

You are invited to participate in an online workshop to discuss strategies to reduce the risk of microplastics pollution from ports and shipping activities. Workshop participants will include maritime professionals, experts and academics. Outputs from the workshop will inform a White Paper that will provide guidance to stakeholders on practical measures to reduce microplastics pollution from ports and shipping activities.

The online workshop will be conducted via Microsoft Teams in short 2-hour sessions, each centred around a particular theme(s). You are welcome to participate in any one or more sessions of your choice. The workshop sessions will take place on 02/03 May 2023 as follows:

#	Session theme(s)	When?	Description	Question(s) for participants
1	<b>Accidental release</b>	<b>02 May 2023</b> 0330-0530 UT 0900-1100 IST 1330-1530 AEST	Microplastic and macroplastic cargo can be accidentally released into the sea e.g. from containers falling overboard. Plastic-containing ship stores, equipment and fittings can be released into the sea following loss, abandonment or wreck of vessels. Macroplastics may eventually degrade into microplastics.	What can be done to reduce the risk of accidental release of micro/macro plastics into the sea?
2	<b>Effluents from ships and ports</b>	<b>02 May 2023</b> 0600-0800 UT 1130-1330 IST 1600-1800 AEST	Grey water/sewage/waste-water discharges and runoffs from ships and ports may contain microplastics from several sources including personal care and cosmetic products, household and industrial cleaning products, pharmaceuticals, and fibres shed from synthetic clothing during washing and use. Discharges and runoffs may also contain rubber particles released by abrasion of vehicle tyres on ships' decks and road surfaces in ports.	What can be done to minimise the risk of microplastics entering the sea as effluents from ships and ports?
3	<b>Mismanaged waste</b>	<b>03 May 2023</b> 0330-0530 UT 0900-1100 IST 1330-1530 AEST	Plastic garbage can degrade into microplastics over time if disposed into the sea. Garbage can be generated from a range of sources such as food and drink containers, hotel facilities, packaging, dunnage materials and end of lifecycle plastic products.	How can the risk of deliberate or inadvertent disposal of garbage into the sea be minimised?
4	<b>Wear and tear of equipment and structures</b>  <b>Transfer of microplastics</b>	<b>03 May 2023</b> 0600-0800 UT 1130-1330 IST 1600-1800 AEST	Synthetic ropes, nets, webbing and similar items used in ships and ports can fray during use and release microfibrils and fragments. Paint particles may fall off painted surfaces due to weathering or during routine maintenance.  Macro and microplastics already present in contaminated coastal seabeds may be relocated to other areas through dredging and disposal activities. Microplastics already present in seawater can be carried to new locations via ships' ballast water.	What can be done to reduce the risk of microplastics being released due to wear and tear of equipment and marine structures?  What can be done to minimise the transfer of microplastics from one location to another?

The following Table provides an overview of the themes, their context, and some considerations to help guide the workshop discussion.

#	Discussion theme	Context			Some considerations for mitigating pollution risk
		Types of microplastics	Sources of microplastics	Pathways to sea	
1	<b>Accidental release</b>	<ul style="list-style-type: none"> <li>• Microplastic pellets (nurdles)</li> <li>• Degradation-based secondary microplastics</li> </ul>	<ul style="list-style-type: none"> <li>• Microplastics cargo</li> <li>• Macro-plastics cargo and packaging</li> <li>• Ships' stores, equipment and fittings</li> </ul>	<ul style="list-style-type: none"> <li>• Containers lost overboard from ships</li> <li>• Run-off from accidental spillage of cargo in port areas</li> <li>• Shipwrecks and lost/abandoned vessels (Also end of life disposal of vessels)</li> </ul>	<ul style="list-style-type: none"> <li>• Application of IMDG Code</li> <li>• Reporting requirements for lost containers</li> <li>• Compensation and liability schemes</li> <li>• Container stowage and securing onboard</li> <li>• Nairobi WRC</li> <li>• Plastic spill control plans</li> </ul>
2	<b>Effluents from ships and ports</b>	<ul style="list-style-type: none"> <li>• Intentionally added microbeads</li> <li>• Synthetic textile microfibrils</li> <li>• Rubber particles from tyre abrasion</li> </ul>	<ul style="list-style-type: none"> <li>• Personal care and cosmetic products; pharmaceuticals</li> <li>• Household detergents and cleaning solvents</li> <li>• Industrial detergent and cleaning solvents</li> <li>• Textiles worn by people</li> <li>• Tyres of vehicles/CTUs carried as cargo</li> <li>• Tyres of vehicles used onboard for loading/unloading ship (forklifts etc)</li> <li>• Tyres of vehicles used in port areas (trucks, forklifts, straddle carriers, RTGs etc)</li> </ul>	<ul style="list-style-type: none"> <li>• Discharge of grey water/sewage from ships</li> <li>• Discharge of bilge water from cargo and machinery spaces of ships</li> <li>• Discharge of grey water/sewage from port areas</li> <li>• Discharge of dirty water from industrial warehouses and workshops in port areas</li> <li>• Run-offs from wharves, jetties and other port areas</li> </ul>	<ul style="list-style-type: none"> <li>• Adequacy of MARPOL Convention</li> <li>• Disposal of sewage sludge</li> <li>• Adequacy of London Dumping Convention/London Protocol</li> <li>• Port reception facilities</li> <li>• Procurement policies for plastic containing products</li> <li>• Engineering solutions for microplastics capture</li> <li>• Wastewater management in ports</li> <li>• Wash-water/bilge water discharge from ships</li> </ul>

