



## Applying precautionary principle to marine litter and microplastics governance framework: Solutions in the absence of “complete” scientific evidence

PICES - 2017

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Vladivostok, Russia

Lev Neretin / UNEP / NOWPAP

cont. by Aaron Vuola / UNEP

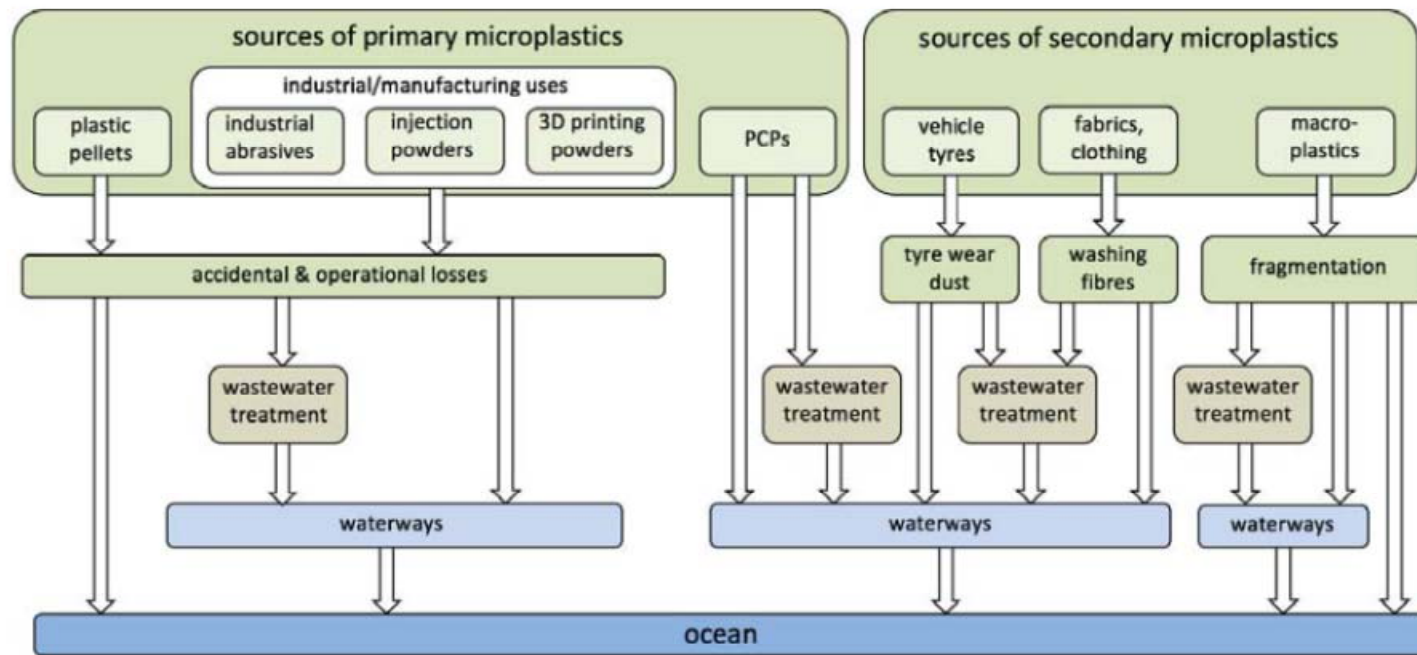
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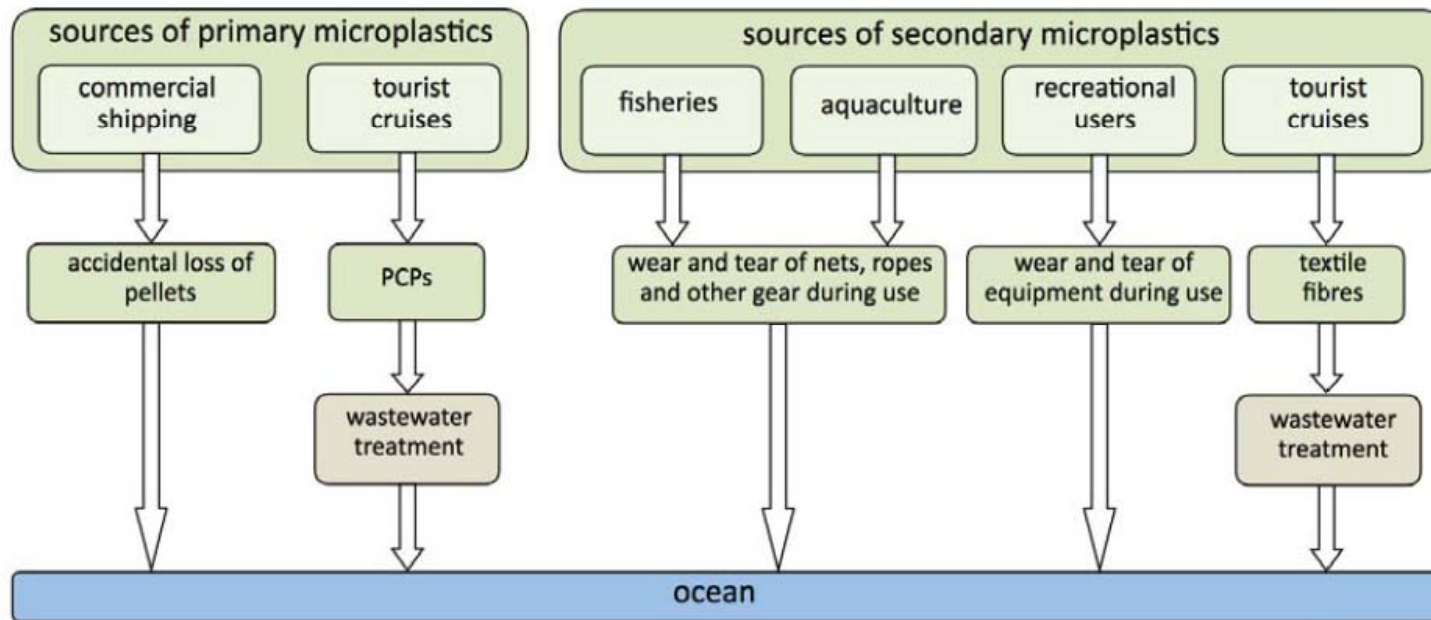
# Sources of microplastics (land-based)



