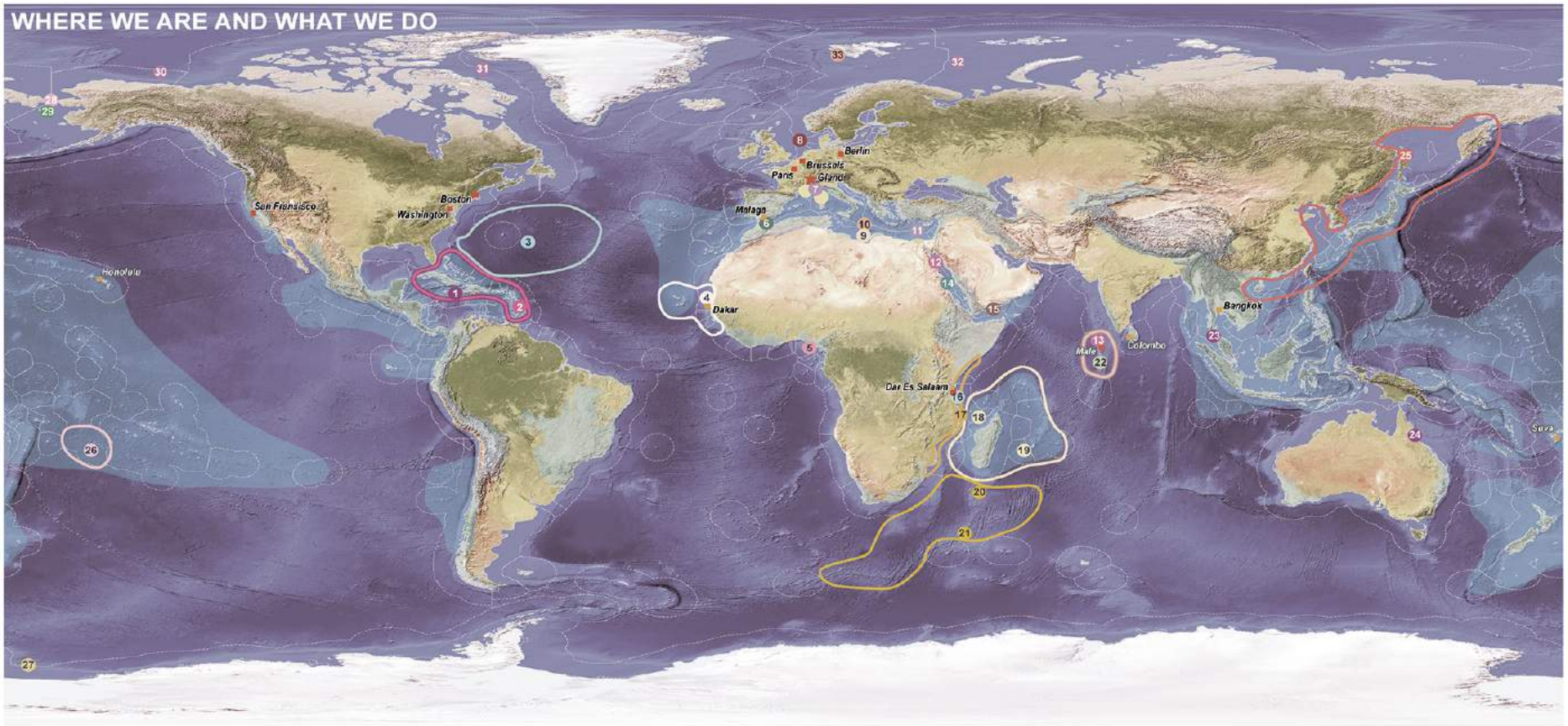
Close the Plastic Tap

Carl Gustaf Lundin
Director, Global Marine and Polar Programme
IUCN

Global Marine and Polar Programme Work



GMPP Framework

OFFICES & COLLABORATORS

- ★ Headquarter - Switzerland
- ▪ GMPP Offices (See next page)
- ▪ GMPP Collaborators (See below)

Malaga: Alain Jeudi, Elena Diaz & Deborah Jouno
Dakar: Mathieu Ducrocq
Malé: Rifaee Rasheed
Colombo: Arjan Rayesuriya
Bangkok: Maeve Ninghtingale & Ganesh Pangare
Honolulu: Mary Donovan
Suva: Sangeeta Mangubhai

