PLASTIC POLLUTION AND BIODIVERSITY: IUCN'S RESPONSE AND GLOBAL ADVOCACY

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Korean National Committee of IUCN
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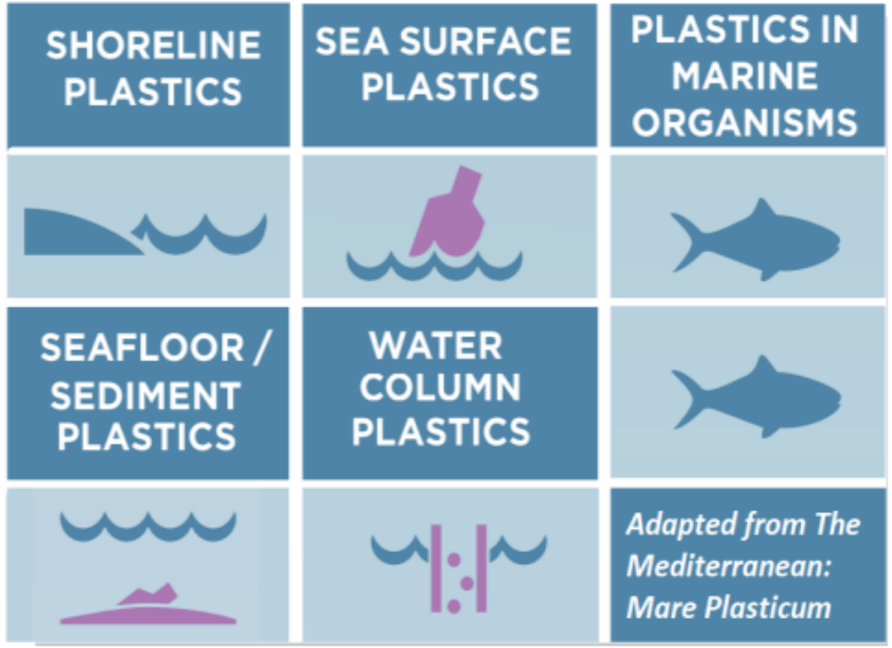
Plastic Pollution and Biodiversity

Why it matters

Plastic is a major threat to biodiversity, contributing to ecosystem degradation and climate change. Plastic pollution impacts all ecosystems, from terrestrial and freshwater to marine environments, and affects various species, including endangered ones.

Since 2014, IUCN has been addressing the impact of plastics globally, with a focus on the marine environment. IUCN supports and builds capacity for countries to effectively negotiate the International, Legally Binding Instrument for Plastic Pollution

Marine Plastic Pollution (2019-2021)



Plastic pollution is found in all areas of the ocean and in marine organisms © IUCN

ISSUES

At least 14 million tons of plastic end up in the ocean every year. Plastic debris is currently the most abundant type of litter in the ocean, making up 80% of all marine debris found from surface waters to deep-sea sediments. Plastic is found on the shorelines of every continent, with more plastic waste found near popular tourist destinations and densely populated areas.

Under the influence of solar UV radiation, wind, currents and other natural factors, plastic breaks down into small particles called microplastics (particles smaller than 5 mm) or nano-plastics
(particles smaller than 100 nm). The small size makes them easy for marine life to ingest accidentally.

The main sources of plastic debris found in the ocean are land-based, coming from urban and stormwater runoff, sewer overflows, littering, inadequate waste disposal and management, industrial activities, tire abrasion, construction and illegal dumping. Ocean-based plastic pollution originates primarily from the fishing industry, nautical activities and aquaculture.

