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AMSA **Webinars**

Welcome to our webinar

Fatigue risk management on domestic commercial vessels

The session will commence at 2:30pm AEST

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Fatigue risk management on domestic commercial vessels

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Acknowledgement of Country

In the spirit of reconciliation, the Australian Maritime Safety Authority acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community.

We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Navigating Tides of Progress.
Created for the Australian Maritime Safety Authority by Alysha Menzel, proud descendant of the Samsep people from Erub Island, Torres Strait Islands.

Housekeeping

- 30 second delay
- To turn on live captioning: Click ‘Captions’ at the top of your Teams window
- Post your questions in the Q&A chat
- After the webinar you will receive an email with:
  - video recording
  - audio podcast
  - copy of this presentation
  - list of Q&A’s

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Contents

This webinar will cover:

- AMSA requirements for managing the risk of fatigue
- What is fatigue
- Recognising fatigue
- Health impacts
- Causes and consequences
- Managing the risk of fatigue
- AMSA resources
- Ask the AMSA experts Q&A session

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AMSA requirements for fatigue risk management

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AMSA MO 2024/5

Marine Order 504 (Certificates of operation — national law) 2024

I, Kaylene Dale, Chief Executive Officer of the Australian Maritime Safety Authority, (the National Marine Safety Regulator under section 9 of the *Marine Safety (Domestic Commercial Vessel) National Law*), make this Marine Order under subsection 163(1) of the *Marine Safety (Domestic Commercial Vessel) National Law 2012*.

Dated 14 November 2024

Kaylene Dale
Chief Executive Officer

All Class 1, 2 and 3 vessel owners must include a fatigue risk management plan in their safety management system.

The plan must identify:

- the risks of master and crew fatigue
- how they will manage these risks.

The plan needs to be appropriate to the size and complexity of your vessel, crew and operations

Any requirements under State or Territory work health and safety laws continue to apply.

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Who is responsible for managing the risk of fatigue?

Everyone is responsible

Owners:

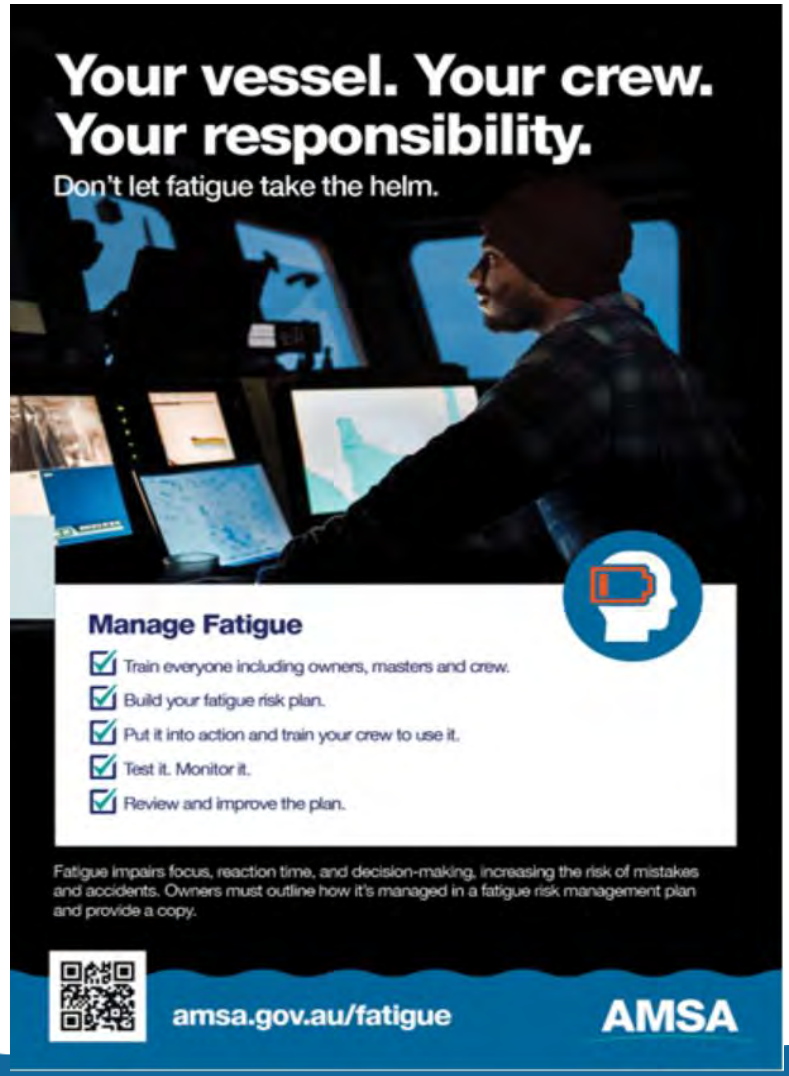
- Provide proper onboard environment, provisions and appropriate rest and recovery time for crew.
- Ensure fatigue risks are addressed in the SMS and fatigue controls are implemented

