FIGHT FATIGUE

safer ships demand realistic manning
ABOUT THE ITF

The International Transport Workers' Federation (ITF) is a global federation of transport workers’ unions. Any independent trade union with members in the transport industry is eligible for membership of the ITF.

624 unions representing 4,400,000 transport workers in 142 countries are members of the ITF. It is one of several Global Union Federations allied with the International Confederation of Free Trade Unions (ICFTU).

The ITF’s headquarters is located in London and it has offices in Nairobi, Ouagadougou, Tokyo, New Delhi, Rio de Janeiro, Georgetown, Moscow and Brussels.
Fatigue is killing seafarers. Long hours, overwork and low staffing levels are causing ship collisions and sinkings, costing lives, ruining seafarers’ health and endangering the environment.

Every study, and countless accident investigations, underline the scale of the danger. All ranks are being affected by a problem that stretches from injury to individual crew members to the loss of ships, loss of lives, and damage to the seas and coastlines.

It is a systemic problem, ranging from the loss of a ship because the officer on watch was exhausted, to the loss of livelihood when an exhausted deck hand falls through an open hatch.

And because it is a systemic problem, a systemic approach is needed. It’s time to examine the issue across the board, rather than focusing on just one sector.

The ITF believes that fatigue cannot be viewed separately from factors such as the number of people working on the ship (known as its manning level); the hours of work; the hours and frequency of rest; the quality of rest (is it disturbed by engine noise, cargo loading or bad weather?); the environment of the ship; the length of voyage and the isolation from normal social life.

WHAT IS IT?

There is no exact agreed legislative definition of seafarer fatigue - instead the IMO (International Maritime Organization) uses the working definition of “a reduction in physical and/or mental capability as the result of physical, mental or emotional exertion which may impair nearly all physical abilities including: strength; speed; reaction time; coordination; decision making; or balance.” It is “a biological state to which all individuals are susceptible, regardless of skill, knowledge or training”.

The IMO also notes that “the effects are particularly dangerous in shipping. The technical and specialized nature of this industry requires constant alertness and intense concentration from its workers. Effectively dealing with fatigue requires a holistic approach.”

As well as the immediate danger of overstretched personnel working in a hazardous environment, there are long term health risks too. And unless the role played by fatigue in an accident can be proved then victims may lose compensation and their career. Other long term effects of overwork include depression, alcoholism, stomach and heart problems - any of which may mean the victim having to leave work without recognition or compensation.

“On previous ship, 12–15 hour days, never had six hours continuous sleep, 87 hour week for three months. Regularly made errors in passage planning and execution. Did not dare sit down on watch.”

First officer on passengership, quoted in Seafarer fatigue: Wake up to the dangers

CAUSES

- Lack of sleep
- Poor quality of sleep
- Insufficient rest time between work periods
- Poor quality of rest
- Stress
- Boring and repetitive work
- Noise or vibration
- Ship movement
- Food
- Medical conditions and illnesses
- Ingesting chemicals
- Jet-lag
- Excessive work load

Condensed from IMO Guidance on Fatigue Mitigation and Management (MSC/Circ 1014)
WHAT CAUSES IT?
Fatigue is caused by lack of sleep, by rest, when it comes, being disturbed or of poor quality, by overwork and by stress. Health, diet, age and other factors affecting the circadian rhythm (the ‘body clock’) - such as shift work - may also play a part.

WHAT'S HAPPENING AT SEA TODAY?
The modern ship can be a high work, high stress environment. Changing patterns of trade and employment mean that time spent onboard has grown. Seafarers may now not see home for six months or a year, and port calls often last hours rather than days. Increased legislation and inspections, designed to increase safety, can unwittingly undermine it, as seafarers are given additional responsibilities, almost always without additional time in which to meet them. Post 9/11, sincere efforts to increase security have restricted shore leave and added the new role of security officer to all vessels - yet almost no companies have employed someone to do this job. For years seafarers have found themselves caught in a pincer of the commercial pressure to work faster, harder, better while crew sizes are cut to the absolute minimum.

HOW TO RECOGNISE IT
A fatigued person may be the last to recognise their condition. Exhaustion affects our judgement and it may be easier to notice the signs in others than in ourselves. Luckily the physical, mental and emotional symptoms are often visible.

