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WCRP Working in partnership with others

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IOC Programmatic elements of relevance

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1. **Influencing observations of the ocean and cryosphere**
2. **Partnering with active research networks**
3. **Contributing to scientific assessments**
4. **Collaborating on expanding and sharing capacity**

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1. Influencing what observations are needed

GOA-ON
Global Ocean Acidification Observing Network

GCOS

Influencing global observing systems

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GOA-ON Global Ocean Acidification Observing Network

Three goals:

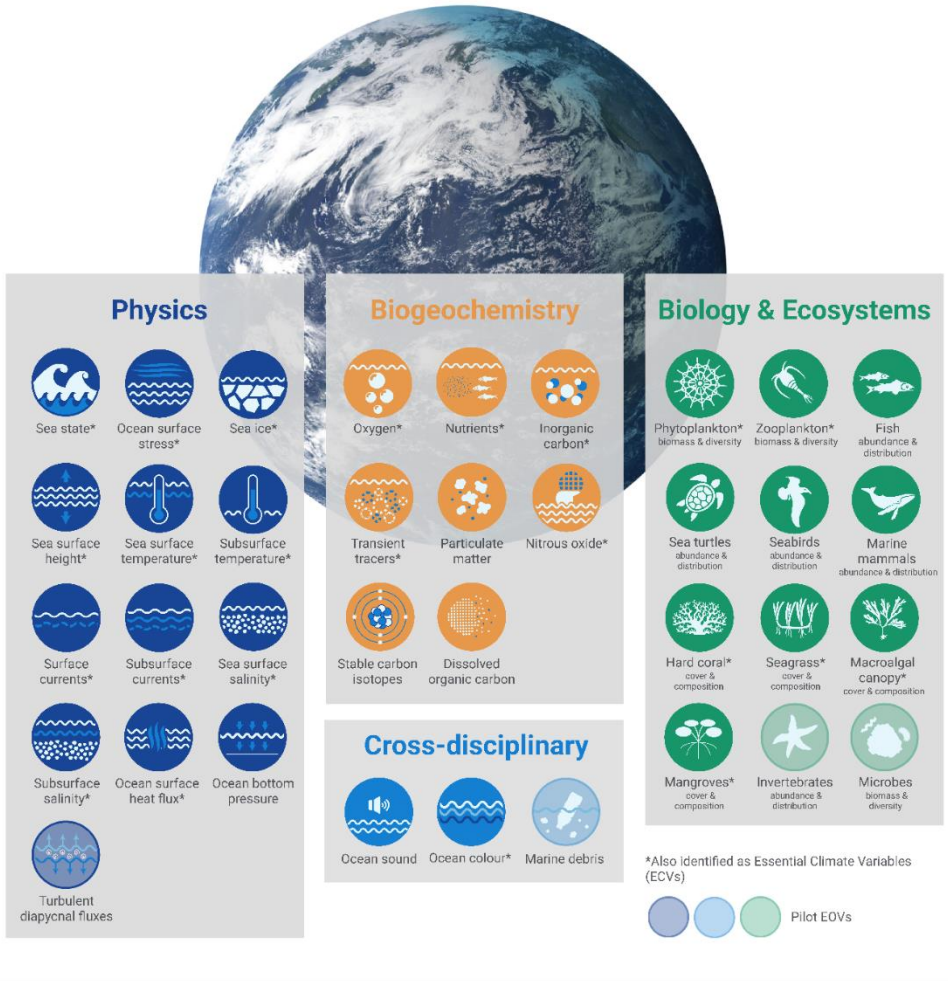
1. to improve our understanding of global OA conditions;
2. to improve our understanding of ecosystem response to OA; and
3. to acquire and exchange data and knowledge necessary to optimize modelling for OA and its impacts.