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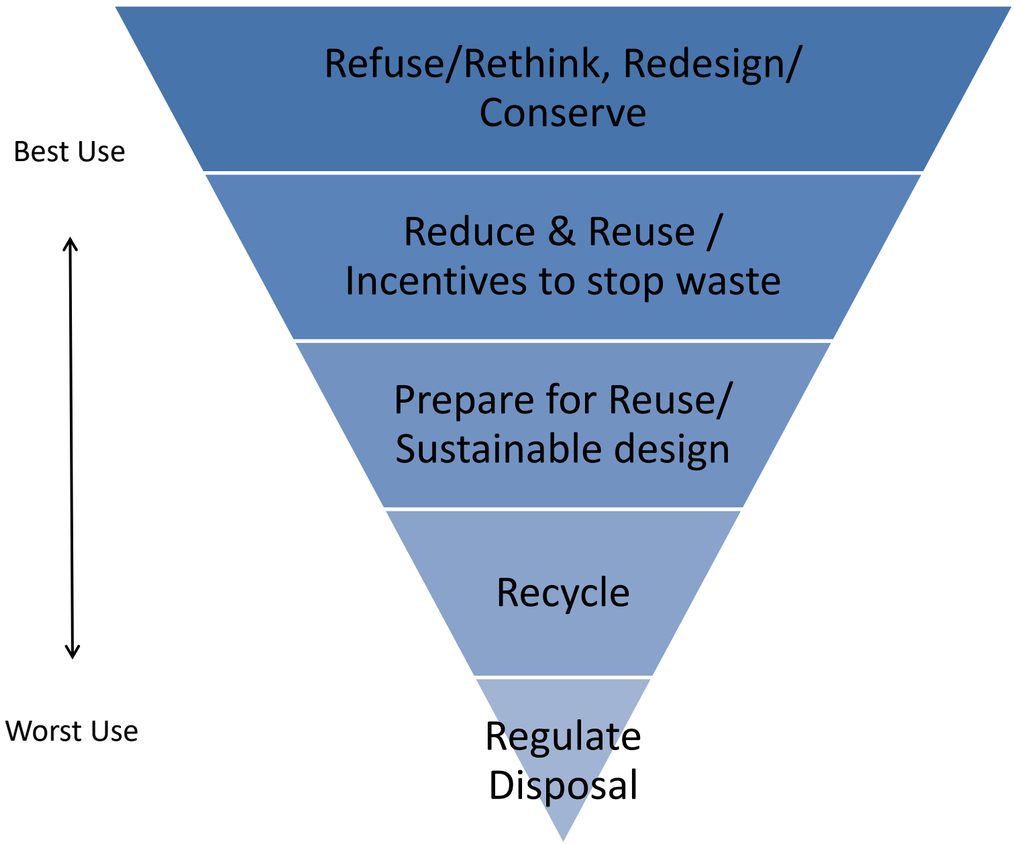


IMPACTS

Impacts on Marine Ecosystem

- Marine wildlife such as seabirds, whales, fish and turtles mistake plastic waste for prey;
- They also suffer from lacerations, infections, reduced ability to swim, and internal injuries. Floating plastics also help transport invasive marine species, thereby threatening marine biodiversity and the food web.

Impacts on Food and Human Health

- The transfer of contaminants between marine species and humans through consumption of seafood has been identified as a health hazard, and research is ongoing

