

# 'Towards a Pollution Free Planet' Preparation of the background document

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3<sup>rd</sup> session of the UN Environment Assembly

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Ligia Noronha, Economy Division Director

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# Key aspects of the background report development

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- Scientific accuracy:
    - ✓ Scientifically based sections (1 and 2) largely developed in consultation with the GEO6 authors
    - ✓ A group of experts to review and provide guidance to early draft of the report
    - ✓ Peer review
  - Draft 1 in house review
  - Draft 2 consultations and inputs from UN agencies, Multilateral Environmental Agreements.
  - Regional and stakeholder consultations to provide inputs and feedback (based on powerpoint presentations)
  - Final Draft for public consultation
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# Key milestones

15 May (2 weeks consultation)	<ul style="list-style-type: none"><li>• 2<sup>nd</sup> draft of the report sent to Multilateral Environmental Agreements and UN agencies, and key experts for comments and feedback.</li><li>• Virtual meetings with 1) key technical experts, 2) MEAs 3) UN Agencies</li></ul>
24 May	Presentation of key finding of the report to the Committee of Permanent Representatives
Mid June	Commitments platform available on line (UN Environment Assembly 3 website)
26 June	Draft report sent to Member states for comments until 14 July (3 weeks)
Week of 17 July	Finalisation of the report
End July – beginning September	Final review, sign off by Head of UN Environment, final editing, design and layout
15 September	Early release/launch of the English version of the report
30th September and 30th November	Reporting and analysis of the commitments received

# Structure of the report

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- **Introduction**
- **Section 1- Evidence of a polluted planet: the science, impacts and economic costs**
  - ✓ Air; marine and coastal; land and soil; freshwater; cross-cutting sources: chemicals and waste
  - ✓ Economic costs
- **Section 2- A Pollution Free Planet: Agenda 2030 and Multilateral Environmental Agreements**
  - ✓ Opportunities for achieving the 2030 Agenda for Sustainable Development and Sustainable Development Goals
  - ✓ The pollution mandates of the Environmental Agreements
  - ✓ Multiple benefits of actions
  - ✓ Towards a strengthened multi-stakeholder governance
- **Section 3- A Framework for Transition to a Pollution Free Planet**
  - ✓ Gaps
  - ✓ Principles
  - ✓ Key system wide areas of change (transformative actions and enablers)
  - ✓ Targeted interventions

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## Conclusion

# Section 1: Evidence of a polluted planet: the science, impacts and economic costs

- Based on the GEO regional reports, GEO-6 thematic drafts, and other sources
- Combining state, trends and impact analysis per pollution theme
- Indicating economic costs of inaction

# Major forms of pollution and key sectoral sources

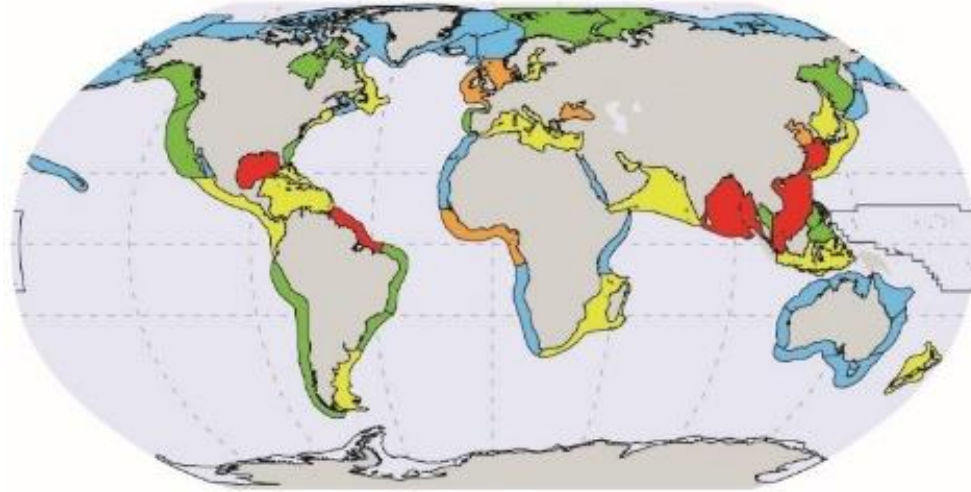
## Environmental Media

AIR	FRESHWATER	MARINE	LAND	ALL
Particulate Matter	Nitrates	Nitrates	Nitrates	Polychlorinated biphenyls
Black carbon	Nutrients (phosphates)	Toxic waste	Heavy metals	Persistent organic pollutants
Nitrogen oxides	Hazardous chemicals	(including oil, plastics)	Pharmaceuticals	Perchloroethylene
Sulphur dioxide	Endocrine disrupting chemicals			Tetrachloroethylene
Ozone	Heavy metals			Radioactive waste
Heavy metals	Pharmaceuticals			
Noise				

## Pollution Sources

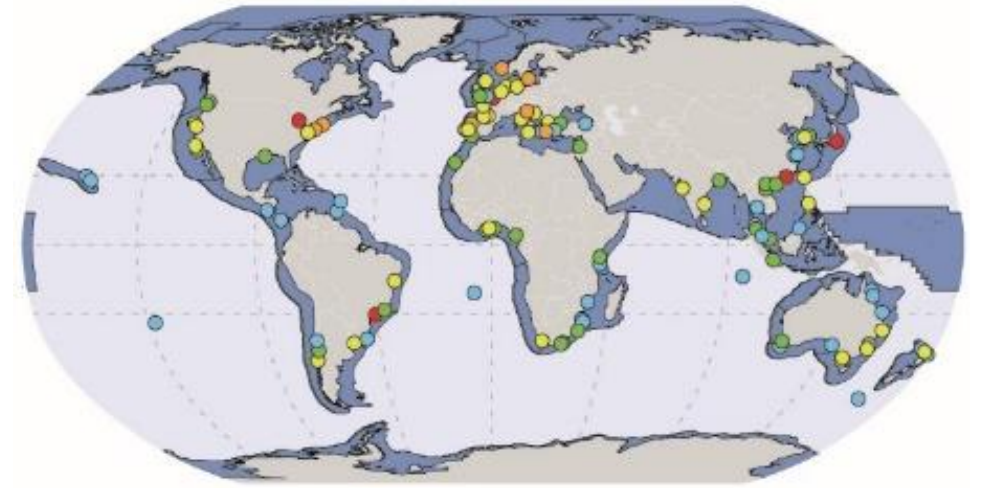
<b>Waste</b>	E-waste, food waste; wastewater; municipal solid waste; open-burning; plastics; hazardous; construction and demolition
<b>Transport</b>	Fuel use and-supply; engine emissions; road: tyres, surface; shipping; aviation
<b>Energy</b>	Combustion plants; fossil fuels; biomass
<b>Service</b>	Tourism; hospitals; water; retail
<b>Industry</b>	Chemicals; Pharmaceuticals; Extractives; Agriculture; Forestry; Fisheries
<b>Urban</b>	Buildings; households; mobility

