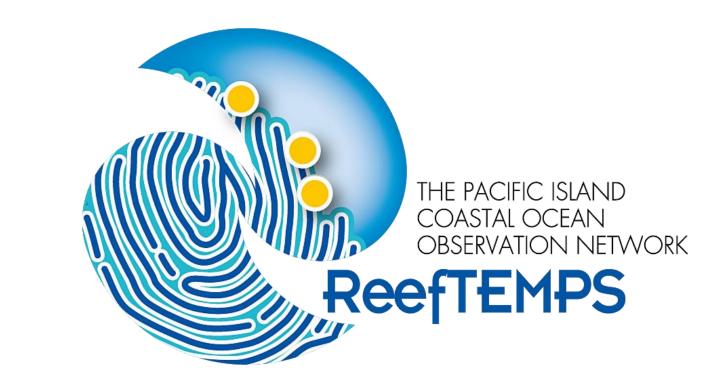
ReefTEMPS, FAIRs access to reef ecosystem environmental measurements



Sylvie Fiat ¹, Jérôme Aucan², David Varillon ³, Régis Hocdé ⁴



ReefTEMPS^α is a coastal ocean observatory in the South, South West and West Pacific that provides long-term monitoring of climate change and its effects on the status of coral reefs and their resources. The network has been deploying sensors for temperature, pressure, conductivity, fluorescence and/or turbidity at 98 sites throughout the coastal zone of some 20 island states and territories since 1958.

ReefTEMPS, labelled Service National (for) Observation (SNO), is part of the French research infrastructure "coastal ocean and nearshore observations" IR ILICO^β.