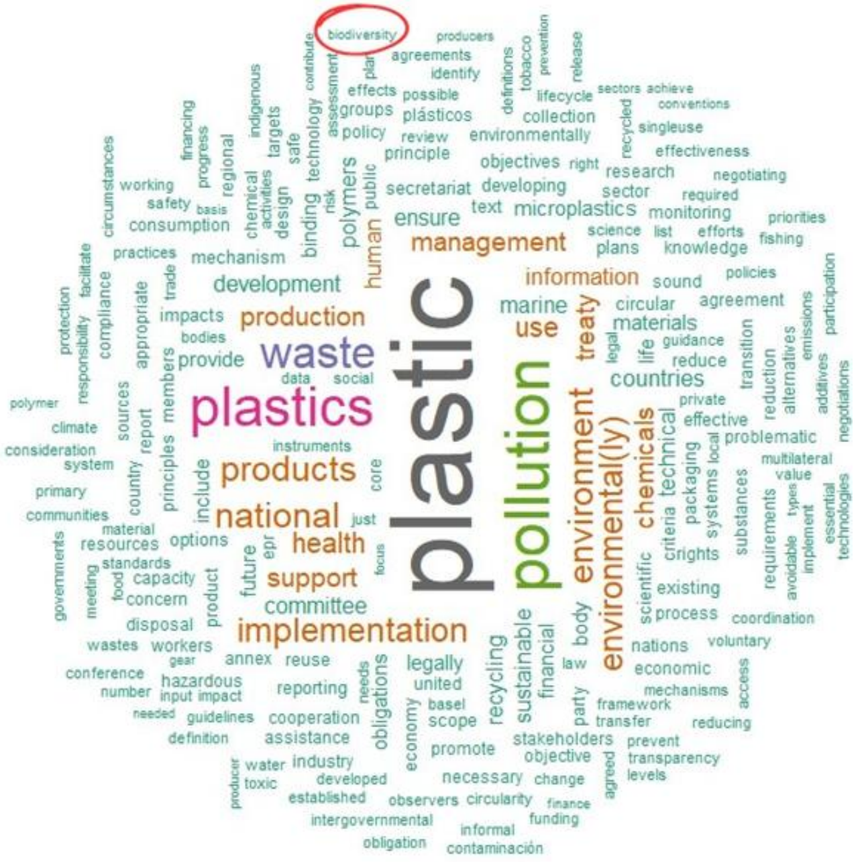
Impacts on Tourism

- Plastic waste damages the aesthetic value of tourist destinations, leading to decreased income from tourism.
- Cleaning and maintenance costs, negative impacts on wildlife

Impacts on Climate Change

- When incinerated or landfilled, it releases CO_2 and CH_4

ADRESSING ISSUES



ADVOCACY

IUCN Resolutions (7.019 - Stopping the global plastic pollution crisis in marine environments by 2030 and 7.069 - Eliminate plastic pollution in protected areas, with priority action on single-use plastic products)

International biodiversity goals and targets (Target 7 of the KunmingMontreal Global Biodiversity Framework (GBF)), the SDGs, (in particular SDG12 and SDG 14.1), and the recently agreed High Seas Treaty.

Participation in various parallel processes:

