



Photo Credit: Emily Twigg

Sustainability Topics at the Ocean Studies Board

Susan Roberts
Stacey Karras

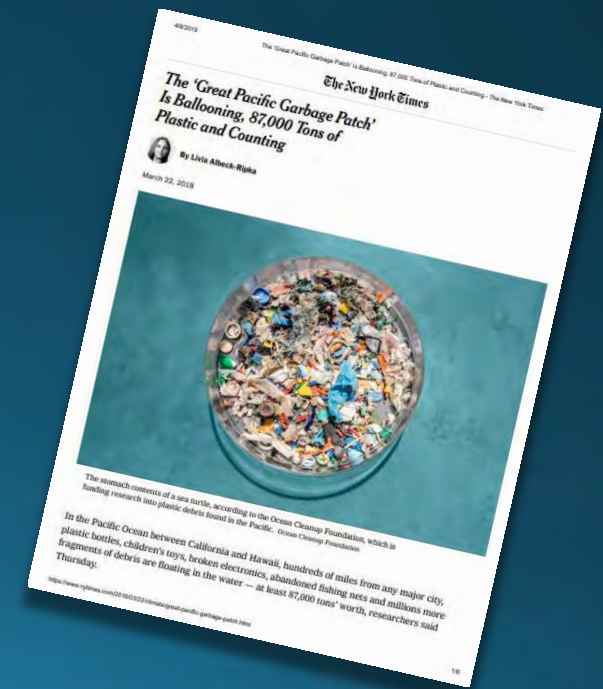
Ocean Studies Board

Plastics in the News

“This pregnant whale died with 50 pounds of plastic in her stomach” – National Geographic

“Disrupting the single-use plastic economy” – Scientific American

“The surprising reason your clothes are a huge source of ocean pollution” – Huffpost

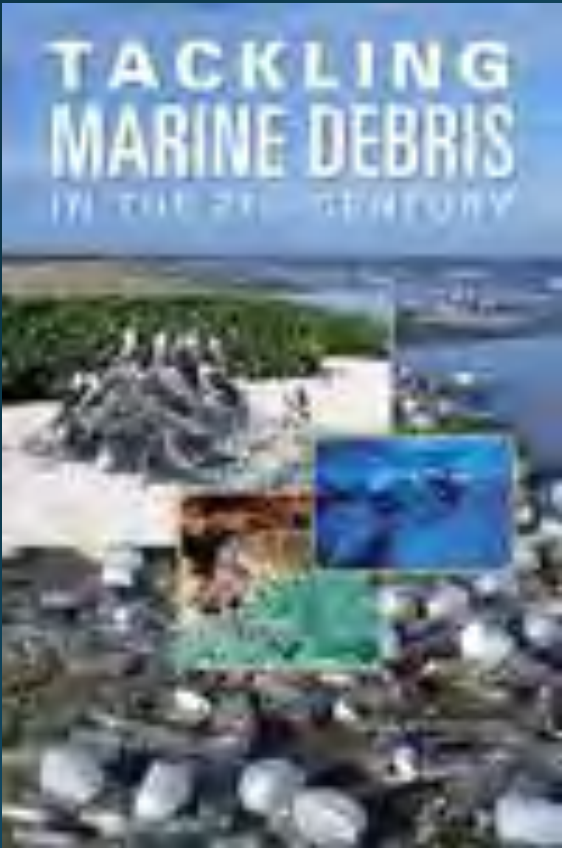


International Issue

- SCOR Working Group 153 Floating Litter and its Oceanic Transport Analysis and Modelling, aka FLOTSAM
- G20 Academies of Sciences (2019) Threats to Coastal and Marine Ecosystems, and Conservation of the Ocean Environment with Special Attention to Climate Change and Marine Plastic Waste
- G7 Academies of Sciences (2015) Future of the Ocean: Impact of human activities on marine systems. “Take urgent action to reduce the input of plastic debris from all sources into the marine system”



Tackling Marine Debris



Congressional Request, funded by the US Coast Guard, published in 2008. Focus on debris disposed of at sea

Cited in:

