ODATIS

www.odatis-ocean.fr

DATA TERRA

the gateway to French open ocean and coastal data

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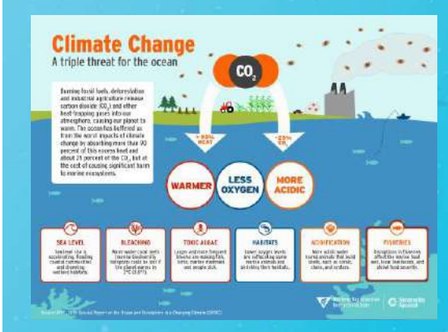
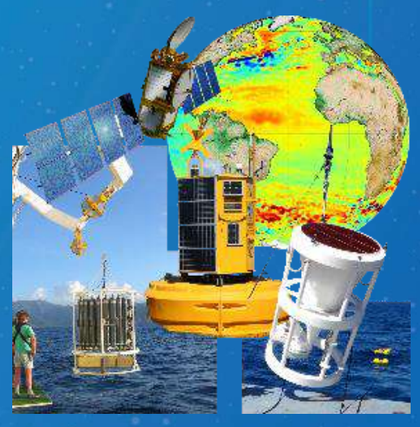


The ongoing and expected consequences of the global change on the ocean are multiple

[1] Since the industrial revolution, the imprints of human activities on the global environment have intensified.

[2] There is a critical need to better understand the impacts of global change. Observations are needed at all the stages of the scientific process: description, modelling and forecasting.

[3] The past few decades have seen a marked acceleration in the diversity and number of marine and coastal observations, both by using *in situ* measurements or remote sensing.



[4] In order to make the most of this flow of data for the benefit of knowledge and society, the preservation of marine observations is a major issue and requires the development of relevant data and services centres.

Brief introduction of common principles for developing marine data and services centres

The need of marine FAIR data

The FAIR principles for scientific data repository:

Findable: metadata and data must be easy to find and (re)use (describe your data, apply persistent identifiers);

Accessible: to be integrated with other dataset (ie workflows for analysis/processing, open format, consistent vocabulary, metadata standards);

Interoperable: to consider what will can be shared and how it can be accessed;

Reusable: data must be reusable, with well-described metadata and appropriate licence.

The need of certification of data repositories

to ensure:

- ✓ the reliability and durability of data repositories,
- ✓ the potential for sharing data over a long period of time for both users and funders.

The Research Data Alliance (RDA) provides a common framework to implement and maintain digital repositories.

www.coretrustseal.org

The French initiative: ODATIS, Ocean DATa Information and Services

Launched in December 2017
ODATIS
aims to become a unique gateway
to all French marine data
regardless of the discipline
physics, chemistry, biogeochemistry, biology, sedimentology
for the benefit of knowledge and society.

ODATIS objectives are to promote and facilitate archiving, sharing, discovery and (re)use of Ocean observations in order to contribute to the understanding of the ocean functioning and its interactions with the other components of the Earth.

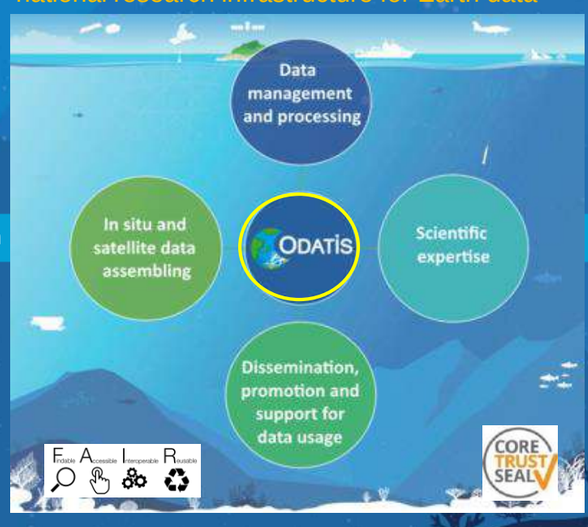
Organized at the national level

ODATIS is the ocean cluster of the Data Terra national research infrastructure for Earth data

Data producers

- Which data repositories ?
- Can I trust them ?
- What about citation ?
- Which feedback on data use ?

Submission



Reuse

Data users

- How to find and access data ?
- Can I trust the data repositories ?
- Are the data interoperable and reusable, in which conditions ?

Towards *science cloud* services

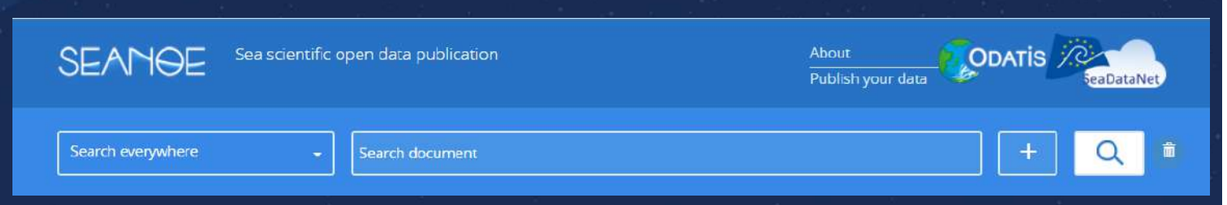
The challenge is to develop ODATIS to cover the needs ranging from proximity to the producer to cross-analysis of data from all Earth compartments for the end-users.

Schematized typologies of data centers, from marine data assembling centers (DAC) and data and services centers (DCS) to the virtual research environment (VRE), in response to user needs.

SERVICE	data repository	production	on demand
Involved structures	ODATIS	ODATIS	ODATIS DATA TERRA
USER	data repositories doi, licences reporting on data use	combination of different marine dataset (*in situ*/ satellite) from the same thematic or area.	data analyses and interpretation cross analyses of different data from all Earth compartments
BACK OFFICE	DAC Close to the producer Common catalogue and vocabulary servers Long-term archive	DSC National data hub Aggregates large collections at the national minimum level	VRE data lake ftp or temporary personal storage TOOL BOX softwares, machine learning, ...

Publish your marine data

SEANOE (SEA scieNtific Open data Edition, www.seanoe.org) is a publisher of scientific data in the field of marine sciences (not restricted for French data).
SEANOE provides to each published dataset a DOI which can be cited in a publication in a reliable and sustainable way.



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For more details: Schmidt S., Maudire G., Nys C., Sudre H., Harscoat V., Dibarboure G. & Hyunh F. (2020) Streamlining data and service centres for easier access to data and analytical services: the strategy of ODATIS as the gateway to French marine data. Frontiers in Marine Science 7: 548126. doi: 10.3389/fmars.2020.548126.

Bay of Biscay

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