TALTransformers™
NURTURING SOCIAL INNOVATION MINDSET

14 LIFE BELOW WATER

Life Below Water

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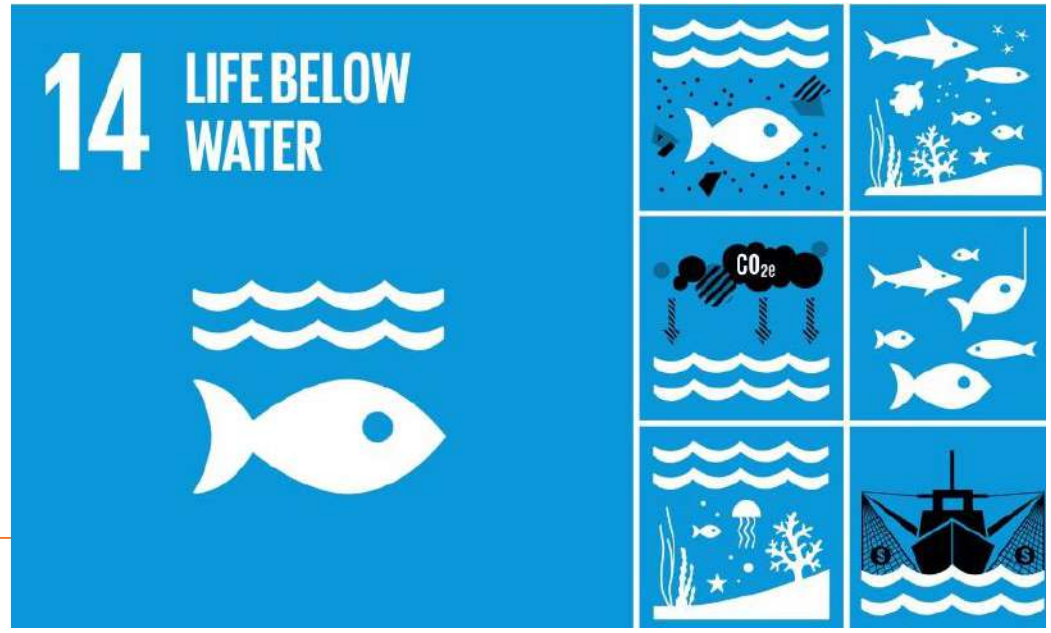
Conserve and sustainably use the oceans, seas and marine resources for sustainable development



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The ocean is the world's largest ecosystem. It continues to be endangered and is in a state of emergency because of rising acidification, eutrophication, declining fish stocks and mounting plastic pollution. The COVID-19 pandemic exacerbated the challenges as massive quantities of single-use plastics entered the world's waters as medical waste.

Despite some progress in SDG14 indicators, especially in expanding marine protected areas and combating illegal, unreported and unregulated fishing over the years, several destructive trends affecting ocean health are unabated. There is an urgent need for more concerted efforts and acceleration to achieve SDG14 goals. Given the oceans absorb almost 25% of CO2 emissions every year, we can effectively counter climate change impacts by ensuring the biodiversity and health of the ocean.

Facts and Figures

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Ocean and Climate Change:

- The ocean generates 50% of all the oxygen we need while absorbing close to 25% of all carbon dioxide emissions. This is why the ocean is not just 'the lungs of the planet' but also the largest 'carbon sink' providing a vital buffer against the impacts of climate change.
- Ocean habitats such as seagrasses and mangroves, along with their associated food webs, can absorb 4 times more carbon dioxide from the atmosphere than terrestrial forests.
- Mangroves, being one of the most carbon-rich ecosystems on the planet, store 1,000 tons of carbon per hectare on average. Plus, they support healthy fisheries, improve water quality, and provide coastal protection against floods and storms.
- Coral reefs which barely occupy 0.1% of the world's oceans support 25% of marine biodiversity and help over a billion people with coastal protection, fisheries, tourism, medicinal benefits, and more.
- As per latest estimates, marine protected areas cover 6.35% of the ocean, increasing almost 10 times since 2000s. Further expanding marine protected areas is critical to improving ocean health and protecting mangroves and coral reefs.

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- Ocean warming is on the rise with record-high levels of ocean heat each year. Currently, the ocean captures about 90% of the harmful global emissions.
- Excessive ocean warming has catastrophic consequences such as ice-melting, sea-level rise, marine heatwaves, and ocean acidification. This, in turn, impacts marine biodiversity and the lives and livelihoods of the coastal population.