EEZ (Marineregions)
Marine Biodiversity Hotspots (CI)
Land Biodiversity Hotspots (CI)

MAJOR PROJECTS

IMPAC III - Marseille and Corsica

Caribbean & Atlantic

1. Global Coral Reef Monitoring Network Caribbean Meta Study
2. MANG-Managing coastal wetlands - Caribbean Region
3. Protecting the Sargasso Sea through SSA
4. Marine Protected Area Networks - West Africa
5. Niger Delta Panel - Nigeria

North Sea, Mediteranean & Red Sea

6. Al Hoceima National Park - Morocco
7. Ocean Acidification RUG - Monaco
8. North Sea Industry Engegement
9. Marine Monitoring and Indicators - Country legislation Review and Administration - North Africa
10. Mediterranean High Seas Governance - Integrated Coastal Zone Mangement - Marine Vegetation Resilience and Blue Carbon
11. MPAs Strategies, Networks Development and Fisheries - Eastern Mediterranean
12. Coral Reefs and Climate Change - Egypt 13 Maldives
14. Surveys of Ray and Sharks - Soudan
15. LNG Scientific Panel - Yemen

Indian Ocean

16. Coral Reef Resilience and Management - East Africa
17. Fair Coasts - Mozambique
18. Connectivity of the Loggerhead turtle - Mayotte Island 19 Reunion Island
20. South-Western Indian Ocean Deep Sea Ecosystems - Walters Shoal
21. Southwest Indian Ridge
22. Whale Sharks & Manta Rays - Maldives
23. Total Foundation Seagrass - Haad Chao Mai Natural Park 24 Cairns - Australia

