The Global Ocean Observing System
goosocean.org

Reflections on CoP26

UN CLIMATE CHANGE CONFERENCE UK 2021
IN PARTNERSHIP WITH ITALY

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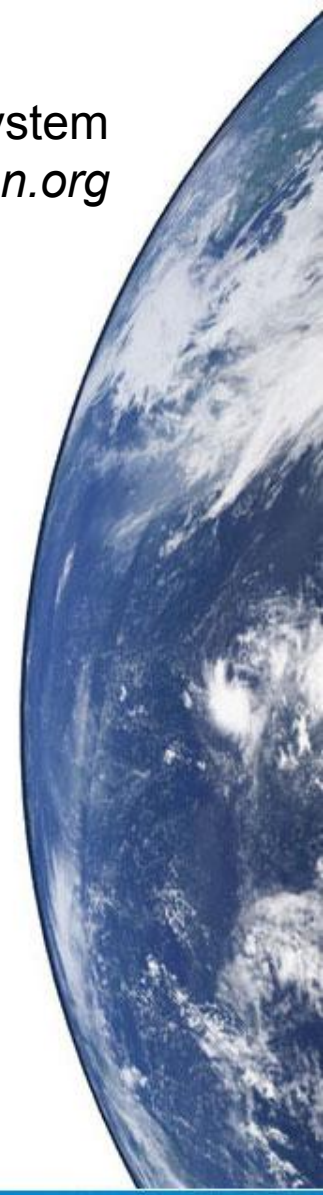
Co-chairs, GOOS Steering Committee
GOOS SC-10, part 2
Nov 30, 2021



UNESCO IOC WMO UN environment International Science Council

COP26: Strategic Goals

- Raise awareness that the ocean is critically under-observed
- Create messaging very high-level
- Reach nations, stakeholders and governments
- Pitch GOOS as critical tool for reaching climate targets

Team: Toste Tanhua, Anya Waite and Catherine Blewett (joint OFI / GOOS delegation)

GOOS

OCEAN FRONTIER INSTITUTE

The message: Linking ocean carbon observation to climate targets

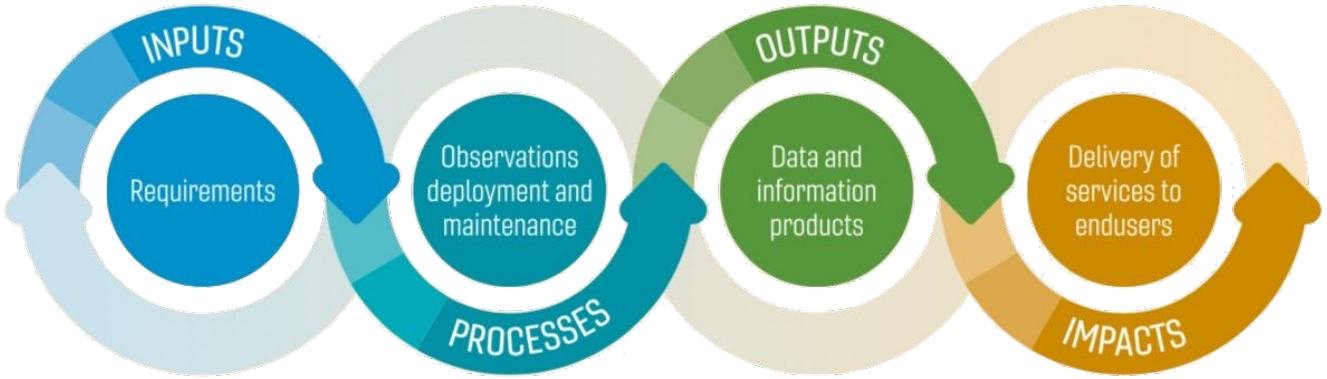
Land-based emissions targets fail to recognize the ocean's carbon absorption:

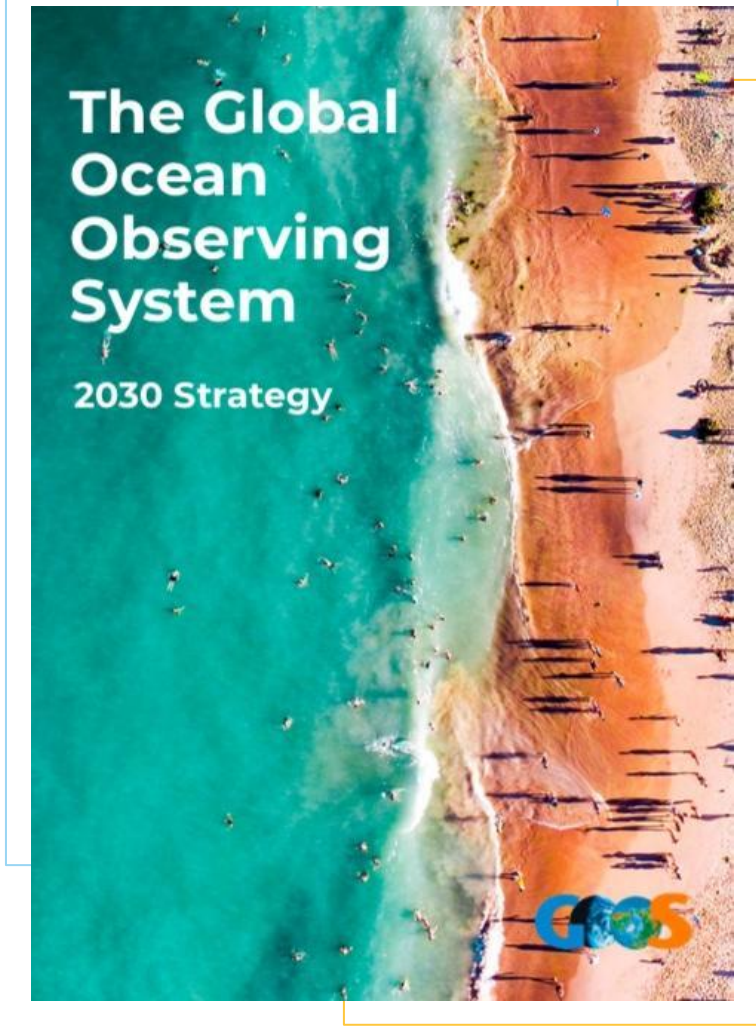
40% fossil fuel emissions ..

.. But will it continue?

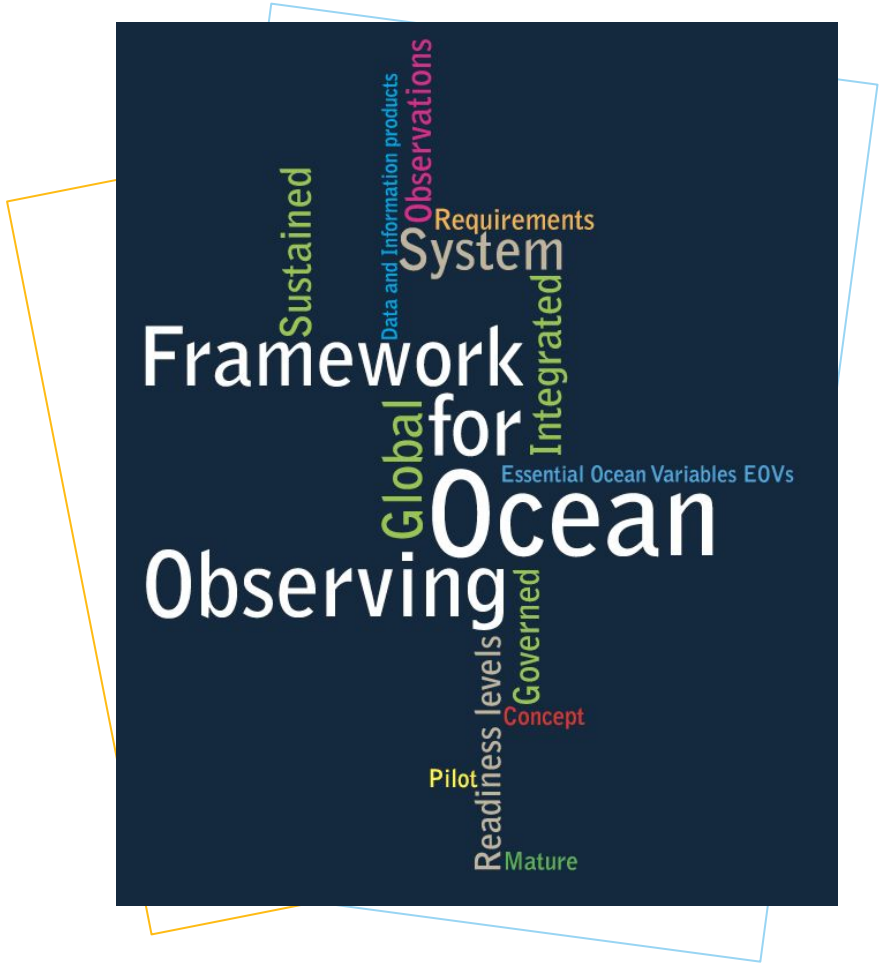
Linking ocean carbon observation to climate targets