Ocean Health & Pollution:

- Plastic pollution is causing major harm to marine biodiversity and coastal populations. Over 17 million metric tons of plastics, the most harmful marine litter, are clogging and choking the ocean. This figure is estimated to double or even triple by 2040.
- There was elevated coastal eutrophication globally in 2022 (above the 2000-2004 baseline) as per latest satellite images. There was a 23% increase in peak values of the indicator for 2020 and 2021 calendar year average, compared with the mean value for previous years.
- The Arabian Sea has been consistently witnessing high levels of eutrophication.
- The consequences of elevated coastal eutrophication are severe for marine ecosystem health, local communities, fisheries and tourism. Caused by increasing nutrient loading into coastal areas by agriculture, aquaculture and wastewater, eutrophication leads to oxygen depletion, harm marine life, contaminate seafood, and damage seagrass and coral reefs, among other impacts.
- Increasing absorption of the growing greenhouse gas emissions is causing increasing levels of ocean acidification.
- At present, the ocean's average pH is 8.1. This means that the ocean today is about 30% more acidic than in pre-industrial times.
- Increasing ocean acidification threatens marine life, weakens and destroys coral and shoreline defenses, degrades habitats, and endangers fisheries, aquaculture & tourism. It also reduces the ocean’s ability to absorb CO2 and to mitigate climate change.

Ocean and people:

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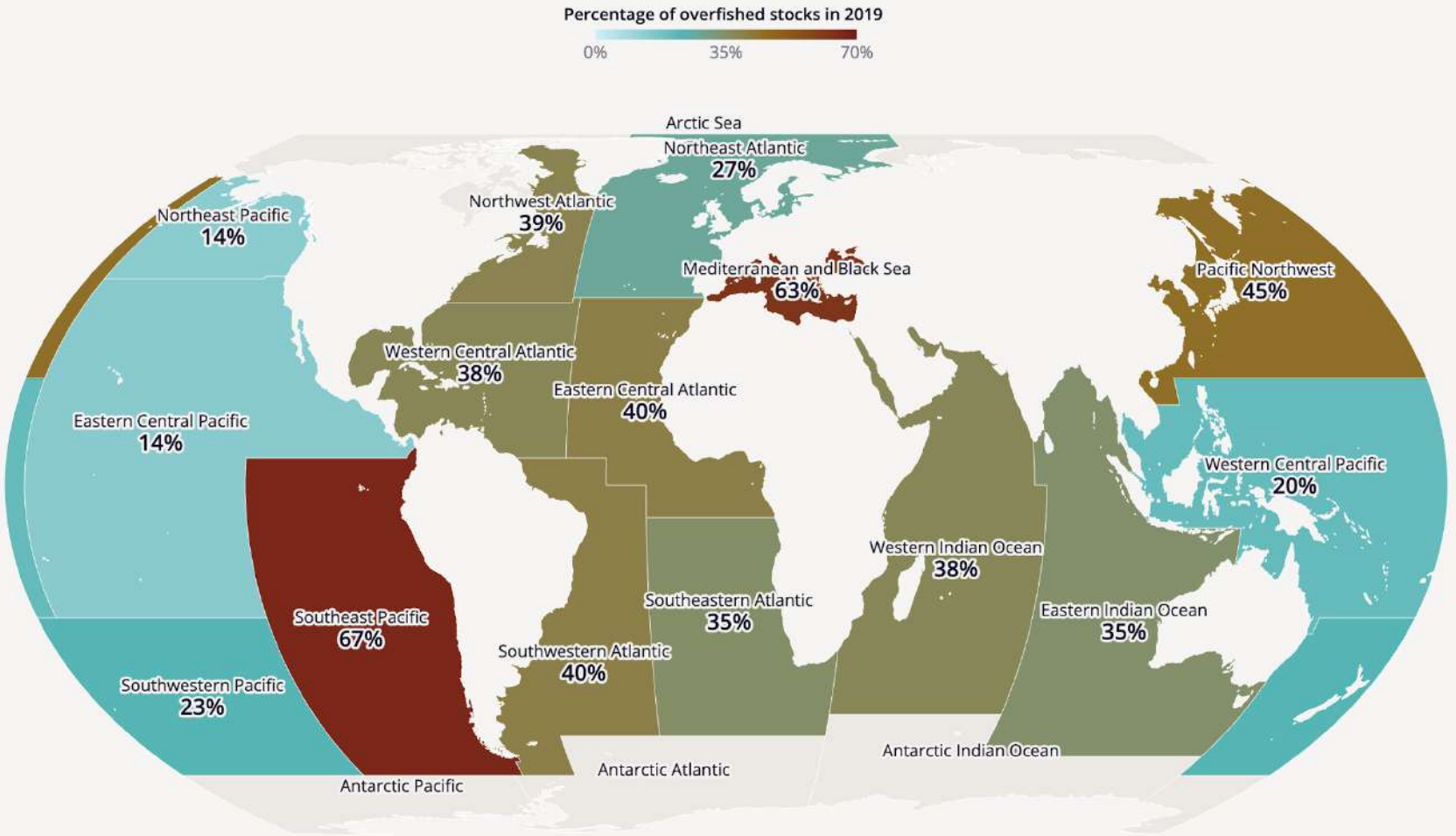
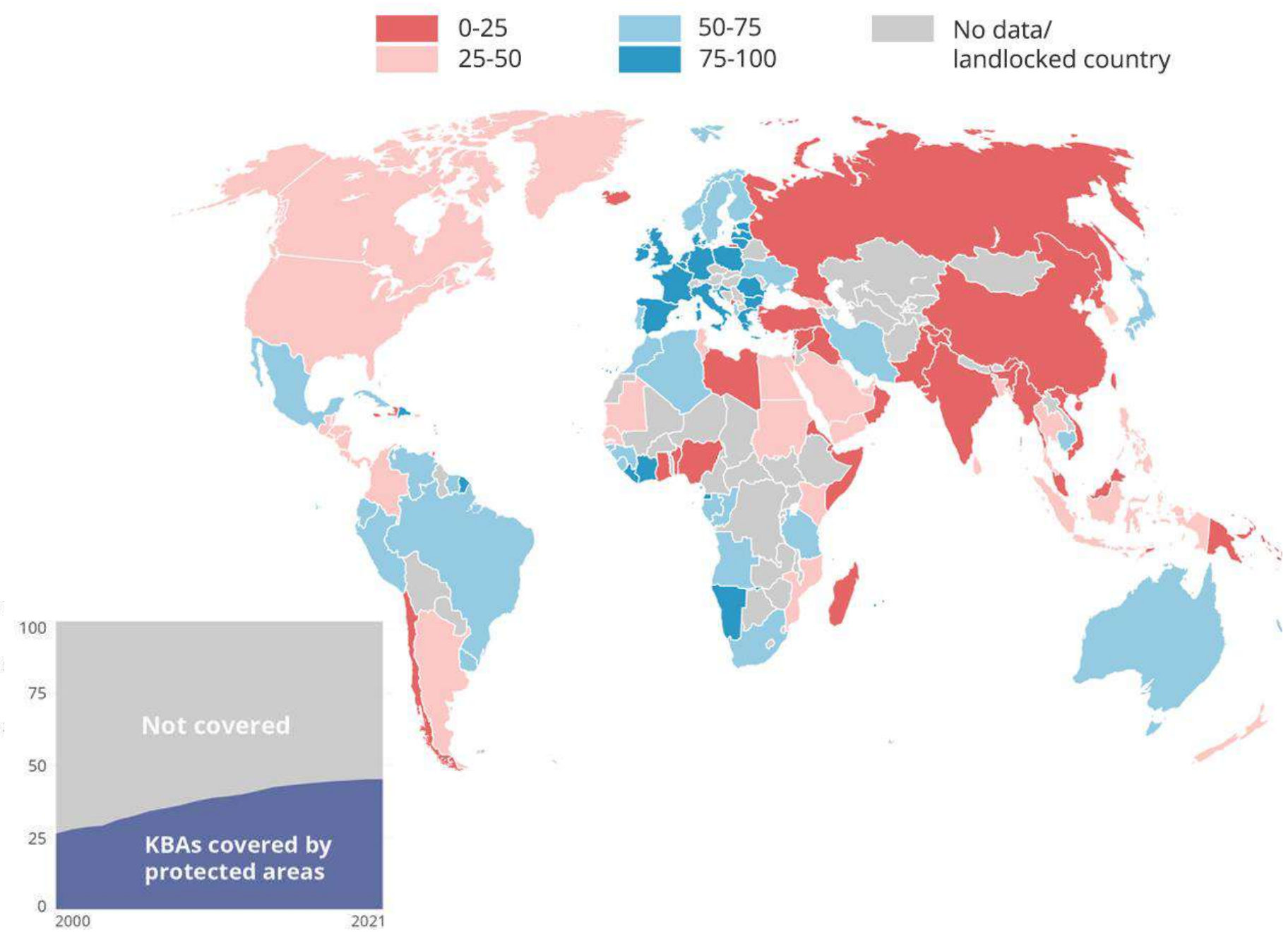
- Over three billion people depend on marine and coastal biodiversity for their livelihoods.
- Marine fisheries directly or indirectly employ over 200 million people.
- Fishery resources continue to be threatened by overfishing, pollution, poor management and other factors, including illegal fishing. 35.4% of global stocks were overfished in 2019, an increase of 1.2% since 2017.
- Approximately 60 million people or 90% of the total fishers' population are employed part or full-time in small-scale fisheries.
- Small-scale fisheries accounts for 40% of global catch and represent one of the food production sectors most vulnerable to climate change.
- In comparison, large-scale fisheries, which employs only 7.3 million people or about 10% of the workforce, accounts for 60% of the global catch.
- Sustainable fisheries is only 0.1% of the of global GDP as of 2019.
- Despite contributing to 2.5% of the world gross value added, on average, between 2013 to 2021, the ocean receives only 1.1% of national research budgets.