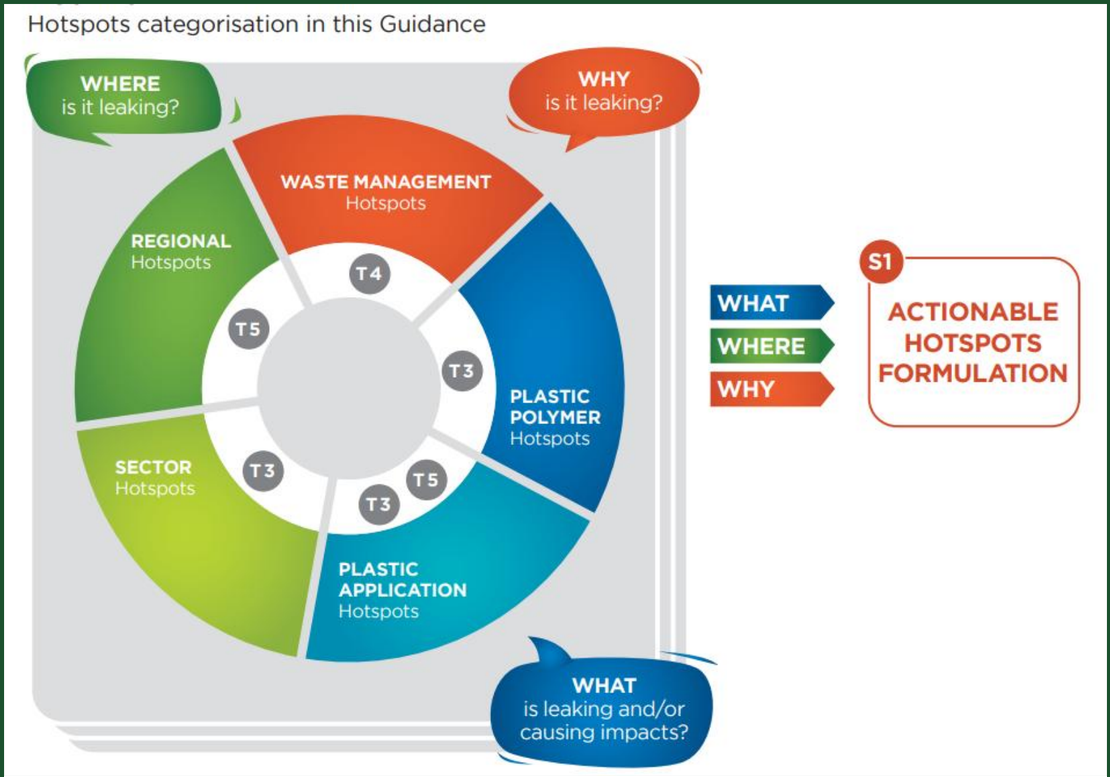
- **Establishment of a Science-Policy Panel to contribute further to the sound management of chemicals and waste and to prevent pollution**;
- Basel, Rotterdam and Stockholm Conventions on Chemicals and Waste (BRS MEAs) and the Strategic Approach to International Chemicals Management (SAICM) – Process;
- UN General Assembly “Zero Waste Initiative”;
- UN General Assembly “The human right to a clean, healthy and sustainable environment”;
- WTO engagement to address trade and plastics regulation issues; WTO | Plastics pollution and environmentally sustainable plastics trade
- World Health Assembly Resolution on The impact of chemicals, waste and pollution on human health (who.int);
- High Ambition Coalition to End Plastic Pollution (hactoendplasticpollution.org)

https://iucn.org/story/202403/future-plastics-treaty-needs-specific-article-biodiversity-iucns-proposal

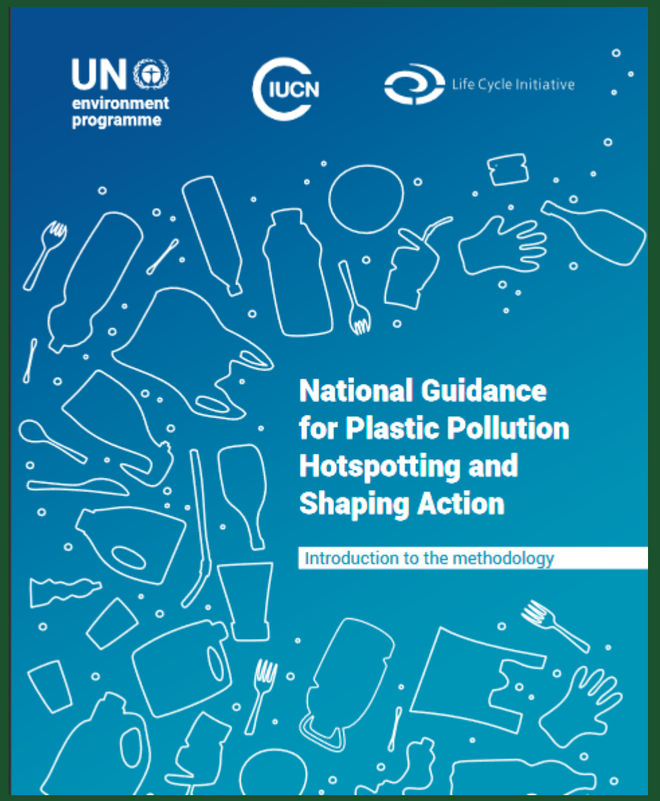
National Guidance for Plastic Pollution Hotspotting and Shaping Action(2020)

Objectives: Providing a structure for the methods of identifying plastic leakage ‘hotspots’, finding their impacts along the entire plastic value chain, and then prioritising actions once these hotspots are identified.

