Global and regional processes/initiatives in addressing marine pollution

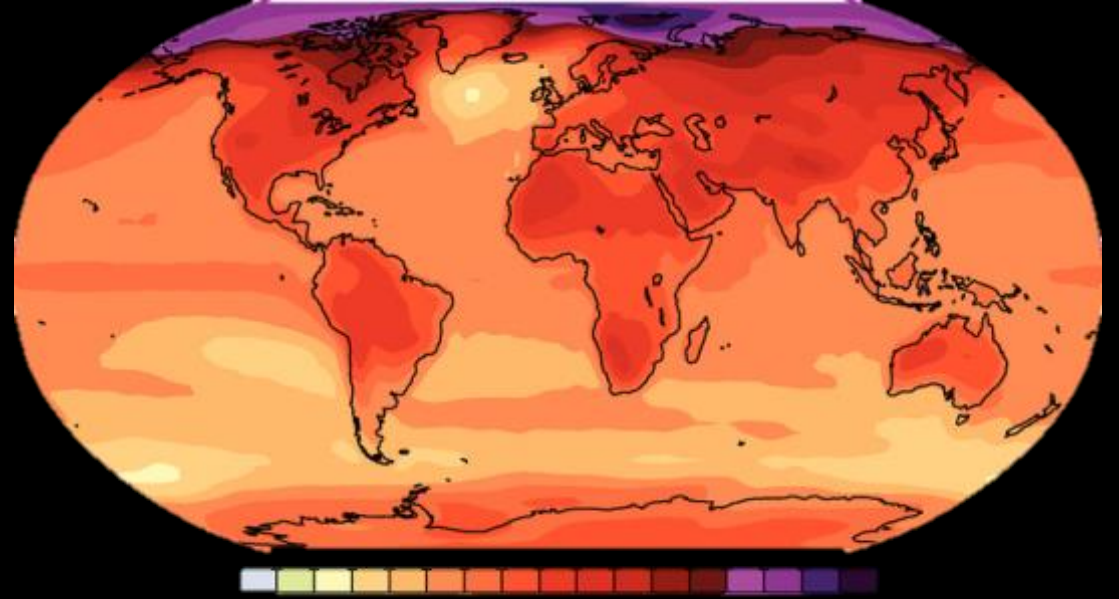
LBSA Workshop for the Nairobi Convention GEF-WIOSAP Project
10 – 11 December 2018
Maputo, Mozambique

Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

The urgent issue of marine pollution…

Up to 80% of all marine pollution comes from land-based sources

Marine pollution **will worsen Climate Change** impacts



Bleached corals…further weakened due to nutrient pollution

Deoxygenation of marine waters

Releases of nitrous oxide

These are global problems requiring global solutions!!

Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)

Mandate

- The GPA was established in 1995; **global cooperation framework** on marine pollution
- Hosted by UN Environment
- Initially address **nine source categories** of marine pollution

Sewage

Persistent organic pollutants

Radioactive substances

Heavy metals

Oils

Nutrients

Sediment mobilization

Litter

Physical alteration and destruction of habitat

GPA Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

The GPA is the only intergovernmental mechanism explicitly addressing the linkages between freshwater, coastal and marine environments – "Source-to-Sea"

Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)

Mandate

GPA — Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

Graduated (under conventions)

- Persistent organic pollutants
- Heavy Metals

Manila Declaration "priorities"

- Litter
- Nutrients
- Sewage

Others

- Radioactive substances
- Oils
- Sediment mobilization
- Physical alteration and destruction of habitat

Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)

Since 2012:

- Capacity building
- Development of norms, standards and guidelines
- Contribution to marine pollution protocols – Regional Seas Programme
- Leveraging resources e.g GEF
- National Plans of Actions (NPAs)
- Broadened multi-stakeholder engagement
    - Technical and policy guidance
    - Advocacy

UN environment

GPA Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)

