

Microplastics in the ocean: opportunities for reducing inputs and impacts

Dr Peter J Kershaw

Chair of GESAMP

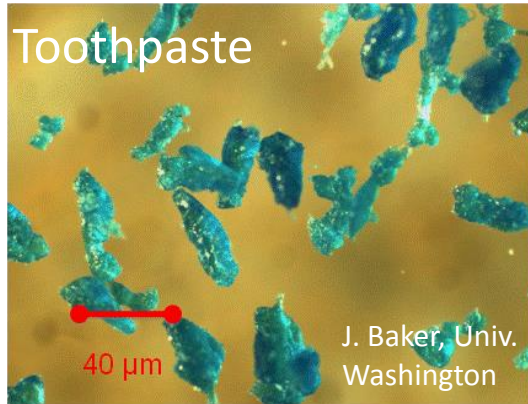
GESAMP: Joint Group of Experts on Scientific Aspects of Marine
Environmental Protection – an inter-agency body of the United Nations



SDG14 Partnership Dialogue 1

Definition of microplastics: < 5 mm

‘primary’
manufactured for a purpose



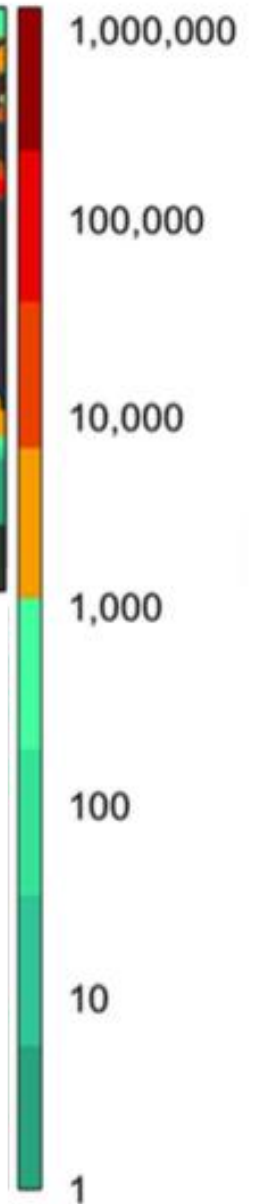
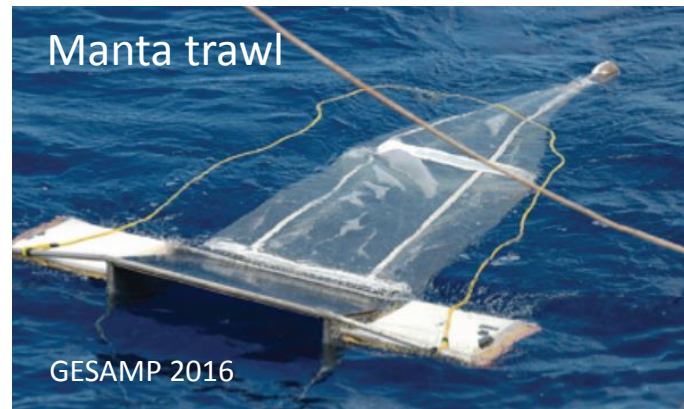
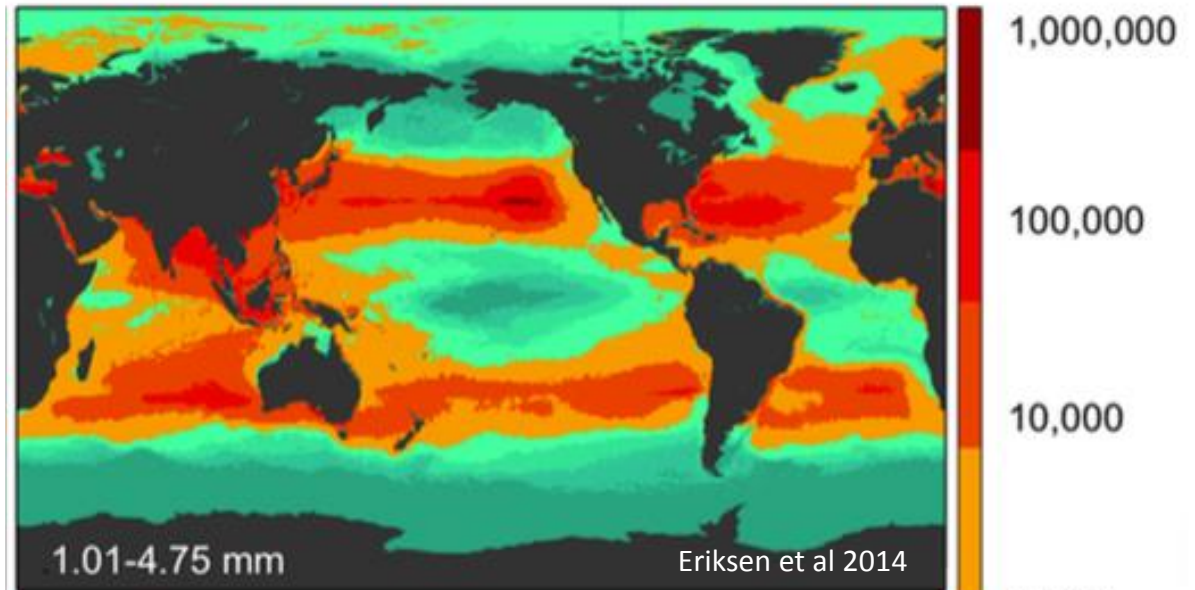
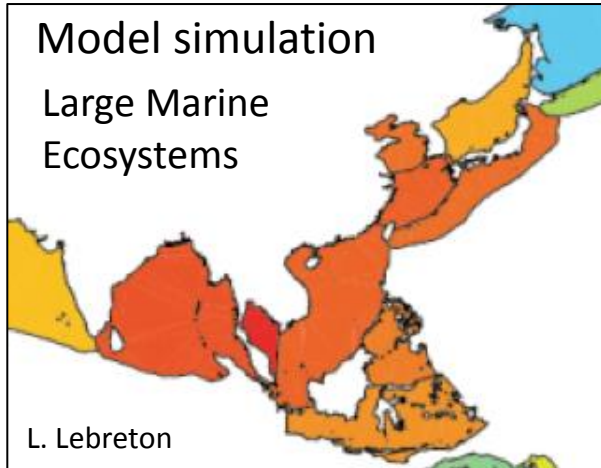
‘secondary’
fragments of larger items