Masters:

- Contribute to the fatigue risk assessment and development of fatigue risk management plan
- Apply and monitor controls during operations

Crew:

- Contribute to risk assessment and fatigue risk management plan
- Follow policies and procedures
- Take recovery and rest opportunities when given.
- Report fatigue concerns promptly



What is fatigue?

Fatigue is a hazard

Fatigue is one of the biggest safety risks in vessel operations

It can lead to:

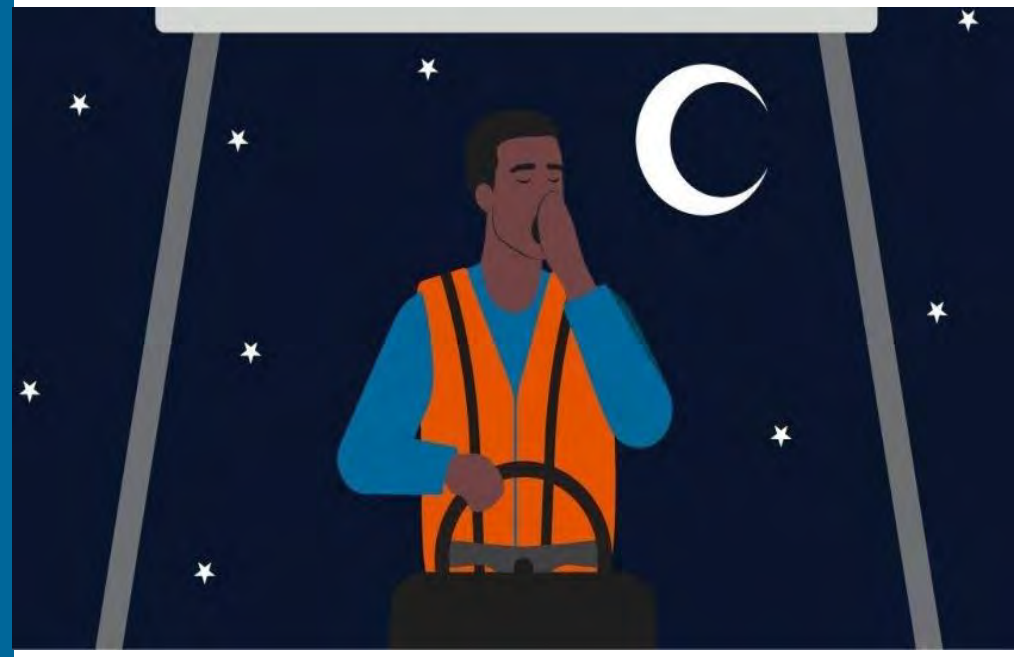
- Mistakes
- Incidents and injuries
- Damage to your vessel
- Long term health conditions

Fatigue needs to be treated like any other safety hazard

Recognising fatigue

Common warning signs of fatigue:

- Yawning and nodding off
- Microsleeps
- Being irritable or short tempered
- Slow reactions
- Poor concentration
- Bad judgement of speed and distance



Fatigue impacts on health

Long term fatigue can lead to:

- Anxiety and depression
- Insomnia
- Digestive problems
- High blood pressure
- Heart disease
- Diabetes