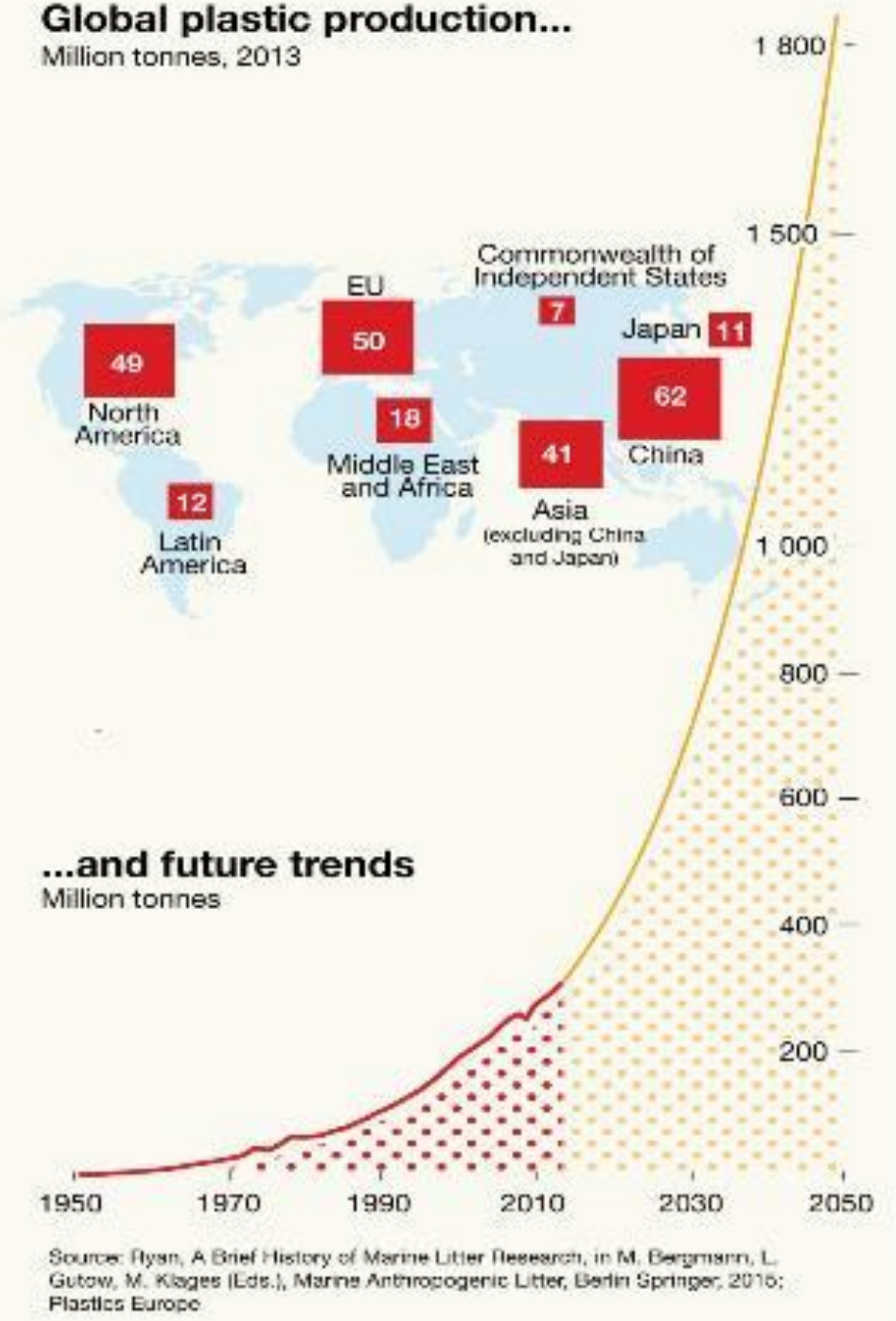
- Through the 2012 Manila Declaration, establishment of three global multi-stakeholder partnerships for the priority areas **nutrients**, **marine litter** and **wastewater:**

  ✓Global Partnership on Marine Litter (**GPML**)
  ✓Global Partnership on Nutrient Management (**GPNM**)
  ✓Global Wastewater Initiative (**GW²I**)

Marine Litter

Global status

- 12 billion tonnes of plastic waste will be in landfills or in the **natural environment** by 2050 under current production and waste management trends.
- Projections of **40% increase** in production over the next 10 years.
- **Microplastics** are found in tap water, sea salt, beer, honey, fish and bivalves.
- In the Arctic, 12,000 microplastic particles/liter of sea ice (2018).



