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## ReefTEMPS, Network of coastal oceanic sensors, Open access data portal

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Fiat Sylvie, David Varillon, Bernard E Pelletier, Jérôme Aucan, Régis Hocdé. ReefTEMPS, Network of coastal oceanic sensors, Open access data portal. RDA 15th plenary virtual meeting, Jan 2020, Melbourne, Australia. ird-03245730

**HAL Id: ird-03245730**

**<https://ird.hal.science/ird-03245730>**

Submitted on 2 Jun 2021

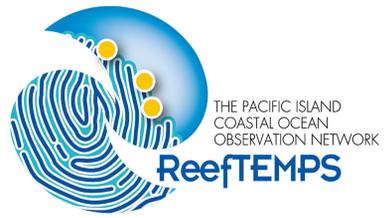
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# ReefTEMPS, Network of coastal oceanic sensors, Open access data portal



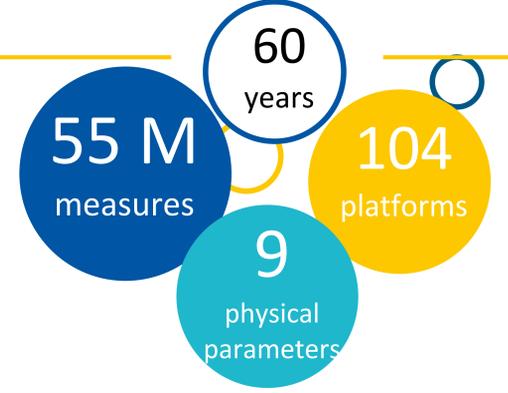
Sylvie Fiat<sup>1</sup>, David Varillon<sup>2</sup>, Bernard Pelletier<sup>3</sup>, Jérôme Aucan<sup>1</sup>, Régis Hocdé<sup>4</sup>



ReefTEMPS<sup>1</sup> is a coastal waters observation network in the South, West and Southwest Pacific region for long-term monitoring of climate change and its effects on the status of coral reefs and their resources. It provides open access to in situ measurements from 14 different countries, over periods of up to 60 years.

The information system, established in 2011, has been designed around the principles of FAIR and provides free access to data through multiple formats and standards.

Since 2017, ReefTEMPS has been part of the ILICO<sup>2</sup> Research Infrastructure and in 2019 was recognised as a French National Observation Service (SNO).

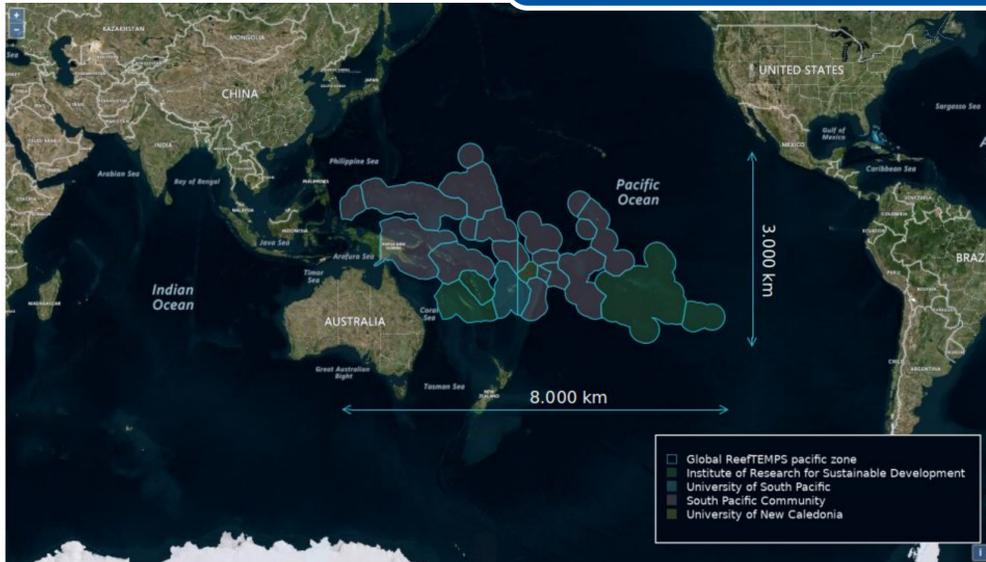


## Open data architecture

- ➔ Provide services adapted to the different research communities
- ➔ Be interoperable with other databases
- ➔ Be referenced in national and international catalogs

<sup>1</sup> <http://reeftemps.science>

<sup>2</sup> [www.ir-ilico.fr](http://www.ir-ilico.fr)



NetCDF 4  
Climate and Forecast (CF)  
Convention,  
format OceanSites

## Measurement cycles

=  
data are collected in cycles, which correspond to the immersion of a sensor for 6 months to 2 years, and generated in NetCDF