Target

14.3

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

Influencing global observing systems



Specifying EOVs

General info: sub-variables, corresponding Essential variables, supporting variables…

Requirements setting: GOOS Applications, Societal Drivers, Pressures, Scientific Questions, Phenomena (process, event or property to measure)

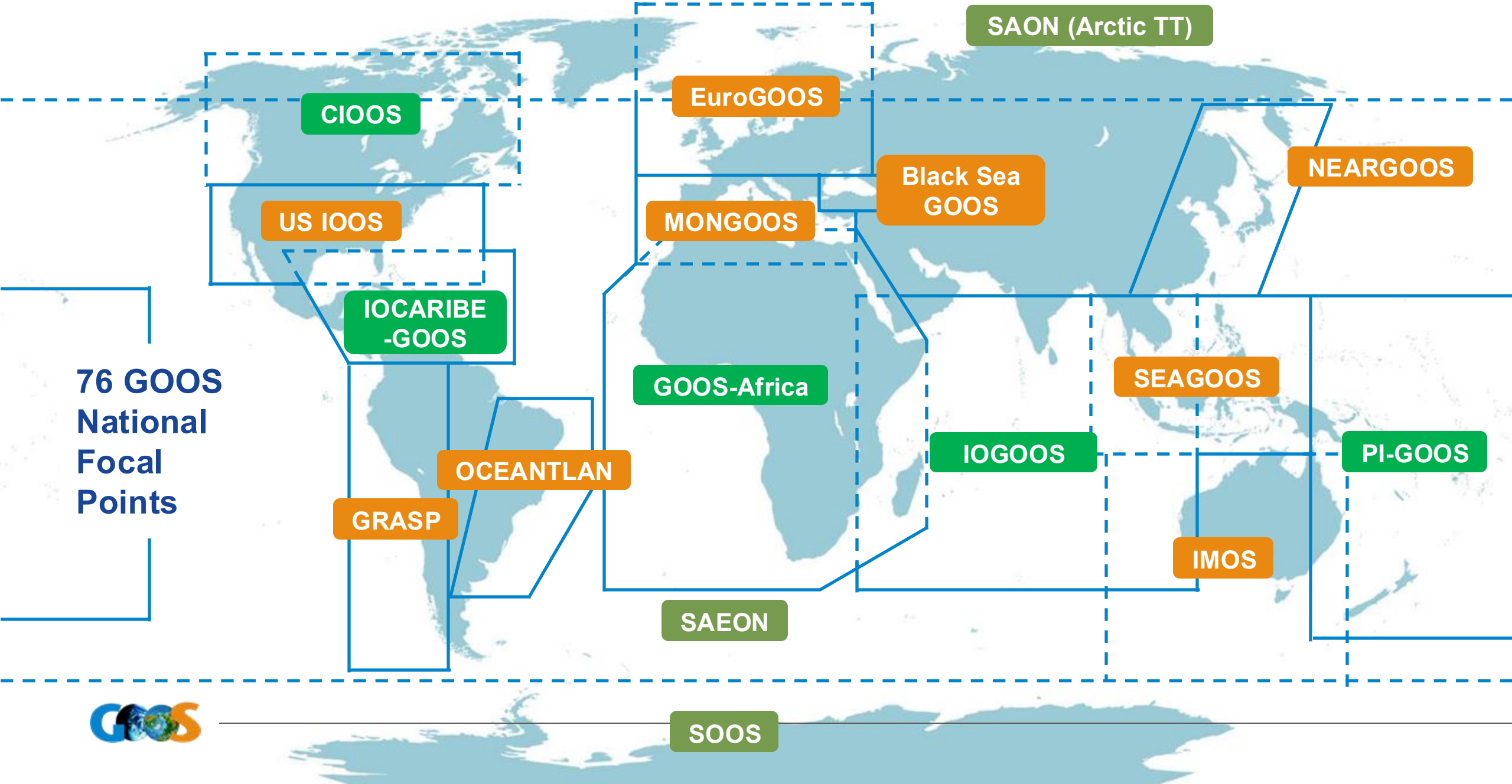
Observation requirements Sub-variables: temporal/spatial resolution, uncertainty, timeliness.

Observing elements: Approach/platform, readiness level coordinating network(s), coverage

Data and information access: Approach/platform, coordination, repositories, products

References: SOP and BP, background information, Integrated EOV products (e.g. Atlas)

Regional & National Alliances



76 GOOS National Focal Points

Influencing global observing systems

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Defining and responding to observing system needs

Standards and Best Practices

Data Management

Metrics
Environmental Stewardship

Capacity Development

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2. Active research networks

GO$_2$NE
Global Ocean Oxygen NEtwork

INTERNATIONAL PARTNERSHIP FOR BLUE CARBON

Active research networks

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GO$_2$NE
Global Ocean Oxygen NEtwork

