



Impacts of marine fauna on shipping

While shipping traffic is one of many human activities in the ocean that may have an adverse impact on marine life, the opposite is also true. The presence of marine fauna in some geographic regions can pose a serious threat to the safety of ships and the individual seafarer.

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The adverse impact of shipping on marine life and ecosystems is well documented. However, it is also true that the presence of certain sea creatures can pose a serious threat to the safety of ships and the individual seafarer. It is therefore important ship operators ensure crews are aware of such risks posed by marine fauna present in their trading areas and properly address measures to control the risks in ships' onboard procedures.

Small fish – big problems

On 20 April 2020, the US Coast Guard Sector Houston-Galveston published a safety alert, [MSIB 14-20](#), warning the shipping industry about the upcoming Gulf Menhaden season and the risk of experiencing loss of propulsion while operating in the Houston Ship Channel complex.

Gulf Menhadens are small fish known to accumulate in ships' sea strainers and cause loss or reduction in propulsion, reduced manoeuvrability, and loss of water pressure within the firefighting system. The species range throughout the Gulf of Mexico but are most abundant in the north-central Gulf, particularly in the waters off Texas and Louisiana. They are found in coastal and inland tidal waters and form large surface schools that appear in near-shore Gulf waters.

The risk of encountering Menhaden related problems is at its highest between May and October. In order to avoid incidents, the US Coast Guard recommends ship operators adhere to the following best practices when operating in the Gulf of Mexico, and in the Houston Ship Channel complex in particular:

- Sea chests should not be used without filter strainers in place and should be monitored at all times.
- Detailed procedures for cleaning seawater strainers should be established. These procedures may include back-flushing or regular changing and cleaning of duplex strainers as appropriate.
- Prior to transit, inspect and clean the service sea chest. Ensure filters and coolers are clean prior to entry into US waters. Implement a preventive system that requires frequent cleaning and swapping between sea strainers.
- Monitor the pressure on pumps and filters. Be prepared to respond quickly when reduced performance is observed.
- Have a contingency plan in place and ensure all engineering staff is familiar with the plan. Consider posting a double watch in the engine room while in pilotage waters. Have crew ready to clean the strainers during transit.

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- All tools and equipment for opening the sea chest and cleaning the strainer should be prepared and ready for use.
- Ships regularly transiting the HSC may consider having spare clean filter strainers onboard, allowing for quick changeover of strainers.
- Consider implementing an engineering-designed approach, such as using the aft peak tank for seawater cooling purposes or internal cooling, which is commonly used for ships which operate in extreme cold weather conditions such as the Baltic Sea and Great Lakes during the winter.

Other dangers lurking in the deep

On 11 March 2020, the Australian Maritime Safety Authority (AMSA) published a Safety Alert, [No.02/20](#) , raising awareness of the risks posed by dangerous marine fauna.

Australian waters are home to a range of dangerous fauna, including fish, jelly fish, sea snakes, octopus, crocodiles, and sharks. Some are venomous, or release or contain poison, some give electric shock, while others just have sharp teeth. Common for all of them, however, is that an unwanted encounter can happen without warning and may be lethal to the person involved. While AMSA's safety alert primarily targets operators of domestic commercial vessels, knowledge about the risks posed by dangerous marine fauna in a specific region could be important also to crews onboard foreign visiting ships. The following general advice should be considered:

- stay informed about dangerous marine creatures in specific regions,
- identify and assess the associated risks, both during crews' duty and leisure time,
- establish procedures to control and respond to these risks,
- consider the need for special medical and personal protective equipment to reduce the risks, e.g. puncture resistant gloves, and
- train and educate crew in what to do if a person is stung or bitten by poisonous or toxic marine fauna as a rapid response may be essential.

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