enough the importance of safe systems of work and safety management systems or the significance of relevant safety drills for the crew and passengers.





FV *Wild Card*



Bruce Davey reflects on how the business of catching fish has changed since he started in the industry 43 years ago.

Operating out of Cairns, Bruce Davey and his wife Juanita run a Spanish mackerel fishing operation for six months of the year and a fishing charter in the other months.

They started operating prawn trawlers in the Gulf of Carpentaria in 1975 before buying their current vessel—FV *Wild Card*—and venturing into Spanish mackerel fishing and charters, and Bruce says the business has changed significantly.

Bruce said when he started out fishing, safety was never an issue.

'We didn't have a life raft and never did drills—I don't even remember seeing a lifejacket. We didn't talk about them and wouldn't have known how to put one on,' he said.

'If you injured yourself, it was a laugh—*harden up, you'll be right next week and get back to work.*'

He said it was the larger companies that started leading a more structured

transition to safer work practices from the old days and this has had a flow-on effect to the smaller operators.

'Nowadays we have a full-blown, certified, transparent safety management system that operates quite simply.'

Bruce engaged a consultant to help them develop their current safety management system, which covers both their fishing operation and their fishing-charter operation.

'We could have done it ourselves if it was a fishing operation because it's mostly the same ritual, but once we went to a different vessel class for our fishing-charter business, we came under a whole range of different legislative requirements specific to taking passengers out. We had to be across a far tougher and more operative system,' he said.

As a part of their safety management system they did risk assessments on every aspect of the operation and prepared for what to do if any of the risks eventuate.

'For example, if we get a new crew member, one of the many early things they learn how to do is to set and retrieve the anchor. They learn exactly what the risks associated with this are—such as a spinning gypsy, or chains coming onto the winch,' he explained.

'If there's a problem like retrieving the anchor, they know how to quickly stop the anchor and how to communicate to the captain at the wheel looking through the window 10 metres ahead, what signals to use so there's never any misunderstanding of what hand signal means what.'

A high-risk manoeuvre in Bruce's operation involves getting in and out of the dories.

'How do we get in and out of the dories when each one weighs a tonne? That's six tonnes of mackerel dories there,' he emphasised.

Then he explained, 'Everyone gets into the first dory with their equipment and then that dory drops off all the people to their individual dories.'



FV Wild Card: Images supplied by Bruce Davey.

'Nowadays we have a full-blown, certified, transparent safety management system that operates quite simply.'

'Getting in and out of the dories is a very dangerous operation 100 miles off the coast, where fatigue is increasingly becoming an issue—and generally old fishermen like me aren't going to admit to fatigue. Fatigue is another risk we address in our safety management system,' he added.

A key addition to Bruce's safety management system when he started the fishing charter operation was passenger inductions to cover safety and emergency procedures.

'The very first thing passengers get when they get on the boat is their induction,' he said.

'For example you might have eight recreational fishermen coming on board who are caught up in the excitement and not taking the induction seriously. There's Joe and Harry ribbing each other saying

'Craw, I hope I fall over the side, you'll save me.' I have to point out that they need to take it all in because the plan will be actioned if necessary. They are also required to sign the ship's log book to confirm they understand all aspects of our safety system.'

Bruce pointed out that developments in technology are also shifting the way businesses operate.

'We are rapidly moving to a digital, virtual era,' he said.

'Vessel monitoring systems, the automatic identification system, digital charting for navigation, 3D underwater mapping, digital logbooks—these are rapidly changing the nature of the business.'

Bruce says that while some things are seen as an extra cost or effort, at the end of the day people just want their crew and passengers to be safe.

'You can't put a price tag on someone's safety, whether it's mentally or physically.'

Asked what his most valuable piece of safety equipment was, he didn't have to think twice.

'Inflatable lifejackets are the most valuable thing; then the radio—communication is key to ensure people's safety.'



wildcardluxurycruises.com.au

Growing up *at sea*



Bruce and Juanita Davey raised and schooled their three children—Tiger, Johanna and Elspeth—on board as they travelled the 12,000 miles around northern Australia and back again each year.

Fishing family: Bruce and his youngest daughter Elspeth.

Their home was their boat *FV Wild Card*, and their back yard the islands, beaches and seas along the route they travelled each season between Cape York, the Kimberly and back to Cairns.

'The Wessel Islands in East Arnhem land was our favourite place as kids. Aside from the ocean, we spent a lot of time on the islands themselves. There are quite a lot of caves on the islands we grew up exploring, as well as beaches for snorkelling and great fishing areas,' said Elspeth.

The children were all schooled on board *Wild Card* via HF radio with the help of a tutor who lived on board for 11 years.

'The school teacher we had aboard with us brought her son as well, so there were actually four children. They had a classroom down in the bow of the boat under the waterline,' Bruce said.

'It was a little triangle room with a tiny triangle table that us four kids and our teacher worked with through distance education,' said Elspeth.

'You could actually hear dolphins and whales under the water while we studied—it was a bit of a distraction. When we heard them we'd run up on the bow to see, it was pretty cool,' she added.