Marine Litter

Global Partnership on Marine Litter

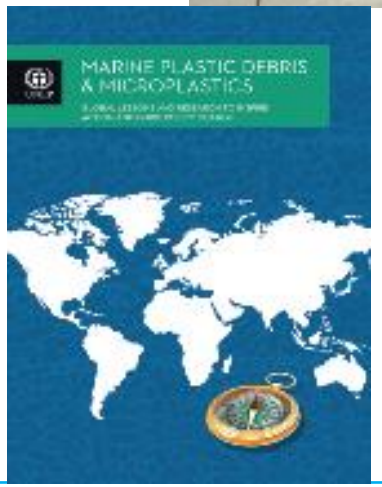
- Launched at the Rio 20+ Conference in June 2012
- Stand-alone resolutions on marine plastic litter and microplastics adopted at all three sessions of the United Nations Environment Assembly
- Help countries reach their targets related to Sustainable Development Goal target 14.1

Marine Litter

Key actions - Global Programme of Action

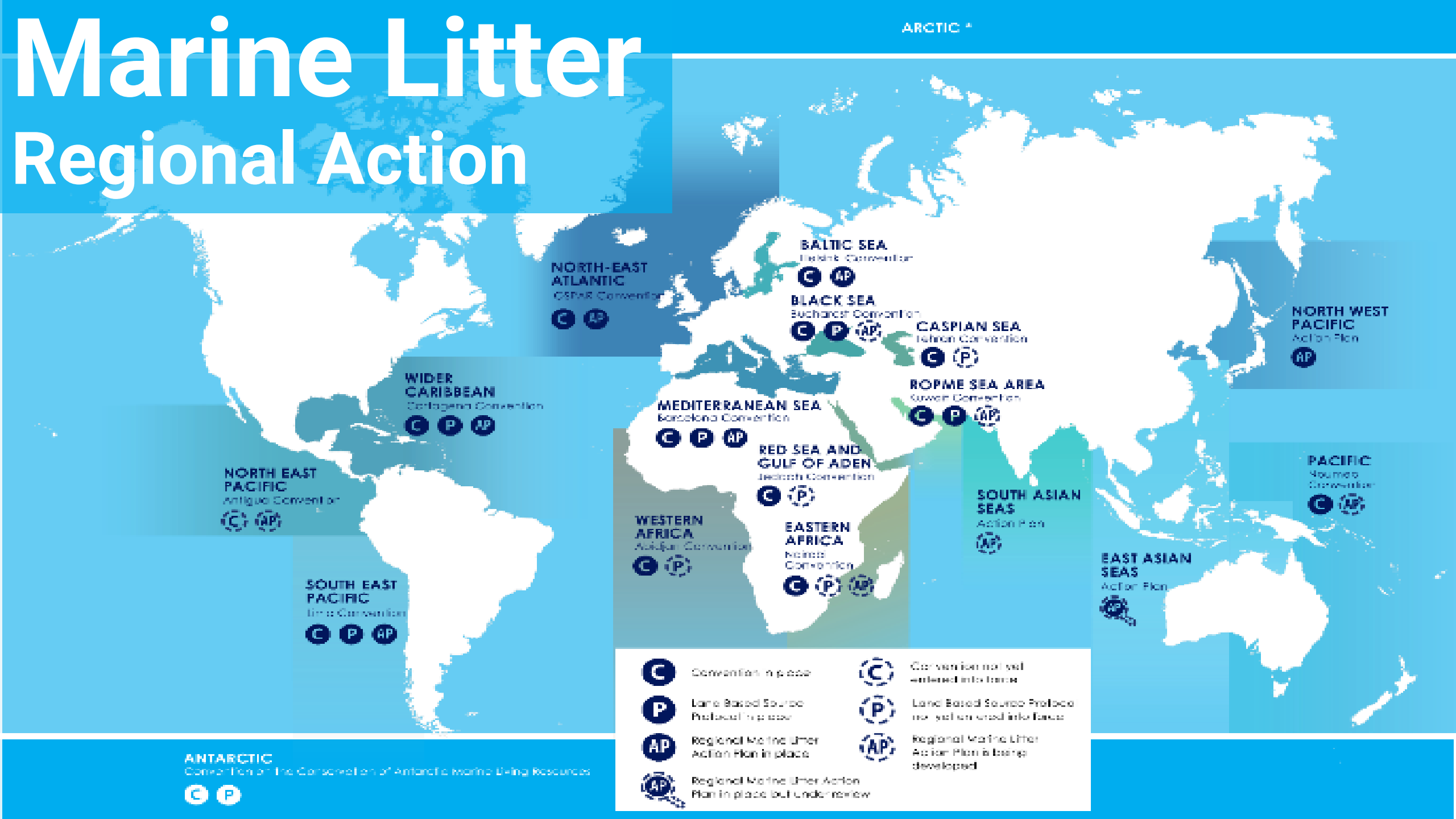
clean seas
turn the tide on plastic

- Implementation **of UNEA resolutions on marine litter and microplastics**
- Contributing **to SDGs 2,6,14 and 15**
- Knowledge generation