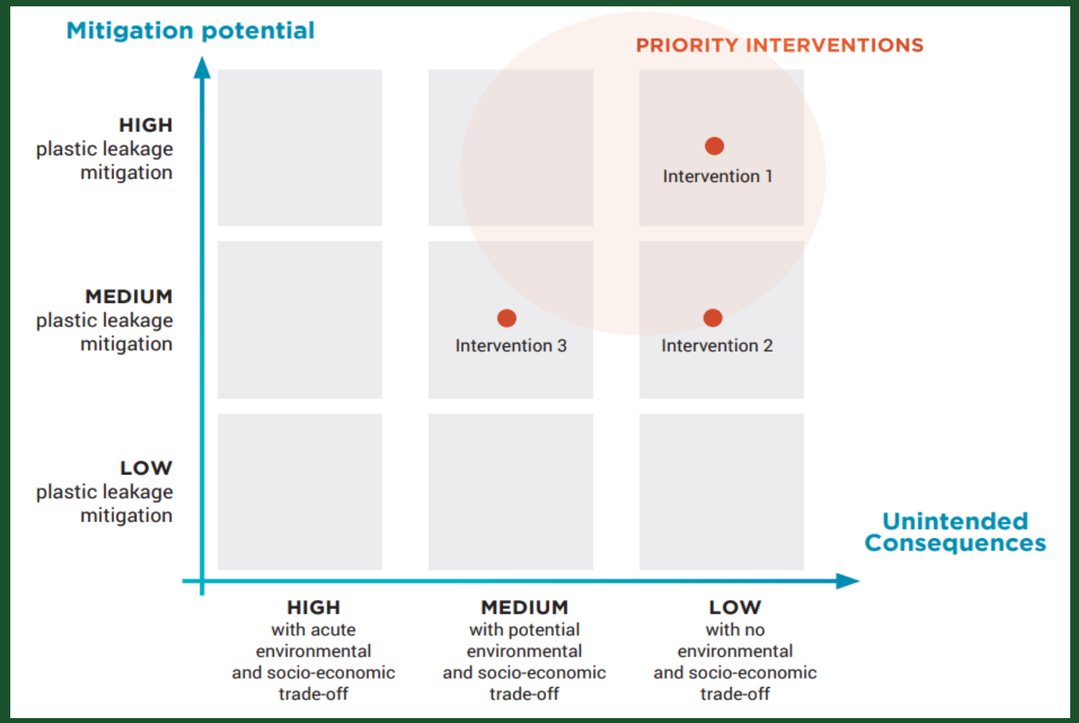
Identification of HOTSPOTS → Where to act? What to do? How to do it?



REPORT with UNEP, Life cycle initiative



Prioritisation of INTERVENTIONS



Sustainable production

- Increase compliance with OCS standard (Operation Clean Sweep)
- Design for less material use (plastic)
- Design for reuse
- Design for lower loss rate (e.g. avoid detachable parts, reduce loss of microfibers)

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Sustainable Consumption

- Reduce littering in urban areas/ rural areas/ at sea (e.g. plastic waste thrown overboard by fishermen)
- Reduce demand for and consumption of single-use plastic products/packaging, in particular on-the-go

Waste Collection System

- Increase the frequency of waste collection in areas prone to plastic leakage
- Increase plastic segregation at household level/ in public space (sorting waste bins)/ in factories/ in sorting stations
- Ensure plastics with low recycling value are collected.

Waste Infrastructure & Plastic Recycling

- Increase capacity for propoer waste disposal and maintenance of equipment
- Increase recycling capacity for domestic plastic waste
- Develop solutions to avoid contamination of plastics to be recycled.