Resin pellets – used by
plastics industry



Microplastics – a trans-boundary issue



Chemical impacts of microplastics

Chemical
microplastics

Impacts of microplastic ingestion

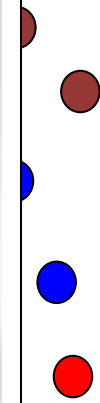
- Seafood safety
- Ecosystem health

- P
- F
- U
- P
- M

Endo



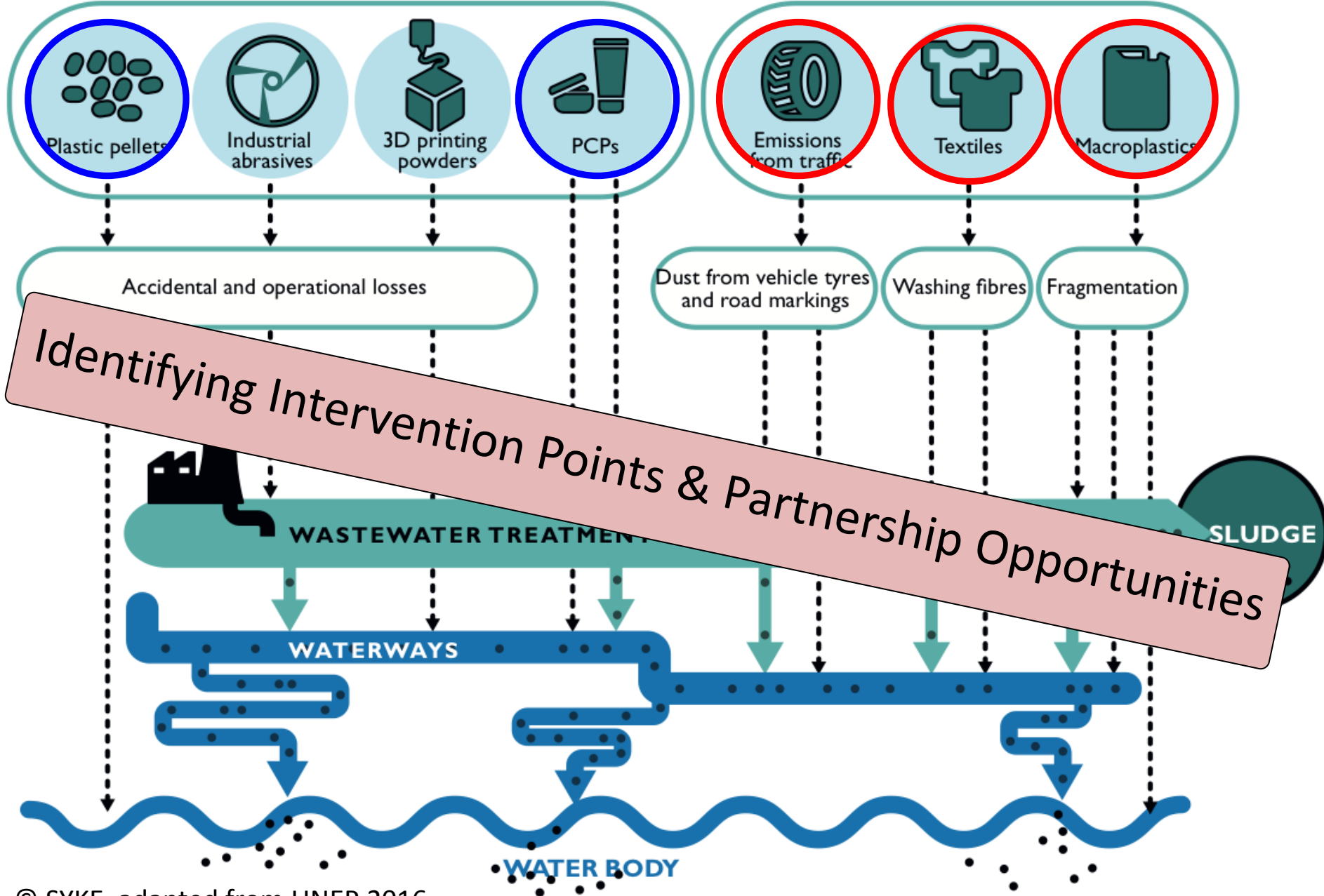
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SOURCES OF PRIMARY MICROPLASTICS

