



From Science to Standards:

ISO/TC8/WG15 and the International Pathway for Ocean-Based

mCDR

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Global ONCE
for Carbon Neutralization



ISO/TC8/WG15: Ocean Negative Carbon Emissions and Carbon Neutrality (ONCE-CN)

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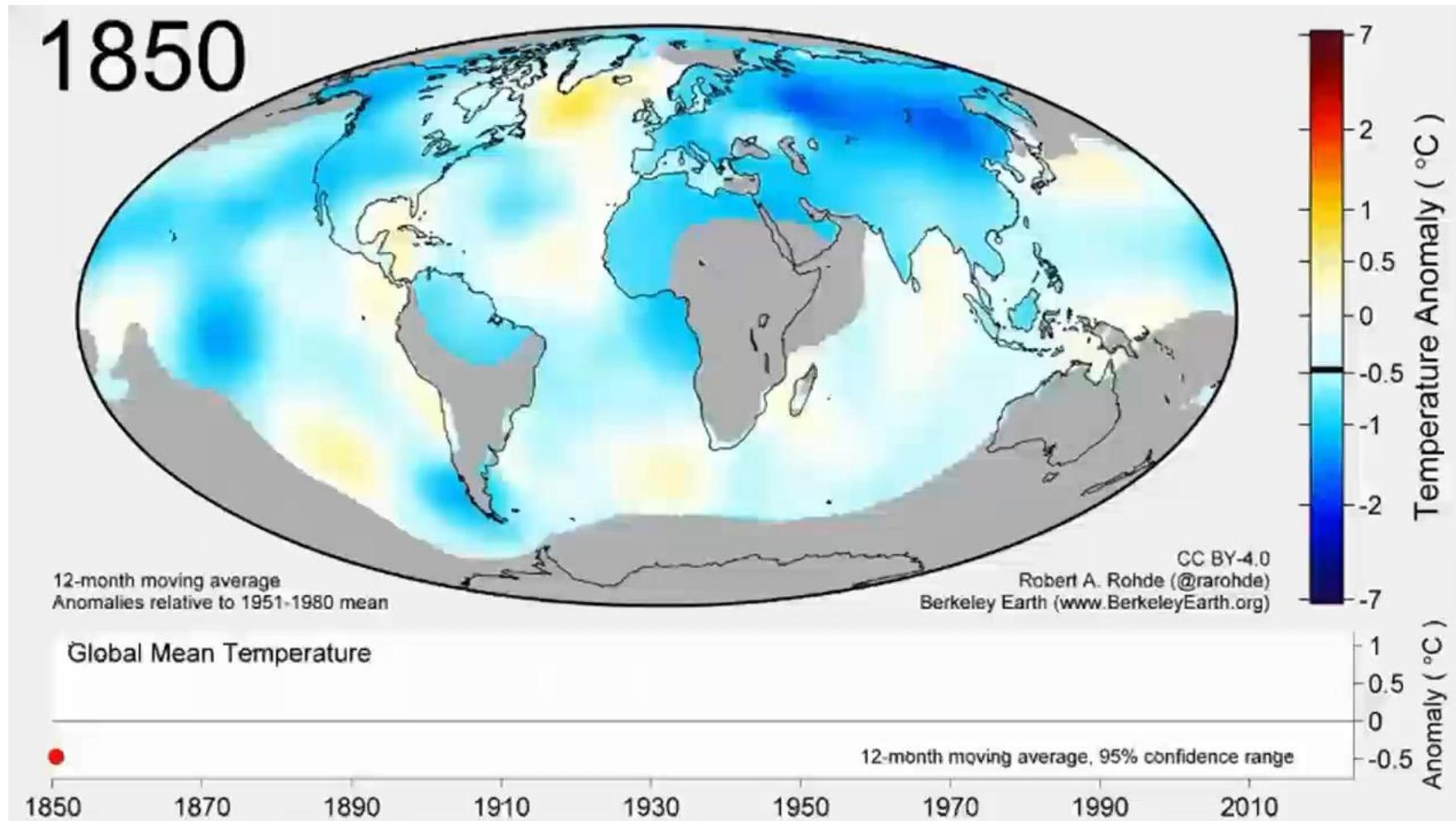
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Scope:

Standardization of technologies and engineering related to ocean negative carbon emission and carbon neutrality, used in quantification and assessment of marine environmental carbon, marine biological carbon and sediment carbon, as well as negative carbon emission techniques application to marine ranching, sewage alkalization, artificial upwelling etc.

Global temperature changes since Industrial Revolution



The Berkeley Earth video extrapolates data from meteorological instruments since their inception in 28 countries, including ancient historical records

Berkeley Earth: Global Average Temperature Changes from 1850 to 2022

Human activities vs Global change

The impact of human activities on climate change

COP30 “The 30th United Nations Climate Change Conference”

Conference of the Parties ;

The highest decision-making body under the United Nations Framework Convention on Climate Change (UNFCCC)

《United Nations Framework Convention on Climate Change》



- The high carbon development model brings systemic risks
- Climate feedback mechanism intensifies the speed and irreversibility of change
- Impact on human security and global stability



25888

International Standards and other
deliverables covering almost all aspects of
technology, management and manufacturing.

174

Members representing ISO in their country.
There is only one member per country.

827

Technical committees and subcommittees
to take care of standards development.

ISO/TC8 Ships and marine technology



ISO/TC8/WG15

Reference ↑	Title
ISO/TC 8/SC 1	Maritime safety
ISO/TC 8/SC 2	Maritime protection
ISO/TC 8/SC 3	
ISO/TC 8/SC 4	
ISO/TC 8/SC 5	
ISO/TC 8/SC 6	
ISO/TC 8/SC 7	
ISO/TC 8/SC 8	
ISO/TC 8/SC 9	
ISO/TC 8/SC 10	
ISO/TC 8/SC 11	
ISO/TC 8/SC 12	Large yachts
ISO/TC 8/SC 13	Marine technology
ISO/TC 8/SC 25	Maritime GHG reduction
ISO/TC 8/SC 26	Smart shipping
ISO/TC 8/SC 27	Ports and terminals

- ISO/TC 8/AG 1 [*i*](#) Chair's Advisory Group
- ISO/TC 8/WG 3 [*i*](#) Special offshore structures and support vessels
- ISO/TC 8/WG 4 [*i*](#) Maritime security
- ISO/TC 8/WG 6 [*i*](#) Ship recycling
- ISO/TC 8/WG 10 [*i*](#) Smart shipping
- ISO/TC 8/WG 11 [*i*](#) Dredging
- ISO/TC 8/WG 12 [*i*](#) Aquatic nuisance species
- ISO/TC 8/WG 14 [*i*](#) Maritime education and training
- ISO/TC 8/WG 15 [*i*](#) Ocean Negative Carbon Emissions and Carbon Neutrality

ISO/TC 8/WG 15 [*i*](#) Ocean Negative Carbon Emissions and Carbon Neutrality



ISO/TC8/WG15:

A platform from “science to standards”

- Carbon quantification and assessment
- Carbon-reducing aquaculture practices;
- Coral restoration and planting;
- Artificial mounds, reefs, and upwelling systems;
- Ocean infrastructure and engineered platforms;
- Offshore renewable energy systems;
- Microplastics technologies for ocean carbon neutrality

WG15 welcomes experts from all over the world to develop international standards for scientific best practices and engineering techniques, so that they can be shared worldwide

Thanks for your attention