60 years 63 M platforms measures physical parameters

α http://reeftemps.science

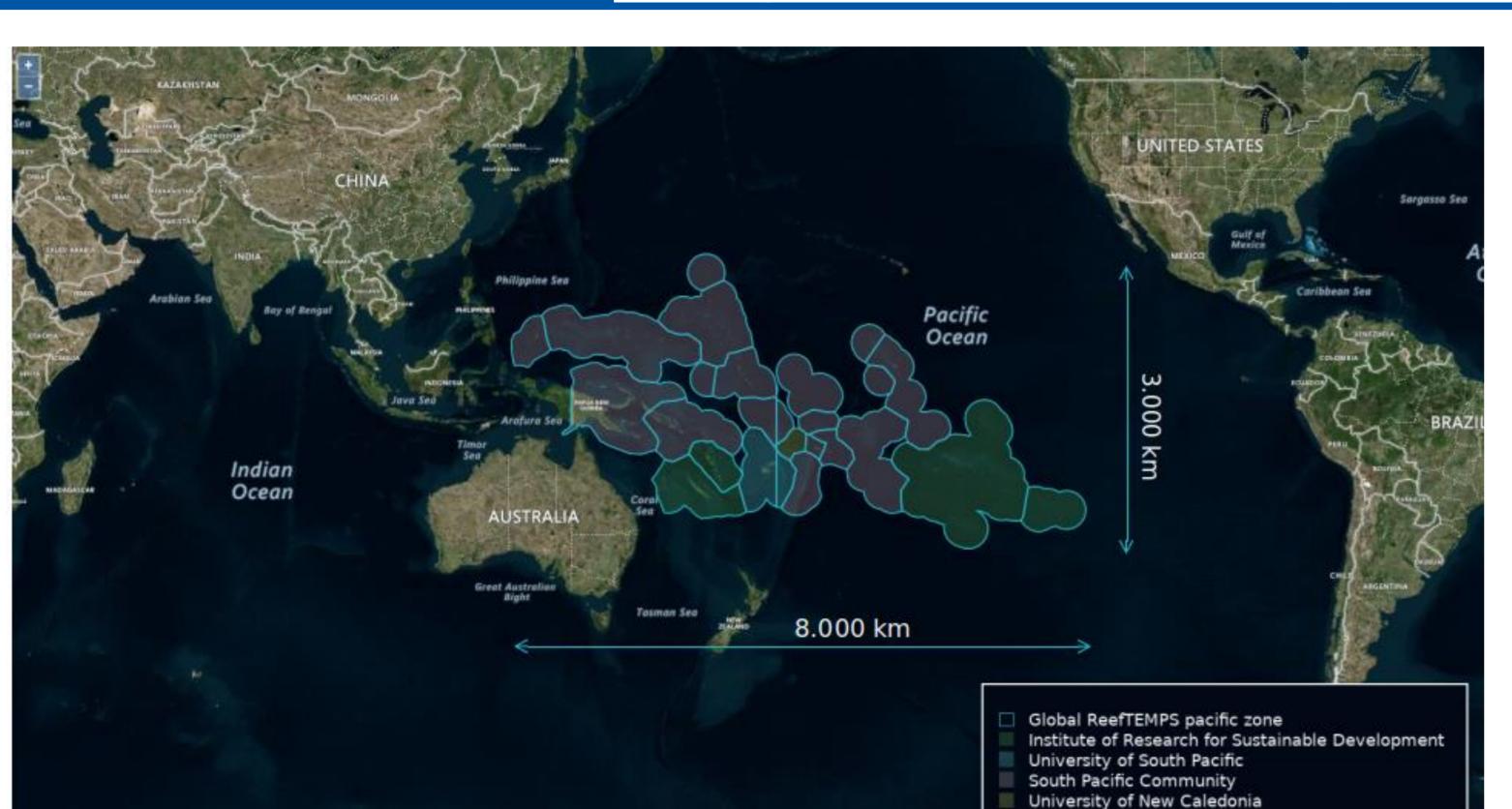


Figure 1. The ReefTEMPS network federates 4 data producers covering in part the South, South West and West Pacific: the Institute of Research for sustainable Development, the Pacific Community, the University of the South Pacific and the University of New Caledonia.

Figure 2. Installation of a sensor by a diver.



Figure 3. Underwater sensor.

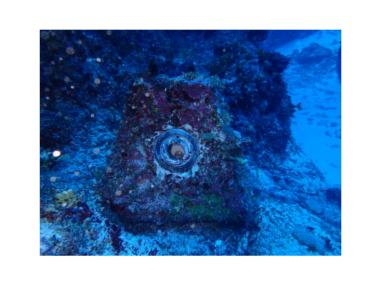


Figure 4. Underwater platform.