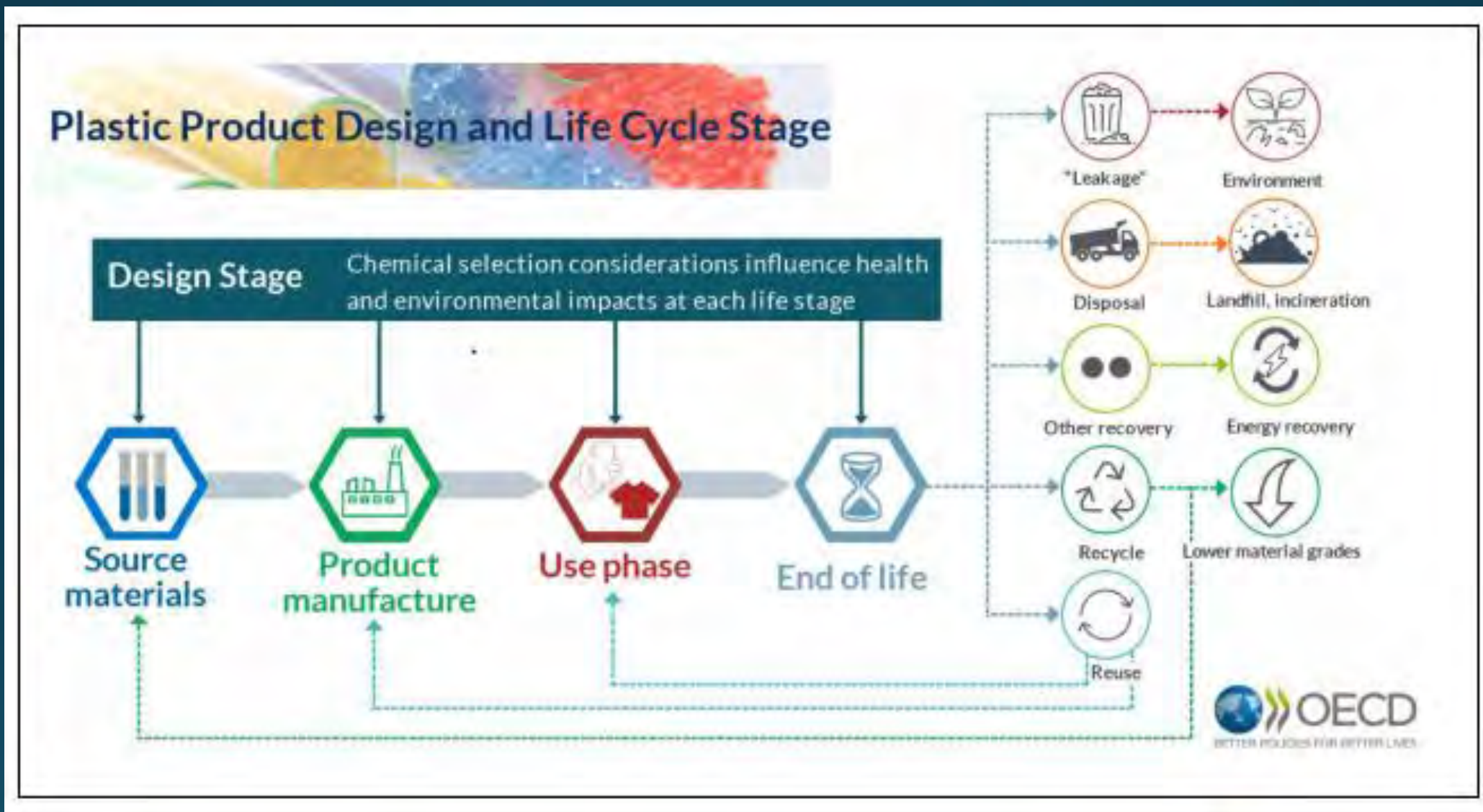
- The Honolulu Strategy: a global platform for the prevention, reduction, and management of marine debris (March 2011)
- MARPOL Annex V (July 2011) shift from discharge overboard anything with some exceptions to nothing except where expressly permitted.
- Economic assessment of policy measures for the implementation of the Marine Strategy Framework Directive (for the European Commission , 2012)