- Assessment of **effectiveness of relevant international, regional and sub-regional instruments and frameworks**
  - ✓ Ad-Hoc Open Ended Expert Group on Marine Litter and Microplastics.
- Leadership by the **Global Partnership on Marine Litter** (GPML)
  - ✓ Capacity building
  - ✓ Clean Seas campaign



GPML
Global Partnership on Marine Litter

Marine Litter
Regional Action



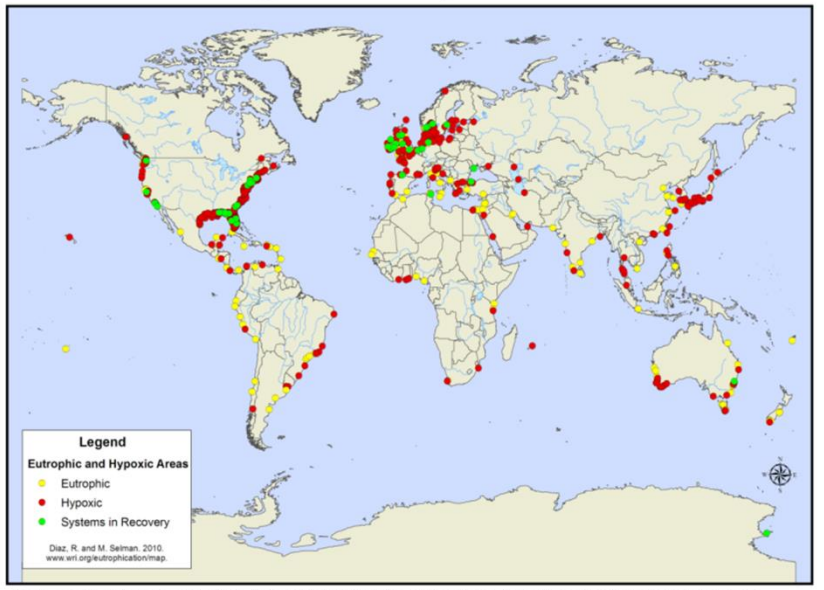
Nutrient Pollution

Global status

- Too much or too little **Nitrogen and Phosphorus**
  - ✓Multiple impacts across several environmental areas
- **>500 eutrophic/hypoxic coastal systems**
  - ✓>245,000 km^2 of water area worldwide
- Global **loss of ecosystem services =USD 200 billion/year**