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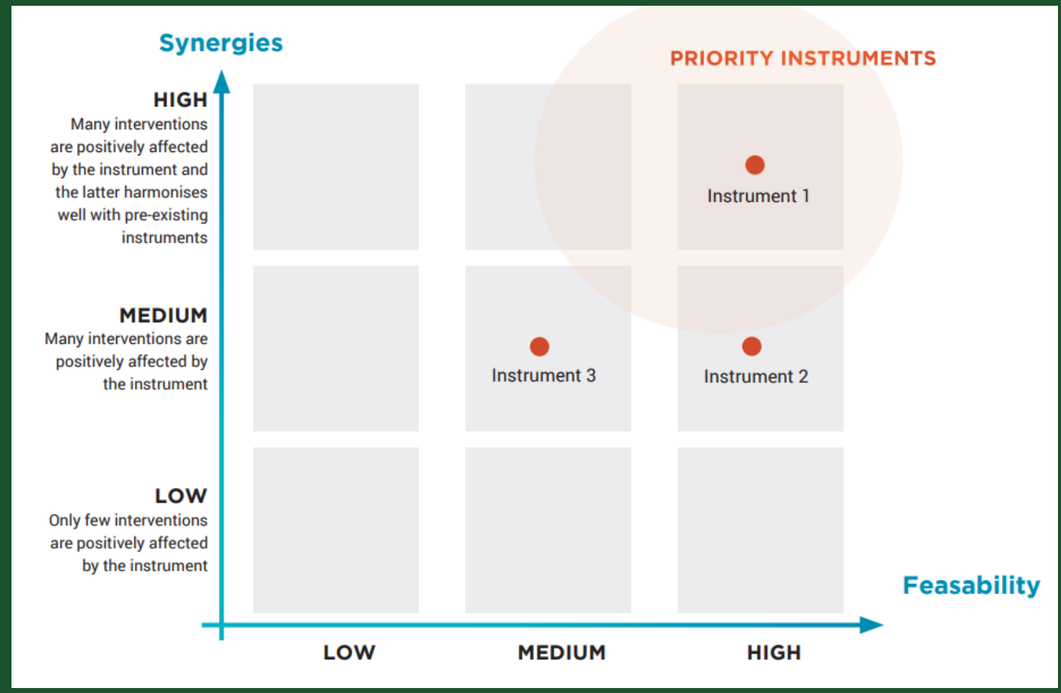
Prioritise the INSTRUMENTS



INPUT

List of Prioritized Interventions

Match

Match the interventions with instruments by selecting relevant instruments from a generic list

Specify

Specify the instruments to the national context by refining the existing instruments and designing new ones when needed.

Prioritise

Prioritise the instruments based on a two dimension map picturing on one axis their feasibility and on the other axis the potential for synergies

OUTPUT

List of Prioritized Interventions

Beyond Plastic Med

Hotspot

The Mediterranean contains just 1% of the world's waters but concentrates 7% of global macro-plastics.

Scientists estimate that 229,000 tonnes of plastic waste enter Mediterranean waters each year, the equivalent of more than 500 shipping containers everyday.