GESAMP (2016)

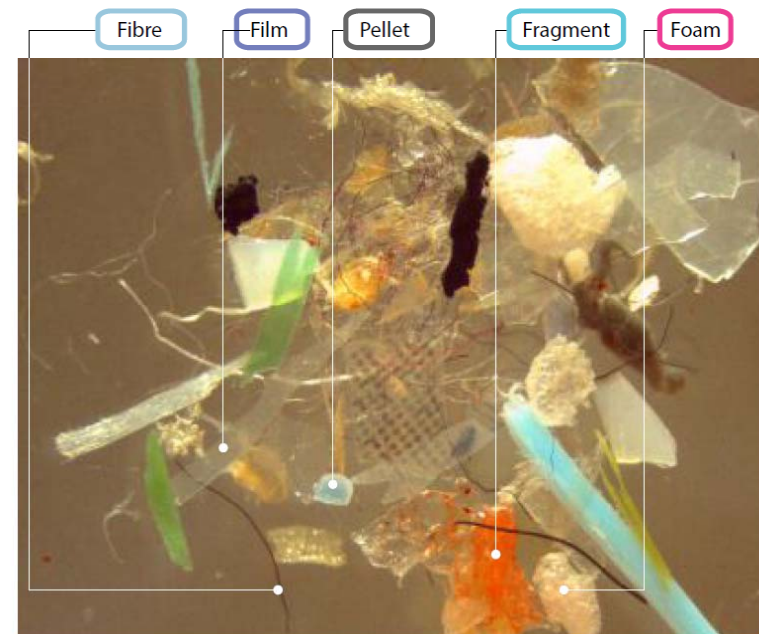
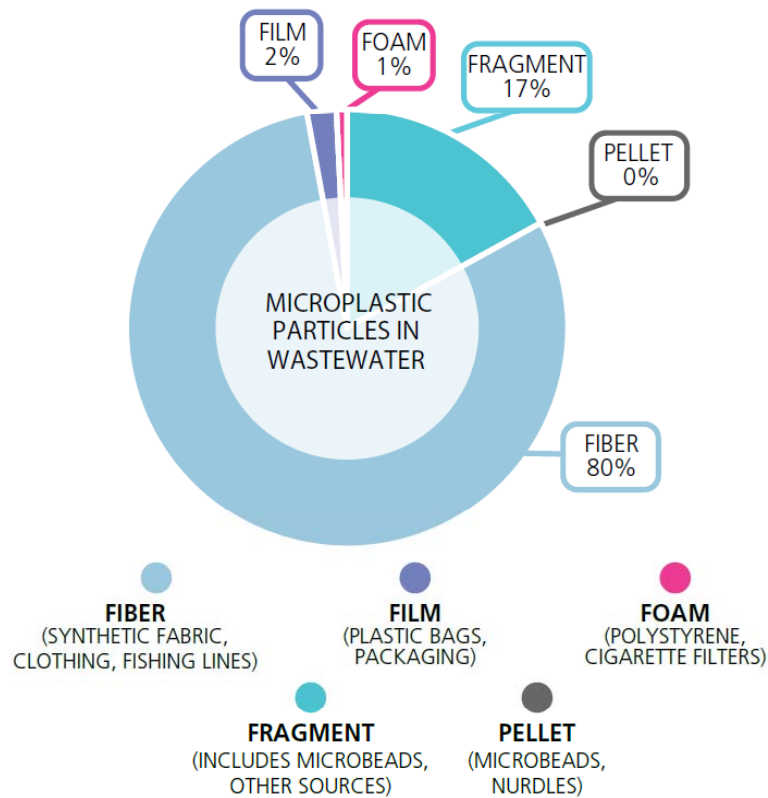