# Mapping key risks: nutrients, polychlorinated biphenyls (PCBs), plastic debris



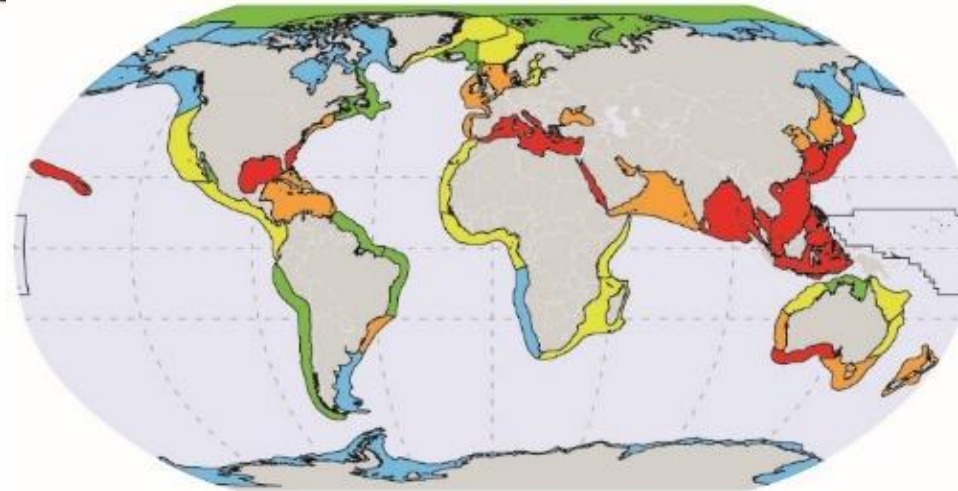
Nutrient risk indicator categories

Lowest Low Medium High Highest



PCBs concentration range (nanograms per gram pellet)