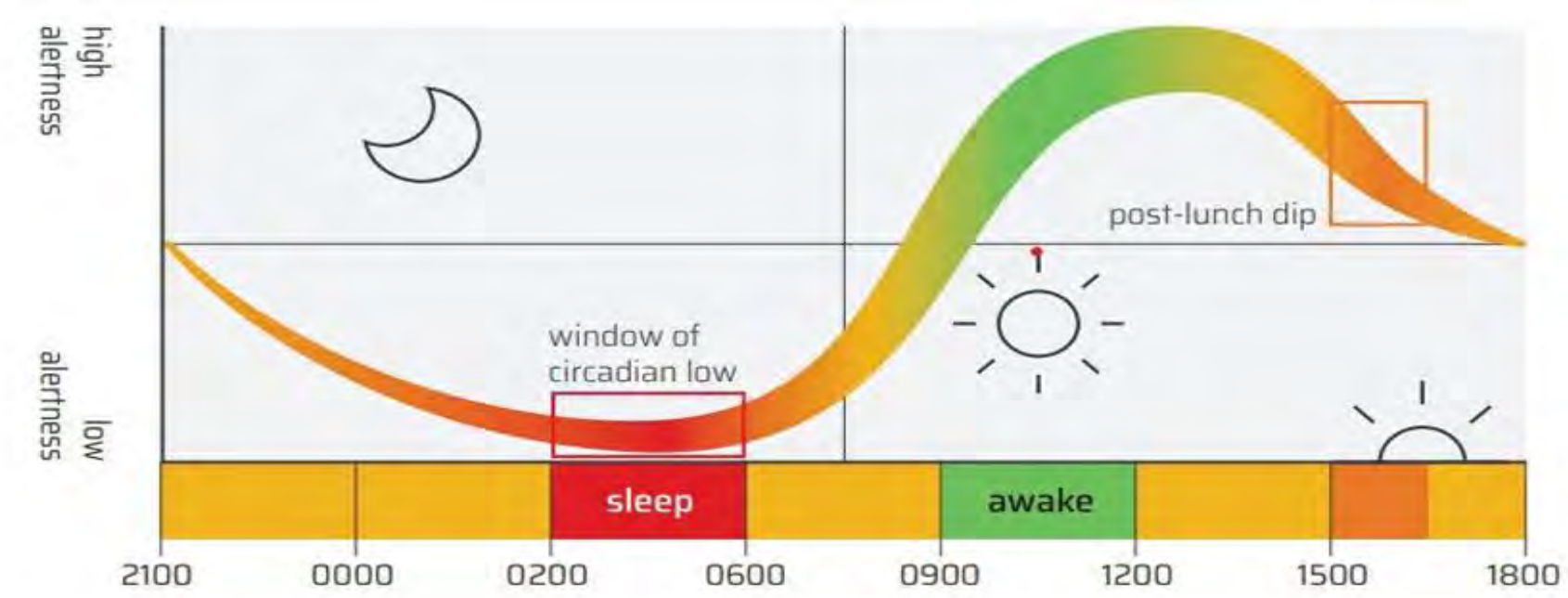
Causes of fatigue

Fatigue risk factors

- Not getting enough good quality sleep
- Night work or early starts
- Long or irregular work hours
- Heavy physical or mental workload
- Noisy, hot, vessel vibration or uncomfortable sleeping areas
- More than one employment, multiple jobs
- Stress from work, personal or home pressures