UNESCO-IOC expert working group and network of ocean oxygen professionals established in 2016 to provide a global and multidisciplinary outlook on ocean deoxygenation

Activities include:

- Monthly online seminar series
- Summer school (in collaboration with GOA-ON)
- coordinating annual GOOD - GO$_2$NE workshops
- Leading development of Global Ocean Oxygen Database and Atlas (GO$_2$DAT)

Active research networks

INTERNATIONAL PARTNERSHIP FOR BLUE CARBON

HIGH LEVEL AMBITION GROUP ON BLUE CARBON

Was launched at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP21) in Paris in 2015 by 9 founding Partners and has now grown to over 60 partners.

Aims to:

- better connect the efforts of governments, research organisations and non-government organisations.
- build on the significant initiatives already under way
- Inform improved policies to conserve, protect and restore
- Develop tools to assist the above – e.g., blue carbon finance toolbox

Active research networks

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Integrated Ocean Carbon Research- IOC-R

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IMBeR Integrated Marine Biosphere Research

surface ocean solas lower atmosphere study

CLIVAR

GLOBAL CARBON project

UNESCO-IOC expert working group convened in 2018 to review the state of play of the science, identify emerging issues, knowledge gaps and/or areas to focus on considering existing activities.

Aims to fill knowledge gaps in relation to ocean carbon by designing and promoting the implementation of a new generation of integrated ocean carbon research

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3. Scientific assessments

GESAMP
Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

Scientific assessments

GESAMP
Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

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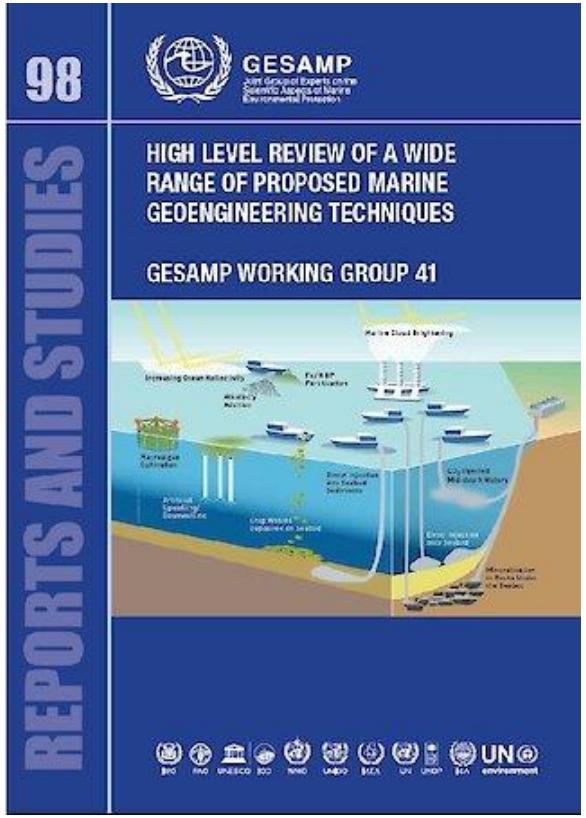
WG 41:Ocean Interventions for Climate Change Mitigation

Tasks:

1. undertaking a high-level review of mCDR techniques with a focus on their efficacy, practicality, side-effects, knowledge gaps, verification and potential environmental and socio-economic impacts.

2. developing a multi-disciplinary framework for a holistic assessment of mCDR approaches for use by regulators, policy-makers, funders using a systems approach



Scientific assessments

GESAMP
Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

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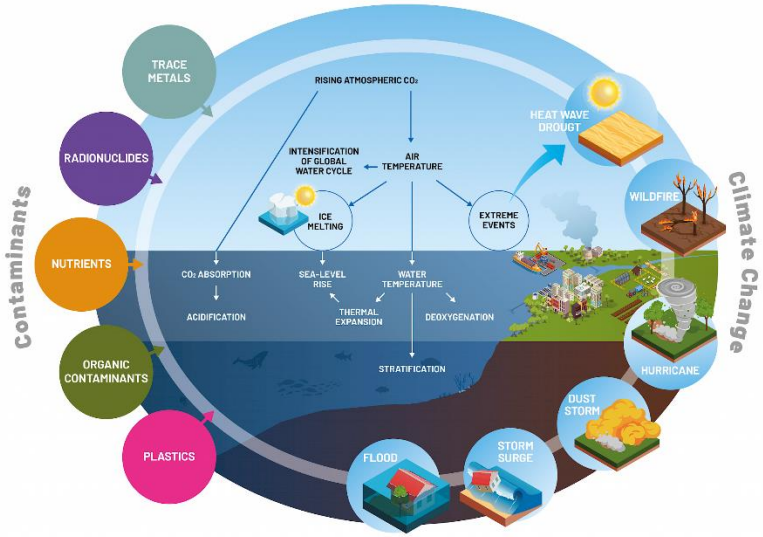
WG 45: Climate Change and Greenhouse Gas Related Impacts on Contaminants in the Ocean