Overfishing is worse in some fishing areas

Share of assessed fish stocks that are overfished (by FAO major fishing area)



Data: FAO. 2022. The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome.



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In 2021, the world's average proportion of Marine Key Biodiversity Areas (KBAs) covered by protected areas (%) was 45 percent, but coverage varies widely among countries.

Average proportion of Marine Key Biodiversity Areas (KBAs) covered by protected areas by country, 2021 (map) and world level, 2000-2021 (bottom left)

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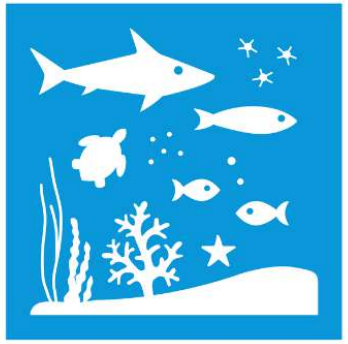
TARGETS

TARGET 14·1

REDUCE MARINE POLLUTION

TARGET 14·2

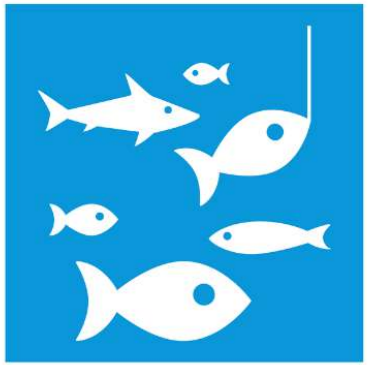


PROTECT AND RESTORE ECOSYSTEMS

TARGET 14·3

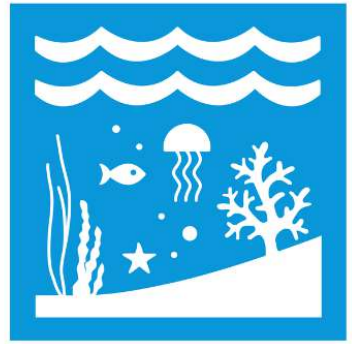
REDUCE OCEAN ACIDIFICATION

TARGET 14·4



SUSTAINABLE FISHING

TARGET 14·5

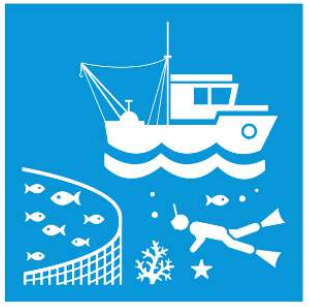


CONSERVE COASTAL AND MARINE AREAS

TARGET 14·6

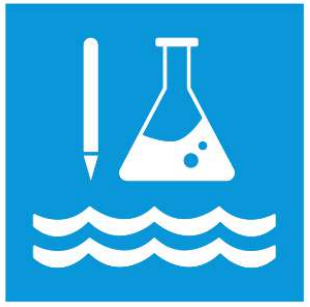
END SUBSIDIES CONTRIBUTING TO OVERFISHING