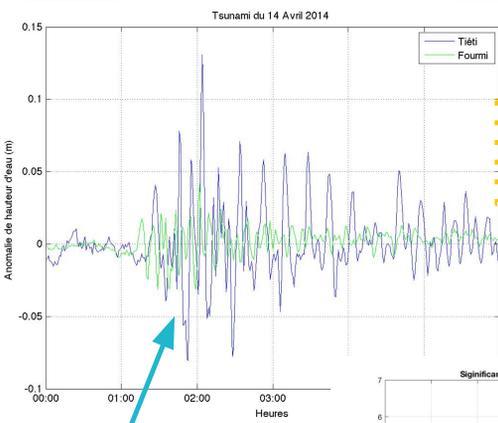
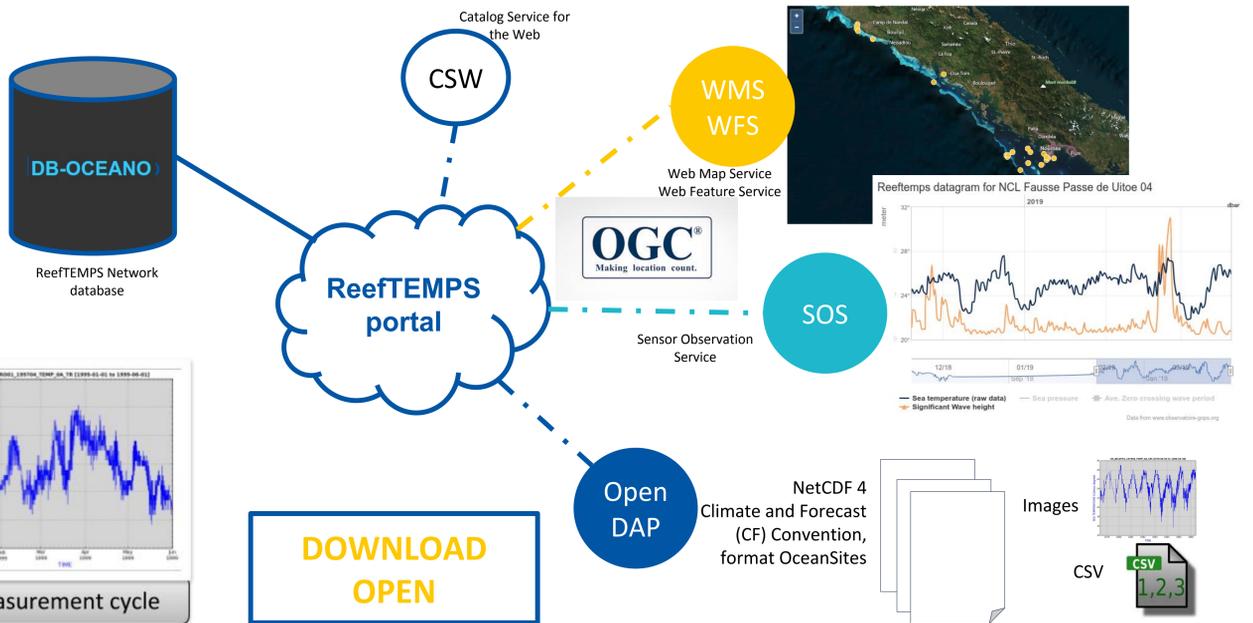
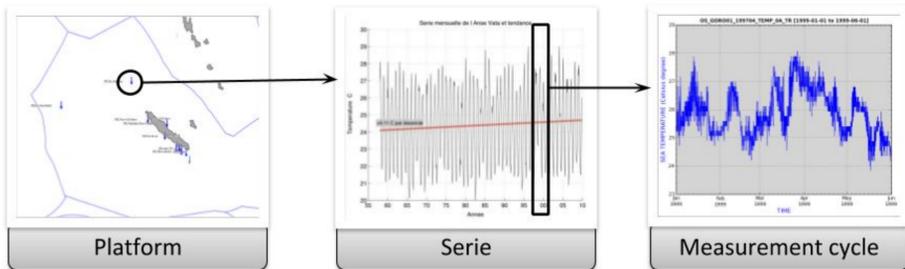
Processing cycle =  
Each measuring cycle is assigned a processing cycle, from the raw data, where no processing has yet been applied, to the various levels of qualification carried out either by automatic checks or by scientific calibration.

Code	Description
0A	RAW DATA
0B	AUTOMATIC QUALITY CONTROL
0C	NOT RECOMMEND
1A	CLIMATOLOGY CONTROL
1B	APPLICATION OF QUALITY CODE AFTER VISUAL INSPECTION
1C	VALIDATED BY PI
2A	NOT RECOMMEND
2B	NOT RECOMMEND
2B+	CALIBRATED DATA
2C	NOT RECOMMEND
2C+	CALIBRATED DATA VALIDATED BY PI
3A	NOT RECOMMEND
3B	CALIBRATED REDUCED DATA
3C	GRIDDED REDUCED DATA

Processing cycle table

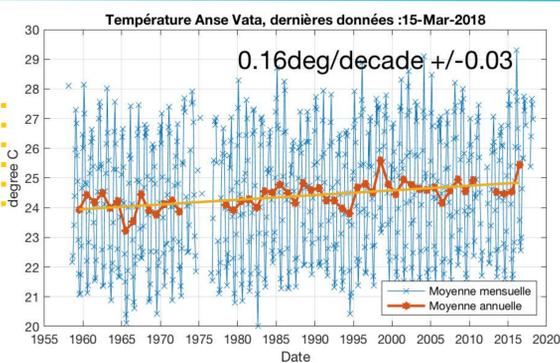
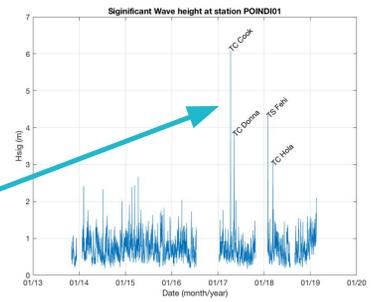
## Series

=  
Datasets or series are generated by concatenating measurement cycles with the same parameters over time - the data are distributed in series.



Effect of reef protection from tsunamis  
Wave height during tropical cyclones

## Products "Data science"



Global warming evidence

## Referencement

How to cite  
Varillon David, Fiat Sylvie, Magron Franck, Allenbach Michel, Hoibian Thierry, De Ramon N'yeurt Antoine, Ganachaud Alexandre, Aucan Jérôme, Pelletier Bernard, Hocdé Régis (2018). ReefTEMPS : The Pacific Island coastal ocean observation network. SEANOE. <https://doi.org/10.17882/55128>