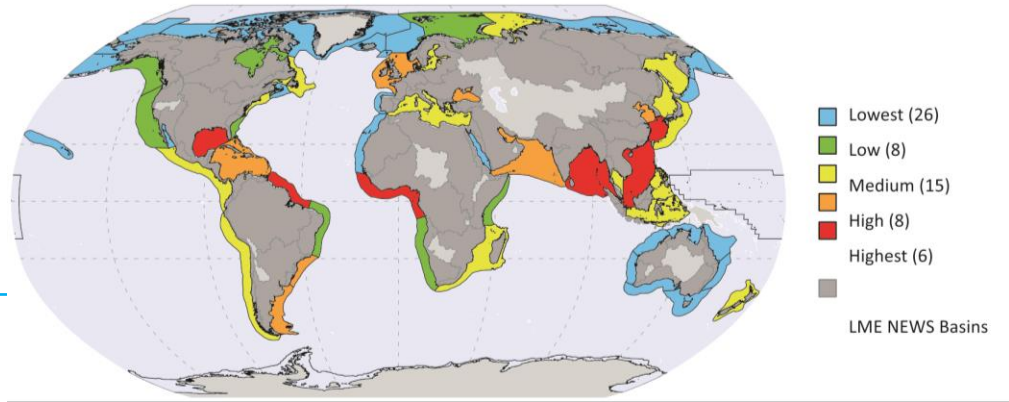
Modified from the European Nitrogen Assessment (2011)

World Hypoxic and Eutrophic Coastal Areas



Source: World Resources Institute (http://www.wri.org/resource/world-hypoxic-and-eutrophic-coastal-areas)

c) For 2050



Nutrient Pollution

Global Partnership on Nutrient Management

- Launched at the United Nations Commission on Suitable Development in 2009
- Four key areas of work: **knowledge generation**, **helping in the creation of pilot solutions**, **awareness-raising** and **partnership creation**
- Help countries reach their targets related to Sustainable Development Goal target 14.1

Nutrient Pollution

Key actions - Global Programme of Action

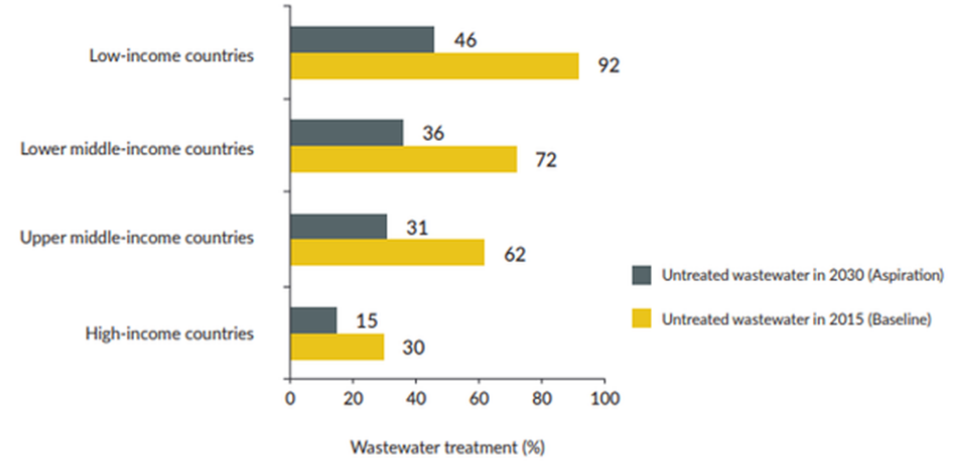
- **Global assessment and scenarios evaluation** - nutrient pollution – coastal hypoxia
- **Watershed management and decision making tools** – national demonstrations; Philippines; India
- **Nutrient management valuation**, Pantanal, Brazil
- Reducing **coral reef degradation from nutrient loading**: Sri Lanka and wider South Asia Region
- **SDG 14.1 marine pollution indicator methodology** development
- **Learning; knowledge transfer**
  - ✓ Massive Open Online Courses (MOOCs)
  - ✓ Replication of best management practices – south-south cooperation
- Addressing **UNEA3 Resolutions on pollution** – nutrient management is cross-cutting - air, soil, water

Wastewater

Status

- **900m^3/person wastewater generated annually globally**
- Over **80% of world's wastewater; > 95% in some least developed countries released to environment** without treatment
- Untreated wastewater **adversely effects human health, environment** and **reduces freshwater availability**
- **Undervalued resource!!!** Treated wastewater; costs usually outweighed by benefits
    - Reliable source of water; offset water scarcity
    - Cost-effective and sustainable source of energy, nutrients
    - Essential component of a circular economy; generate new business opportunities

Percentage of untreated wastewater in 2015 in countries with different income levels and aspirations for 2030 (50% reduction over 2015 baseline)



Source: Based on data from Sato et al. (2013).