DELS/NASEM Activities

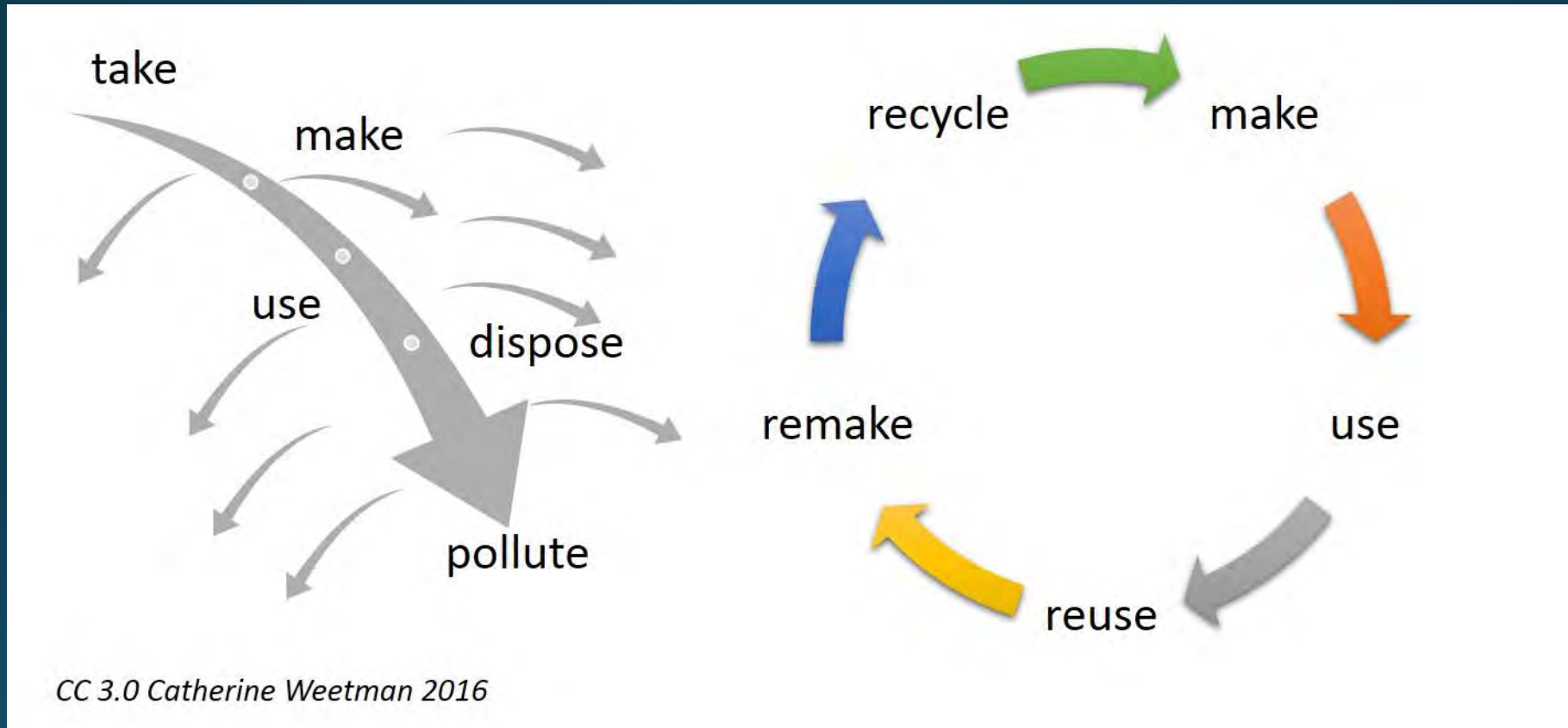
Special sessions at board meetings:

- Board on Chemical Sciences and Technology
 - Board on environmental Studies and Toxicology
 - Ocean Studies Board
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- Synthesis: Complex problem – need to consider the full system to identify potential mitigation strategies and research priorities.

Life Cycle of Plastic



Circular Economy



By Catherine Weetman - Own work, CC BY-SA 4.0,
<https://commons.wikimedia.org/w/index.php?curid=67945876>

The Academies' Role Roundtable on Plastics in the Environment



- *Roundtables* at NASEM provide their members with an opportunity to choose topics of common interest for discussion among members and experts in a neutral setting that builds trust and promotes problem-solving.
- *Roundtable on Plastics in the Environment* would convene different sectors (government, industry, E-NGOs) to foster a systems approach for interventions to solve the plastic debris problem.

UN Decade of Ocean Science

UN Decade slides provided by Craig McLean, NOAA



for Sustainable Development

U.S. Decadal Goals



Modernize R&D infrastructure

Big data, models, R2O



Promote Economic Prosperity

Seafood competitiveness, energy, minerals, econ/eco balance, workforce



Resilient Coastal Communities

Disaster risk reduction



Safeguard Human Health

Plastics contaminants & pathogens, HAB, Natural Products



Ensure Maritime Security

Arctic transport, situational awareness

UN Decade Goals



Transparent Ocean

Data sharing & application products, services, policy



Productive Ocean

Sustainable BE, safe thresholds for econ growth, mitigate impacts of envir. change



Safe Ocean

Disaster risk reduction



Healthy/Resilient Ocean

Ecosystems mapped & protected, impacts mapped, measured & reduced



Clean Ocean

Pollution identified, quantified, reduced & removed



Predicted Ocean

All ocean basins observed and mapped; obs for mgmt. & BE; innovate tech

Preparing for the Decade: Upcoming Events

13-15 May

Global
Constituent/
Planning
meeting,
Copenhagen
(by invitation)

22-26 July

South Pacific
Workshop,
New
Caledonia

31 July- 2 August

North Pacific
Regional
Workshop,
Tokyo

October

Latin/
Caribbean
Regional
Workshop,
Mexico

2020

Global
Conference
in Portugal;
Launch of
Decade at
conference in
Germany

Involvement in the UN Decade

- **UN Decade Feedback**
 - For more information, visit:
 - <https://en.unesco.org/ocean-decade>
 - Feedback Survey:
 - <https://research.noaa.gov/UN-Decade>
- **World Ocean Assessment II**
- **Global Ocean Science Report 2020**
- **NASEM?**