Tasks:

1. review existing research on the effects of climate change (physics & chemistry) on the speciation, toxicity, bioaccumulation, mobilization, and transport of pollutants identifying knowledge gaps.

2. document the central role and global importance of climate change on the coastal and marine ecosystems' functions and services.

3. Identify future research directions on the effect of climate changes in the speciation, cycling, toxicity, transport, mobility, and bioavailability of diverse pollutants.



Scientific assessments

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Information about the state of the ocean, in support of identifying policy and management priorities and focus areas for research.

Covers physical, chemical and biological parameters describing the state of the ocean.

Summarizes threats posed to the ocean.

Showcases the access to observation infrastructure, data and information.

Provides new insights on ocean literacy, indigenous and traditional knowledge.

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4. Expanding and sharing capacity

Expanding capacity

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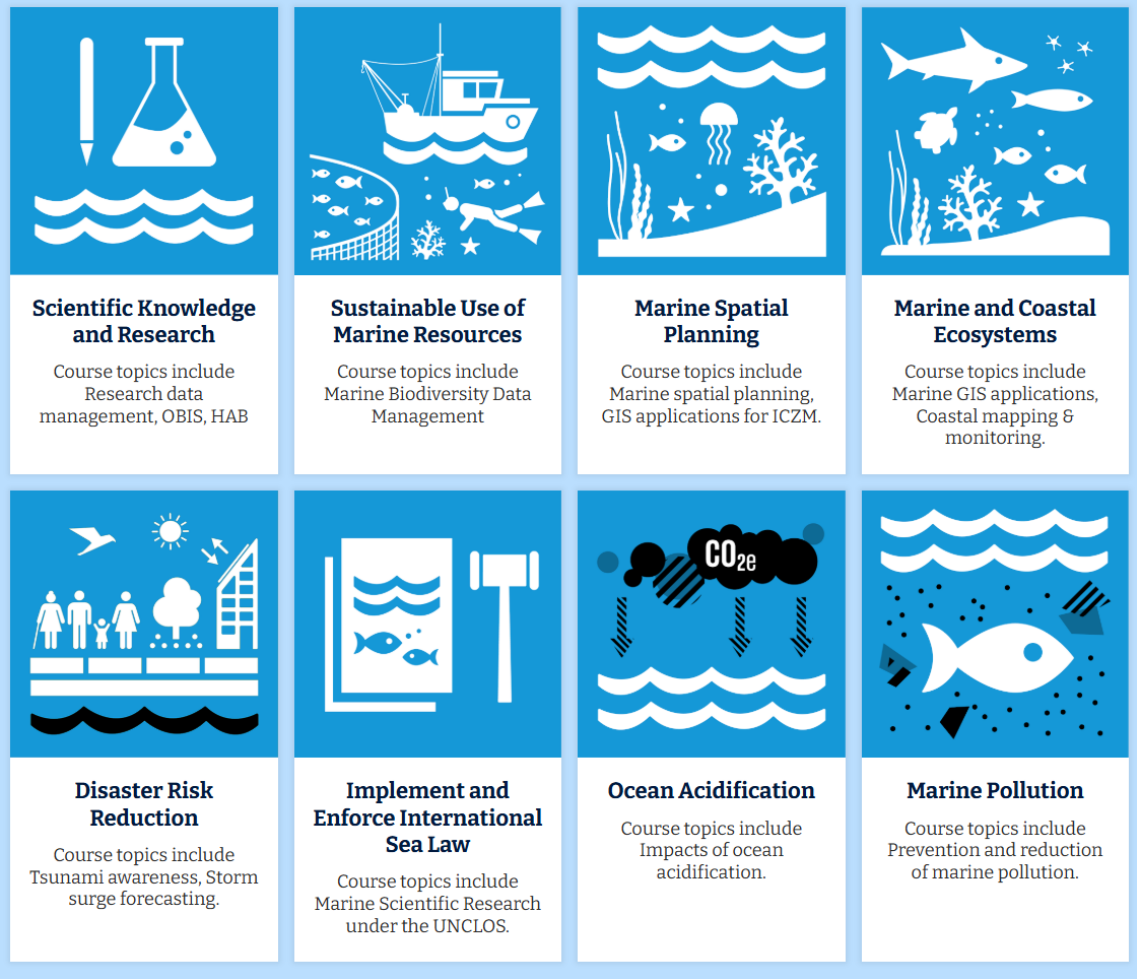