'You could actually hear dolphins and whales under the water while we studied...'

'We got taught about safety at a young age. Being surrounded by water constantly, we learnt to swim, to hold on to railing with two hands, evacuation points and what to do in the case of fire or the boat sinking.'

The children also learned how to fish early on.

'I loved fishing and life on *Wild Card* from an early age, but when I finished my distance education I went to boarding school,' said Elspeth.

'I enjoyed boarding school but I felt left out of what was happening on the boat and missed fishing so I decided to leave school at the end of year 10 to become a professional fisher.'

'I did my marine engineers' ticket (MED2) ticket when I was 18, and I found out later that I was the youngest person to get their MED2 in Australia.'

In 2012 Elspeth was a winner of the Heywire storytelling competition for young people living in regional Australia. She has just started her second prawn trawling season.



abc.net.au/heywire



youtube.com/watch?v=oEvR83U-tcc

Sustainable Fishing Families

Health and wellbeing of Australian fishers

Dr Tanya King talks to us about the Sustainable Fishing Families program which addresses the health, wellbeing and safety issues facing those working in the Australian seafood industry.

By Brad Roberts, Liaison Officer Victoria

Fishing operators and their families experience unique challenges and high levels of psychological distress—almost twice that of the national average. These are the findings in the preliminary analysis of a recent survey led by Dr King.

With common symptoms including difficulty sleeping, stress and trouble concentrating and remembering, it is easy to see how these symptoms could pose further safety risks for fishers on the job, and impact on productivity.

The survey results pointed to a need for the Sustainable Fishing Families program. The aim of the program is to offer practical and positive strategies to promote the health and wellbeing of fishers, their families and the Australian fishing industry.

What the survey revealed

The anonymous survey captured responses from nearly one thousand fishers and family members from around Australia. People's responses to the survey showed two types of stressors impacting the fishing sector. ►



Image source: [iStock.com/seamartini](https://www.iStock.com/seamartini)

Traditional risks

These include things like fluctuating markets, severe weather, and the physical dangers of fishing.

Modern uncertainties

Of this category, the top three stressors are unnecessarily complex regulation, livelihood insecurity, and regulatory change.

While many fishers find it easier to deal with traditional risks, fishers said they are less able to deal with the current set of modern uncertainties because they can't control or anticipate these decisions.

The Sustainable Fishing Families program not only focusses on providing practical ways to deal with the stress caused by these factors, it builds resilience and positive wellbeing so that fishing operators and their families can better 'ride the bumps' of a challenging profession while enjoying happy and fulfilling lives.

How the program works

The program consists of three workshops delivered over 12 months, during which families learn from health professionals about issues, dangers and risks specific to the fishing industry and what individuals can do to maximise their productivity and improve their quality of life.

The workshops are based on the model of the successful Sustainable Farming Families program, which has been running for 10 years in Australia and adopted in other countries.

A key feature of the program are the personalised action plans identifying personal goals and strategies that the participant can track over time. The workshops cover a range of important topics relating to health and wellbeing—from men and women's health, to discussion about depression and suicide. Individual health testing, one-on-one health checks and specialist referrals are also included in the program.



Dr Tanya King

'Seeing the health and productivity of participants improve in ways even they didn't think was possible has been amazing.'

Dr King said the workshops—which are already underway in Victoria—have seen extremely positive results and the Victorian Government has funded another workshop.

'I'll never forget one participant saying, *if it wasn't for this program, I'd have been dead on the side of the road by now, for sure. But here I am, working harder than I have in years ... and feeling fantastic!* That's a gratifying process to be a part of,' said Dr King.

'Seeing the health and productivity of participants improve in ways even they didn't think was possible, has been amazing,' she said.

Dr King said the results have confirmed that the Sustainable Fishing Families program is viable and they are looking to other state and territory governments to step up and demonstrate their commitment to the people of the seafood industry by funding programs for their fishing communities.

'I'd love to see this program rolled out to as many fishing communities as possible across the country. Without the fishing families, none of us would enjoy the fresh sustainable seafood we're lucky enough to have access to in this country,' she said.

The project to develop the Sustainable Fishing Families program was funded by the Fisheries Research and Development Corporation (FRDC), hosted by Deakin University and is also in partnership with the National Centre for Farmer Health in Hamilton, Victoria.



blogs.deakin.edu.au/anthropology



Conversations in anthropology@deakin



Landline *Fishing for Votes* abc.net.au

Check in on your mates at sea: Image source: iStock.com/piola666

Check your mates

Bruce Davey talks about his experience with mental-health issues in the fishing industry and how he promotes mental wellbeing in his operation.



Bruce Davey

'In an operation like ours, which runs seven days a week, 30 days a month, 180 days a year, we need to be perceptive to the moods of those on board,' says Bruce.

'If there's any hint of depression or other mental-health issues with staff, I need to make sure they have the opportunity to talk to someone.'