The Global Ocean Observing System (GOOS) coordinates a long-term, sustained ocean observing system



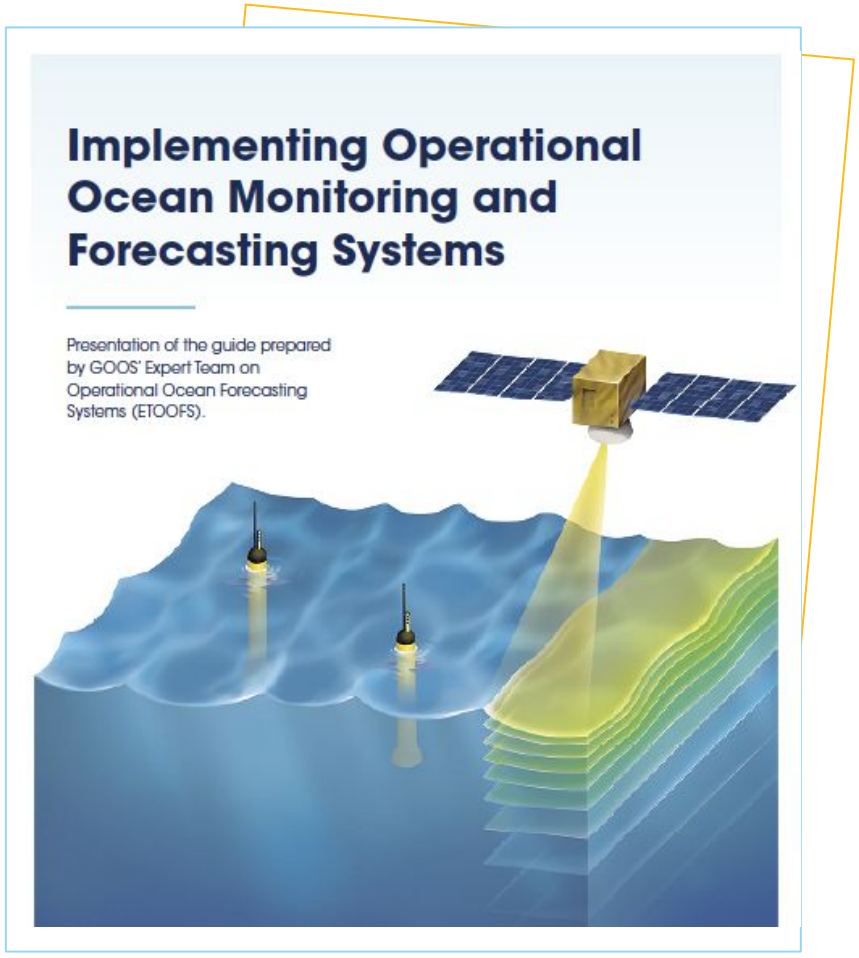


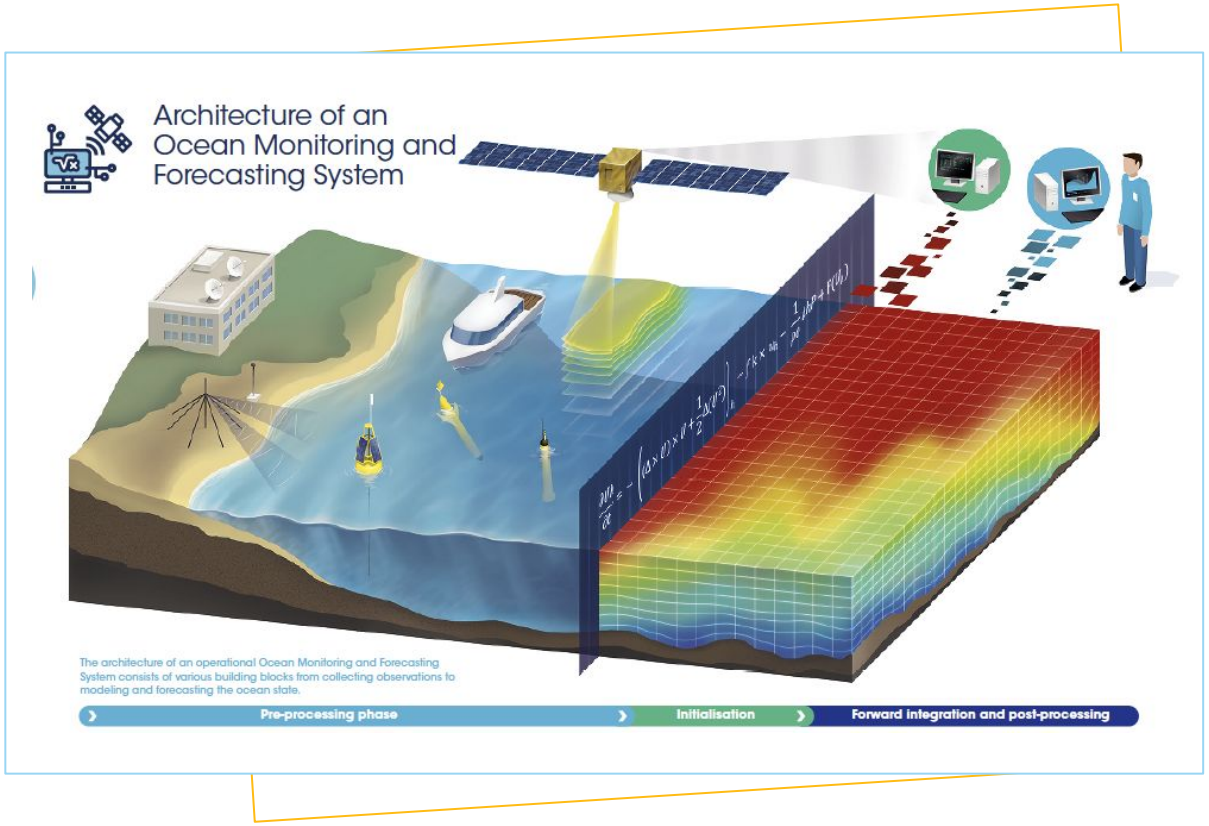
Linking ocean carbon observation to climate targets