TARGET 14·7



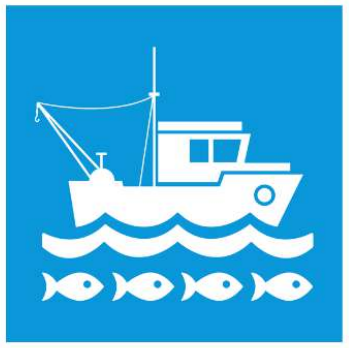
INCREASE THE ECONOMIC BENEFITS FROM SUSTAINABLE USE OF MARINE RESOURCES

TARGET 14·A



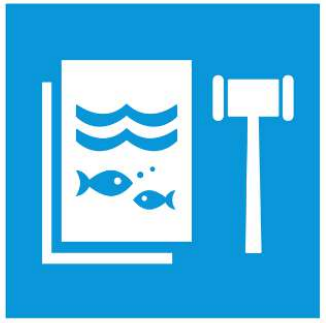
INCREASE SCIENTIFIC KNOWLEDGE, RESEARCH AND TECHNOLOGY FOR OCEAN HEALTH

TARGET 14·B



SUPPORT SMALL SCALE FISHERS

TARGET 14·C



IMPLEMENT AND ENFORCE INTERNATIONAL SEA LAW

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14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation

14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

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14.A Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

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

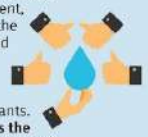
14.C Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want

INTERNATIONAL GENEVA FOR PROTECTING LIFE BELOW WATER

The International Organization for Standardization (ISO) develops standards to protect the sea and marine environment. They focus on oil spill response, port waste management, management and handling of shipboard garbage and others.

Negotiations on fisheries subsidies are current ongoing among the **World Trade Organization**'s Member starts. The proposals include the provisions to prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing and to eliminate subsidies that contribute to illegal, unreported and unregulated fishing.

When the polluted water (from land-based activities) reaches the marine environment, the pollution enters the marine ecosystem and food chain, which enables further accumulation and transfer of the pollutants. **UN Water coordinates the UN family's response to water related challenges.**



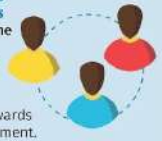
14 LIFE BELOW WATER

The Ecosystems and Biodiversity Programme of the **UN Development Program (UNDP) has supported the establishment of expanding marine protected area in over 35 countries around the world.** These projects impact 444 protected areas covering nearly 90 million hectares in marine and related ecosystems.

Over-exploitation of marine resources poses threatens the conservation of oceans and livelihoods of millions of people relying on coastal ecosystems for their income and food security. Through Standards Map, a web-based platform, **the International Trade Centre (ITC) helps businesses chart their path towards more sustainable trade in sectors such as aquaculture and fisheries.**

UN Environment and IUCN **have launched a Marine Protected Planet Interactive platform** for collecting and sharing information about ocean protection. Data collected covers over 25 million Km2.

To bridge the gap between data and users, **the Group on Earth Observations (GEO), coordinates the Blue Planet initiative,** a network of experts to support informed decision-making towards sustainable development.



The International Civil Defence Organization (ICDO) organizes training for civil defence-protection specialists to work in the event of emergency situations in

The UN Economic Commission for Europe (UNECE) introduced *The Fisheries Language for Universal Exchange (FLUX)*, which **provides access to up-to-date electronic data on fish stocks** to help preserving the costal and marine resources.

IMPACT INFOGRAPHIC BY THE PERCEPTION CHANGE PROJECT.
This infographic has been created with the contributions from PCP Partners Organizations participating in the PCP Impact Infographic series, and who reacted to PCP's request in crowd-sourcing information on the impact on the SDG 14:
The International Organization for Standardization (ISO), UN Water, the UN Economic Commission for Europe (UNECE), UN Environment, the Group on Earth Observations (GEO), the International Civil Defence Organization (ICDO), the International Trade Centre (ITC), the World Trade Organization (WTO).