<10 10-50 50-200 200-500

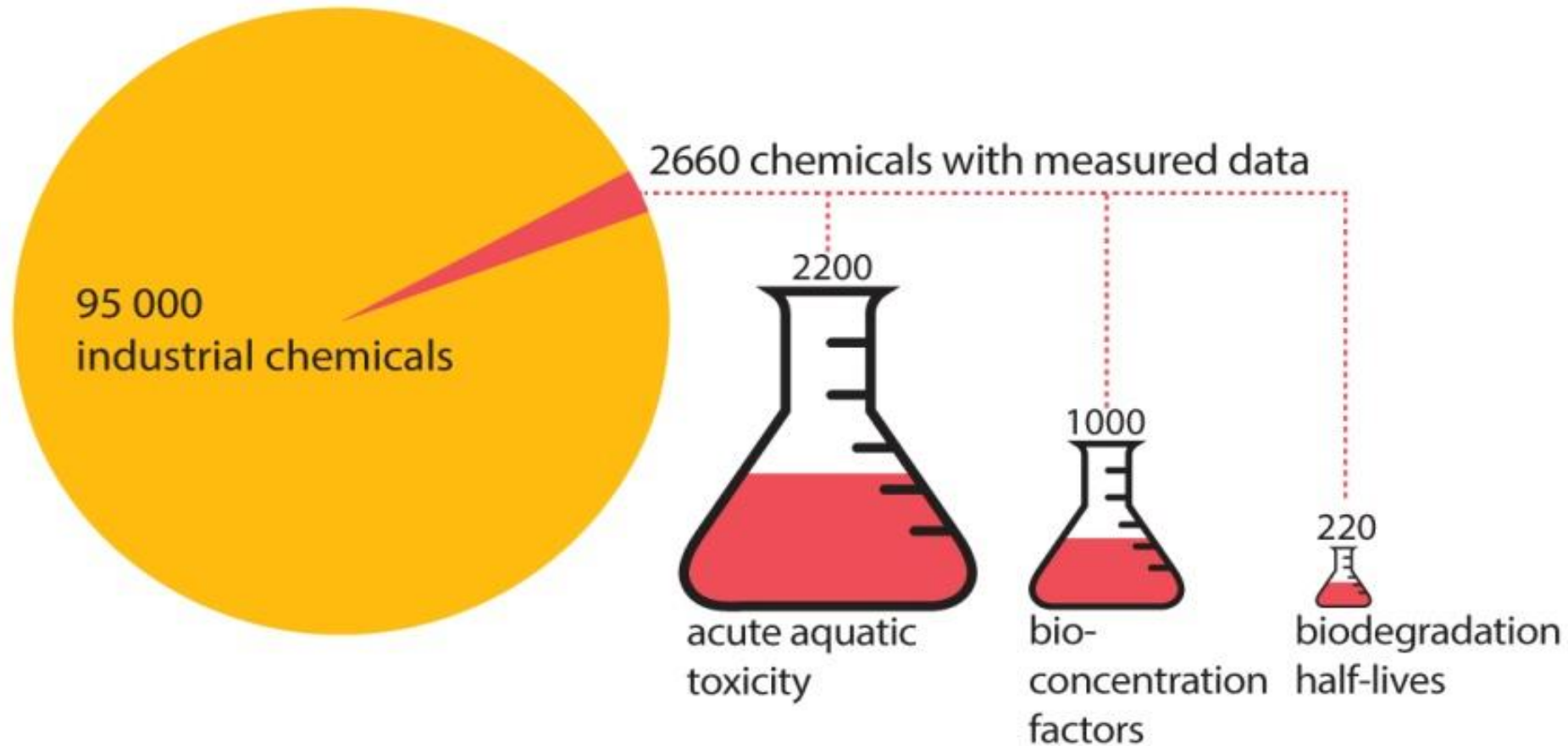


Floating plastic debris risk categories

Lowest Low Medium High Highest

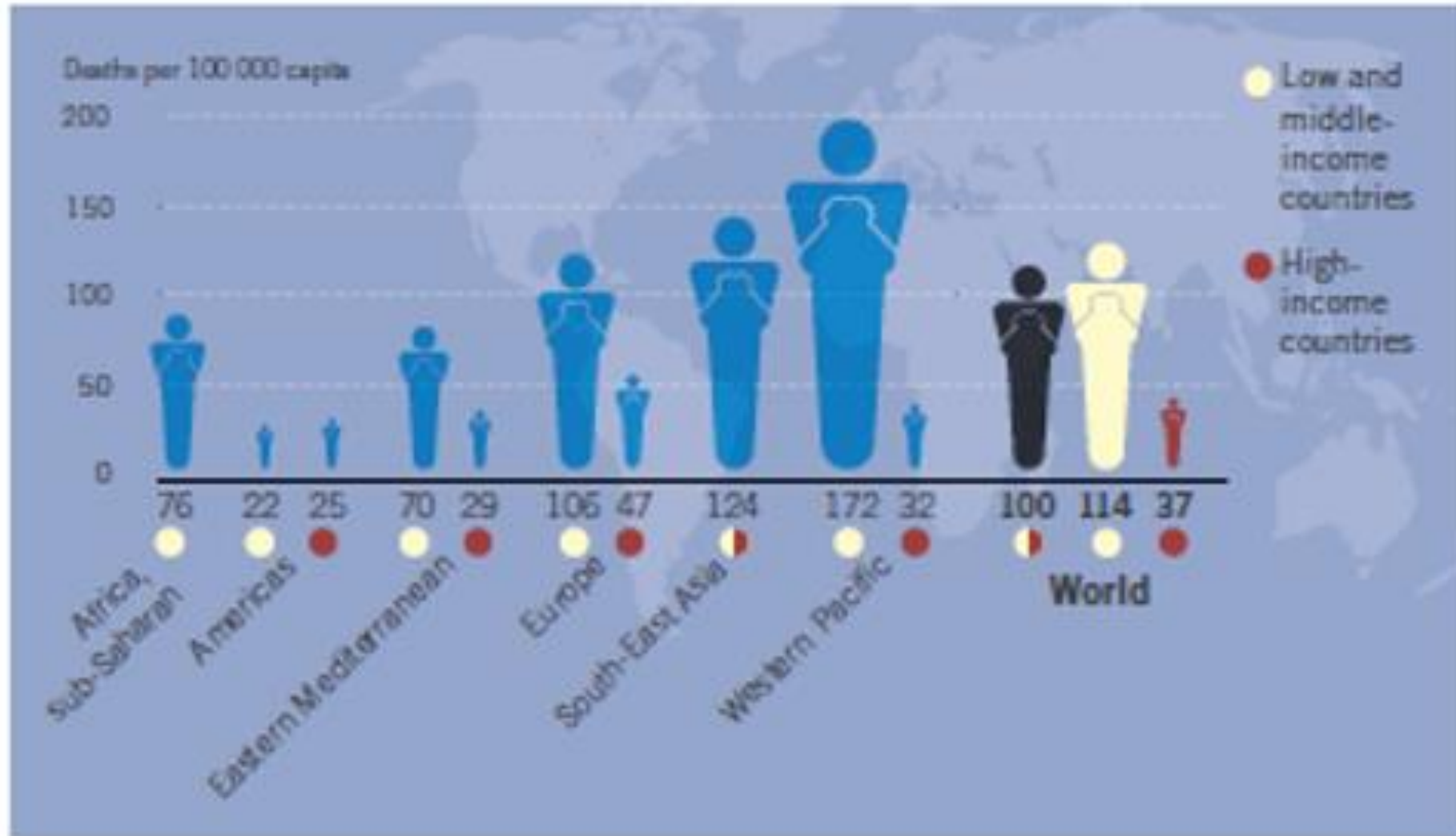
# Testing of chemicals

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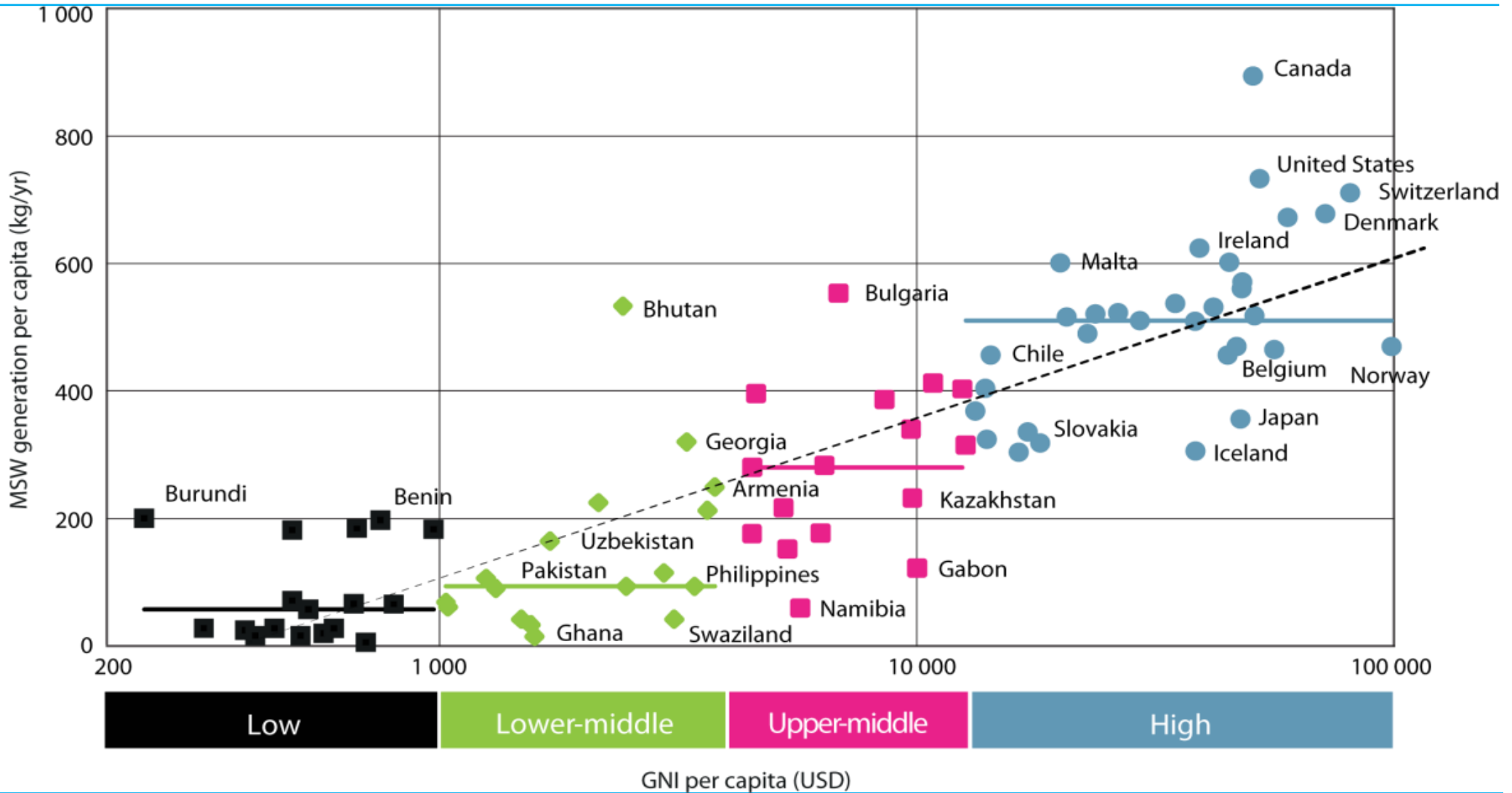




