



# ICOS OCEAN THEMATIC CENTRE

ICOS

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Integrated  
Carbon  
Observation  
System

**KNOWLEDGE THROUGH OBSERVATIONS**

[icos-ri.eu](http://icos-ri.eu)

# Climate change is a huge challenge facing our planet

About 25% of the CO<sub>2</sub> we release to the atmosphere enters the ocean, with another 25% entering the land biosphere.

Where are the sinks?  
How do they operate?  
Are they changing?

To answer the questions we need data from accurate, long term, sustainable observing systems.



## INTEGRATED CARBON OBSERVATION SYSTEM

The Integrated Carbon Observation System (ICOS) Research Infrastructure supplies these data. Each subscribing country supports a set of stations and most host a Head Office or central facility designed to steward data, provide calibration standards and support observing systems.

ICOS is the European pillar of a global greenhouse gas observation system and

promotes technological developments and demonstrations related to greenhouse gases by linking research, education and innovation.

## ICOS OCEAN OBSERVING SYSTEM

The ICOS Ocean Observing system consists of 21 ocean stations from 7 countries monitoring surface ocean CO<sub>2</sub> levels. Together these form the ICOS Ocean Monitoring Station Assembly (MSA).

These data are combined with satellite data to create maps of ocean carbon uptake. Ultimately these data contribute to estimates of the global carbon cycle, which are published annually and which support the United Nations IPCC process.

The Ocean stations deliver data to the ICOS Carbon Portal, receive calibration gases from the ICOS Calibration Lab and is supported by ICOS Head Office and the ICOS Ocean Thematic Centre.



# The services we offer for ICOS stations



## OCEAN THEMATIC CENTRE (OTC)

The OTC is devoted to helping the ICOS ocean observing community deliver the data we need to quantify the oceans role in planetary carbon cycling. The OTC is jointly operated by Norway and the U.K. with headquarters in Bergen, Norway.

National funding agencies supply >80% of OTC funding with membership subscriptions supporting the remainder. We invite stations from ICOS member countries to explore joining the ICOS MSA and hence benefit from the services the OTC provides. We will help you fund

your station, demonstrate that it meets current best practice, address your calibration needs, manage and archive your data, transition to new observing technologies, link you into our extensive training programme, represent you in international fora and link you to end users.



<https://otc.icos-cp.eu>



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The Ocean Thematic Centre is jointly hosted between Norway (University of Bergen and NORCE) and UK (the University of Exeter and National Oceanographic Centre).

The Ocean Thematic Centre is supported and funded by Research Council of Norway and Natural Environment Research Council.