Pacific

25. Western Gray Whale range-wide conservation initiative
26. Cook Islands Marine Park

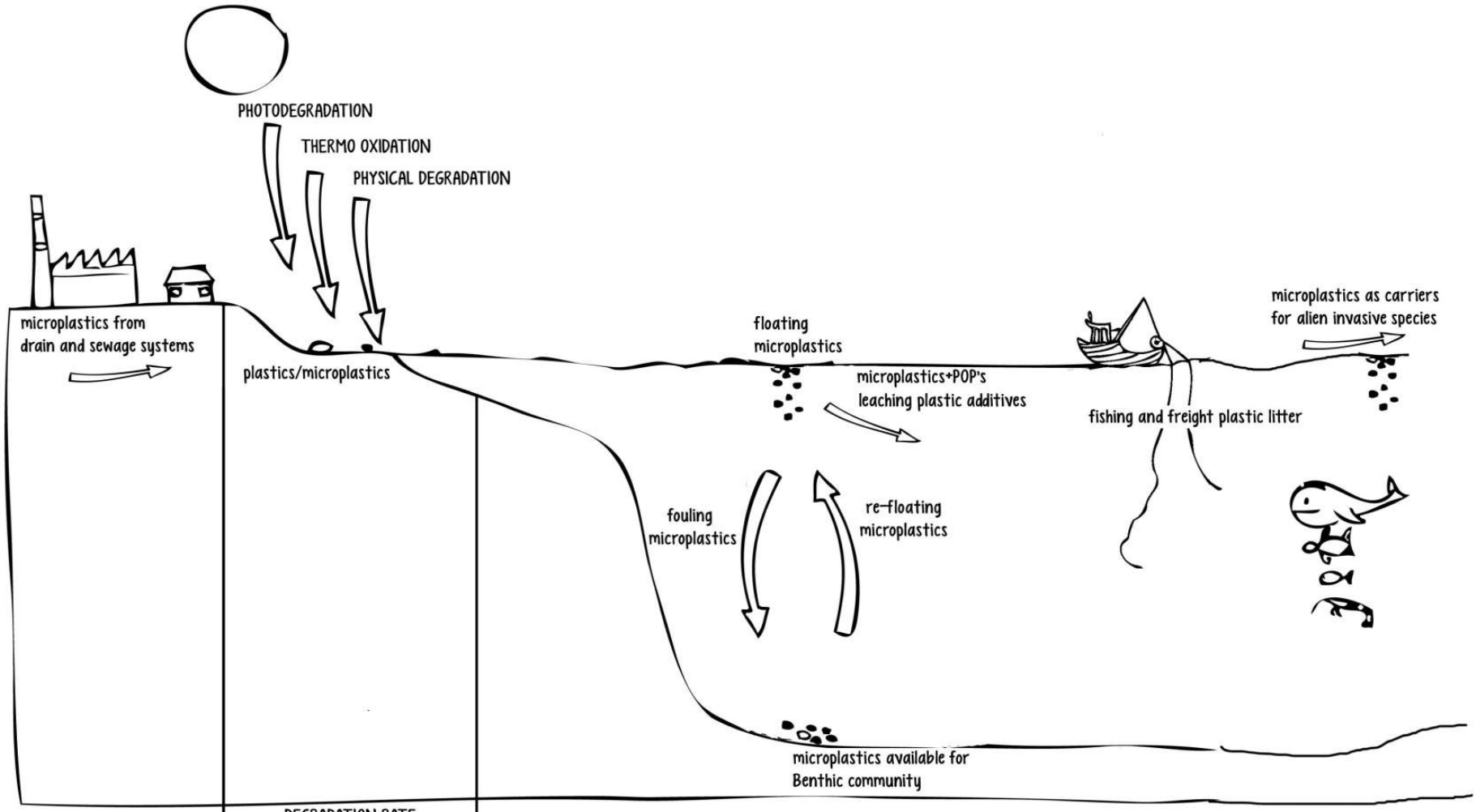
Polar regions

27. Promoting a Network of MPAs in the Antarctic - Ross Sea
28. Development of Voluntary Measures for Shippers to Ensure Safety and Stewardship in the Bering Strait
29. Maritime Safety for Bering Strait Small Vessels Pilot Program - St Lawrence Island
30. Cross Sector Business Coalition for Sustainable Development in the Arctic - Beaufort Sea
31. Baffin Sea 32 Barents Sea
33. Ocean Acidification in Arctic Fjords - Swalbard

IUCN
International Union for Conservation of Nature

- Global plastic production in 2013: **299 million tonnes** (source: Plastics Europe)
- Plastic demand in Europe in 2013: 46.8 M tons: **39.6 % for packaging** (source: Plastics Europe)
- In 2012, 25.2 million tons of post-consumer plastics waste ended up in the waste upstream in Europe, 26% of which was recycled, **38% went to landfill** and 36% to energy recovery (source: Plastics Europe)
- About **4 million to 12 million metric tons** of plastic estimated to enter the ocean (J. Jambeck *et al*, 2015)
- **US$13 billion per year** associated **cost** in environmental damage to marine ecosystems, including financial losses incurred by fisheries, tourism as well as for coastal cleaning operations (UNEP report: *Valuing the Ocean*)

