

SUSTAINABLE PACIFIC SHIPPING: ENVIRONMENTAL CONSIDERATIONS



POLLUTION AND DEBRIS

KEY POINTS

- Shipping is by far the world's most efficient form of transport, but it still has major environmental impact.¹ Ships can cause noise and light pollution; transfer of [invasive species](#); oil, atmospheric, and [debris pollution](#); and greenhouse gas (GHG) emissions.
- The shipping industry is responsible for 3% of greenhouse gas emissions and has traditionally used cheap, polluting fuel that also releases other airborne contaminants.
 1. The Pacific contributes about 0.03% of the global GHG emissions.
 2. One ship has sulphur dioxide (SO₂) emissions equivalent to 50 million cars, and just 15 ships have the equivalent SO₂ emissions of every car in the world.
- Fishing vessels in the Pacific frequently violate MARPOL by discarding non-biodegradable debris.² These violations must be addressed through improved monitoring and enforcement of MARPOL. PICs need technical and financial support to improve their ability to effectively implement their obligations under the MARPOL convention.
- Sustainable shipping must balance economic, environmental, and social considerations.
 1. As the most efficient form of commercial transport, shipping can be seen as a driver of green growth and jobs.
 2. Shipping must remain commercially viable, while implementing improved environmental and safety standards.
 3. Shipping has a compelling case as the most energy-efficient freight service, but sustainable growth will rely on innovation to maintain reasonable costs and reduce its environmental impacts.

HOW ISSUE LINKS TO/IMPACTS SDGs BEYOND **SDG14 LIFE BELOW WATER**

- SDG8.3, 9.1 & 9.4: contributes to the development of productive activities and jobs; sustainable, resilient infrastructure and adoption of clean technologies and industrial processes.
- SDG12.6: encourages companies to adopt sustainable practices.

BACKGROUND

1. **Shipping has global impact.** Because shipping is a global industry, responsible for the transportation of approximately 90% of world trade, the impacts of pollution and illegal discharges are felt worldwide. Present management is under the [International Convention for the Prevention of Pollution from Ships \(MARPOL\)](#) and the [Marine Environmental Protection Committee of the International Maritime Organisation \(IMO\)](#). Significant progress has been made for effective environmental management, but a proactive approach is necessary to ensure sustainable practice.
2. **International shipping has developed the first international regime for GHG emissions under MARPOL Annex VI**, to balance the environmental demands on land-based and sea-based transport and business. Pacific island countries are supportive of these new standards to improve the environmental performance of the shipping industry.
3. MARPOL, and its amendments, is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. The Convention includes regulations aimed at preventing and minimising pollution from ships - both accidental and from routine operations. The 6 annexes specifically address oil; noxious substances in bulk and as packaged liquids; sewage; garbage, including a complete ban on the disposal into the sea of all forms of plastics; and GHG emissions. Annex VI also prohibits deliberate emissions of ozone-depleting substances. All vessels are also to abide by [SOLAS Chapter 5, Regulation 10](#) for efficient and safe routing.



4. **Monitoring and enforcement of MARPOL is weak, and violations are frequent.** For example, observers on fishing vessels in the Western and Central Pacific Ocean reported over 10,000 pollution incidents between 2003 and 2015.³ The majority of the reported pollution incidents related to dumping of plastic waste.
5. **The environmental sustainability of global shipping also relies on the control of potentially invasive species** through effective biosecurity practices. The present Pacific actions on marine invasives include hull cleaning, ballast water management, and cargo inspection/quarantine, including actions under [National Invasive Species Strategies and Actions Plans](#). These actions still require implementation and management assistance.
6. **Vessel operations must consider environmental safety** and social obligations. All vessels are potential contributors to marine [noise pollution](#) and [ship strikes](#) of whales and dolphins, etc. Voluntary IMO guidelines for noise reduction were established in 2014.⁴
7. **A holistic regional approach would increase the sustainability of Pacific shipping.** With global legislation slow to address these issues, a number of regional initiatives, generally focusing on specific environmental shipping issues, have been developed. This has resulted in country-specific solutions rather than a coordinated, standardised sustainable approach that looks at shipping in a holistic manner. Regulation and environmental protection remain key drivers, but the economic bottom line is still dominant and needs to be targeted to deliver a sustainable shipping standard.

1 WWF 2012. [Shipping and sustainability](#). 5 p

2 Richardson et al. 2016. Marine pollution originating from purse seine and longline fishing vessel operations in the Western and Central Pacific Ocean, 2003–2015. [Ambio doi:10.1007/s13280-016-0811-8](#)

3 Richardson et al. 2016. [Marine pollution originating from purse seine and longline fishing vessel operations in the Western and Central Pacific Ocean, 2003–2015](#). *Ambio* 45

4 IMO 2014. [Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life](#). MEPC.1/Circ.833