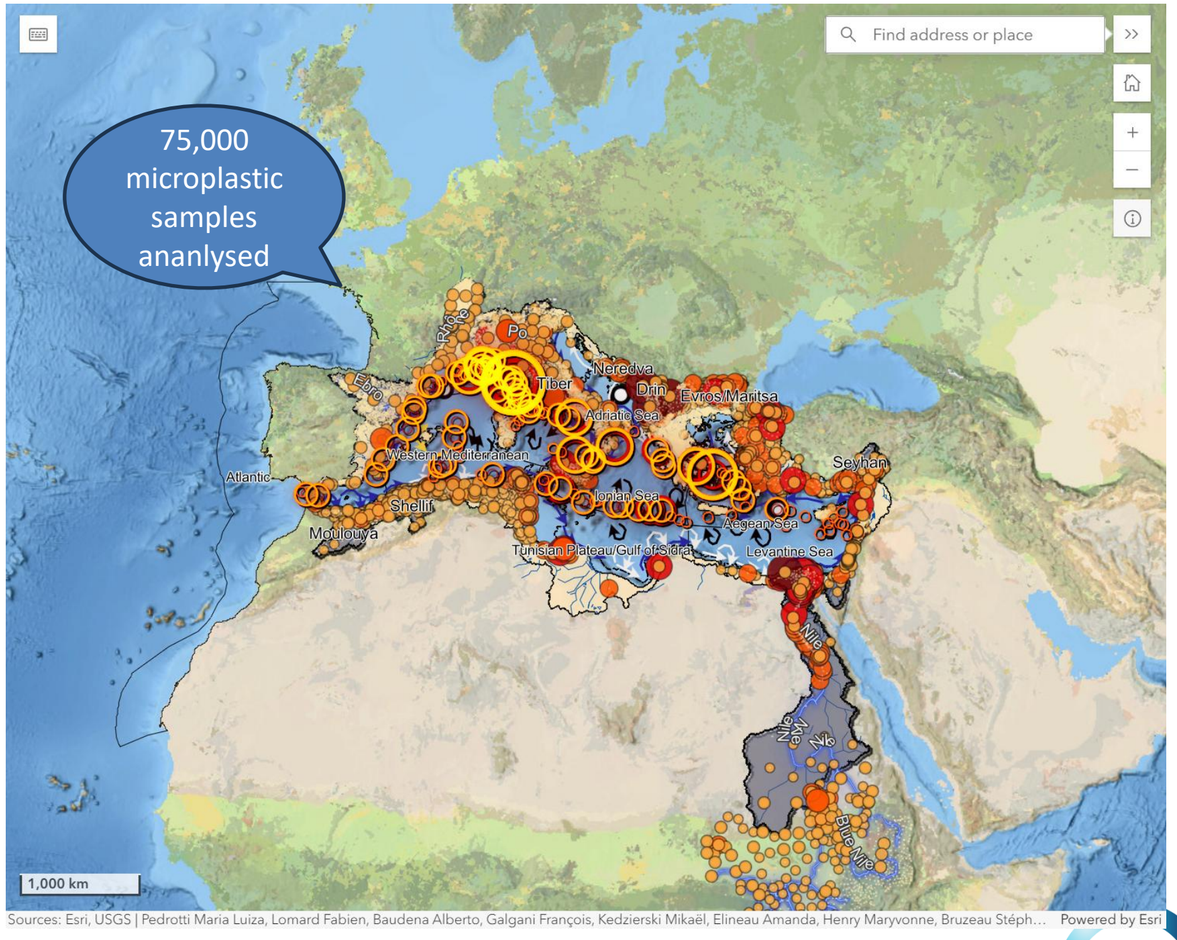
Nearly 1,200,000 toones has already accumulated, and this is projected to at least double by 2040 unless significant action is taken.

Taking Action

The Beyond Plastic Med (BeMed) initiative was launched in 2019 to develop and support a network of stakeholders committed to implementing concrete solutions for the prevention of plastic pollution in the Mediterranean.

In 2019, IUCN-Med launched the Plastic Waste-Free Islands Mediterranean project, as part of its global Close the Plastic Tap programme.

The initiative's overarching goal is to drive the circular economy agenda forward and to reduce plastic waste generation and leakage from islands.



https://iucn.org/story/202207/plastic-pollution-crisis

PROJECTS

PLASTIC WASTE FREE ISLANDS

Global Initiative - Launched in 2019 under the Close the Plastic Tap programme, implemented in 6 SIDS in Carribean and Pacific (Fiji, Samoa, Vanuatu, Antigua & Barbuda, St.Lucia, Grenada)

- Audit plastic flows across tourism, fisheries, and waste management sectors
- Engage governments, local businesses, and communities
- Test and demonstrate circular-economy solutions (bottle-to bottle recycling, waste repurposing) → Toolkit

PLASTIC FREE ISLANDS IN THE MEDITERRANEAN

(2019-2022) Pilots on Menorca and Cyprus

- Assess plastic leakage hotspots (tourism, fisheries, waste)
- Enhance understanding of waste generation
- Co-create action plans with sector stakeholders
- Develop model beaches as Plastic Free Beaches

Closing the Plastic Tap (FPA2BeMed)

Based on the project "IUCN's Close the Plastic Tap", a report was published in 2022.

