UN Decade of Ocean Science for Sustainable Development (2021-2030)

Vision
The science we need for the ocean we want

Mission
Transformative ocean science solutions for sustainable development, connecting people and our ocean.
2030 Agenda for Sustainable Development and similar global processes (Paris agreement)
SDG interaction and policy coherence (Ocean-Climate as one example)

Oceans and Human Health research provides an avenue for transdisciplinary cooperation which is needed to achieve the Sustainable Development Goals.
Decade Outcomes

Describe the ‘ocean we want’ at the end of the Decade.

1. A clean ocean where sources of pollution are identified, reduced or removed.
2. A healthy and resilient ocean where marine ecosystems are understood and managed.
3. A productive ocean supporting sustainable food supply and a sustainable ocean economy.
4. A predicted ocean where society understands and can respond to changing ocean conditions.
5. A safe ocean where life and livelihoods are protected from ocean-related hazards.
6. An accessible ocean with open and equitable access to data, information, and technology and innovation.
7. An inspiring and engaging ocean where society understands and values the ocean in relation to human wellbeing and sustainable development.
From Science to Societal Benefit Value-Cycle

Societal Value Scientific Enterprise

Society

Science

OCEAN

PRESSURES RESILIENCE PROSPERITY

Observing Mapping

Governing Acting

Understanding Processing

Assessing Informing

Predicting Modeling

Science of complex systems

Engaging Acting

Assessing Informing

Predicting Modeling

Observing Mapping

Under standing Processing
10 Ocean Decade Challenges

1. Understand and map land and sea-based sources of pollutants and contaminants and their potential impacts on human health and ocean ecosystems, and develop solutions to mitigate or remove them.

2. Understand the effects of multiple stressors on ocean ecosystems, and develop solutions to protect, monitor, manage and restore ecosystems and their biodiversity under changing environmental conditions, including climate.

3. Generate knowledge, support innovation, and develop solutions to optimise the role of the ocean to contribute to sustainably feeding the world’s population under changing environmental and social conditions.

4. Generate knowledge, support innovation, and develop solutions to contribute to equitable and sustainable development of the ocean economy under changing environmental and social conditions.
5. Enhance understanding of the **ocean-climate nexus** and use this **understanding** to generate solutions to mitigate, adapt and build resilience to the effects of climate change, and to improve services including improved predictions and forecasts for weather, climate, and the ocean.

6. Expand **multi-hazard warning systems** for all biological, geophysical, and weather **and** climate related ocean hazards, and mainstream community preparedness and resilience.

7. Ensure a sustainable **ocean observing system** that delivers timely data and **information** accessible to all users on the state of the ocean across all ocean basins.

8. Develop a comprehensive **digital representation of the ocean**, including a dynamic ocean map, through multi-stakeholder collaboration that provides free and open access to explore, discover, and visualize past, current, and future ocean conditions.
9. Ensure comprehensive **capacity development and equitable access to data, information, knowledge and technology** across all aspects of ocean science and for all stakeholders regardless of geography, gender, culture, or age.

10. Ensure that the multiple values of the ocean for human wellbeing, culture, and **sustainable** development are recognised and widely understood, and **identify and overcome barriers to the behaviour change** that is required for a step change in humanity’s relationship with the ocean.
Decade Action Framework

AGENDA 2030 & REGIONAL AND GLOBAL POLICY FRAMEWORKS

DECADE OUTCOMES
The desired characteristics of the ocean at the end of the Decade.

OCEAN DECADE CHALLENGES
The most immediate and pressing needs of the Decade. Challenges may evolve throughout the Decade and new Challenges will be added. Each Challenge contributes to one or more Decade outcomes.

DECADE OBJECTIVES
The steps in the process from the ocean we have to the ocean we want. Objectives are relevant to all Challenges. Prioritisation and translation of objectives into Actions will vary depending on context.

DECADE ACTIONS
The tangible initiatives and endeavours that will be implemented by a wide range of Decade stakeholders to fulfil the objectives and thus achieve the Challenges.
Stakeholder Engagement

Global Stakeholder Forum: actively managed communities of practice that will collaborate online and in-person.
Decade Action Hierarchy

Tangible initiatives that will be implemented by a wide range of Decade stakeholders.

Decade programme
- Global or regional in scale
- Fulfils one or more of the Decade objectives.
- Long-term (multi-year), interdisciplinary and typically multi-national.
- Includes component projects, and enabling activities.

Decade Project
- Discrete and focused undertaking of a shorter duration.
- Will typically contribute to an identified Decade programme

Decade Activity
- In support of an outcome, objective, programme, or project.
- Typically a one-off standalone activity
- Can form part of a programme or project or can relate directly to a Decade objective.

Decade Contribution
- Supports the Decade through provision of a necessary resource
- Can be either for costs related to the implementation of a Decade Action or for coordination costs.
Where we are and where we would like to be

**Where we are**

- Science largely competent for problem *diagnostic*
- *Observing system for climate and emerging data service*
- Major knowledge gaps, weak ocean literacy
- Funding base mostly in research mode
- Hugely uneven capacity, especially developing countries/IDS

**where we would like to be**

- Science providing *solutions* and motivation for action
- *Adequate ocean data and information system*
- Ocean literate society and well-informed decisions
- Clear value chain leading to resourcing and commitment
- CD/ transfer of technology: no one remains behind
UN Decade of Ocean Science for Sustainable Development (2021-2030)

Vision
The science we need for the ocean we want

***

Mission
Transformative ocean science solutions for sustainable development, connecting people and our ocean.