# Sources of microplastics (sea-based)



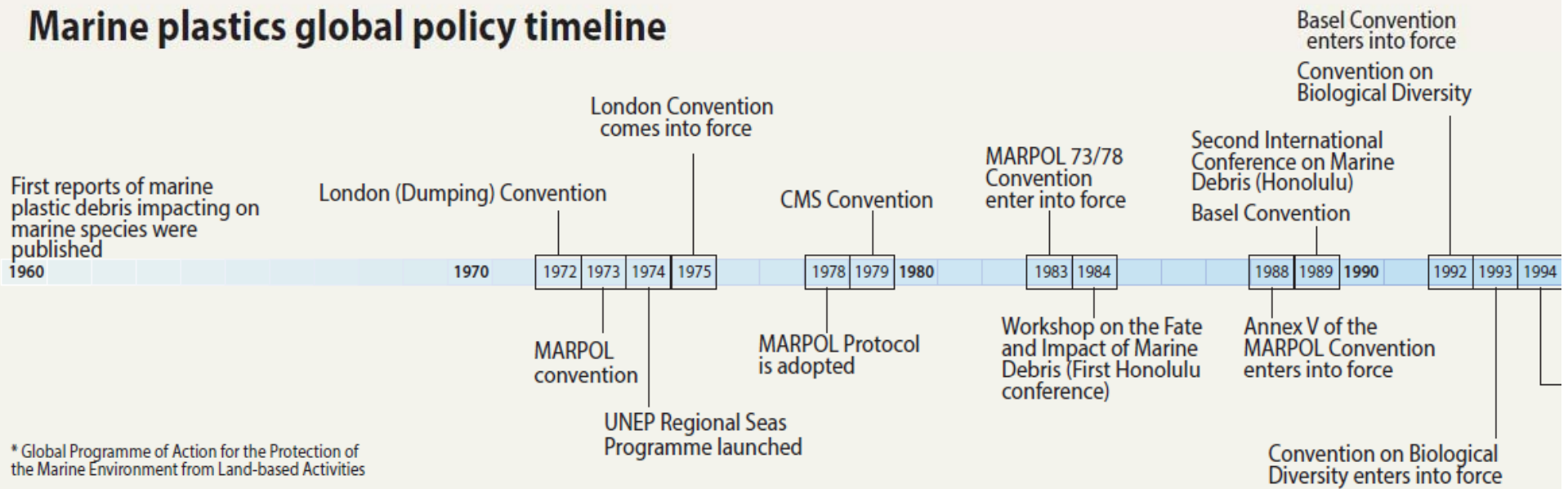
GESAMP (2016)