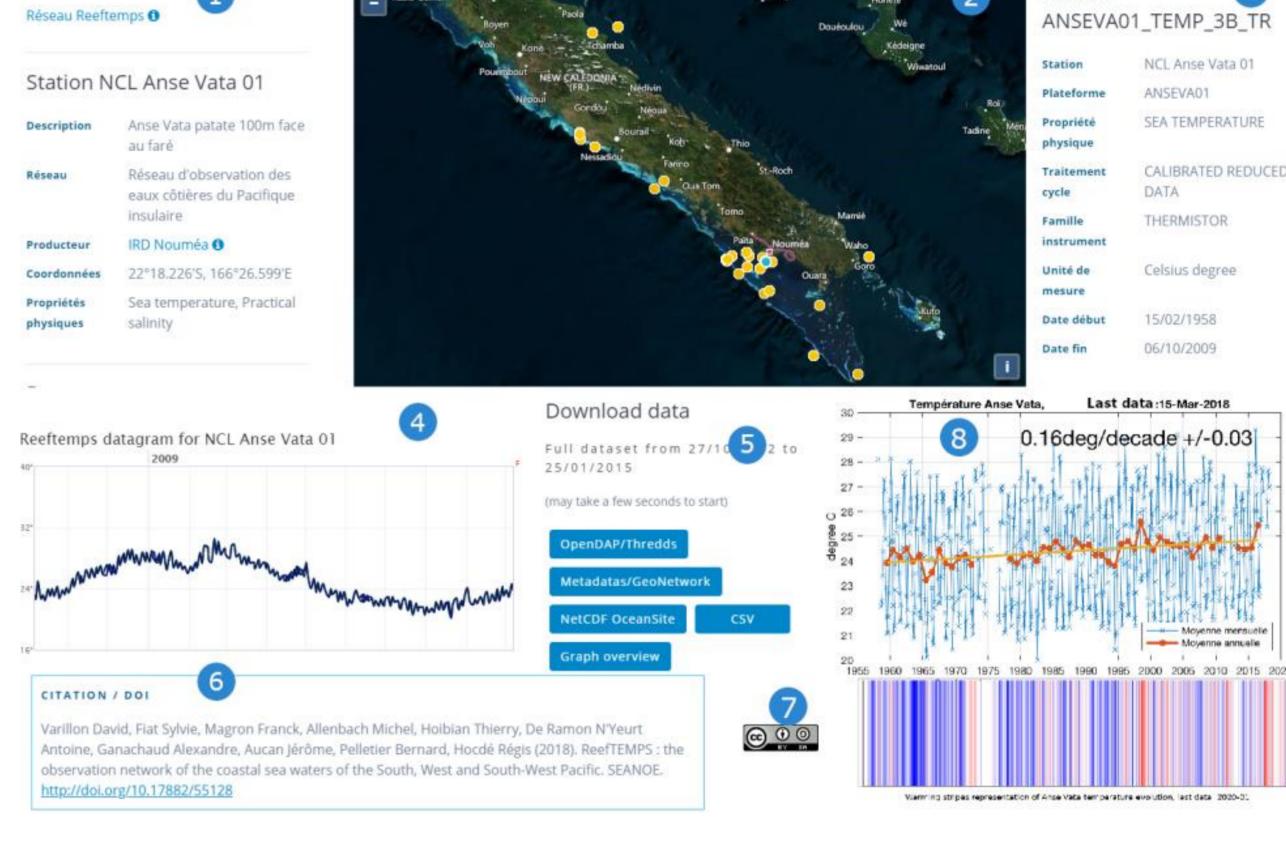


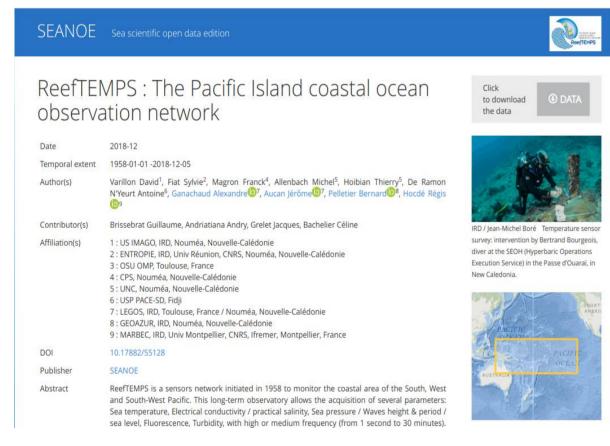
Figure 5. Getting Anse Vata (New Caledonia) temperature data in ReefTEMPS: 1/ station metadata, 2/ station location on interactive map (blue spot), 3/ Dataset metadata, 4/ Interactive datagram to preview data, 5/ Download available, 6/ DOI reference, 7/ Data licence, 8/ Data science products as a result.



doi:10.17882/55128

Unique and persistent identifier

SEANOE



Bi-annual updates September 2019 update :

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Findable by data generic search engines