Internet-based training platform that supports classroom training, blended training, and online (distance) learning

Supported by a global network of Regional and Specialised Training Centres to deliver customised training for ocean experts and professionals to increase national and regional capacity.

Expanding capacity

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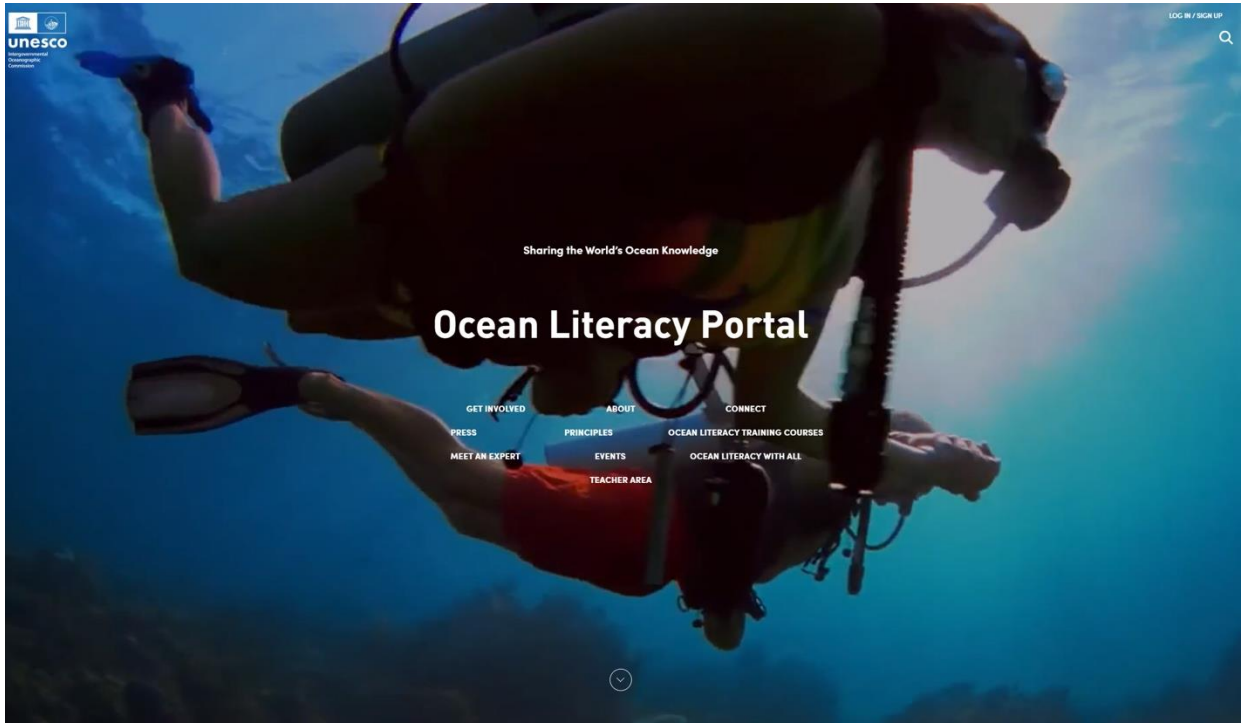

Ocean literacy program goal:

create an ocean-literate society able to make informed and responsible decisions on ocean resources and ocean sustainability

Connect: educators with scientists
Train: courses for translating science
Design and build: codesign interdisciplinary programs to build literacy

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Strategic messaging and influence

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THANK YOU