'For example, if you take a young 18 year old out to sea for their first trip, they might be psychologically scarred because they've got no mobile reception, no Facebook, no Snapchat, no nothing and you'd be surprised at how kids just freak out because they've got no internet.'

'Then there's fatigue. Many family operations like ours are literally working 14-and 15-hour days, then doing their own accounting, log books and their steering watches. The first thing that happens with fatigue is that people get angry. In the past there was no compassion for that, it was about hardening up—but that's changed today,' he said.

'We make sure they're not working 31 hours straight, and pretty much just look after them and work as a team.'

'We also have a highly articulate job description of what's expected, so young kids coming into the job know what they're getting themselves into. They're encouraged to develop self-confidence, to come to the captain with any issues, to take part in meetings about everything that's happening and to log everything. This is a part of our safety management system,' Bruce said.

Bruce said there are factors that can add to stress levels for fishers.

'There are other pressures on a local, state and national level that can cause additional stress,' he said.

'But I concentrate on things I can do something about to improve the quality of life for myself and my crew.'

Safety management systems

The mental health of crew members is just as important as their physical health and wellbeing.

Particular work conditions that could cause someone to develop mental health issues—such as lack of sleep—should be addressed in the safety management system, along with ways that those conditions can be managed to reduce the chance of it impacting on the mental health of the crew and a plan for what to do if someone does experience mental health issues.



Find information and resources to assist you develop and maintain your safety management system at amsa.gov.au/sms

A man with a beard, wearing an orange high-visibility shirt, is shown in profile, looking out of a circular porthole on a dark background. The lighting is dramatic, highlighting his face and the texture of his beard.

LOST *at* SEA

Based on an article originally published in the *Australasian Mine Safety Journal*.

Changing the stigma around mental health and encouraging people experiencing mental health issues to access support is a big priority.

According to the Australian Institute of Health and Welfare, the direct financial impact of mental illness on Australian business is in the vicinity of \$11 billion each year—largely due to absenteeism (\$4.7 billion) and reduced productivity (\$6.1 billion)—and the maritime industry is no exception.

Often stigmas about mental illness compound the isolation that many sufferers already feel, propelling sufferers into a downward spiral instead of getting the support they really need.

Having experienced firsthand the devastating effects that mental health issues can have on an individual, Jason Tulipan now works to break down those stigmas and promote mental-health awareness.

From the age of 15 Jason worked hard to build himself an impressive career at sea, working in the oil and gas industry despite quietly living with mental illness for many of those years.

'I never knew what mental illness was, nor the signs. It was a few years after a fatal car crash when I was 17 that I had my first episode with mental illness,' Jason said.

'My girlfriend and I were in the carpark of a shopping centre and while still in the car, I started to feel overcome with fear and dread like I was unable to breathe.'

'Our family doctor was within sight of the carpark and I was able to see him straight away. I was flown to Perth for treatment for post-traumatic stress disorder (PTSD).'

With mental illness somewhat a taboo topic at this stage, Jason had no one to talk to in his workplace, leaving him to suffer in silence.

'The only references to mental illness were generally negative ones and so if you had a mental-health issue people assumed you were either psychotic or dangerous. People at work didn't know how to deal with someone who had gone from well to unwell from a mental illness,' he said.

Jason turned to alcohol and over-the-counter medications to help him cope with his increasing stress.



'The battle against mental-health problems will not be won until it can be spoken about and treated like any other health and safety issue.'

'It was like a never-ending process of self-medicating to handle the day, and then unwind with alcohol or try to find the 'off' button, only to wake early and start the process again.'

Jason's coping mechanisms became destructive and the wall he had built up quickly came crashing down.

'It all eventually came to a head when I was overseas with a supply vessel. I started really falling apart and became withdrawn and unable to speak to my boss so emailed all my correspondence. My emails reflected that I was on top of things, when in fact I was losing myself and the contract I had been trying to finalise.'

'Then it happened—I just remember getting on a plane to go home and then the next thing I know, I wake up in hospital. A combination of my drinking, drug use and stress had caused me to have a psychotic episode.'

Jason hit rock bottom. He had no choice but to resign. He lost his home and was forced to live in his car. But then a series of life events helped him recover.

He fell in love, moved to the country where his now-wife opened a café, which they ran together. The country air, coffee beans, and someone to hold his hand through the dark times proved to be the best medicine. But it took a death in the family to truly snap Jason out of his state, and get him back on track.

'I was really able to see that life was possible without anything to mask the problems and started to unconditionally deal and feel my

problems with mindfulness and self-help methods.'

Even though Jason felt confident enough to return to the oil and gas industry, he had a few issues to deal with. There was some hesitation from the industry due to his public problems and all of his qualifications required revalidation by stringent medicals and oral exams.

A marine manning company gave Jason a chance and he climbed back up the ladder from second mate to chief mate, master and marine superintendent.

Now Jason uses his struggle with mental illness to raise awareness and help others in the same boat.

Jason says the battle against mental-health problems will not be won until it can be spoken about and treated like any other health and safety issue.