The global community is mature and ready to act

Linking ocean carbon observation to climate targets





Community is well prepared to design sustained carbon observations

THE OCEAN IS MISSING!

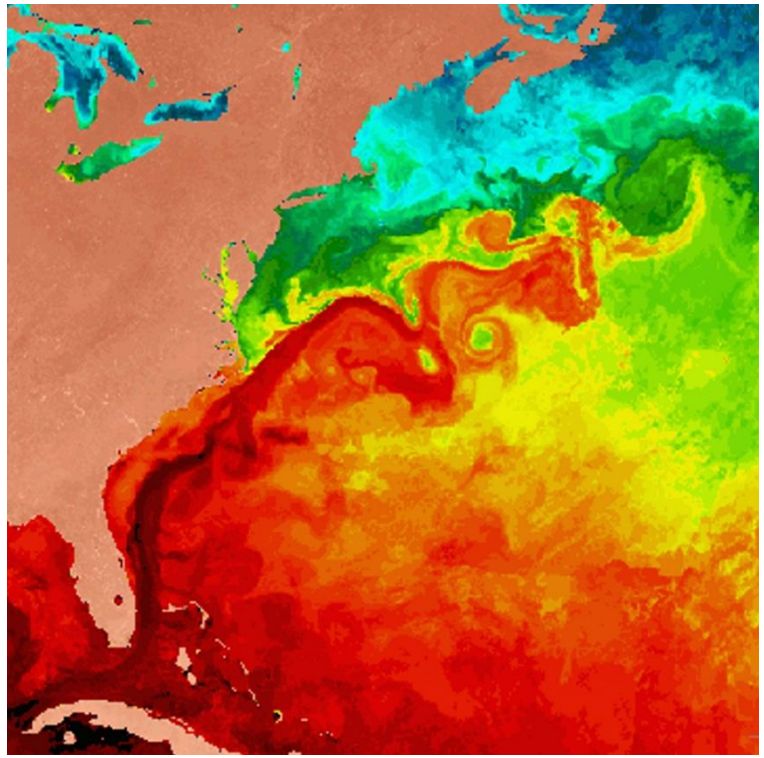
Add the ocean to solve for net zero!