Microplastics Source and Fate in the Marine Environment

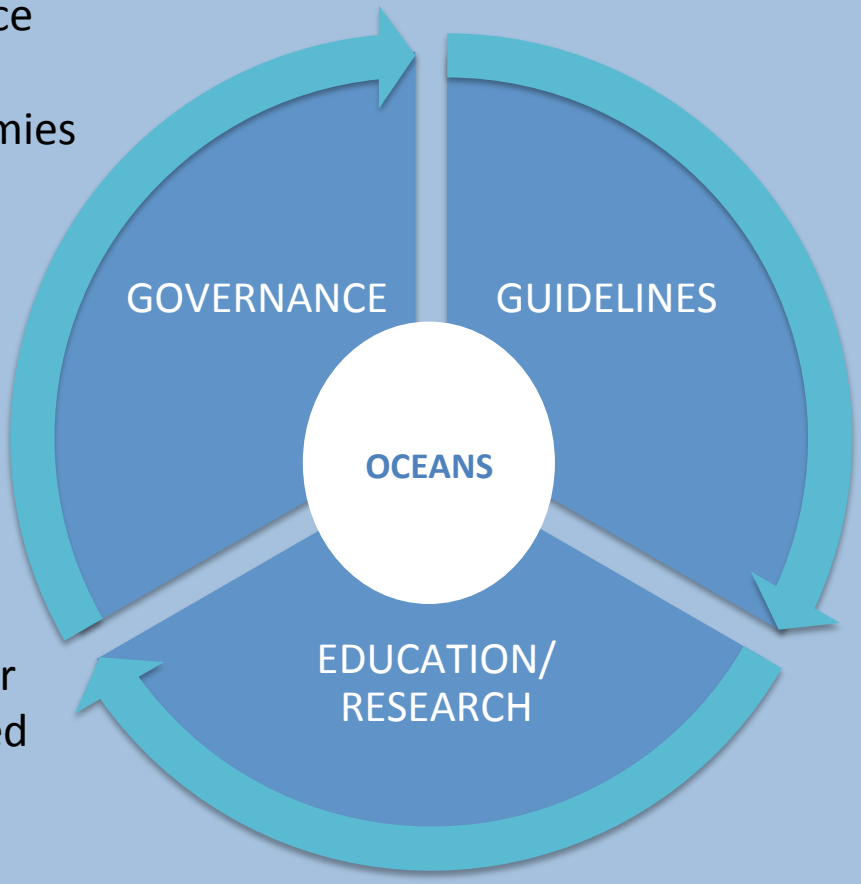


Source: IUCN-GMPP

Holistic Approach

Support governance structures from developing economies

Help industries to adopt best practices



Set up international standards for best production practices across sectors

Identify solutions for dealing with collected plastics adapted to local conditions

Understand the main sources of microplastics

Engage the end-user to adapt plastic disposal behaviour

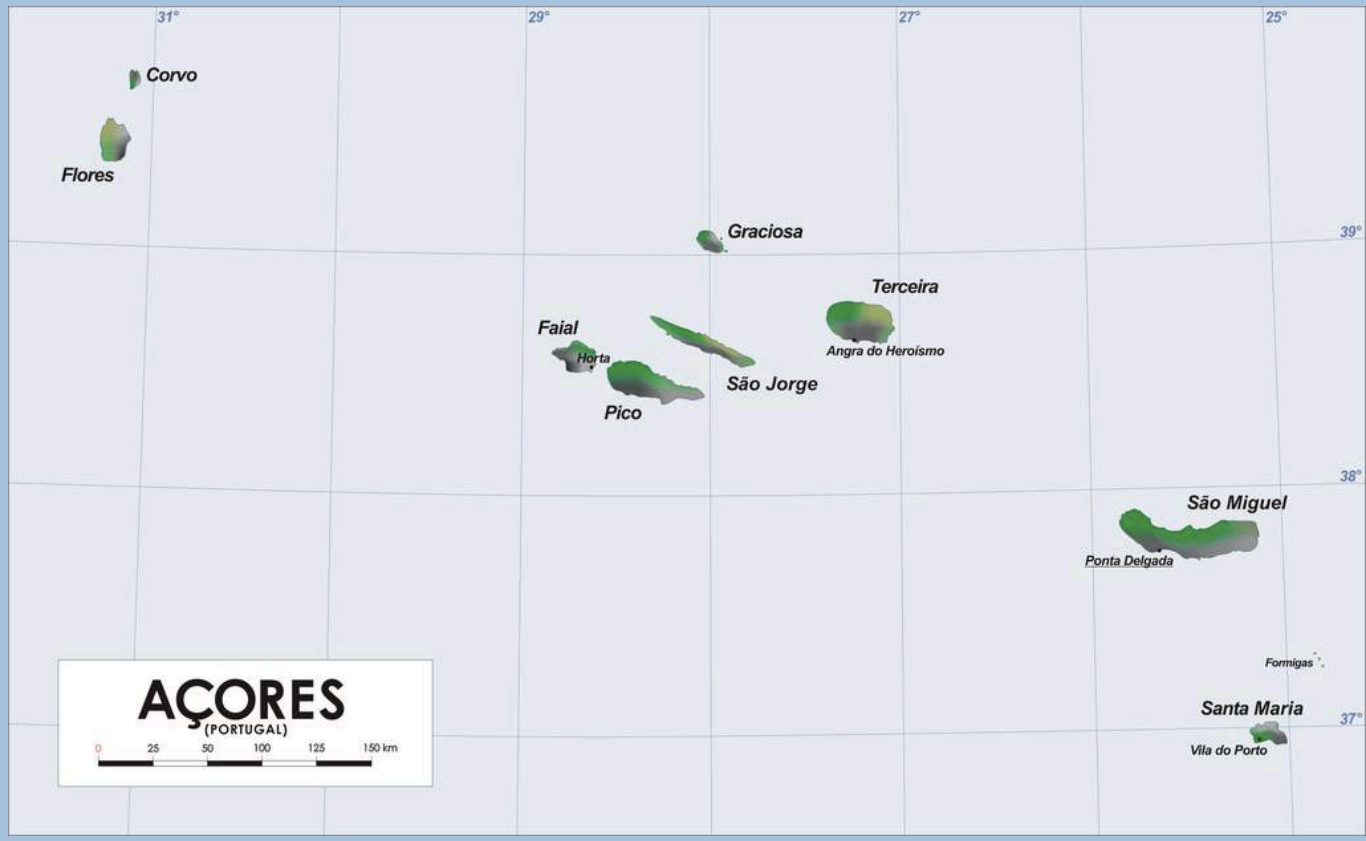
IUCN GMPP work on marine plastics (II)