'The other thing is education for staff in key positions. When managers, supervisors, masters and other leaders know how to manage mental health in the workplace, more people will be willing to put up their hand and ask for help,' he said.

'Nobody will put up their hand if it means being seen as weak and potentially bullied or they think they will lose their job as a result.'

Jason has provided mental-health training to Farstad, Smit Lamnalco and KTM maritime services. He has also worked with the Australian Medical Association to facilitate mental-health-safety officer courses and psychosocial hazard audits.

Raising awareness: Jason Tulipan reflects on his journey. (image credit: In Shot Productions)

STOW IT DON'T THROW IT

By 2050 there will be more plastic in the sea than fish. And that's just plastic.

Dispose of your garbage ashore.

Penalties apply to those caught dumping waste overboard.

An underwater photograph showing a green plastic bag on the left and a lionfish on the right, swimming in a blue-green ocean. The background shows a hazy underwater landscape.

**Report dumping 1800 641 792
amsa.gov.au/environment**

Float-free EPIRBs

Float-free Emergency Position Indicating Radio Beacons (EPIRBs) autonomously activate and rapidly signal a request for assistance, offering a significant safety advantage for crew and passengers on sinking vessels.

In recent months AMSA has consulted with industry on the proposal to make float-free EPIRBs mandatory on many commercial vessels after a number of incidents where commercial vessels have sunk quickly and the crew were not able to deploy their EPIRB in time, resulting in a tragic loss of life.

How do float-free EPIRBs work?

Float-free EPIRBs are water-activated and mounted on a bracket in an enclosed casing. When the EPIRB reaches a depth of 1–4 metres underwater, a hydrostatic release opens the casing, allowing the EPIRB to float to the surface where it starts transmitting a distress signal.

The EPIRB automatically activates on contact with water but the signal is not transmitted until it breaks the surface. For this reason, the EPIRB must be able to reach the surface of the water without becoming blocked by the sinking vessel or tangled up in other external structures on the boat.

Read the manufacturer's instructions carefully

Installation instructions vary for different brands of float-free EPIRB. It's important that you read the manufacturer's instructions for detailed advice on how to correctly install and maintain your float-free EPIRB.



Who should have a float-free EPIRB?

It is recommended all vessels carry a float-free EPIRB, however under the proposed changes, the following commercial vessels would need to carry one, irrespective of whether they are in survey, non-survey, or grandfathered.

Hire-and-drive vessels 12 metres or more in length (or less than 12 metres and do not have level flotation) operating in C waters—within 30 nautical miles from the coast of the Australian mainland, Tasmania, a recognised island; or within 50 nautical miles of the

baseline of Queensland, within the Great Barrier Reef Region or the Torres Strait Zone.

Passenger, non-passenger and fishing vessels that are 12 metres or more in length and operate beyond two nautical miles out to sea.

Passenger, non-passenger and fishing vessels that are less than 12 metres in length, do not have level flotation and operate beyond two nautical miles out to sea.

The final consultation report on the proposed changes will be released soon, as well as confirmation of who will need to carry a float-free EPIRB.



Register your float-free EPIRB at amsa.gov.au/beacons

Learn more about the regulatory requirements for float-free EPIRBs in Australia at amsa.gov.au

Better regulation, not *more* regulation

Safety regulations must be sustainable for operators to comply with and flexible in a world of technological innovation.

AMSA's approach is to align regulation to risk wherever possible and to motivate operators and crew to be proactive about safety.

A risk-based approach allows us to focus regulatory control and monitoring on high-risk, low-compliance operations, while reducing regulatory burden for operators who meet their obligations and operate safely. We encourage cooperation by making safety regulations relevant and practical to follow.

To guide us in this process we look at domestic and international trends, hot-spots of non-compliance and incident data. This information enables us to assess how effectively regulations achieve safety outcomes and identify areas that need updating. In the process we also look for ways to streamline and simplify the legislative instruments that contain all of these standards and requirements.

The Australian commercial vessel industry plays a key role in guiding this regulatory review and development. We have worked closely with industry to identify areas in the National System that need attention, including construction standards, survey requirements, crew competency standards and vessel-and-operator certification.

We have seen many of these areas updated and modernised with more to come—bearing in mind that too much change is disruptive for operators.

Over the next few months, a number of significant changes to regulations will be put in place. While many of these changes focus on consolidating regulatory instruments and clarifying the language used, the proposed changes to vessel survey regime arrangements will offer real, tangible benefits for vessel owners.

Under the proposed changes, the frequency of vessel survey is based on the level of risk associated with a vessel, rather than on a prescribed set time.



Streamlining so far

Since AMSA became the national regulator for domestic commercial vessel safety in 2013 the following regulatory changes have been put in place.