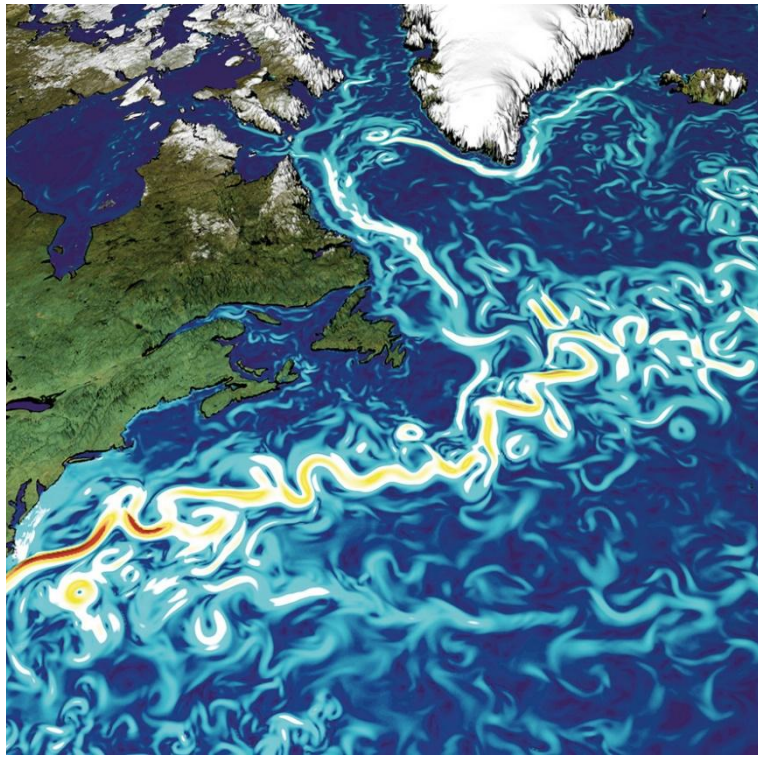
THE OCEAN IS MISSING!

AN EXEMPLAR

North Atlantic Carbon Observatory

(NACO)





Linking ocean carbon observation to climate targets

Example:

Ocean innovation in CDR urgently needs an ocean baseline

Actions :

- 4 formal presentations including:
    - Earth Information Day (IOC)
    - UK Fragile Oceans workshop
    - IUCN – including oceans in Global Stocktake
- Panel discussions
- Meetings with colleagues and policy makers (incl. UK, US, Canada, Norway, Portugal).
- Informal presentations, included brief comments at an invitation-only meeting on the capitalist transition to a low-carbon future with international private investors, several Canadian Ministers, and HRH Prince Charles.

Outcomes:

- Raised global awareness of the ocean's role in absorbing carbon in the climate system.
- Ocean under-observation as a critical gap potentially crippling our efforts to reach global climate targets.
- As a solution, to focus international attention on an action at the scale of an "ocean space station".
- Ocean Carbon Observatory

We engineered a **step-change in the awareness of GOOS** and understanding of the oceans' role in climate change and the critical need for ocean observation.

Follow-on Action:

Opportunities now exist to further the Ocean Carbon Observatory internationally through the Ocean Panel (formerly HLP), as well as through the G7.

Further discussions and workshops with the scientific community will focus attention and action on the technical aspects of the Ocean Carbon Observatory.