Causes of fatigue – body clock

The time of day matters when it comes to managing the risk of fatigue

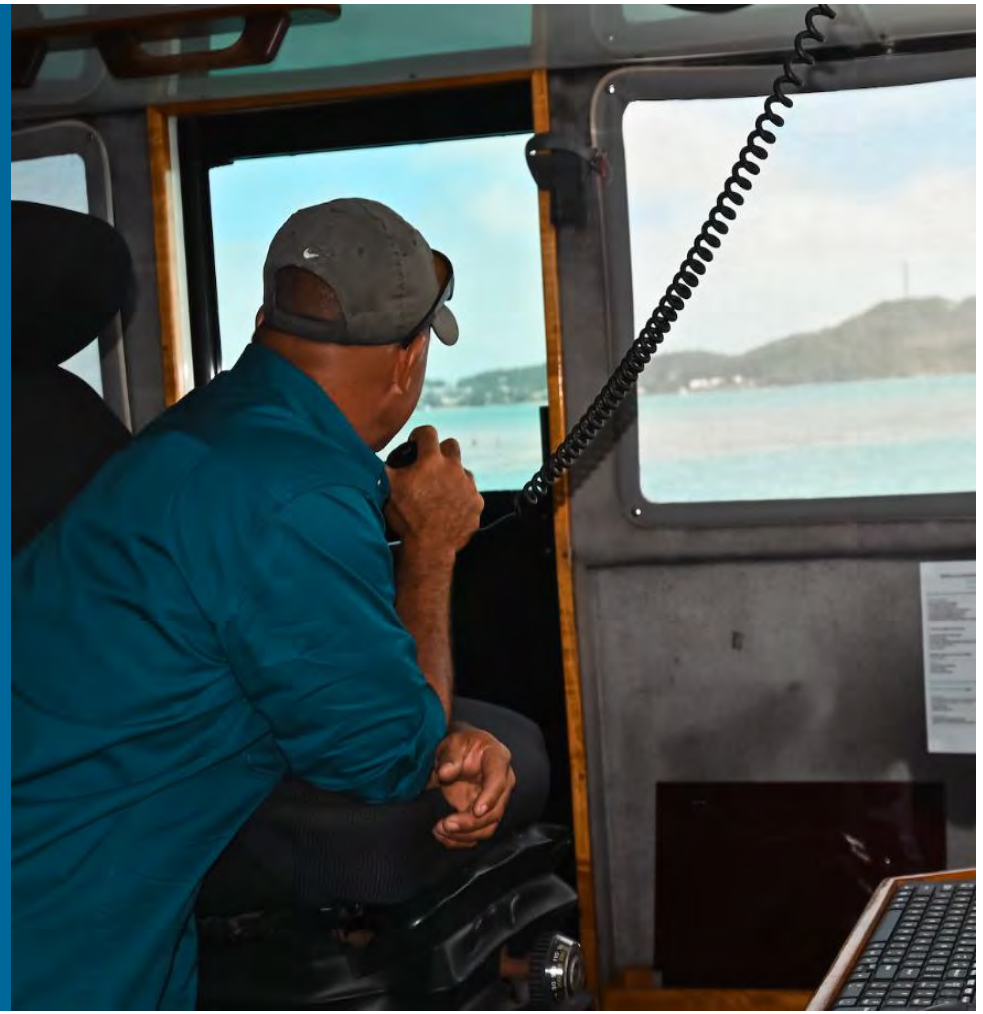


This graph shows the danger times for fatigue. 0200 - 0600 is high risk. 1500 – 1630 is moderate risk.

Consequences of fatigue

When someone is fatigued, they are more likely to:

- Lose control of the vessel
- Have a collision or grounding
- Miss checks and alarms
- Make poor decisions
- React too slowly in an emergency



Safety lessons

Safety lesson 1: fatigue puts fishing vessel on the rocks

- Lone operator returning to anchorage in poor weather
- Had been working 17 hours without rest
- Fell asleep while at the helm
- Vessel travelled 800 metres unattended
- Ran aground on rocky shoreline
- Vessel flooded and was abandoned

Safety lessons

Safety lesson 2: fatigue contributes to fishing vessel grounding

- Class 3B fishing vessel grounded on Kay reef after six days at sea
- Watch schedule 4 hours on / 4 hours off
- Master remained on call at all times
- Limited crew competency
- Master had 4 hours of proper rest in 6 days
- Grounding occurred at 0630 on master's watch
- Vessel was refloated with no injuries to master and crew and vessel detained

Safety lessons

Fatigue contributes to fishing vessel grounding

Contributing factors:

- Master not supported by effective fatigue risk management plan that did not provide opportunities for quality sleep
- Inadequate crewing (inexperienced, uncertified crew)
- Poor fatigue risk assessment
- Ineffective safety management system (SMS)
- No watch alarm (fatigue controls not implemented)

Fatigue risk management checklist

Overview

Vessel owners must identify the risk of master and crew fatigue and how this is to be managed in their safety management system (SMS).

Answer the questions in this checklist to identify risks of fatigue in your operation. If the answer is **yes** to any of the questions, record the risk in your SMS risk assessment. Include control measures you will implement to reduce the risk and who is responsible for implementing the control.

Note: This is not a full list of risk factors. You will need to work out what other risk factors apply to your operation.