CCESSIBLE

HTTP **HTTPS**



Access through standards

DOWNLOAD & **ACCESS OPEN**

No registration, no restriction, no constraints, no fees

NTEROPERABLE

Web Map Service Web Feature Service

Reeftemps datagram for NCL Fausse Passe de Uitoe 04

Sensor Observation Service

Catalog Service CSW for the Web

Open-source Open Project for a **Network Data** DAP **Access Protocol**

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

EUSABLE

Rich metadata & multiple layers

Datasets metadata Data quality control flags

Sensors metadata

Observation service metadata

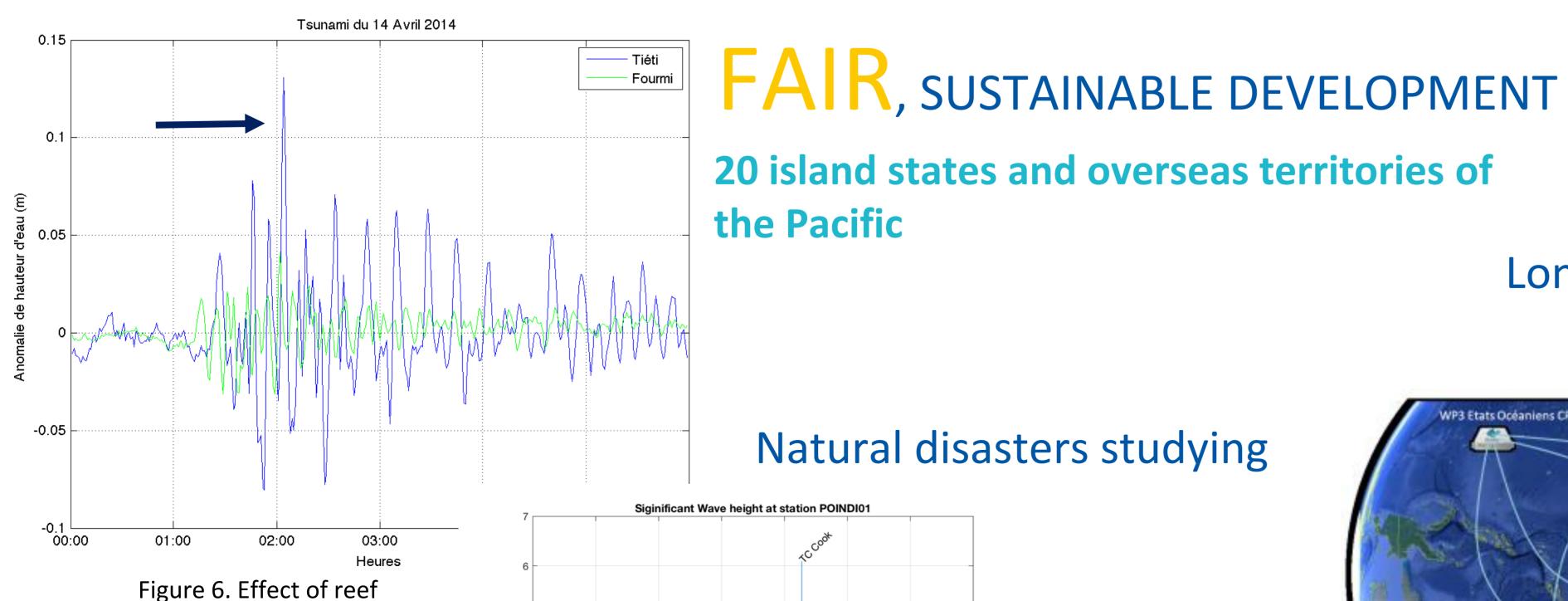
Provenance / Citation

How to cite 1 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

Data usage licence