# Deaths per capita attributable to joint effects of household and ambient air pollution in 2012, by region

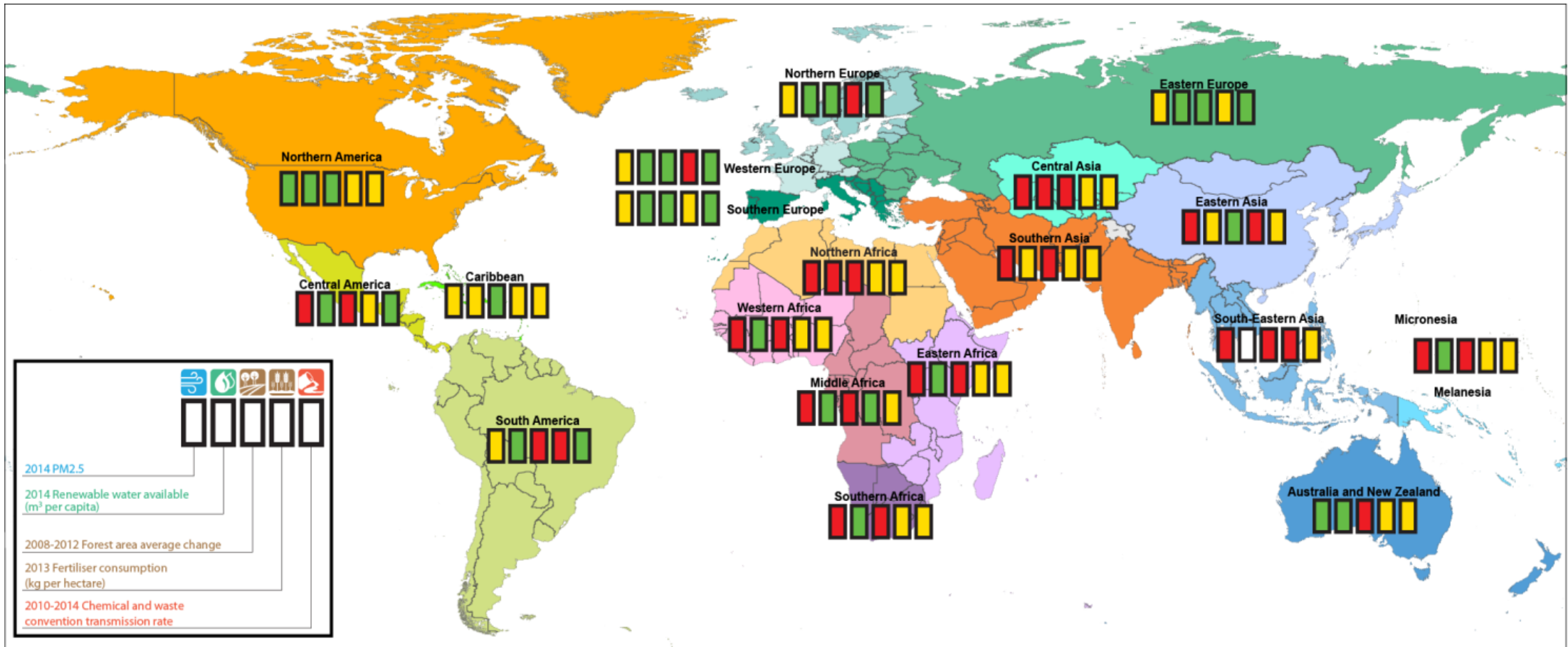


# Waste generation by income level



# Selected pollution indicators by UN sub region

- Based on selected indicators complementing a review of pollution data emanating from the GEO-6 Regional Assessments.



