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ODATIS' strategy for providing French ocean data collection, analysis and interpretation services

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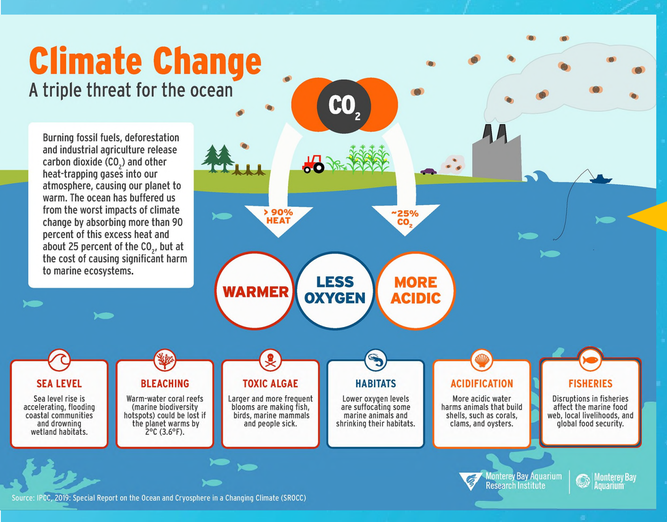


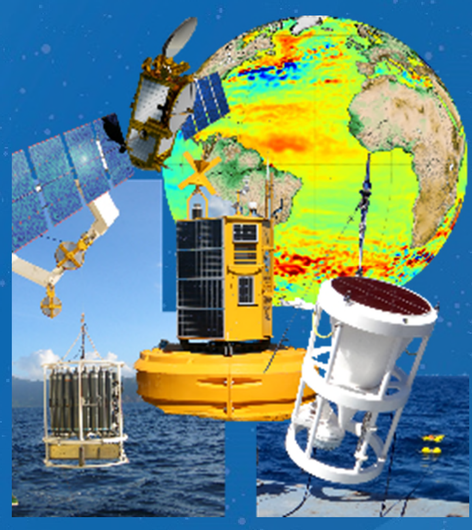
[1] Since the industrial revolution, the imprints of human activities on the global environment have intensified.

Consequences of the global change on the ocean are multiple.

[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.

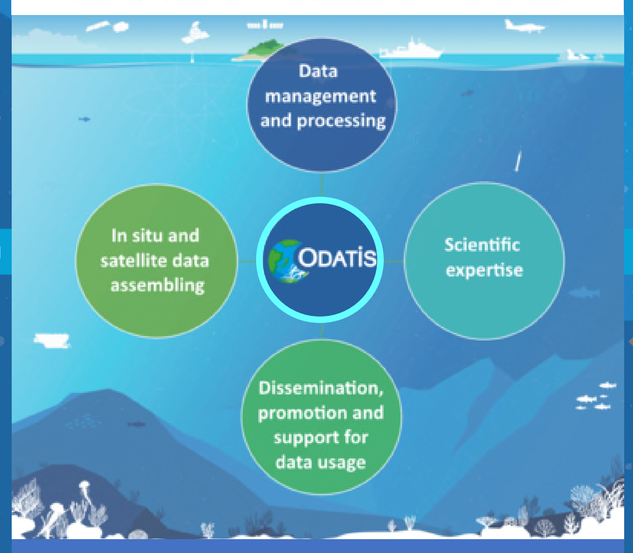


The French initiative: ODATIS

Launched in 2017, ODATIS (Ocean DATa Information and Services) aims to become an unique gateway to all French marine data regardless of the discipline for the benefit of knowledge and society.

Organized at the national level

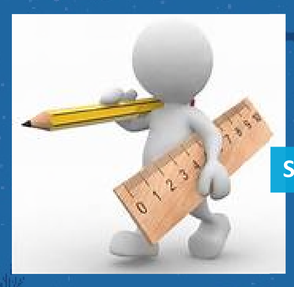
ODATIS is the ocean cluster of DATA TERRA, the national research infrastructure for Earth data.



in respect with international standards

FAIR TRUST

Data producers



SUBMISSION

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

Data users

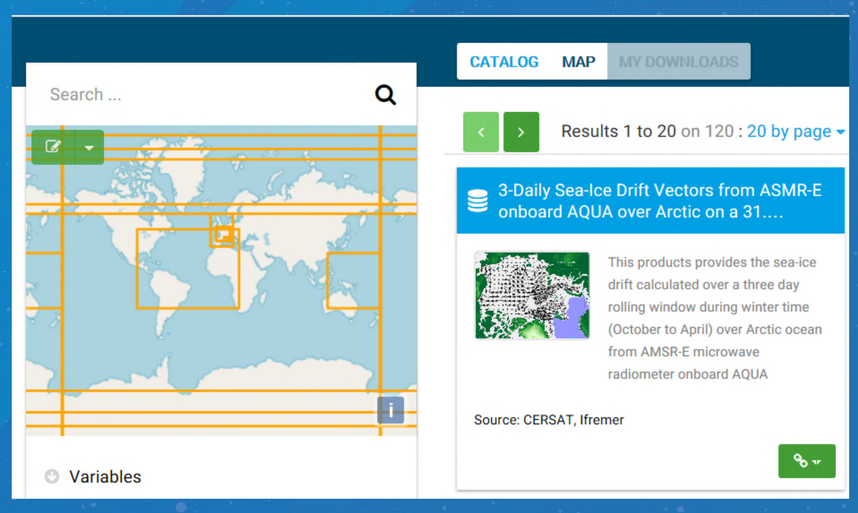
REUSE

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

Fagel (2021) QSR

ODATIS catalogue

ODATS catalogue includes the variables of all the marine disciplines (*physic, chemistry, biogeochemistry biology, sedimentology*) whatever the technique used (satellites, *in-situ* observatories, field cruises, lab analyses).



The catalogue offers different data access tools:

- a search service with selection filters,
- a data description service (*Preview* or *Complete*),
- a visualization service,
- the possibility to download data directly or via the local partner portals.

Towards *science cloud* services

→ to cover 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:

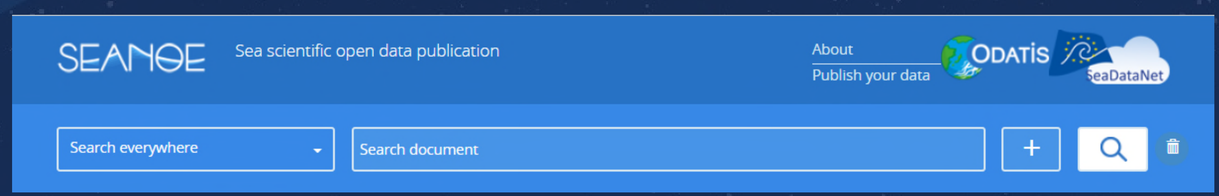
SERVICE	data repository	production	on demand
Involved structures	ODATIS	ODATIS	ODATIS DATA TERRA
USER	data repositories doi, licences reporting on data use	combination of different marine dataset (*in situ*/ satellite) from the same thematic or area.	data analyses and interpretation cross analyses of 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

→ publisher of scientific data in the field of marine sciences not restricted to 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., et al (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.

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