Source: The United Nations World Water Development Report (2017)

Wastewater

Global Wastewater Initiative

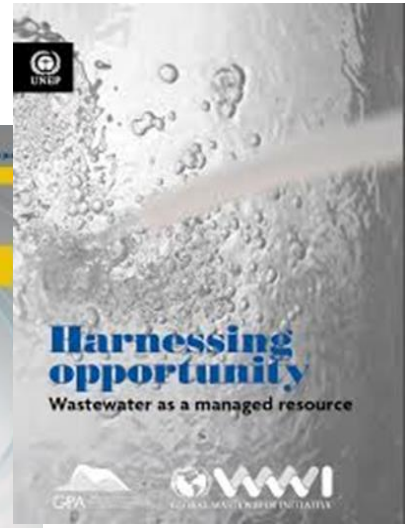
- Launched by UN Environment in 2013 to address wastewater-related issues, prompt action and encourage investment in wastewater management
- Focal areas: **capacity development, promotior of best practices, addressing data gaps and generating knowledge and building partnerships**
- Help countries reach their targets related to Sustainable Development Goal target 6.3

GLOBAL WASTEWATER INITIATIVE

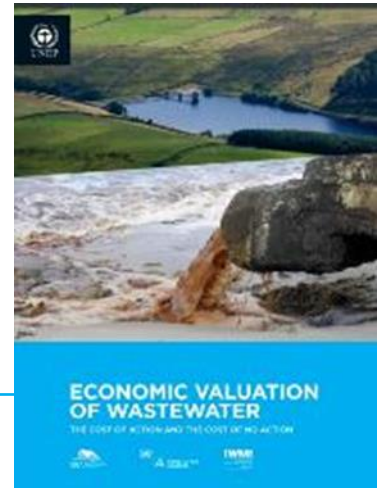
Wastewater

Key actions - Global Programme of Action

- **On-ground projects** demonstration of best practice
  - ✓ **Tanzania** – Guidelines and standards on decentralized wastewater treatment systems
  - ✓ Reuse of **treated wastewater for afforestation/reforestation and restoration of degraded wetlands:** Morocco, Benin, Egypt, Ethiopia and Ghana
  - ✓ **EcoSan approach** and circular economy: Georgia
- Contributing to the **SDG6 Target 6.3 on water quality**
- Contributing to the **global processes** (UN-Water, UNSGAB, World Water Development Report; Science-to-Policy Briefs,…)
- Knowledge generation; Capacity building (SUWA, MOOC, Webinars)
- Provision of **decision making** tools (Technology matrix, **monitoring** of impact of WW on coral reefs, Atlas on Wastewater, **Economic valuation** of wastewater)
- Implementation of **UNEA-3** Resolution 3/10 on water pollution



GLOBAL WASTEWATER INITIATIVE



What are countries doing?