# Pollution impacts (1/2)

## AIR POLLUTION

- 6,5 mn die due to poor air quality; 4.3 mn die due to household air pollution
- Lower respiratory infections: 51 mn years lost or lived with disability due to household or ambient air pollution
- Chronic obstructive pulmonary disease: 32 mn years life lost or lived with disability because of household air pollution and workers' exposure

**Global costs: \$5322 bn: 7.2% GDP**

## WATER POLLUTION

- 58 % of diarrheal disease due to lack of access to clean water; sanitation
- 57 mn years life lost or lived with disability due to poor water, sanitation, hygiene

**Global Cost: \$ 306 bn; 0.4%GDP**

## MARINE AND COASTAL POLLUTION

- 3.5 Bn people depend on oceans for source of food which are used as waste and waste water dumps
- Close to 500 'Dead zones', regions that have too little oxygen to support marine organisms, including commercial species
- Plastics (75% of marine litter) carry persistent bio accumulative and toxic substances

# Pollution impacts (2/2)

## LAND POLLUTION

- Open waste dumps and burning affect lives, health and livelihoods and affect soil chemistry and nutrition
- Health impacts of chronic exposure to use of pesticides for men, women and children
- Salinization of land and ground water affects health, especially of pregnant women and infants

## CHEMICALS

- Over 100,000 die annually from exposure to asbestos
- Lead in paint affects children's IQ
- Impacts of some chemicals such as endocrine disruptors, developmental neurotoxicants and exposure to pesticides and biodiversity are still to be fully assessed

**Global costs: \$ 480.4 bn; 0.4% GDP**

## WASTE

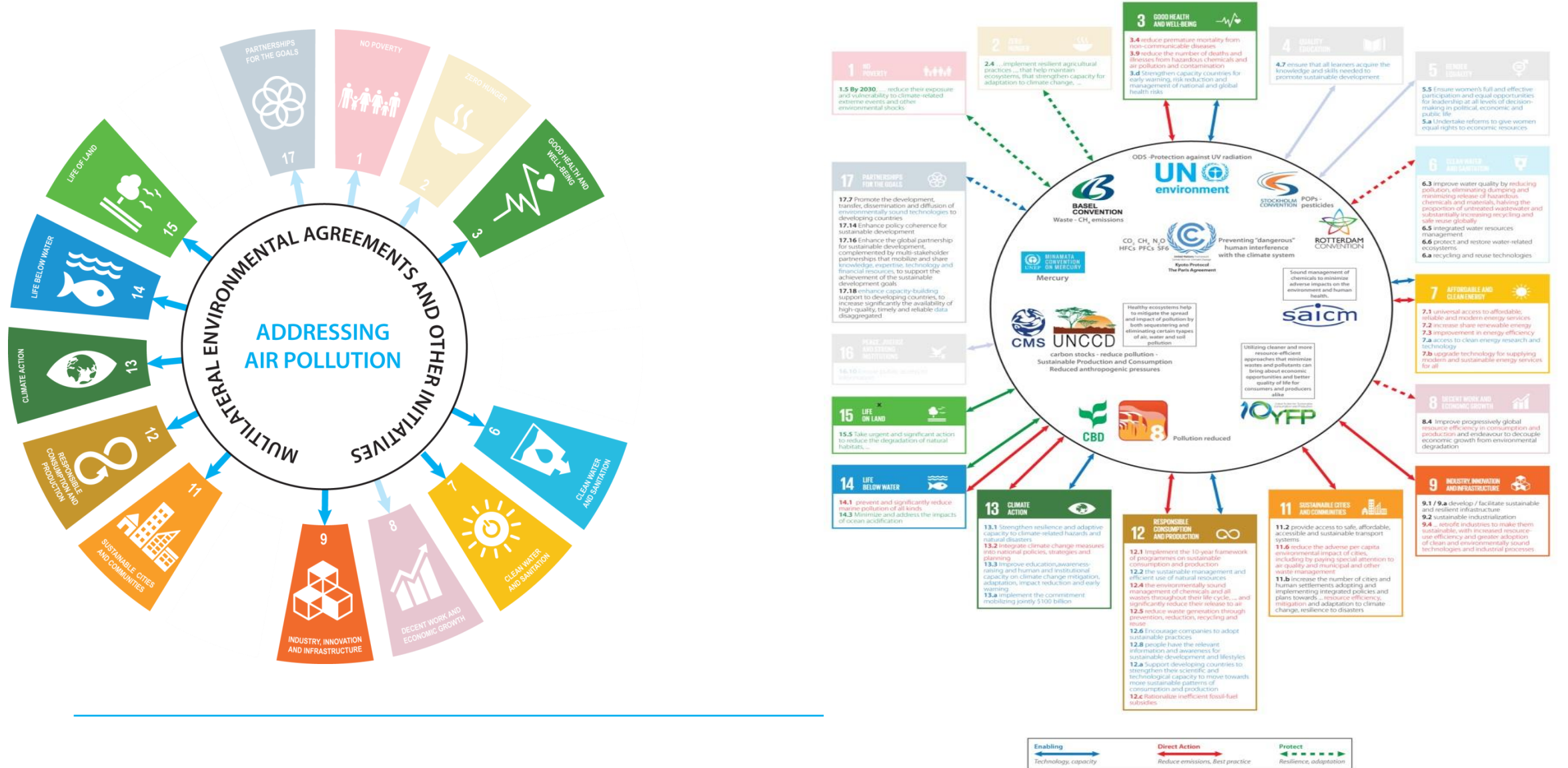
- 50 biggest active dump sites affect lives of 64 mn people: health, loss of lives and property when collapses occur;
- 2 billion people without access to solid waste management and 3 billion lack access to controlled waste disposal facilities