- Immediate operation pending issue of a certificate of survey
- Expanded availability of equivalent means of compliance
- Vessels less than 12 metres now allowed to operate recreationally without applying for approval (conditions apply)
- Temporary operations without certificates for certain activities
- Compass-adjustment requirements reduced for some vessels
- Human-powered vessels, small sail craft, personal watercraft and low-risk non-passenger vessels with up to four passengers now included in the non-survey category
- A new C-restricted operational category introduced
- A new temporary exemption allowing crew with a level of competence that closely aligns with existing grandfathered arrangements to operate new vessels in similar circumstances
- A new endorsement allowing holders of Master (under 35 metre) certificates to operate vessels under 45 metres in length
- A new B-extended operational area introduced and the C-operational area clarified
- A new category of vessels exempt from having a Certificate of operation introduced.



Reduced survey scheme

While the survey requirements will become tougher for some high-risk vessels and operations, the vast majority of the domestic commercial vessel fleet in Australia will experience the opposite, with many moving into a two-in-five year survey regime, rather than being surveyed annually. Some vessels under 12 metres in length may no longer be required to undergo survey at all.

Additionally, the frequency of out-of-water surveys may be further reduced where a vessel's risks are managed in other ways, and surveys will be able to take place at the same time as other vessel maintenance.

The changes also provide AMSA with ways to address poor vessel maintenance or safety performance.

AMSA will be able to move individual vessels into higher or lower survey frequency levels, depending on their performance—encouraging operators to maintain their vessels to high standards.

If AMSA identifies safety gaps in the new survey arrangements, it will have the flexibility to amend the description of vessel attributes and what constitutes a high-risk operation, in order to change survey requirements and increase safety.

Additionally, from July 2020 the changes to Class survey requirements recommended in the *Survey under the National System for Domestic Commercial Vessel Safety Decision Regulation Impact Statement* will commence. These changes will allow vessels up to 45 metres in length to undergo initial and periodic surveys by an Accredited Marine Surveyor. Vessels up to 65 metres will be allowed to undergo periodic surveys by an Accredited Marine Surveyor, provided they have done their initial survey (and certification) via a Recognised Organisation.

Industry consultation on these proposed changes has just closed and the resulting changes to survey arrangements are expected to be in place from 1 July 2018.



To receive notification of future consultations about proposed changes to regulations subscribe to AMSA update at amsa.gov.au/subscribe



See what consultations are open for comment at amsa.gov.au/consultations

Read more about our regulatory approach at amsa.gov.au/our-regulatory-approach

REDUCE *your* IMPACT

on the marine environment

The marine environment is a precious natural asset. Home to over half the Earth's animals and plants, the marine environment is an important source of food, enjoyment and wonder.



Waste and garbage

This includes food wastes, plastics, cargo residues, incinerator ashes, cigarette butts, deck sweepings, cooking oil, fishing gear, and animal carcasses.

Garbage looks and smells unpleasant and it can transport marine pests between waterways. Larger items of garbage can also cause damage to hulls and propellers.

Plastic is particularly harmful in the marine environment—it breaks down extremely slowly and can remain in the water for hundreds of years. Wildlife gets tangled up in it and mistakes it for food, causing internal injury and slow starvation.

Plastics and other toxic substances that accumulate in marine food chains ultimately end up on our plate.

- Sort and separate all types of waste on board your boat, so that each type of waste can be recycled or disposed of appropriately.
- Contact your local marina, boat harbour, port or terminal office to find out what waste collection and disposal facilities are available.



Oil

Oil on vessels—such as fuel and lubricants—can contaminate other wastes like bilge water and rags used for cleaning. Oil can enter the marine environment from day-to-day operations, small leaks, poor maintenance, or deliberate dumping.

Oil is toxic to marine life. It smothers wildlife and damages habitats such as mangroves, seagrasses, corals, rock outcrops and beaches.

- Dispose of used oil, oily rags and filters at appropriate oil recycling facilities.
- Take care when refuelling. Where possible refuel on land rather than over water.
- Keep a small kit of absorbent material on board to clean up any waste oil in the bilge or accidental spills.
- Clean and service your vessel's engine regularly and repair oil and fuel leaks promptly.



Chemicals

Chemicals are carried on vessels in bulk as cargo or in containers, barrels and gas cylinders. There are also a range of chemicals found in a boat's stores and equipment, such as pesticides, acids and cleaning agents.

- Use clean water for everyday deck scrubbing.
- Check chemical safety data sheets to determine if the chemical is safe to use.
- Read the product information panel before deciding on a chemical cleaner.
- Make sure dangerous goods are packaged, marked, labelled, and stowed according to the dangerous goods regulations.

Everyone benefits from a healthy marine environment—not least commercial operators, who depend on it for their immediate livelihood. There's a lot you can do to protect it during day-to-day operations.

Pollution: iStock.com/madsoci



Fishing gear

Abandoned, lost or discarded equipment—fishing nets, ropes, lines and tackle—go on 'ghost fishing' for many years. They damage the marine environment, impact fish stocks and are a serious hazard to boats.

Many threatened and endangered marine species are impacted by becoming entangled in and ingesting fishing gear.

- Store waste fishing gear such as cut-off lengths of rope or line, damaged floats or lures, and used cyalumes (glow sticks) in closed containers.
- Check lines and nets regularly for damage.
- Try to retrieve snagged gear where possible.
- Stow your gear when it's not in use.