Work scheduling and planning

Does anyone work in excess of 12 hours regularly?	Yes/No
Does anyone work in excess of 60 hours per week?	Yes/No
Does anyone have less than 10 hours continuous rest between each work period?	Yes/No
Is work performed at night during low body clock times (between 2 am and 6 am)?	Yes/No
Does the work schedule make it difficult for crew to consistently have at least 2 consecutive nights sleep per week (i.e. working consecutive night shifts)?	Yes/No
Does the work schedule prevent crew having at least 24 continuous hours off per week?	Yes/No
Does anyone have to commute more than one hour to get to their vessel?	Yes/No

amsa.gov.au Keep your safety management system current. AMSA

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Managing the risk of fatigue – AMSA requirements

Vessel owners are required to:

- Provide the safe working environment, conditions, resources to support appropriate rest and recovery time for master and crew
- Identify fatigue risks to master and crew
- Include fatigue risks in the vessel risks assessment
- Document how the risk of fatigue is managed in the SMS
- Work with the master and crew to develop fatigue risk management plan
- Implement the plan, train crew and monitor

Fatigue risk management is a **mandatory**

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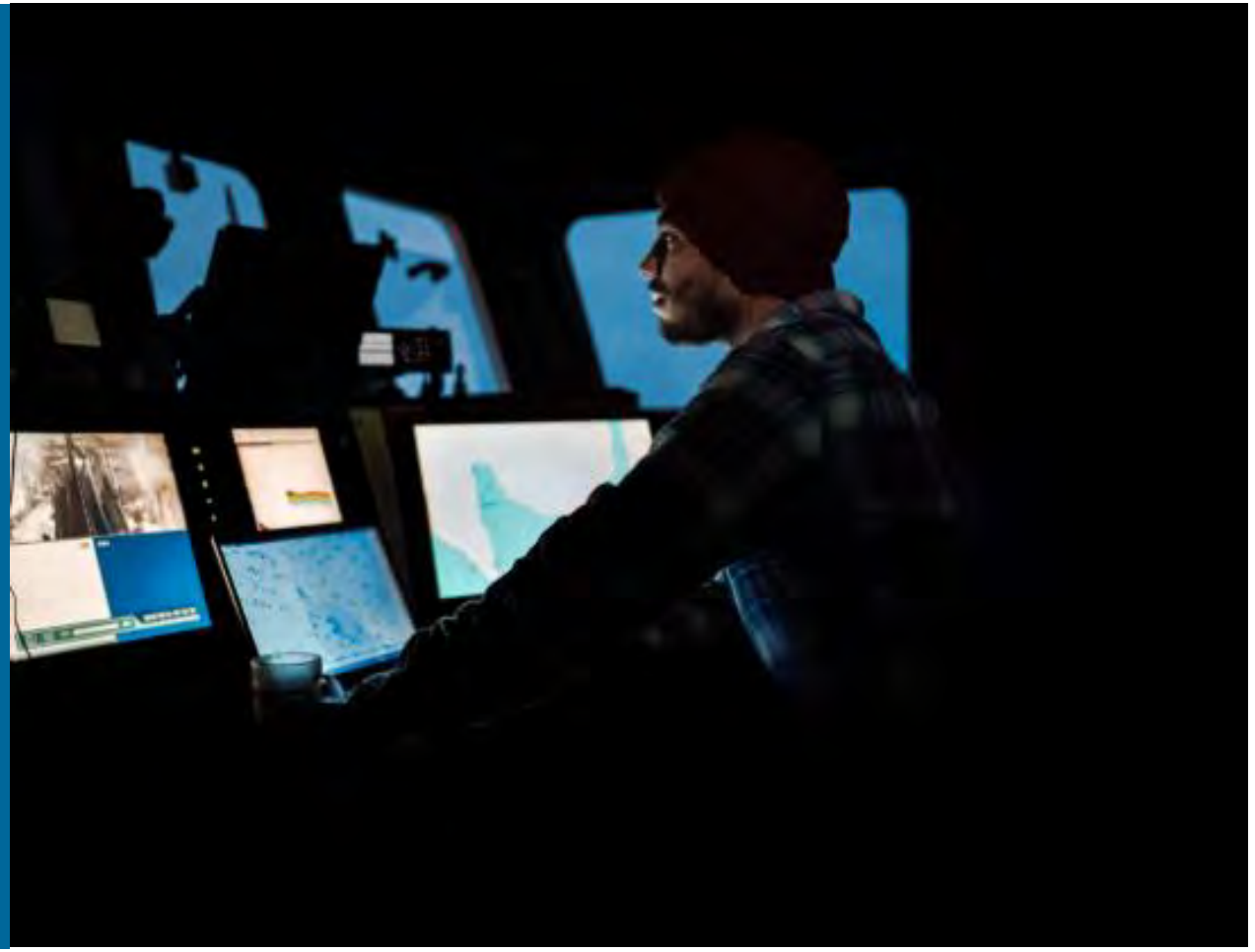
Managing the risk of fatigue

Important considerations:

- Sleep 7-9 hours per 24-hour period
- Avoid being awake during circadian low (between 2 – 6am)
- Work during daylight hours, not overly strenuous work
- Do you have sufficient crew?