**Global Costs: \$216 bn; 0.3% GDP**

## Section 2: A pollution free planet: Agenda 2030 and Multilateral Environmental Agreements

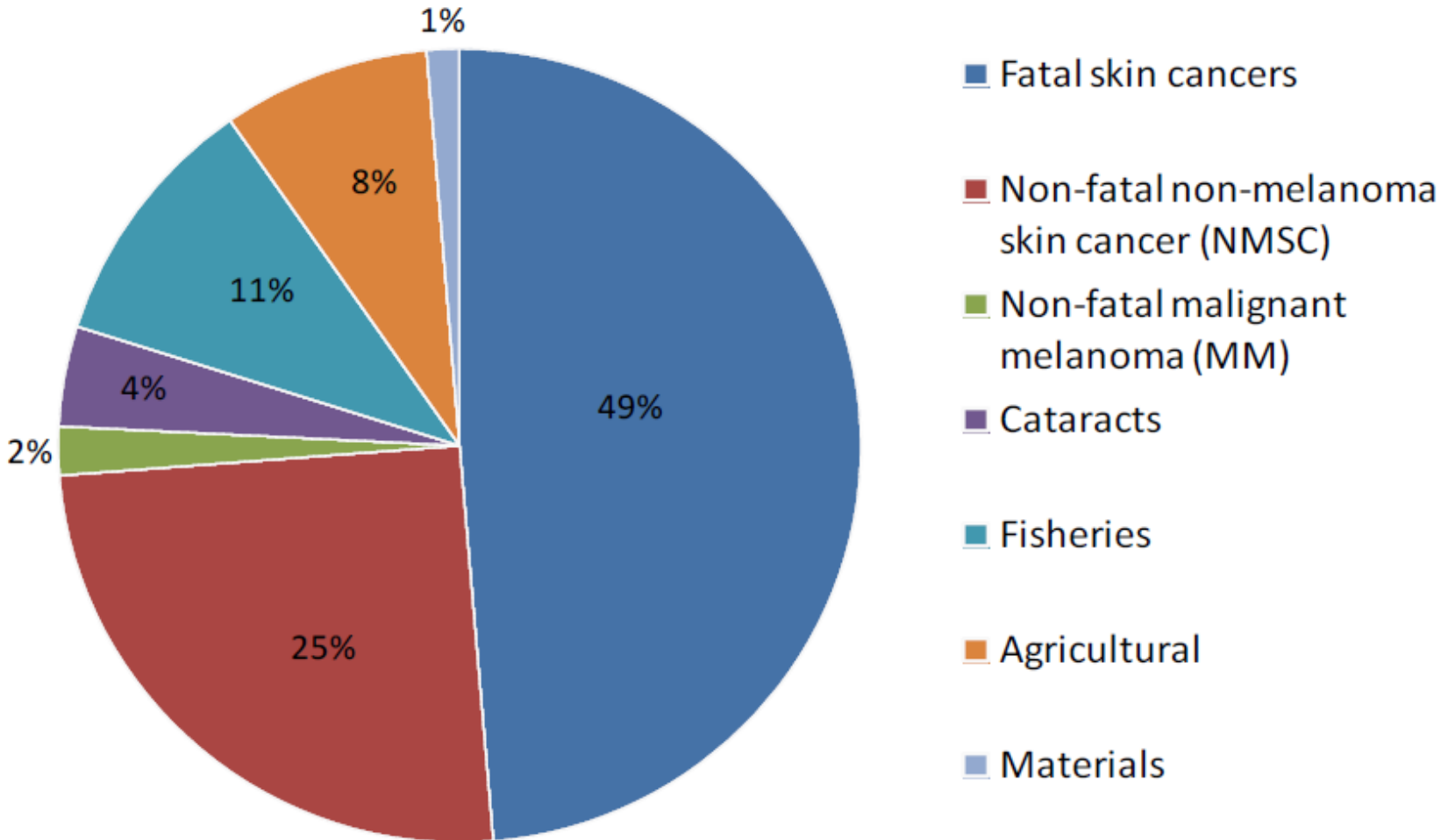
- Mapping of Sustainable Development Goals linkages ongoing per pollution theme and role of Environment Agreements
- Demonstrating how addressing pollution is contributing to achieving multiple Sustainable Development Goals and targets
- Highlighting multiple benefits of action

# Demonstrating how addressing air pollution through selected Multilateral Environmental Agreements and global initiatives is contributing to achieving multiple Sustainable Development Goals



# Some success stories: the Montreal Protocol on Substances that Deplete the Ozone Layer

Health benefits represent 80% of total economic benefit of the Montreal Protocol\*, estimated to be US\$1.8 trillion by 2060.