RESEARCH

- Coordinated expanded **scientific research** in the Azores to establish a baseline for marine litter in the region (Gallifrey Foundation)
- Collect and analyze plastic waste in sediments in selected islands (Race for Water Foundation)
- Released the **report** "*Plastic Debris in the Ocean: The Characterization of Marine Plastics and their Environmental Impacts, Situation Analysis Report*" by F. Thevenon, C. Caroll and J. Sousa, IUCN (2014)
- Research on the extent and impacts of microplastics in the **Arctic and the Baltic**
- Report to be released: "*Primary Microplastics in the Ocean, a Global Evaluation of Sources*" (Sep 2016)

Scientific research in the Azores AZORLIT

- Assessing the extent of microplastic pollution in commercial fish
- Expanded research to other fish species, birds and turtles with support from UNEP, CSIRO and other research centres
- Financial support from the Gallifrey Foundation
- Results presented : Marine litter accumulation in the Azores archipelago; Azorlit preliminary data. MICRO 2016 International Conference, Lanzarote, Spain 25-27 May 2016



Race for Water Foundation

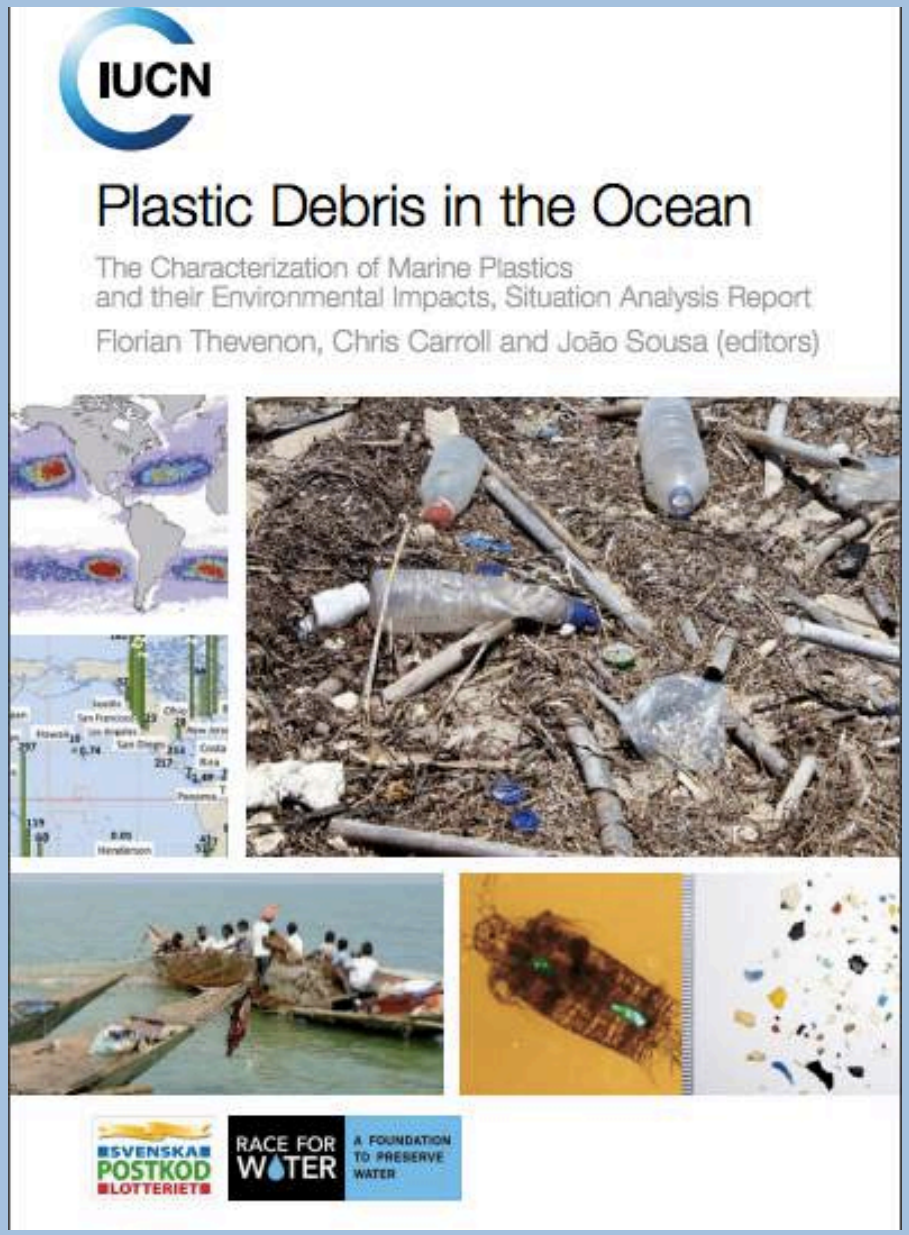
- Race for Water Foundation launched a 300-day scientific voyage to explore and analyse the world's five trash vortices