# Types of microplastics: San Francisco Bay (2015)



# Governance landscape

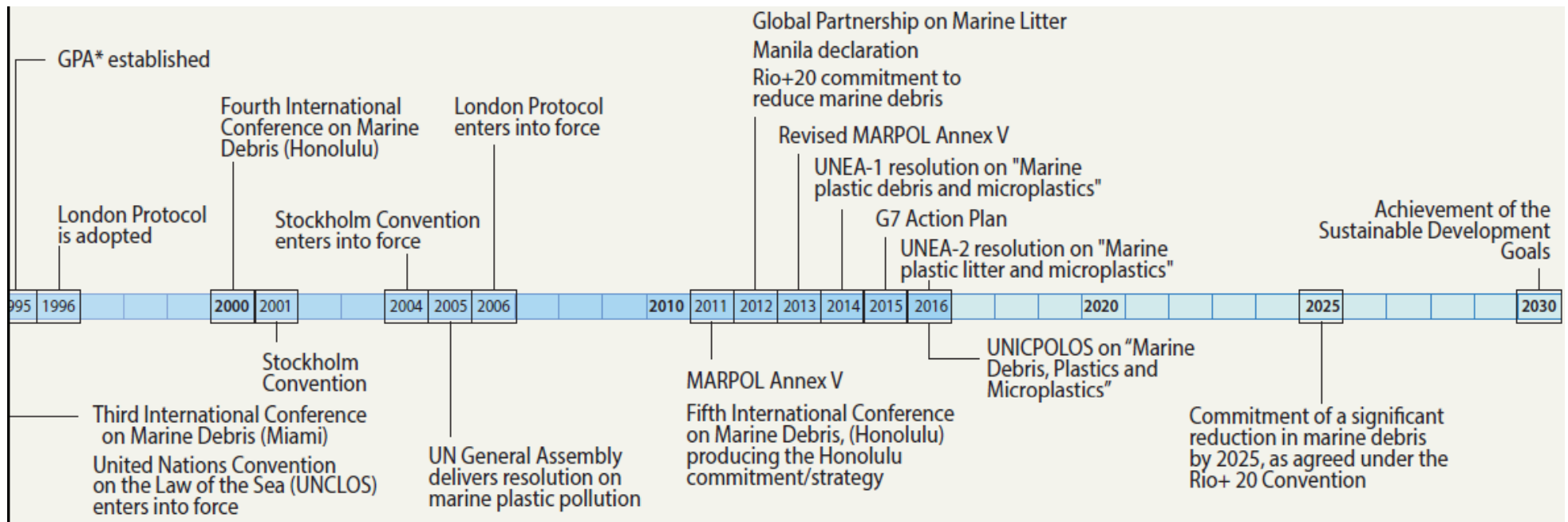
## Marine plastics global policy timeline



UNEP and GRID-Arendal (2016)



# Governance landscape (cont.)



UNEP and GRID-Arendal (2016)



# Global Partnership on Marine Litter (GPML):

- Launched in Rio+20, June 2012 to protect human health and the environment by the reduction and management of ML
- Stand alone resolutions on marine plastic litter and microplastics adopted both at the First and Second United Nations Environmental Assemblies (UNEA 1/6 and UNEA 2/11)
- Recognized in G-7 and G-20 (Global Network of the Committed – GNC) Action Plans on marine litter
- Voluntary multi-stakeholder partnership ~ 100 partners, many networks in their own right (African Marine Waste Network, Clean Europe Network etc.)
- Help countries reach their targets related to Sustainable Development Goal target 14.1



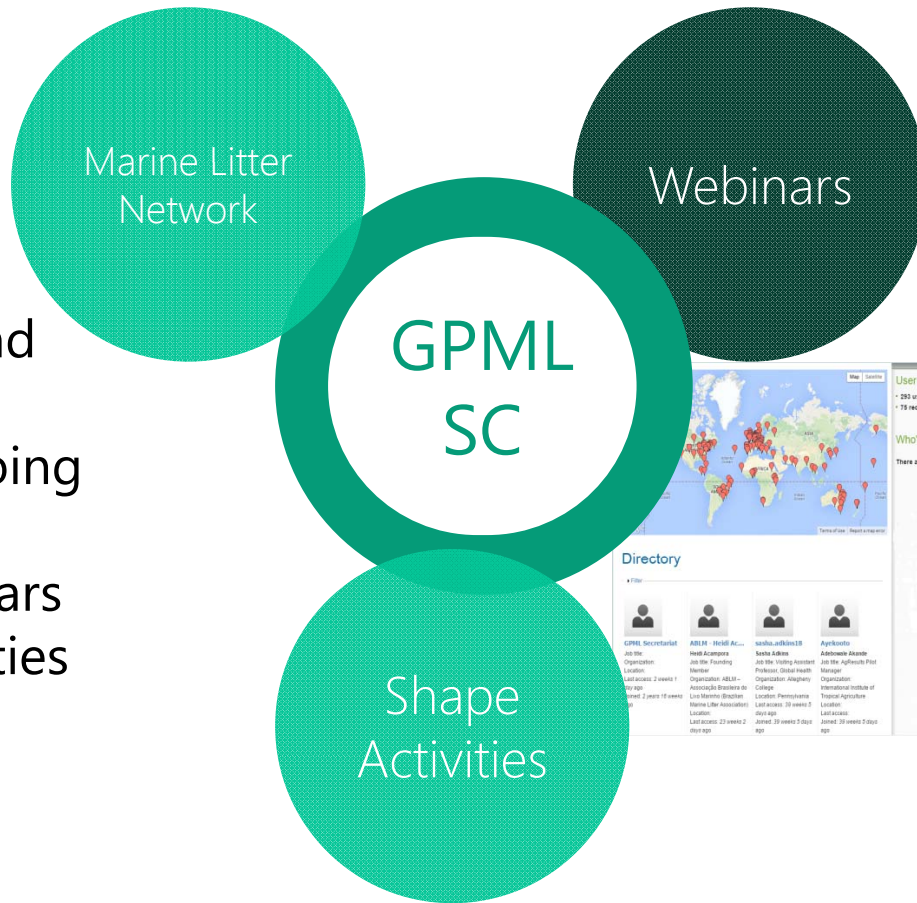
# How can Members engage with the GPML:

## Participate

Members can present their activities and find out what other members are doing

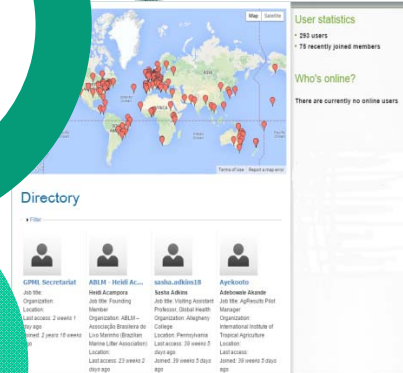
Thematic webinars for GPML Activities

Newsletter



## Registry

- Being upgraded with the University of Georgia making it easier than ever to use
- New BAT/BEP database to be added
- Directory gives members access to the GPML community
- Members can share events and activities



[www.uncep.org/gpa/gpml/](http://www.uncep.org/gpa/gpml/)





# GPML: Regional Nodes

Current:

- Caribbean: Gulf and Caribbean Fisheries Institute (GCFI)
- Northwest Pacific (Japan)
- South Pacific

In the pipeline:

- Mediterranean



# #Clean Seas, truly global campaign on Marine Litter

- Improve plastics management (reduce, redesign, reuse, recycle)
- Global phase out non-recoverable plastics (e.g. microplastics in cosmetics)
- Reduce single-use plastics drastically
  - Global ban on certain types of single-use plastic bags
- Move towards: Plastics consumed re-enter the product life cycle, i.e. generate zero waste, all plastics recyclable



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# Ocean Races and Expeditions

- Volvo Ocean Race kicks off in October 2017 – UN Environment / #Clean Seas campaign is one of the three sustainability partners
  - Marine litter education and awareness raising in race villages throughout the route
- Plastic Change
  - Microplastics research expedition



We are partnering with UN Environment Clean Seas campaign, and will seek to amplify their key messages.



# Massive Open Online Course (MOOC) on Marine Litter

- First Massive Open Online Course on Marine Litter in 2015 (6500 registered students)
- **Second ML MOOC in May-July 2017**
- Spanish MOOC in Q4/2017
- Other UN languages in 2017-2018 (leadership track)
- **Leadership Track:**  
5 hours of learning consist of 2 blocks
- **Expert Track:**  
32 additional hours consisting of 6 blocks



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# Marine Litter Innovation Challenge for Universities

## Challenge has four tracks:

1. Engineering and Design Challenge – material innovation, manufacturing innovation, packaging design and other related innovations that demonstrate a measurable impact on marine plastics;
2. Communication Challenge – mobile apps, creative communication strategies, music, short film, media, or story-telling that can engage large groups of people in addressing the marine plastics issue;
3. Economics Challenge - Valuation methodology and framework, financial and business model, creative financing and other, focus on assessing the impact of marine plastics and recommended solutions;
4. Prediction and Recovery Challenge - Algorithms, Models, hotspot identification etc.



# Ocean Conference and SDG 14:

**SUSTAINABLE DEVELOPMENT GOALS** #SDGsketch  
 17 GOALS TO TRANSFORM OUR WORLD  
 is a project by @Club17Africa <http://club17africa.org> in collaboration with @xLontrax and @DrMinaOgbanga

## GOAL 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development



By 2020 sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts.

Minimize and address the impact of ocean acidification, including through scientific cooperation at all levels

By 2025 Prevent and significantly reduce marine pollution of all kinds

By 2020 conserve at least 10% of coastal and marine areas

By 2020 effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing

By 2020 prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing

By 2030 increase economic benefits to Small Islands developing States and least developed countries from the sustainable use of marine resources

Provide access for small-scale artisanal fishers to marine resources and markets

Increase scientific knowledge, develop research capacity and transfer marine technology taking into account Intergovernmental Oceanographic Commission guidelines

Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS

Sketchnote by @xLontrax 2016 see more on #Club17Africa CC BY Info → <https://sustainabledevelopment.un.org/sdg14>



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# Towards UNEA-3: UNEA 2/11 Marine Plastic Litter and Microplastics:

- Requested UNEP to provide **support to the development of marine litter action plans** upon request by countries
- Requested **UNEP ED** to **assess the effectiveness of relevant international, regional and sub-regional governance strategies and approaches** to combat marine plastic litter and microplastics and **identify gaps and options** for addressing them. Draft resolution is proposed (→ UNEA-3)
- Establishment of **public-private partnerships**, development of **campaigns** for awareness-raising, prevention and clean-up
- Encouraged product manufacturers to consider the lifecycle environmental impacts of products containing **microbeads and compostable polymers**