- Draw conclusions from the results of eight plastic pollution hotspotting assessments;
- Recommend actions, instruments, and interventions;
- Discuss the findings and recommendations of policy and economic research; and
- Share the methodologies, with the aim that others can replicate the model.

SIDA Plastics Programme of work

2017-2022 funded by SIDA

Eastern and Southern Africa (Kenya, Mozambique, South Africa), and Asia-Pacific (Thailand and Viet Nam).

- Provide knowledge, tools, and capacity to governments and private sector.
- Apply the Source-to-Sea Hotspotting Methodology (plastic leakage assessments).
- Support policy and action plan development.
- Foster multi-stakeholder public-private partnerships

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Solutions to Reduce Plastic Pollution Affecting Marine Biodiversity and Sensitive Coastal Ecosystems: Samoa, Vanuatu & Tonga

Partnership

Supported by the Ministry of Oceans and Fisheries, Republic of Korea, 2025

Ms. Leituala Kuiniselani Toelupe Tago, ICUN Oceania said, "*the urgency of this issue cannot be overstated, given the impacts of plastics pollution; and more importantly the interconnected environmental challenges of climate change, biodiversity loss, and pollution, or the Triple Planetary Crisis! It is therefore incumbent for us to take decisive action, towards developing sustainable, upstream circular solutions, that address our climate, biodiversity and pollution challenges. Our engagement with the representatives of the target countries, this week, will allow us to better understand their needs and priorities, as it relates to reducing plastic pollution and its impacts on marine biodiversity inclusive of sensitive coastal ecosystems to drive project implementation over the next 3 years.*"

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AFRIPAC(2023): Effective plastic treaty capacity building: Africa and African SIDS

5 Countries:
Cabo Verde, Guinea Bissau, São Tomé and Príncipe, Senegal, and Sierra Leone

Capacity Building Project

- This project addresses (a) global commitments to end plastic pollution strengthened (b) national action plans and policy strengthened and (c) strengthening the global policy links to the national and regional instruments to prevent marine litter by ensuring they are in sync with each other.

Objectives:

- Target States and Stakeholders play an active role in Intergovernmental Negotiating Committee (INC) negotiations process for the Global Plastics Treaty.
- Plastic pollution mitigation processes of Target States integrate Circular Economy (CE) principles in Waste Management (WM) practices.
- Synergies developed and improved collaboration with other organisations funded by Norad and associated plastic pollution networks.
- Effective Project Management through Monitoring, Evaluation, and Learning.

Desired outcomes:

- (1) Target States and stakeholders, including women, will play an active role in the Intergovernmental Negotiating Committee (INC) negotiation processes including INC-2 in Paris; and (2) Plastic pollution mitigation processes of Target States will integrate Circular Economy principles in Waste Management practices. The proposed legal instrument includes Circular Economy and Waste Management as main action points to mitigate and manage plastic pollution.

https://iucn.org/story/202303/afripac-strengthening-5-countries-commitments-un-plastics-treaty

End Plastic Pollution International Collaborative (EPPIC, 2024)

Public-private partnership

IUCN with partners like Aspen Institute (USA), The Ocean Foundation (USA), Searious Business (NL), with initial seed funding from the U.S. Department of State

EPPIC Grant Program

- It provides in-country entities in Latin America and Sub-Saharan Africa with the financial resources to address location-appropriate upstream and midstream interventions to significantly reduce plastic pollution and advance circular solutions.

- EPPIC defines upstream as any interventions after the extraction of raw materials, and midstream as any interventions before an item would be considered waste.

Recent Proposals supported by EPPIC

- Costa Rica (2024)
- Guatemala (2024)
- Ghana (2024)
- Kenya (2024)
- Senegal (2024)
- South Africa (2024)

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Solving plastic pollution is not just a waste issue. It’s a conservation imperative!

Thank you for your attention!