- 11 scientific stops and focused on islands near the gyres

- IUCN studies the negative environmental, social and economic impacts of plastic litter and providing logistic support

Plastic Debris in the Ocean

- Examining the sources and characteristics of plastics in the marine environment
- Best practices for sampling
- Impacts of plastics on marine organisms
- Existing legislation and related initiatives – both at the global and regional/national initiatives



Microplastics in the Arctic

1. Biodiversity

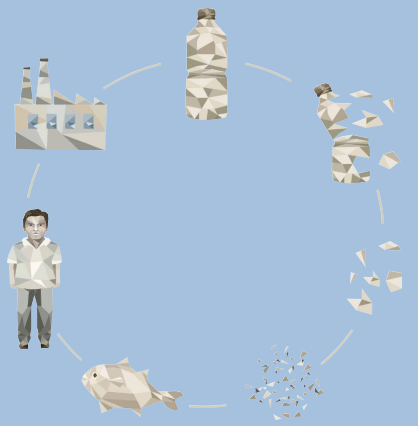
- Quantitative and qualitative analysis of the microplastics in the Arctic – studying origins and impacts on biodiversity

2. Human Health

- Micro and nanoplastics human health effects
  - Approximately 40% of the United States commercial fisheries (by weight) come from the Bering Sea and about half of the fish consumed in the EU comes from the European Arctic.
- Food sustainability/security, food contamination

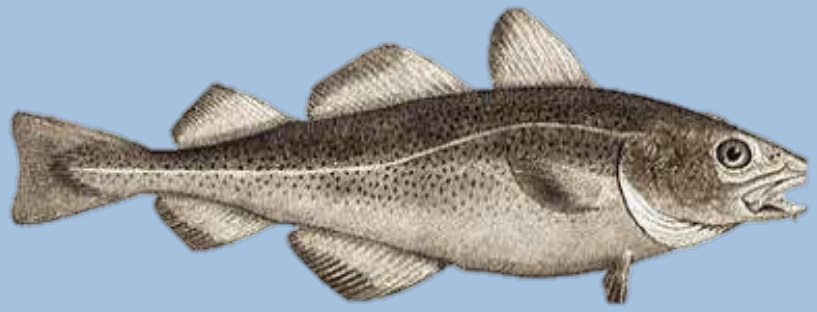
3. Climate Change

- Possible effects of microplastics on the formation and
- melting of the ice and, subsequently, on climate change



Baltic Sea and Microplastics

- Exploring the extent to which the Baltic Sea is polluted by microplastics
- The Baltic Sea Expedition took samples all over the Baltic Sea during the summer of 2014
- IUCN seeks to expand the research and to use solid scientific information to provide comprehensive recommendations to to governments, industries, local communities and civil society