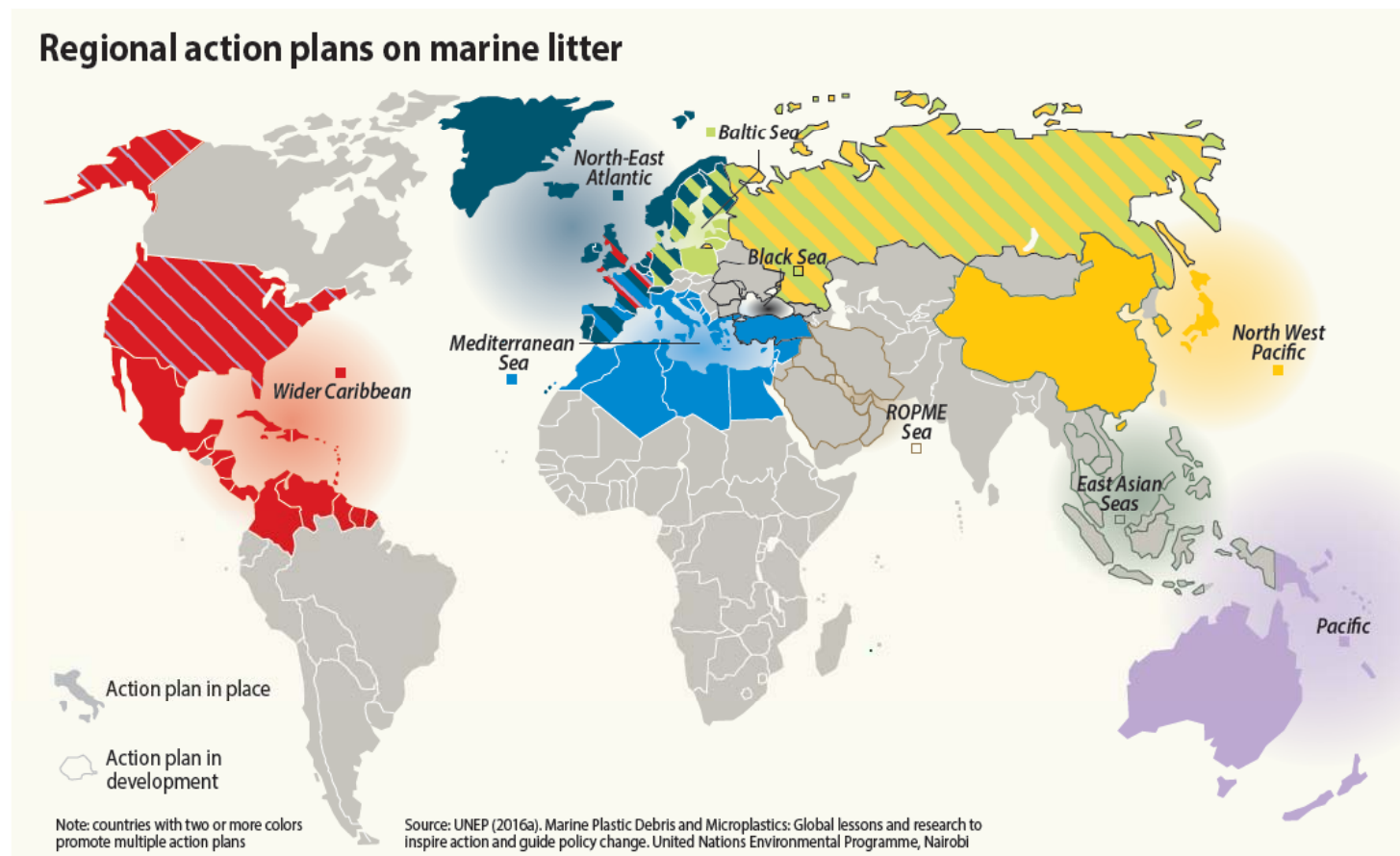
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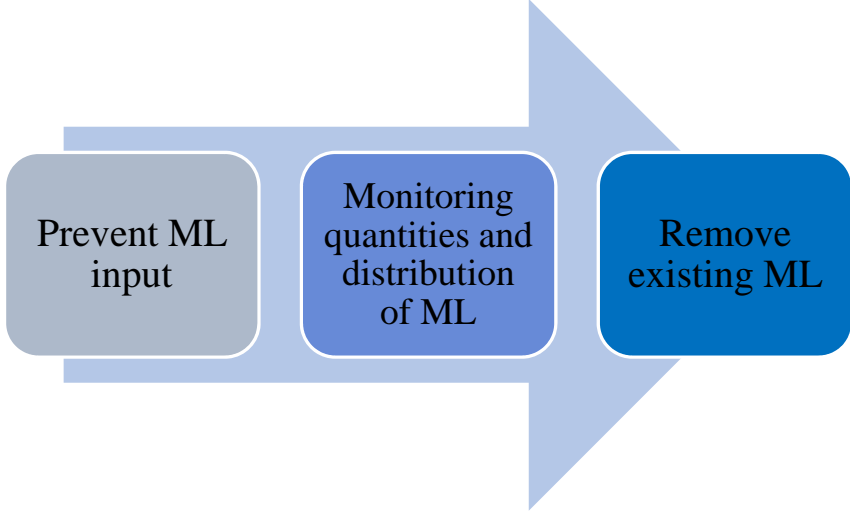
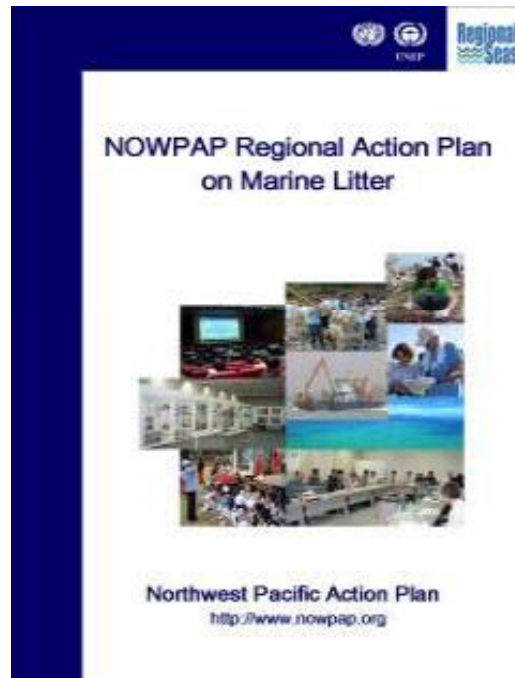