Air pollution

Air pollution from engine emissions often contain sulphur and nitrogen oxides and fine particles, which cause breathing problems in humans and acid rain. Marine engines also emit greenhouse gases that contribute to climate change.

- Get a licensed technician to service air conditioning, refrigeration and firefighting systems to minimise the chance of ozone-depleting substances escaping.
- Fuel used on board vessels must contain a maximum of 3.5 per cent sulphur. Marine diesel oil and petrol is generally below this limit, but if your vessel uses intermediate or heavy fuel oil, make sure the sulphur content of the fuel you purchase is below this limit. From 1 January 2020, the legal sulphur level for fuel used on board vessels will reduce to 0.5 per cent.



Antifouling systems

Anti-fouling systems that contain organotin have been banned since 2008. Tributyltin (TBT) is an example of a banned organotin antifouling compound.

- Do not apply antifouling paints that contain organotin to any part of your vessel's hull or external parts or surfaces.
- Remove and dispose of older antifouling systems containing organotin at appropriate facilities on land, or paint over it with a coating that prevents the banned compounds from leaching into the water.



Pollution and safety go hand in hand



Pollution risk: iStock.com/piola666

Consider all the possible operational risks associated with pollution in your safety management system (SMS).

Vessel owners and operators are best placed to assess the specific types of risks in their operation and work out the best way to address the risks.

Some pollution risks are a direct result of safety risks. For example a collision or grounding can lead to a fuel spill. Your SMS could therefore include clean-up procedures and contact details for notifying the authorities of the spill.

Other pollution risks can be managed in the same way as other safety risks. For example, stowing garbage securely prevents garbage from falling overboard, risk to hygiene, and trip hazards. Keeping machinery well-maintained reduces the likelihood of

breakdown, addresses the likelihood of oil leaks (which may lead to a fire) and excessive exhaust emissions (which may be a health hazard to crew and passengers).

Good operational procedures implemented by appropriately trained crew ensures that activities such as refuelling and loading cargo are done safely and with consideration of the possible environmental impacts.

Reporting marine pollution

If you witness a vessel or seafarer polluting, or see pollution in the marine environment that you think might be from a vessel, you can make a general marine pollution report at amsa.gov.au/marine-environment/marine-pollution/general-marine-pollution-reporting.



Learn more at amsa.gov.au/marine-environment/marine-pollution/general-marine-pollution-reporting

Teamed up *for training*

Winching a person at sea into a helicopter is a difficult operation which requires a unique and well-practiced skill set.

In December of last year, Babcock Mission Critical Services Australasia engaged the Australian Maritime Safety Authority's emergency towage vessel, *Coral Knight*, to assist with helicopter-winch training exercises in the Torres Strait.

In certain situations a helicopter may be required to winch a patient from the water or a vessel at sea, either in a search-and-rescue operation or a medical evacuation.

The exercises were designed to recertify the helicopter crew in winch operations, but they also provided an opportunity for *Coral Knight's* crew to hone their own skills working with aircraft.

The exercises included casualty recovery from the water and stretcher recovery from the deck of *Coral Knight*.

In addition to patrolling and protecting the Great Barrier Reef and Torres Strait from ship-sourced pollution, *Coral Knight* is also on standby to respond to search-and-rescue activities in its area of operation. Training exercises like these benefit both crews to ensure smooth rescue missions in the future.





Australian Government
Australian Maritime Safety Authority

Prepare your beacon before heading out on the water

Register your beacon with AMSA

Having a registered beacon can provide search and rescue authorities with important information to respond effectively in an emergency. In some cases, it's the law.



To update your registration details or for more information on beacons, please visit amsa.gov.au/beacons or phone **1800 627 484**

Cape Otway *Lighthouse*

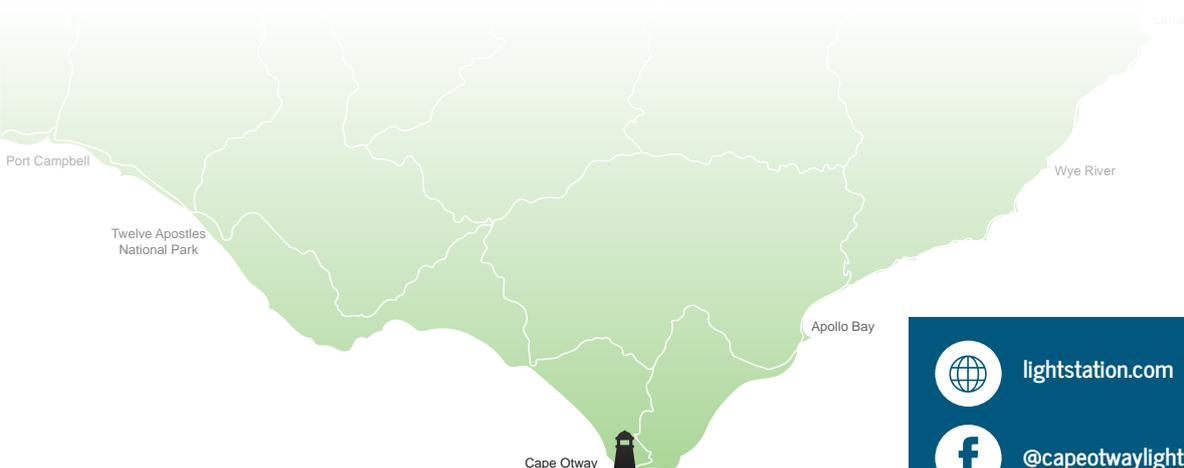
Cape Otway Lighthouse: iStock.com/Phaendin, (inset) iStock.com/htrnr