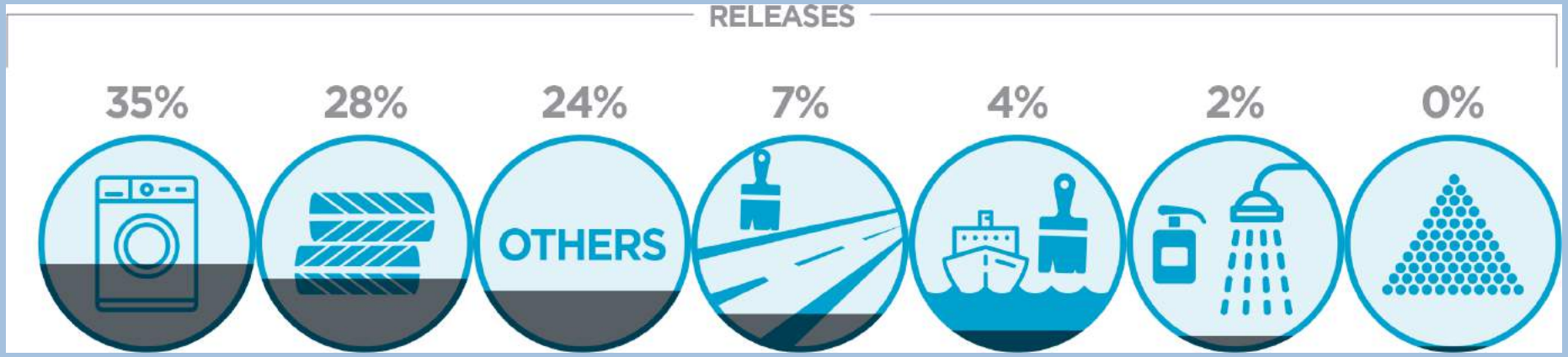
Report: “Primary Microplastics in the Oceans”

- The purpose of this report is to provide the first global estimate and mapping of sources and quantities of primary microplastics released into the oceans
  - On a global scale : between 15-31% of all plastic in the oceans could originate from primary sources
  - Regionally : outweighing that of secondary microplastics from littering and mismanaged wastes.

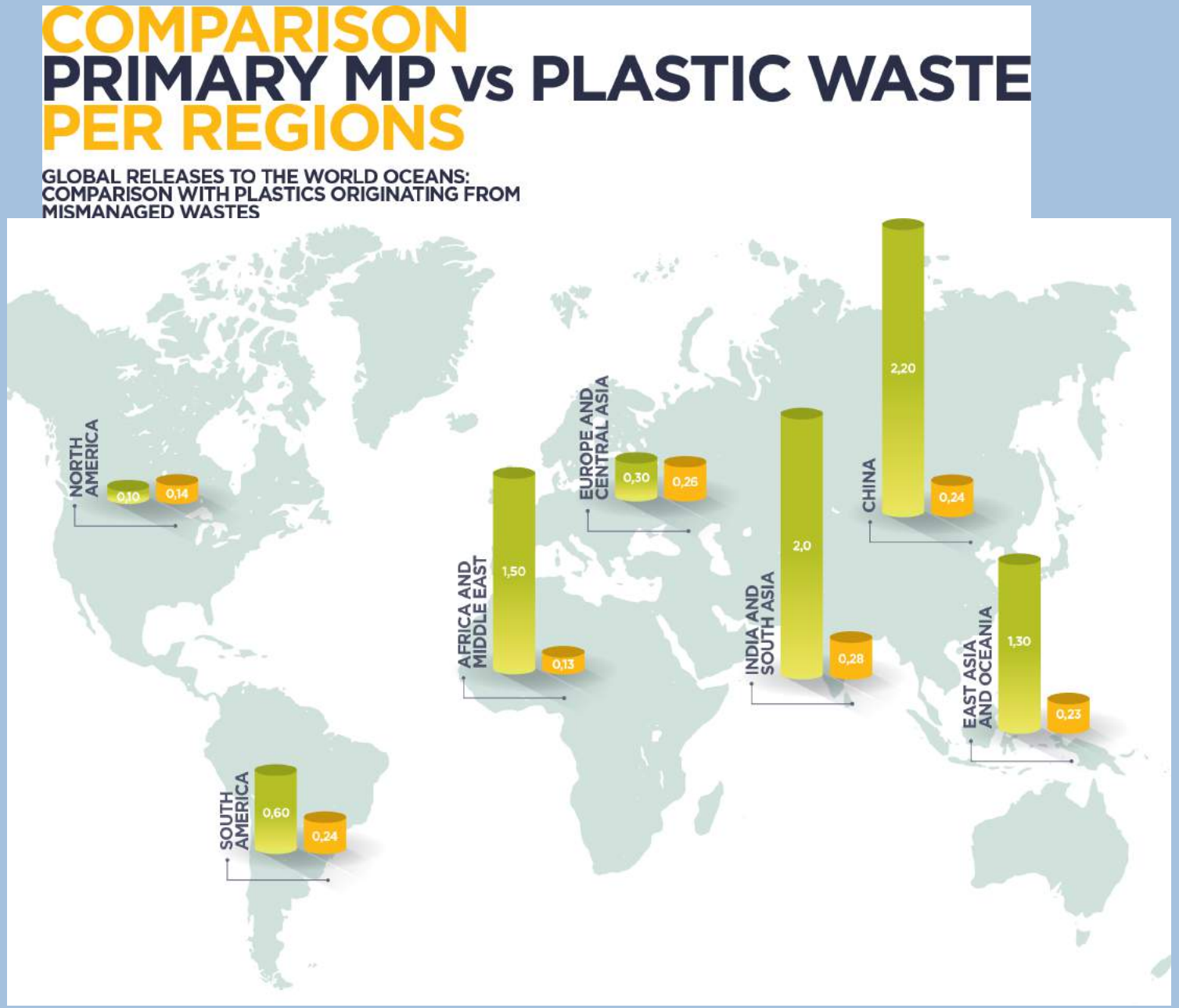
- Contribute to a better identification and prioritisation of the sources and pathways of plastic leakage into the oceans