Genève internationale
Peace, Rights and Well-Being

PERCEPTION CHANGE

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0.35% ↑
Increase in nitrogen fertilizer usage in coastal states

ONLY 2 OUT OF 9 MARITIME STATES FALL IN good CATEGORY
Coastal Water Quality Index

3.82% ↑
area under mangroves

7.8 -8.2
Median pH of coastal waters in shore zone

11%
of available potential area developed under coastal aquaculture

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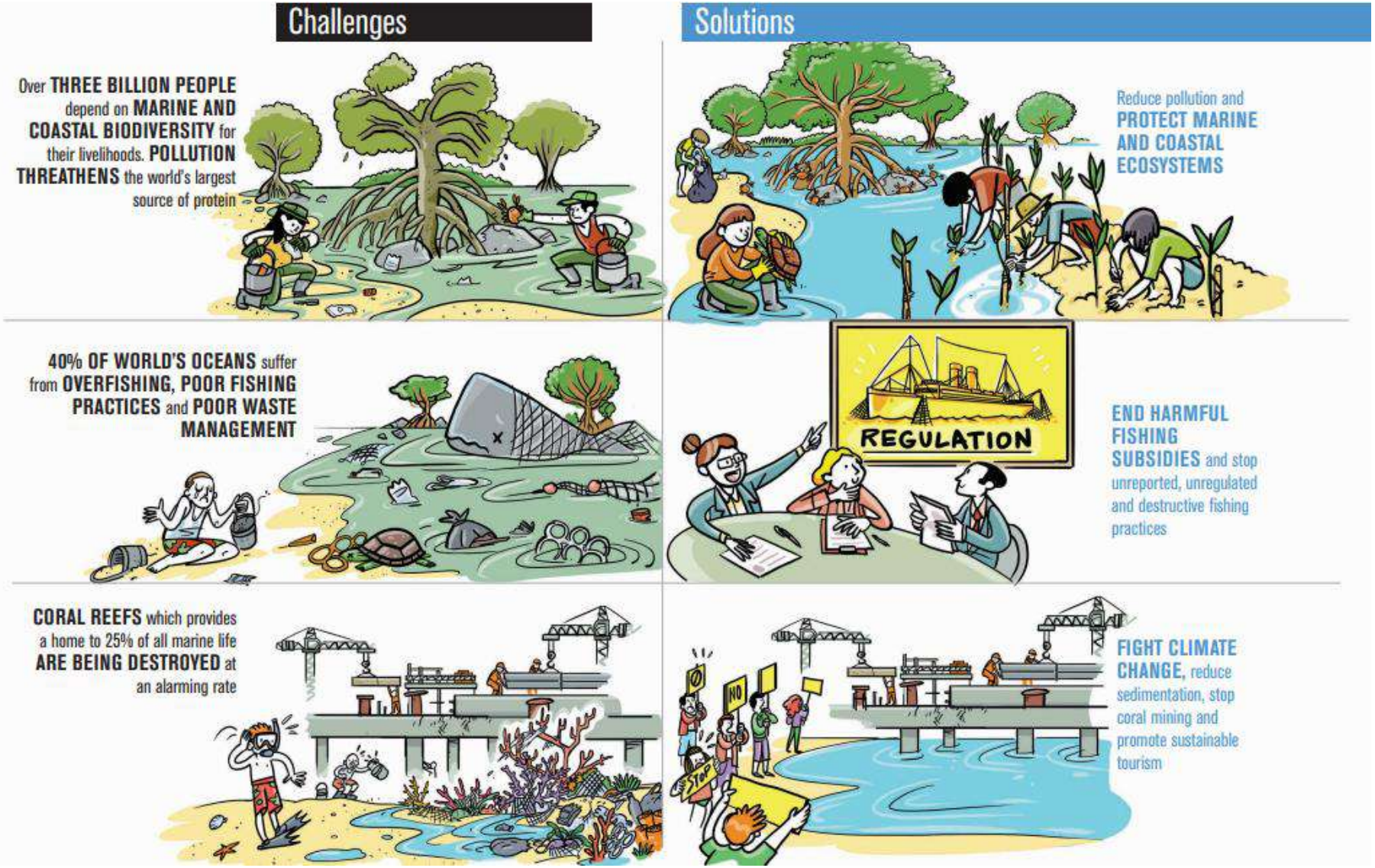

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DECADE OF ACTION

How do we achieve the **#GlobalGoals** by 2030?

- Mobilize everyone, everywhere
- Demand urgency and ambition
- Design new innovations and solutions

SUSTAINABLE DEVELOPMENT GOALS