Cape Otway Lighthouse was built in 1848 after eight ships wrecked along the nearby coastline while attempting to navigate the Eye of the Needle—an 80 kilometre-wide passage between the Australian mainland and King Island, off Tasmania's north-west coast.

Sitting 90 metres above the Bass Strait in the Otway National Park, the lighthouse became known as the 'Beacon of Hope'. As well as being an invaluable navigational aid, it was the first sight of land for many 19th-century migrants travelling the long voyage from Europe, Asia, or North America.

In 1939, the Cape Otway Lighthouse was the first to have a marine-radio beacon installed, with a range of 160 kilometres.

In January 1994, the light was turned off and replaced by a solar-powered light 21 metres in front of the old tower. The Cape Otway Lightstation is now a major point of interest along the Great Ocean Road.

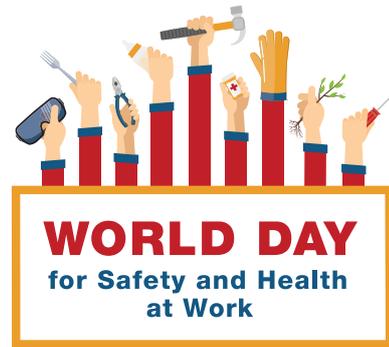


lightstation.com



@capeotwaylighthouse

World Day for Safety and Health at Work



Saturday 28 April 2018 marked World Day for Safety and Health at Work, a campaign by the International Labour Organisation to promote safer, healthier workplaces.

According to the United Nations, about 6300 people die every day around the world as a result of occupational accidents or work-related diseases—that's more than 2.3 million deaths every year.

'A national occupational safety and health culture is one in which the right to a safe and healthy working environment is respected at all levels, where governments, employers and workers actively participate in securing a safe and healthy working environment through a system of define rights, responsibilities and duties, and where the highest priority is accorded to the principle of prevention.'

– United Nations

In the Australian commercial vessel industry there have been about 2000 serious incidents reported, including about 200 injuries and 47 fatalities since July 2013. Of these fatalities, 26 occurred in the fishing sector alone.

A robust safety management system, which identifies risks of your operation and implements control measures to mitigate these, is an important step towards preventing incidents from occurring in the first place.

Visit the AMSA website or speak with your local liaison officer for more information about developing an effective safety management system for your operation.



Safety Management: Emergency towage vessel safety training exercise.



amsa.gov.au/sms

Community events



Recently, we took our safety message to the Apollo Bay Seafood Festival and Hooked on Lakes Entrance in Victoria. We had the pleasure of meeting with locals, operators and other organisations including Seafood Industry Victoria, the Victorian Fisheries Authority, the Australian Fisheries Management Authority, and the Fisheries Research and Development Corporation.





'Lifejackets are the main things ... and an EPIRB.'



'A lifejacket and an EPIRB.'



'Checking my fuel. Number two is that you haven't got any leaks!'

What don't you leave port without?

While at the Apollo Bay Seafood Festival and Hooked on Lakes Entrance we asked people what item of safety equipment they don't leave port without. Here's what they said ...



'My lifejacket!'



'Vessel monitoring system ... turned on.'



'I wouldn't leave port without my phone or my lifejacket.'