# Regional Seas





# NOWPAP Marine Litter Action Plan (2008)



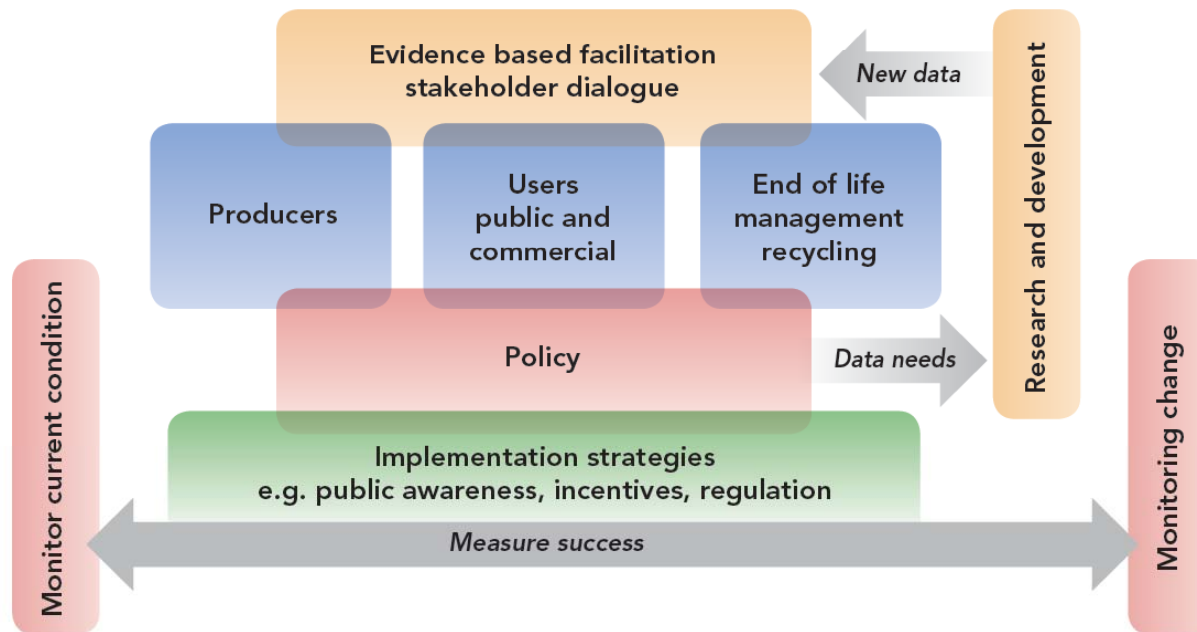
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# Regional Dimension of Marine Litter Management is Important 6 R's: Refuse, Redesign, Reduce, Reuse, Recycle, and Recover