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Managing the risk of fatigue – Scenario 1

16m Class 3B fishing vessel

Operates

- 100 nautical miles off the coast
- 21 and 28 days at sea

Key fatigue risks:

- Lack of sleep – less than 7 hours per night
- Long shifts - 12 hour + work days
- Crew arrive to work fatigued – home pressures second job
- Consistent night work – midnight to 6am
- Physically demanding work

Risk assessment – record the risks

Risks	Controls	Responsible person	Observations and notes
Training			
Lack of sleep			
Crew arriving at work fatigued			
Working in excess of 12 hours			
Consistent work between midnight and 6am			
Physically demanding work			
Review			Example only

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Managing the risk of fatigue – develop controls

Risks	Controls	Responsible person	Observations and notes
Lack of sleep	• Implement hours of work and rest requirements, including time for adequate sleep (min 7hrs uninterrupted sleep) in work rosters • Set maximum number of hours that can be worked in any 24-hour period • Regular 20 minute rest breaks • Darkened, air conditioned and comfortable sleeping area • Provisions are available for meals and breaks	• Owner: provide comfortable accomodation/sleeping spaces and provisions • Master: design work rosters, crew rotations, breaks, fatigue awareness • Crew: report fatigue risks if feeling tired and monitor peers to master, limit use of phone/tablets, get to sleep during allocated sleeping window without distractions	Example only

Managing the risk of fatigue

Fatigue risk management plan

Develop the fatigue management plan with your crew and place effective controls:

- Ensure there are adequate rest and sleep opportunities
- Plan work to avoid excessive fatigue
- Schedule breaks
- Avoid night work where possible
- Provide suitable sleeping conditions
- Established safe fatigue conversations
- Everyone needs to know the plan -train crew to recognise and report fatigue

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Managing the risk of fatigue – Scenario 2

4.6m Class 2 fishing tour vessel

Operation:
Takes clients on half-day fishing charters in local rivers

Key fatigue risks:
- 10 – 12 hour work day in daylight hours
- Crew travel less than 1hr to get to work
- Work 5 – 6 days per week

Short fatigue management plan

- I understand the causes and consequences of fatigue.
- My total hours worked will not exceed 12 hours during the day.
- Commute time is usually 40 minutes from port to home.
- I allocate sufficient sleep time (7-9 hours) per night before a charter.
- If I work excess hours (more than 14 hours) I allow for a longer recovery period.

Last reviewed: dd/mm/yyyy

Managing the risk of fatigue

Monitoring and reviewing fatigue controls

Owners and operators regularly review whether fatigue controls are effective.

Ask yourself and the crew:

- Is the master and crew getting enough sleep?
- Any sleep disorders or distractions affecting sleep?
- Incidents and near misses where fatigue is a factor/cause
- Are the controls still working?
- Is the plan still working effectively to control fatigue risks or does it need amending?

- Update the SMS when risks or operations change
- Learn from incidents and apply further controls

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AMSA resources

Go to the AMSA's website to access fatigue risk management resources to help you with:

- Developing a fatigue management plan
- Undertaking a fatigue risk assessment
- Read up on managing crew fatigue
- Download a fatigue risk management checklist and printable guidance
- Appropriate crewing determinations
- Learn from others mistakes in Safety lessons

- Fatigue risk management plan
- Fatigue risk management
- Managing crew fatigue
- Fatigue risk management checklist
- How to write a fatigue risk management plan printable guidance
- Crewing guidance for domestic commercial vessels
- 2025/03 Marine Notice - Watchkeeping and crewing standards

Q&A session

Answers to your questions.

We value your feedback!

Please take a moment to complete our survey.

Thank you.

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Safe and clean seas, saving lives

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