PHYSICAL SIGNS
- Inability to stay awake (eg. head nodding)
- Difficulty with hand-eye coordination
- Speech difficulties (eg. slurred)
- Heaviness in arms and legs or sluggish feeling
- Decreased ability to lift, push or pull
- Dropping objects
- Non-specific physical discomfort
- Headaches
- Giddiness
- Heart palpitations
- Rapid breathing
- Loss of appetite
- Insomnia
- Sweating fits
- Leg pains/cramps
- Digestion problems

EMOTIONAL SIGNS
- Risk taking
- Intolerance and anti-social behaviour
- Needless worry
- Reduced motivation to work well
- Mood changes (eg. irritability, tiredness, depression)

MENTAL SIGNS
- Poor judgement of distance, speed, time
- Inaccurate interpretation of a situation, eg. failing to anticipate danger
- Slow or no response to normal, abnormal or emergency situations
- Reduced attention span
- Difficulty concentrating and thinking clearly
- Decreased ability to pay attention

Condensed from IMO Guidance on Fatigue Mitigation and Management (MSC/Circ 1014)

“Surely the problem is that some ships just don't have enough people on board.”

Arthur Bowring Managing Director, Hong Kong Shipowners’ Association, reported in industry newspaper Lloyd’s List, September 2005

WHAT'S THE PROBLEM?
One of the most extensive surveys ever made of seafarers’ working hours was the ITF’s research project Seafarer fatigue: Wake up to the dangers. Based on responses from 2,500 seafarers of 60 different nationalities serving under 63 different flags, it revealed just how widespread the problem is. It highlighted the enormity of the risks to health and safety and the marine environment. It found that, despite advances in regulations, more work needed to be done, with many seafarers unaware of the legal safeguards that have been introduced and many shipowners and operators either unwilling or unable to comply with the regulations.

Concern about accidents and excessive working hours resulted in two key international agreements to limit duty hours and set requirements for rest periods: the 1995 amendments to the Standards of Training, Certification & Watchkeeping Convention (STCW 95) and ILO Convention 180 on Seafarers’ Hours of Work and the Manning of Ships. Additionally, many flag states have their own national regulations. Despite
this, the ITF report recorded, fatigue was endemic within shipping. One third of those questioned reported average daily working hours of 12 and more, and more than 5% averaged more than 15 hours a day. Almost two thirds said their average weekly working hours totalled more than 60, and 25% reported working more than 80 hours a week. These are way in excess of the STCW 95 or ILO 180 requirements. Over half of all those surveyed said their working hours presented a danger to their personal health and safety, and just under half said their working hours presented a danger to safe operations on their ships.

Some of the longest hours were worked by watchkeepers. Over 70% of masters, chief engineers and first officers reported a major increase in workload in the preceding five to 10 years, while around 60% of watchkeepers considered that excessive hours were leading to personal health and safety risks. Some 42% of masters said they averaged more than 80 hours a week on duty.

“During port operations I was serving as chief officer and had worked continuously for 48 hours. I contributed to a chemical overflow in which serious injury occurred by not concentrating on the loading operation. (Acrylonite overflowed and covered two men when I hot-washed an adjacent tank).”

Shipmaster, quoted in Seafarer fatigue: Wake up to the dangers

Despite these regulations and conventions seafarers are still routinely worked to dangerous levels – not just illegally and through the falsification of work and rest timesheets, but because flag states can gain dispensation by claiming to increase leave and because there is more focus on hours of rest rather than hours of work.

“Legislation on work and rest hours

- STCW (Standards of Training, Certification and Watchkeeping)
- SOLAS (International Convention for the Safety of Life at Sea)
- Principles of Safe Manning (IMO Resolution A.890(12))

“There’s no other industry that accepts a 98 hour week for watchkeepers.”

John Bainbridge, former chief engineer and ITF Seafarers’ Section Deputy Secretary

Pictured on the cover, the Cita, which ran aground in the Scilly Isles after the chief officer, alone on the bridge, fell asleep. The Cita sailed through busy shipping lanes at full speed for around two hours while the officer - who had had only two three-hour periods of sleep in the preceding 36 hours - slept on.

Seafarer fatigue: Wake up to the dangers. ITF. 1997)
The US Coast Guard has also investigated. It analysed 297 marine casualties (personal injuries and vessel damage/losses) in order to develop a ‘fatigue index’ which showed that fatigue was a contributing factor in 16% of critical vessel casualties and 33% of personnel injuries, making they noted, ‘fatigue a significant causal factor in marine casualties’. (Source: Procedures for Investigating and Reporting Human Factors and Fatigue Contributions to Marine Casualties. September 1996. US Coast Guard Research and Development Center.)