SOURCES OF SECONDARY MICROPLASTICS

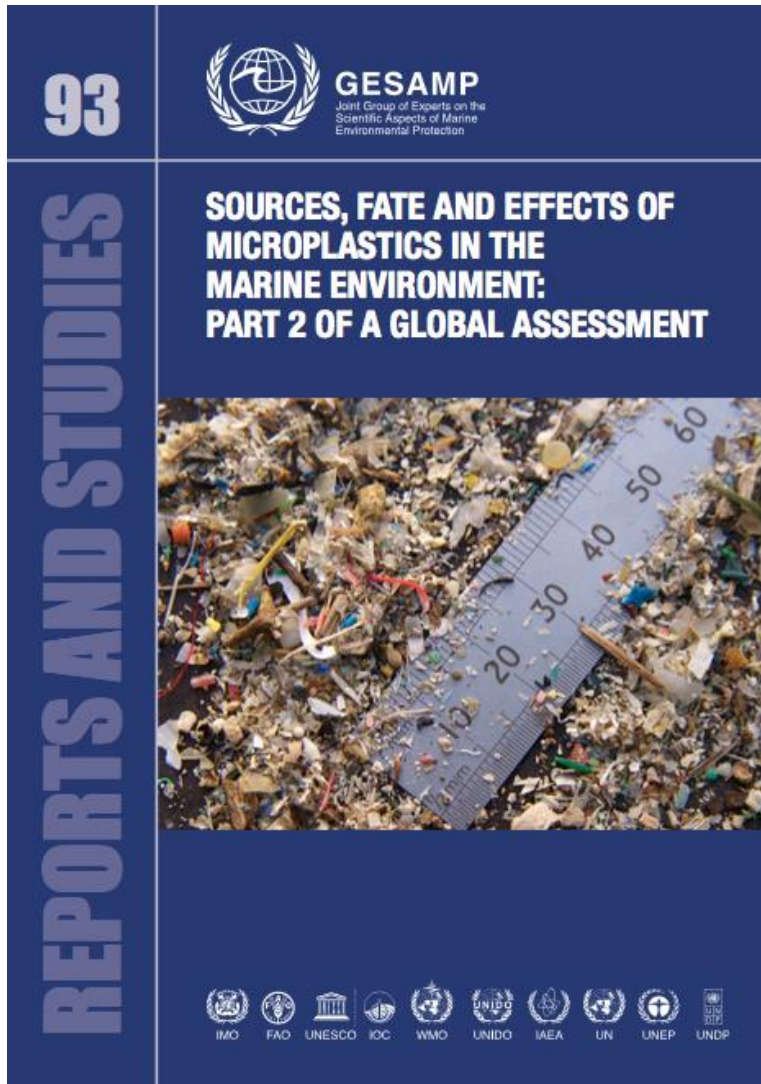


Other SDG targets related to marine litter

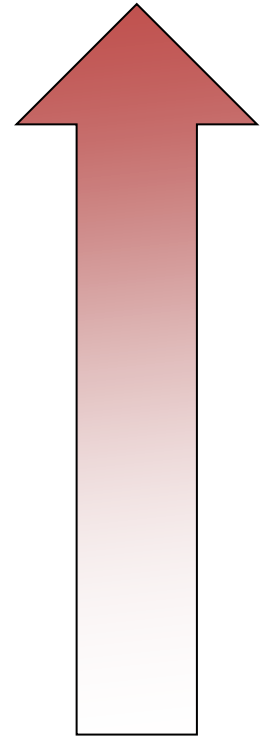
- 6.3 By 2030, the **proportion of untreated wastewater should be halved**
- 11.6 By 2030, **reduce the adverse per capita environmental impact of cities municipal and other waste management**
- 12.1 Implement the 10-year framework of programmes on **sustainable consumption and production**
- 12.4 By 2020, achieve the **environmentally sound management of chemicals and all wastes throughout their life cycle**
- 12.5 By 2030, substantially **reduce waste generation through prevention, reduction, recycling and reuse**

Multiple benefits

Microplastics and other pollution stressors



- Marine litter
- Microplastics
- Nutrients
- Underwater noise
- Organic pollutants
- Temperature
- Acidification



Impact of multiple stressors?