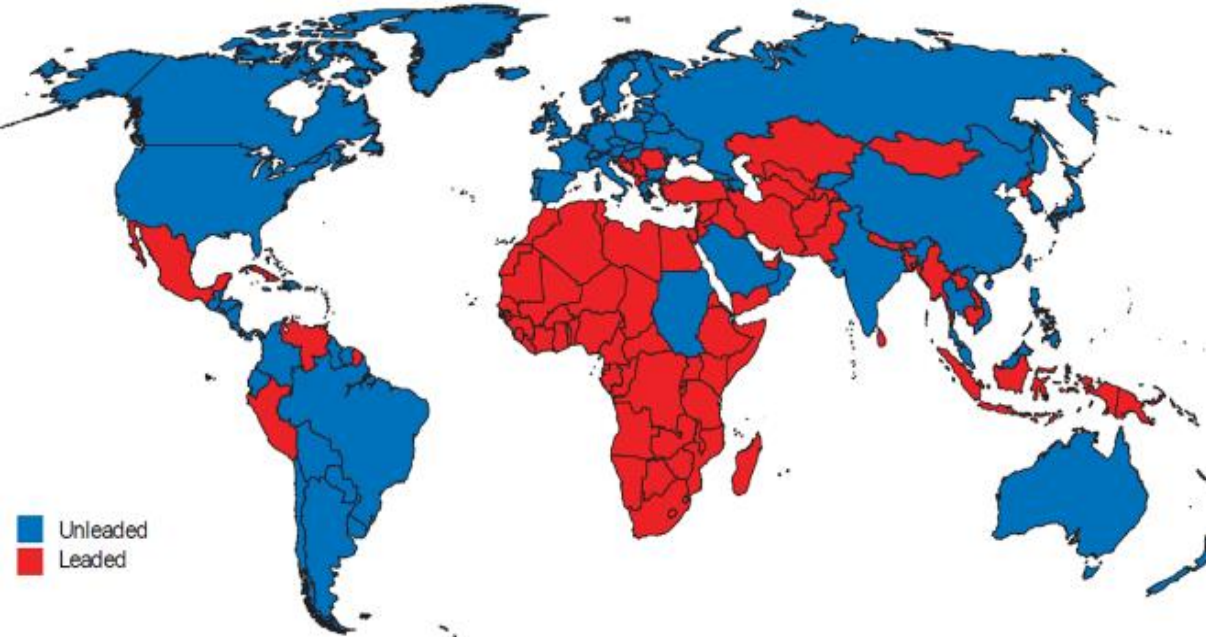




# Some Success stories: Lead in fuels



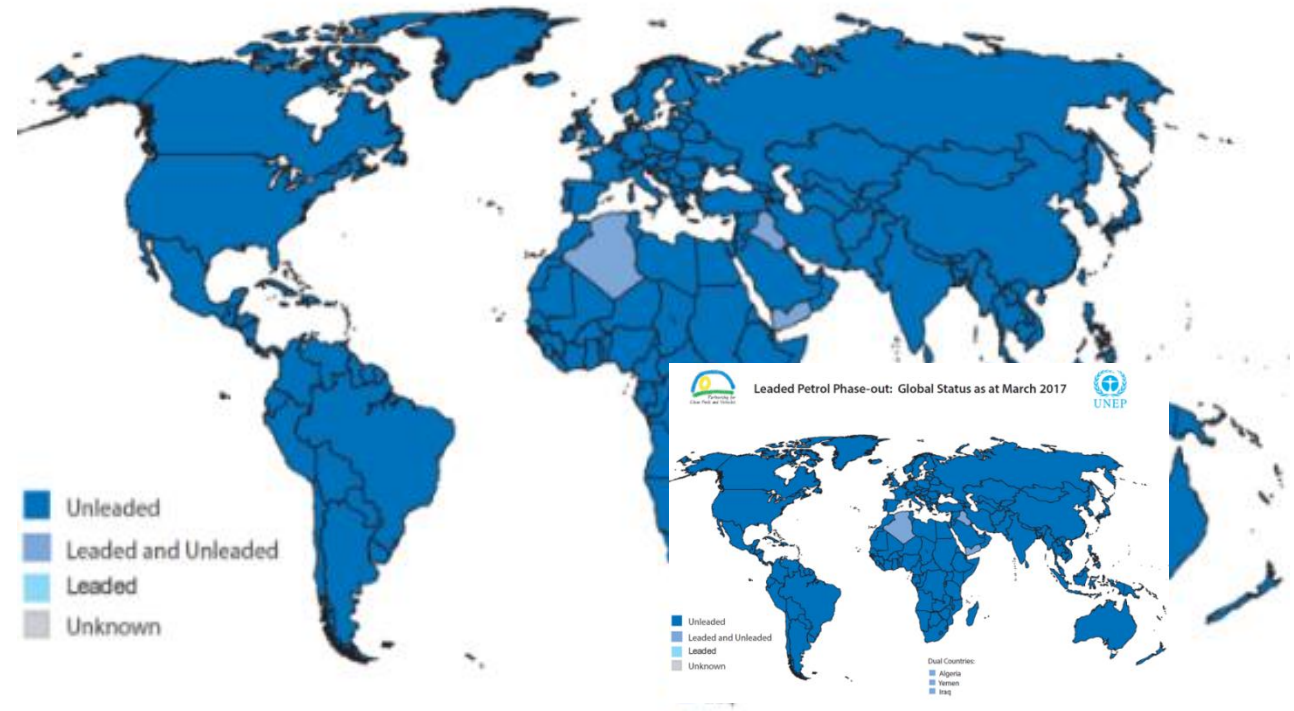
Leaded Petrol Phase-Out: Global Status








Status as of End 2002



Leaded Petrol Phase-out: Global Status as at March 2017



# Examples of multiple benefits of action

	Environmental Benefits	Health Benefits	Economic Benefits
 <p><b>Transport</b> Tight standards to reduce sulphur in fuels</p>	<p>Reduction in acid rain phenomena, thus lesser forest and crop damages, and lesser acidification of soils</p>	<p>Reduced incidence of diseases such as cardiovascular and respiratory, cancer and adverse reproductive outcomes</p>	<p>As a comparison, eliminating lead in gasoline on a global scale have been estimated at approximately 4% of global GDP.</p>
 <p><b>Agriculture</b> Integrated landscape management</p>	<p>Conservation of biodiversity and critical ecosystem services, hydropower generation, improved water quality and quantity</p>	<p>Reduced incidence of diseases associated with poor water quality (e.g. diarrhoea, etc.) and/or with poor personal hygiene</p>	<p>Reduced health costs from water related diseases. Reduced water and sanitation costs due to improved water shed management.</p>
 <p><b>Cities</b> Increase vegetation and green spaces</p>	<p>Improved air quality, reduced heat island impacts, lessened storm-water flooding, intercepted pollutants</p>	<p>Improved human resilience to extreme weather conditions; reduced levels of stress and mental health benefits; increased outdoor physical and recreational activities and thus reduced obesity</p>	<p>Increased property value, reduced air conditioning costs.</p>
 <p><b>Energy</b> Clean energy supply and energy efficiency</p>	<p>Improved air quality</p>	<p>Reduced air pollution related diseases (e.g. respiratory ones)</p>	<p>Doubling of the share of renewable energy by 2030 would bring a global 1.1% GDP increase and 24 million jobs.</p>
 <p><b>Sanitation</b> Provision of infrastructure</p>	<p>Improved water quality</p>	<p>Reduced morbidity and mortality from various diseases, in particular diarrhoeal diseases</p>	<p>US\$ 1 invested in clean water and sanitation provides an economic return of between US\$ 3 and US\$ 34, depending on the region.</p>

# Learning from past experiences

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- ✓ Strengthening the science policy- society- interface
- ✓ Complementing multilateral and regional agreements with more light-footed initiatives
- ✓ Engagement of diverse actors and stakeholders early on
- ✓ Engagement of business and industry in solutions
- ✓ Integrated innovations for transitions and social safety nets, jobs

The problem of pollution, however, is more complex than what can be resolved solely through improved and more coherent environmental governance

The phenomenon is closely connected with technology choices, production and consumption practice, industrial processes, pricing policies, behavioral choices and (absent) ecosystem valuation

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## Section 3: A Framework for a Transition to a Pollution Free Planet

- Analysing Gaps and Issues
- Defining Principles
- Identifying main Actions and Enablers
- Highlighting targeted interventions for pollution risk areas

# Why is pollution so pervasive?

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Sections 1 and 2 suggest the following:

- Important sectoral misalignments, behavioral choices, institutional and regulatory deficits, absence of information, missing markets and resources
  - Absence of property rights or enforceable rights on the environment, for example on oceans, atmosphere, on many open lands, result in them being treated as dumping grounds for waste
  - New and emerging chemicals are however rising; but not enough information is available on their impacts.
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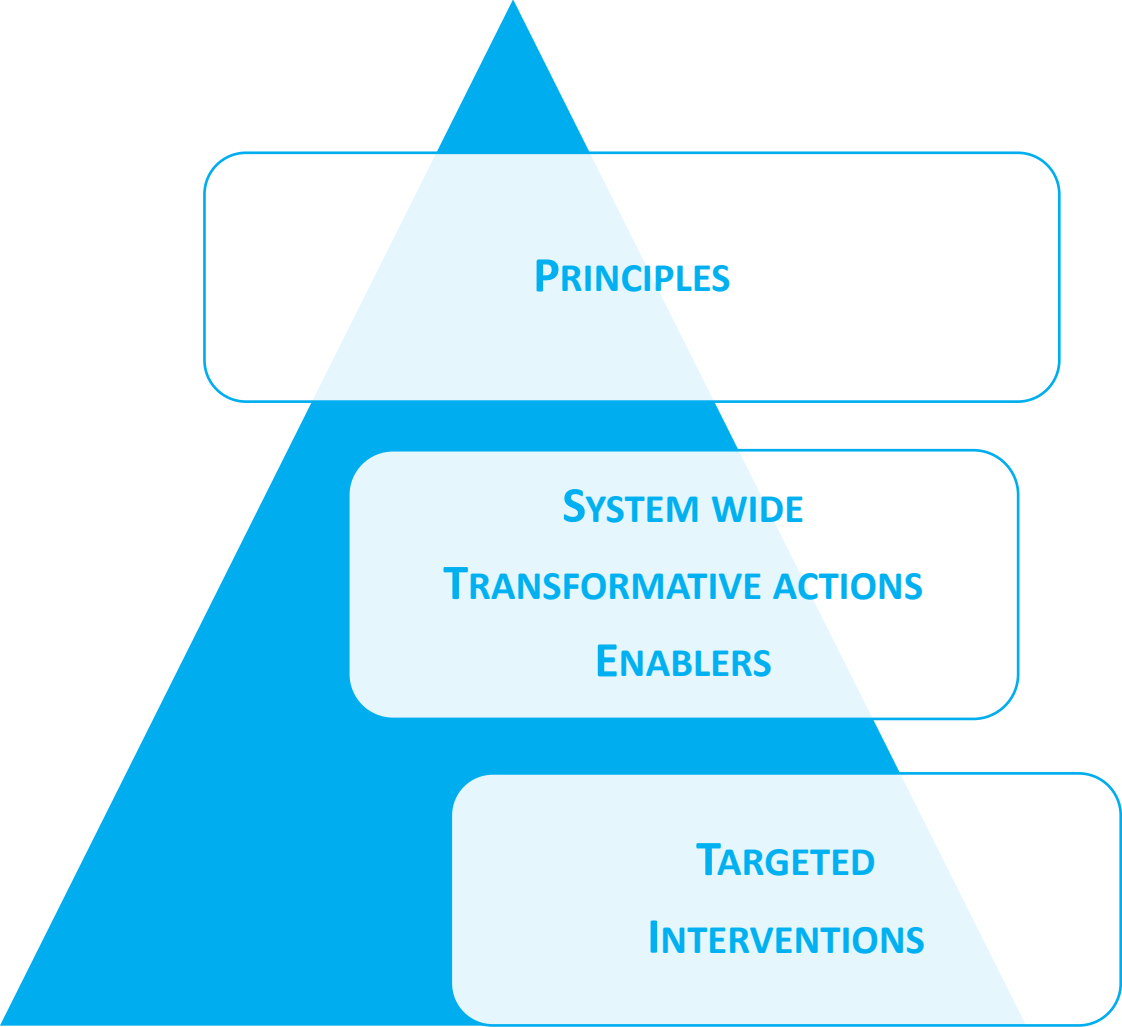
# Gaps

Issues/gaps have been identified which require attention which is both system wide and targeted to the pollution areas through transformative actions and enablers

1. Inadequate awareness & information on pollution sources, pathways, impacts, alternatives
2. Poor regulatory & institutional functioning
3. Absence of infrastructure to manage and control pollution
4. Lack of data on pollutants for improved choices, regulation and decisions
5. Limited finance & industry leadership on pollution matters
6. Knowledge and experience sharing on what has worked
7. Capacity, funding and technologies
8. Absence of internalization of pollution costs in decision making
9. Mispricing and invisibility of ecosystem values so their degradation goes unnoticed
10. Behavior of citizens and non-recognition that choices have pollution consequences

# A Framework for a Transition towards a Pollution Free Planet

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# Principles

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## Draw from the Rio Principles and the 2030 Agenda for Sustainable Development

- universal, integrative, and leaving no one behind

- 1. All sections of society have the responsibility to ensure a pollution free planet.** While national governments have a clear role in enabling and guiding actions including pollution management into development agendas, the state and local authorities, communities, businesses, multi stake holder partnerships and citizens have a clear responsibility to act
  - 2. A preventive approach is central given the multiple risks to human health and well-being and to ecosystem health.** The Precautionary Principle and the Polluter Pays Principle are key to guide change, as these ensure not just responsibility but stewardship by different societal actors
  - 3. Multiple benefits of action on pollution need to be recognized** for political leadership to prioritize action on pollution given many demands on scarce political and administrative resources and short time horizons in which to make the case. This will require a 'whole-of-government' and integrated approach
  - 4. Decision making needs to take into account multiple risks to health and ecosystems** of pollutants, reduce policy uncertainty, centre stage innovation and recognize economic opportunity
  - 5. Access to environmental information and data, education and public participation** are key to effective actions and environmental justice
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# Enablers and Transformative Actions

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## TRANSFORMATIVE ACTIONS

(TO SHIFT THE ECONOMY )

- Finance and Investments
- Innovations and Technology
- Production and Supply chains
- City level Actions: Sectoral integration to tackle pollution
- Sustainable Consumption practices

## ENABLERS

(TO CORRECT MARKET & POLICY FAILURES AND FACILITATE CHANGE)

- Evidence-Based Decision-Making
  - Enhanced Governance
  - Economic Instruments
  - Education for Change
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# Targeted Interventions for pollution risk areas

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Will be proposed based on

- What needs to be done on a priority basis in each area
  - What has worked in countries that have managed to address pollution
  - Expert advice
  - Feedback from regional consultations
  - Behavioral insights from previous interventions in the risk area
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Thank you

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