- Provide key stakeholders ownership of the increasingly urging plastic issue with the aim to close the plastic tap

Report: “Primary Microplastics in the Oceans”



Report: “Primary Microplastics in the Oceans”



IUCN GMPP work on marine plastics (II)

GUIDELINES

- **Stakeholder platform** with a coalition of private sector, governments and NGOs to discuss and develop **best practice** solutions to address plastic and microplastics marine pollution (Swedish Postcode Lottery Foundation)

GOVERNANCE

- Advising governments on how to best manage the issue of microplastics – particularly in the wake of recent microbeads bans

Framework for Action

- Stakeholders from private sector, governments and NGOs
- With input from multiple actors, developed the Framework for Action – a list of commitments to encourage concrete action aligned with the SDG Target 14.1 on marine pollution

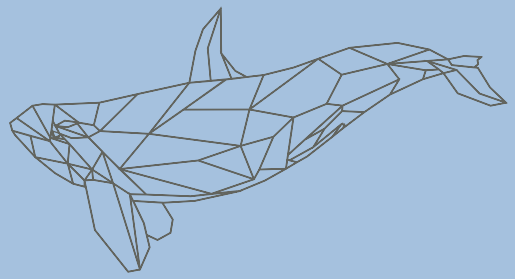
- Commitments include promoting science-based policies; extending producer responsibility; enhance opportunities for recycling and energy recovery (among others)

	Biodiversity	Human health	Economics	Climate change
Research in the Azores	X		X	
Race for Water Odyssey			X	
Reports: Plastic Debris in the Ocean & Primary Microplastics in the Ocean	X		X	
Microplastics in the Arctic	X	X	X	X
Microplastics in the Baltic	X	X	X	
Framework for Action			X	

Recommendations

POLICY

- Changing business policy – Framework for Action – looking to change internal business practices
- Connecting product designers with end-of-life managers for circular economy products
- Mainstreaming plastic footprint into companies' annual reports
- Encouraging extended producer responsibility
- Changing government policy – making plastic a hazardous emission under the rule of pollutant release and transfer register
- Ban or heavily tax single-use plastics



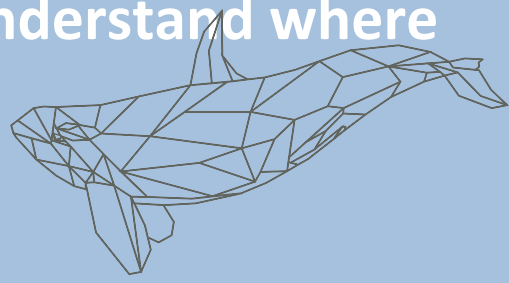
Recommendations

EDUCATION AND AWARENESS

- Educating on the impacts of marine litter and behaviour changes to mitigate this problem at a young age
- Emphasising zero-waste at a university campus level

RESEARCH

- Better understanding of the impacts of litter on marine species & human health
- Designing alternatives for plastic (especially single-use plastic)
- Designing improved waste water facilities capable of retaining microplastics and microfibres
- Mapping hot zones of plastic pollution leakage and doing life-cycle assessments
- Monitoring to map the impacts of policies and understand where changes may be needed




IUCN
Act now, sleep later...
Thank you...