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		Types of microplastics	Sources of microplastics	Pathways to sea	
3	<b>Mismanaged waste</b>	Degradation-based secondary microplastics	<ul style="list-style-type: none"> <li>• Garbage generated from cargo, vessel and port operations</li> <li>• Garbage generated from food and drink containers</li> <li>• Garbage from hotel facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Deliberate or inadvertent disposal of packaging materials, dunnage, end of lifecycle plastic products into sea</li> <li>• Deliberate or inadvertent disposal of plastic utensils, cutlery, bags, containers, bottles etc into sea</li> <li>• Deliberate or inadvertent disposal of hotel waste, including pharmaceutical products into sea</li> </ul>	<ul style="list-style-type: none"> <li>• Port reception facilities for plastic waste/end-of-life gear</li> <li>• Standardized protocols for waste reception</li> <li>• Onboard storage and incineration</li> <li>• Monitoring of MARPOL compliance</li> <li>• Procurement policies for plastic containing products</li> <li>• Prohibition on certain products e.g. single-use plastics</li> </ul>
4	<b>Wear and tear of equipment and structures</b>	<ul style="list-style-type: none"> <li>• Synthetic microfibres/ fragments</li> <li>• Paint particles</li> </ul>	<ul style="list-style-type: none"> <li>• Mooring ropes</li> <li>• Synthetic nets, straps, webbing and similar securing materials</li> <li>• Paints (coatings) applied to ships</li> <li>• Paints applied to ports and harbour infrastructure – jetties, buildings, cranes, buoys etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Particles from wear and tear of ropes, nets etc directly falling in water or through run-off</li> <li>• Paint loss/weathering or paint removal for maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• Retirement/replacement of ropes and similar items</li> <li>• Substitute materials</li> <li>• Maintenance practices including in-water cleaning</li> </ul>
	<b>Transfer of microplastics</b>	Any type	<ul style="list-style-type: none"> <li>• Macro and microplastics present in estuarine, port and harbour seabeds</li> <li>• Microplastics present in sea water</li> </ul>	<ul style="list-style-type: none"> <li>• Disposal and placement of dredged material</li> <li>• Ballasting/de-ballasting of ships</li> </ul>	<ul style="list-style-type: none"> <li>• Adequacy of London Dumping Convention/London Protocol</li> <li>• Disposal/placement of dredged material</li> <li>• Ballast water management</li> </ul>

Notes:

- This document should be read in conjunction with the *Participant Information Sheet and Consent form* and the *Project Flyer*.
- The workshop will be facilitated by researchers from the Australian Maritime College, Institute of Marine and Antarctic Studies, Bombay College of Pharmacy and the University of Mumbai.

**RSVP:**

Please indicate your availability and preference for a particular theme(s) by emailing Dr Prashant Bhaskar [prashant.bhaskar@utas.edu.au](mailto:prashant.bhaskar@utas.edu.au) or by phone +61 (0)3 6324 9480 latest by 27 April 2023. Further details about the workshop will be provided following confirmation of your participation.