The Global Ocean Observing System

COP26

HIGH LEVEL PANEL for
A SUSTAINABLE
OCEAN ECONOMY

The Ocean Essential Climate Variables (ECVs)

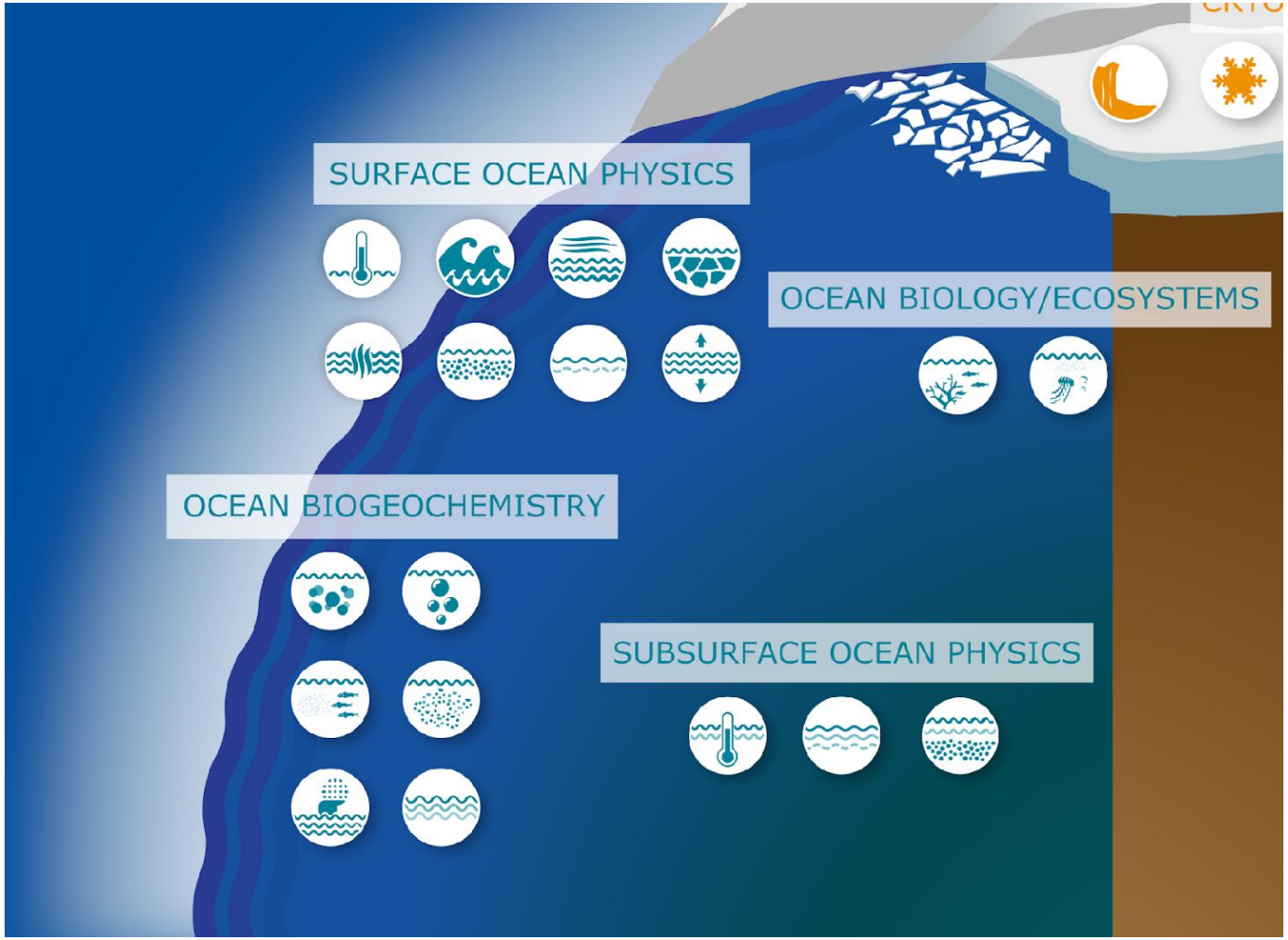
Ocean

Physical

- Ocean surface heat flux
- Sea ice
- Sea level
- Sea state
- Sea surface currents
- Sea surface salinity
- Sea surface stress
- Sea surface temperature
- Subsurface currents
- Subsurface salinity
- Subsurface temperature

Biogeochemical

- Inorganic carbon
- Nitrous oxide
- Nutrients
- Ocean colour
- Oxygen
- Transient tracers

Biological/ecosystems

- Marine habitats
- Plankton