Scientific and Technical Advisory Panel  
An independent group of scientists which advises the Global Environment Facility



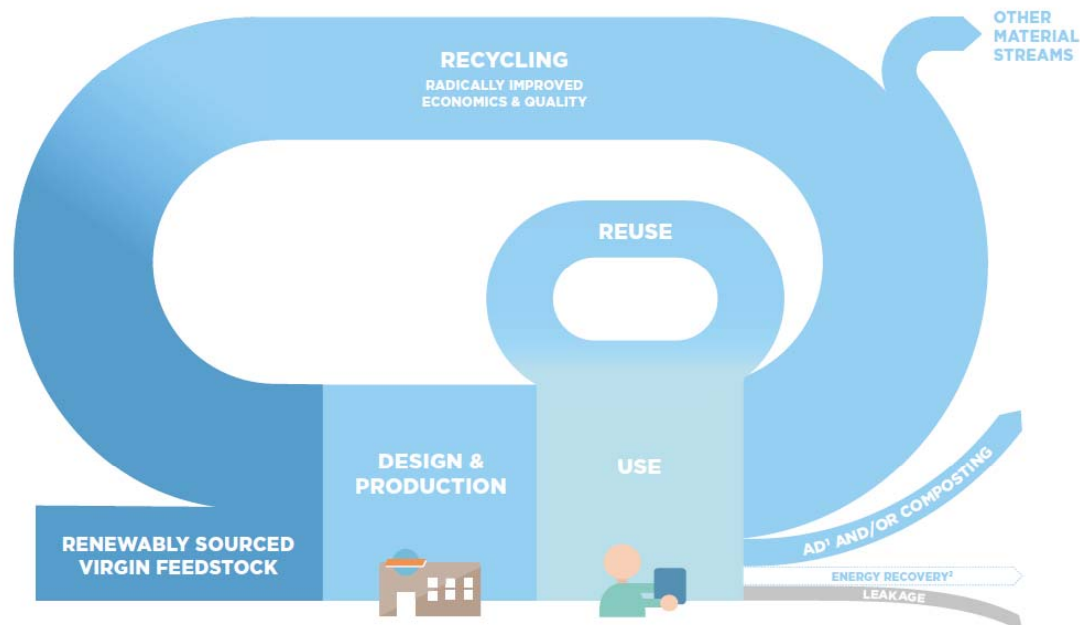
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# Future direction: The new plastics economy

## 1 CREATE AN EFFECTIVE AFTER-USE PLASTICS ECONOMY

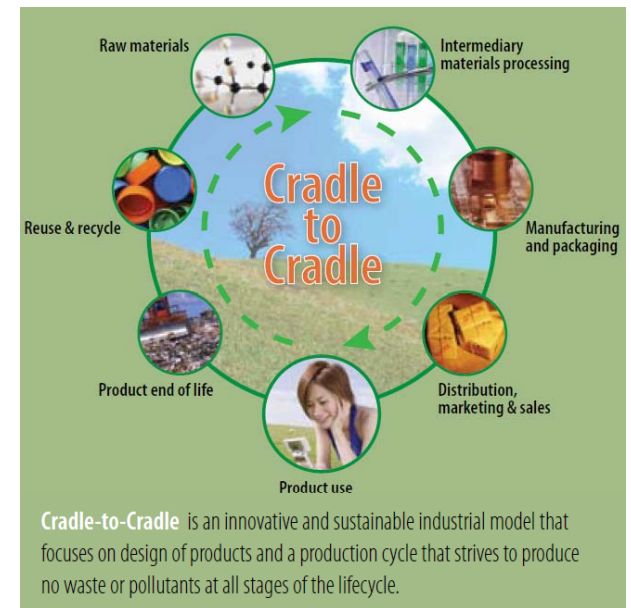


## 3 DECOUPLE PLASTICS FROM FOSSIL FEEDSTOCKS

1 Anaerobic digestion  
 2 The role of, and boundary conditions for, energy recovery in the New Plastics Economy need to be further investigated  
 Source: Project Mainstream analysis.

## 2 DRASTICALLY REDUCE THE LEAKAGE OF PLASTICS INTO NATURAL SYSTEMS & OTHER NEGATIVE EXTERNALITIES

WEF and Macarthur Foundation (2016)



## Addressing marine litter and microplastics: Strong case for bridging science-policy divide

- One size does not fit all: adjust strategy and policies to circumstances
- Integrate circular economy principles into policy design
- Support for research into impacts and plastic alternatives is crucial
- Raise awareness and undertake effective campaigns and education among general public to drive change
- Engage business and support innovation, encourage flows of green finance into the waste management sector

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Thank you for your attention!