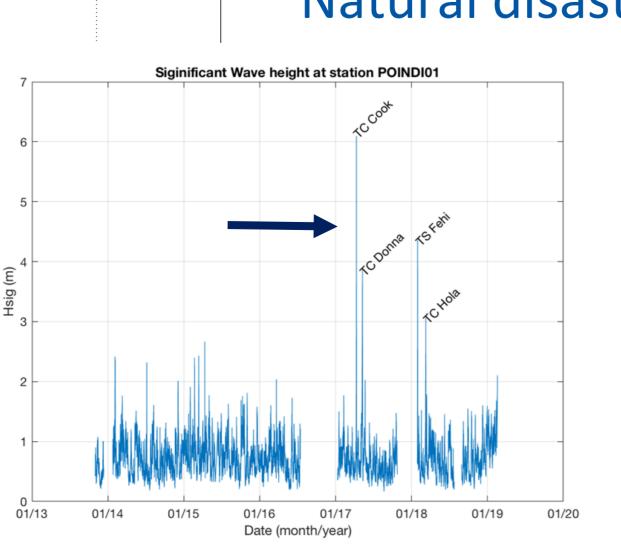


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Natural disasters studying

20 island states and overseas territories of



the Pacific

Open source software architecture

Française CRIO

Figure 8. ReefTEMPS informatopn system deployment

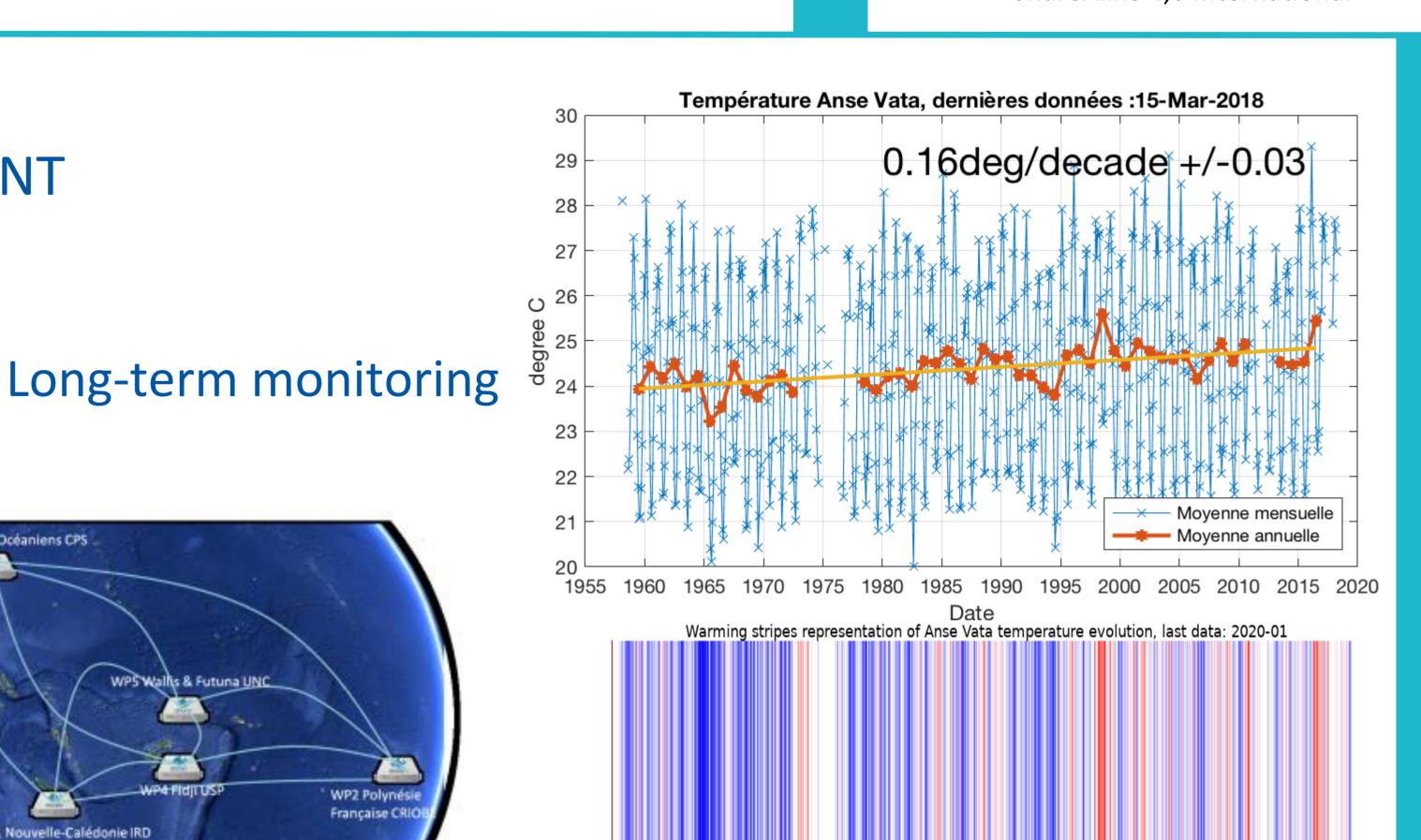
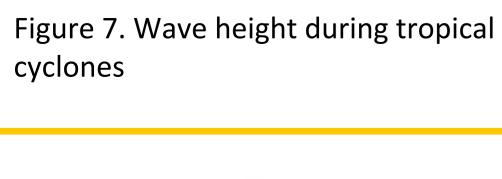


Figure 9. Global warming evidence



protection from tsunamis











- ¹ ENTROPIE, IRD, Univ Réunion, CNRS, Ifremer, Univ Nouvelle-Calédonie, Nouméa, Nouvelle-Calédonie,
- ² The Pacific Community (SPC), Nouméa, Nouvelle-Calédonie, ³ IMAGO, IRD, Nouméa, Nouvelle-Calédonie
- ⁴ MARBEC, Univ Montpellier, CNRS, Ifremer, IRD, Montpellier, France