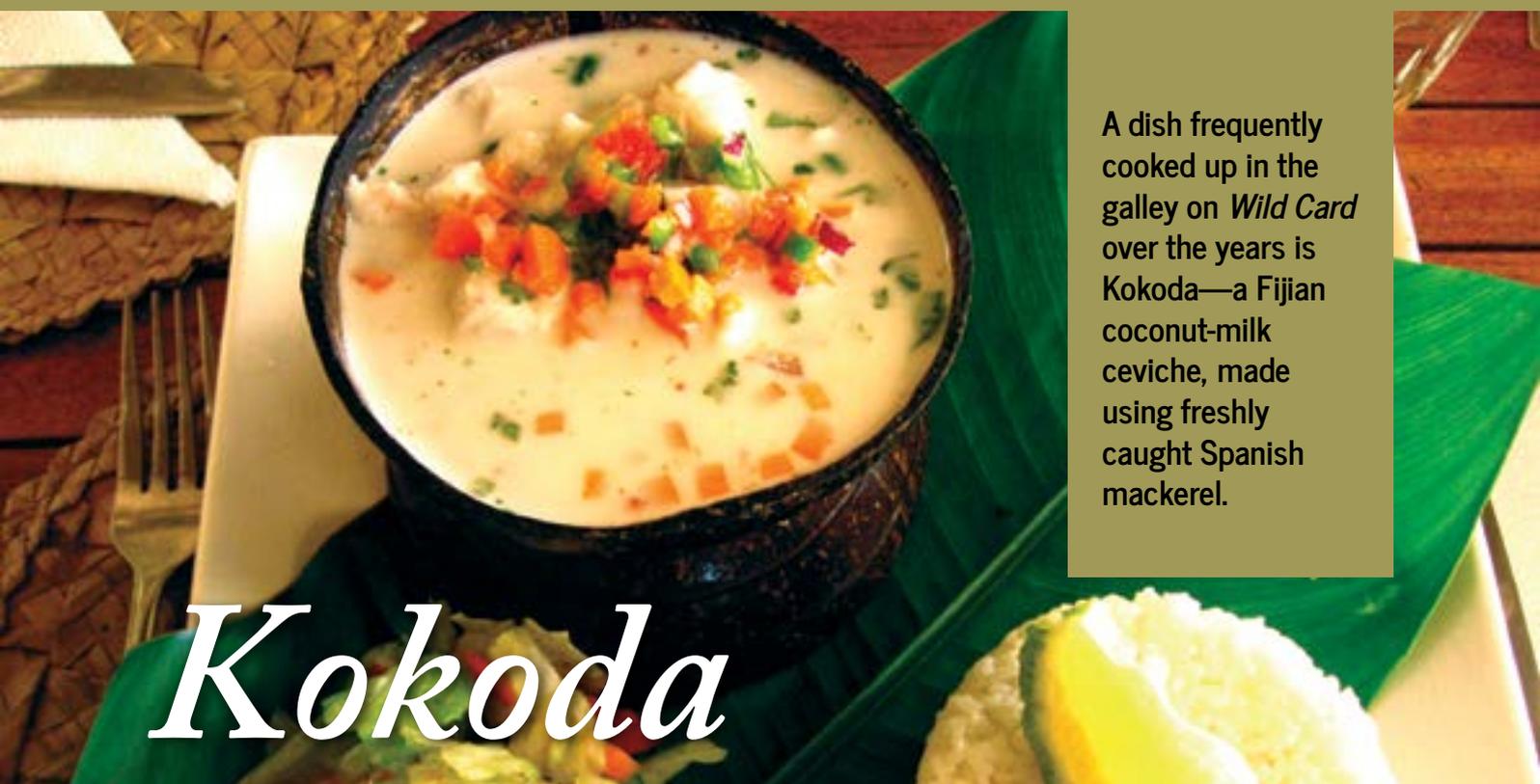


'My lifejackets.'



'An EPIRB.'

The galley



A dish frequently cooked up in the galley on *Wild Card* over the years is Kokoda—a Fijian coconut-milk ceviche, made using freshly caught Spanish mackerel.

Kokoda

Serves 4

Preparation: 15 mins

Marinate: 2 hours

Total: 2 hours, 15 mins

Ingredients

- 500g fresh Spanish mackerel fillet, cubed in 1 cm pieces
- 4 limes, juiced
- 2 lemons, juiced
- 1 cup coconut milk
- 2 medium-sized shallots, finely diced
- 1/2 medium red onion, finely diced
- 1 medium green capsicum, finely diced
- 1 cucumber, finely diced
- 3 long red chillies, finely diced
- 2 tbs parsley, finely diced
- 2 roma tomatoes, finely diced

Instructions

1. Place the cubed Spanish mackerel into a large bowl. Juice the lemons and limes to make 1 cup of citrus juice then pour over the fish, to submerge it.
2. Cover the bowl with plastic wrap, then place in the fridge to marinate for a minimum of two hours.
3. After at least two hours, the cubed fish fillet should be opaque and tender. Drain off the excess liquid.
4. Pour coconut milk over the fish in the bowl.
5. Chop shallots, red onion, green capsicum, cucumber, chillies, tomatoes and parsley. Combine the fresh ingredients carefully together with the fish mixture.
6. Serve the Kokoda cold, either in small bowls or in lettuce cups. Enjoy!



Eating a variety of fresh foods daily is important for your physical and mental wellbeing.



We'd love to know what fare you serve up from your galley. Please send your recipe, the story behind the recipe and pictures to engagement@amsa.gov.au



Australian Government
Australian Maritime Safety Authority



NATIONAL
MARITIME
SYSTEM



One set of rules



One point of contact



One set of fees



One system to navigate.

From **1 July 2018**, you'll get your certificates of survey and operation and crew qualifications from AMSA instead of your local marine safety agency.

You can also access a range of other maritime services including permits, exemptions and equivalent means of compliance.



Call AMSA CONNECT **1800 627 484**



Visit **AMSA.GOV.AU**
to find out how
this affects you