In 2004 Britain’s Marine Accident Investigation Branch (MAIB) released a Bridge Watchkeeping Safety Study in response to a spate of “remarkably similar accidents” whose common factors included fatigued officers and one man bridge operation at night. The study examined 66 ship collisions, near collisions, groundings and contacts. It concluded that “the current provision of STCW 95 in respect of safe manning, hours of work and lookout are not effective” and that, “it is the opinion of the MAIB that the records of hours of rest on board many vessels, which almost invariably show compliance with the regulations, are not completed accurately”.

The ITF also carried out research on the effects of the ISPS (International Ship and Port Facility Security) Code introduced in response to the 9/11 attacks in the USA. The Code sets requirements for ship security plans and ship security officers, and for monitoring and control of access to the ship. While most trade unions had been supportive of ISPS and the consultative manner in which it was drawn up there were always concerns about a possible negative impact on seafarers. To learn more the ITF surveyed its 127 inspectors and 230 affiliated maritime unions.

A majority of respondents felt that ISPS had indeed improved security, but that it had also resulted in extra work and adversely affected crew performance - yet 96% said there had been no increase in crew levels to deal with the additional workloads.


The 1989 grounding of the Exxon Valdez caused the release of 11.2 million gallons of crude oil. It was a true environmental disaster, the world’s worst ever oil spill. The US National Transportation Safety Board later determined that the probable causes included “the failure of the third mate to properly maneuver the vessel because of fatigue and excessive workload” and “the failure of the Exxon shipping company to provide a fit master and a rested and sufficient crew for the Exxon Valdez”. Here an attempt is made to transfer oil from the tanker to a smaller ship.
WHAT CAN BE DONE TO REDUCE CREW FATIGUE?

Everyone can help. Flag states, which determine manning levels on ships they register, must set realistic levels and not, as some do, join the destructive spiral of allowing smaller and smaller crews as a way of attracting new business.

Port state control bodies, the national organisations which police safety standards on ships entering ports, are barred from changing the hours worked on ships, even when they have spotted dangerous practices. It may be time to let bodies other than the flag state set manning levels. Administrative and regulatory bodies such as port state control and the IMO could also build on their already valuable work by setting up mechanisms to handle complaints of long hours and overwork.

Ship owners and operators too must realise, as many already do, that a sensibly staffed ship is a safer ship, and a fit and well rested crew is a more efficient one. And seafarers themselves can help combat fatigue by raising the alarm if they are being overworked, by telling their trade union, and by looking after their own health and diet.

“Fatigue was found to be associated with a combination of factors, including working hours, sleep problems, tour length, shift schedule, job demands, stress at work and standing watch … findings suggest that in order to reduce fatigue among seafarers it would be most beneficial to focus on controlling working hours to optimum levels.”

UK Maritime and Coastguard Agency (MCA) research projects. www.mcga.gov.uk/c4mca/mcga-the_mca/shared_content-mcga-mpb-research/shared_content-mcga-mpb-research-proposed.htm

What can you do? If you believe that the shipping industry - like other transport industries - should have sensible and humane limits on how hard those in it can be worked, and that crews, passengers and the environment are put at risk by a driven and exhausted workforce, then please ask your government to support new legislation to tackle the problem.

The ITF believes that the problem of fatigue is too widespread to be tackled by existing legislation. Its research has shown the inadequacy of the existing principles for assessment of minimum safe manning levels - leading it to call for legislation on determining crew complements that reflects actual operational requirements, trading patterns and other demands. Existing legislation, such as the International Safety Management code, is intended to provide an overarching framework. However it is often misused by ship owners to cover their responsibilities by just providing files and unrealistic instructions (this proliferation of paperwork at a time when a crew sizes are being slashed has itself increased the demands made on senior officers). Evidence is also emerging that crews are being worked beyond even the legal limits. Paris MOU (Memorandum of Understanding) - the port state control organisation covering most western European nations’ efforts to seek out and eradicate unsafe shipping - has detected the falsification of work and rest time records on ships.

Seafarers are human beings with human rights, not commodities that can be exploited to fill gaps, and then discarded when damaged. The dangers inherent in their place of work demand alertness and attention. Their ships, carrying, as they may be, passengers, fuel and possibly dangerous cargoes, need to be served and steered by trained, rested and sufficient personnel. The consequences of reduced crews, long hours, and too little leave and rest can be environmental damage, increased prices for oil and goods and long term health problems for seafarers. Thankfully the will to address the problem is evident among many influential maritime bodies and flag states. Let’s take it forward.