Voluntary reporting to IGR-4: 39 respondent countries

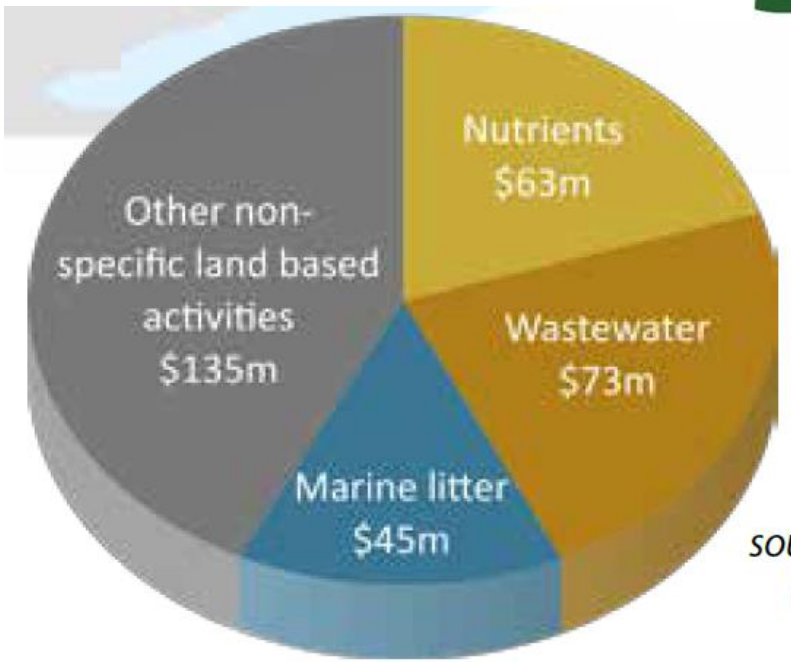
- **NPA development status** and related frameworks
  - ✓ **75% have relevant instruments; challenges in implementation**
- National and regional-level **policy and institutional arrangements**
  - ✓ **Many signatory to Regional Seas Conventions; ad-hoc to adequate arrangements in place; good linkages to meeting SDG agenda**
- Assessment of the **status of LBS of marine pollution**
  - ✓ **Mostly monitored: streamflow, pathogens, nutrient loads; frequency of assessment variable**
- **Financing for implementation** of National Programmes of Action
  - ✓ **Poor knowledge on relative contributions from national budgets; generally less than 1%**
  - ✓ **Financing sources: User fees; taxes; GEF is significant donor**
- **Awareness of the GPA** and its partnerships
  - ✓ **Visibility/awareness is limited**
- **New and planned investments** in control of LBS of marine pollution
  - ✓ **Investments: mainly in wastewater, litter and nutrient control**

Regional cooperation to address marine pollution

- **18 Regional Seas Programmes globally**
  - ✓7 UNEP administered; 7 Non-UNEP administered; 4 independent
- Several programmes are **legally binding Member State commitments**
- Programmes are **major delivery mechanism for GPA** through Land-Based Sources and Activities (LBSA) Protocols
- General implementation status (as per reporting to IGR4)
  - ✓**Problem identification:** Monitoring and assessment actions
    - **generally significant progress/on-going processes**
  - ✓ **Planning processes:** development of Regional and national programmes
    - **generally good progress; more advanced within regional level – national uptake slower; variable**
  - ✓**Regional regulatory framework:** uptake and application of voluntary codes; regional convention; LBSA protocols
    - **Variable across the Programmes**

Global Environment Facility support

- **Main funding window: International Waters Focal Area**
  - ✓ Invested over $1.9 billion in grants
  - ✓ leveraging $12.6 billion in co-financing supporting 350 projects managing transboundary water bodies
- GEF has been assisting countries in addressing land-based sources of marine pollution
- First GEF replenishment in 1995 coincided with the initiation of the GPA
- **Value of investment in LBS pollution: 316 million**



Active GEF Investment per source sector of the GPA since 2012.

Final messages

- **Source-to-Sea or Ridge-to-Reef approach: interlinkages** between marine litter, nutrient management and wastewater management
  - ✓ Countries should emulate this approach; not fragment between addressing pollution sources
  - ✓ Apply watershed-based planning and implementation
- **Positive effects** on one category will have good repercussions on the other two, and with regards to tackling other sources of **land-based pollution**
- **Meeting the Sustainable Development Goals: Links between Targets 6.3 and 14.1**
  - ✓ Addressing marine pollution must be dealt with through keeping freshwater bodies/ecosystems clean

Watch

Two Minutes on Oceans with Jim Toomey:

“The Land-Ocean Connection”

Two Minutes on Oceans w/ Jim Toomey: The Land-Ocean Connection

https://www.youtube.com/watch?v=W9dgumHkFnU

For more information visit us at

https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/addressing-land-based-pollution

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GPA

Global Programme of Action for the Protection of the Marine Environment from Land-based Activities