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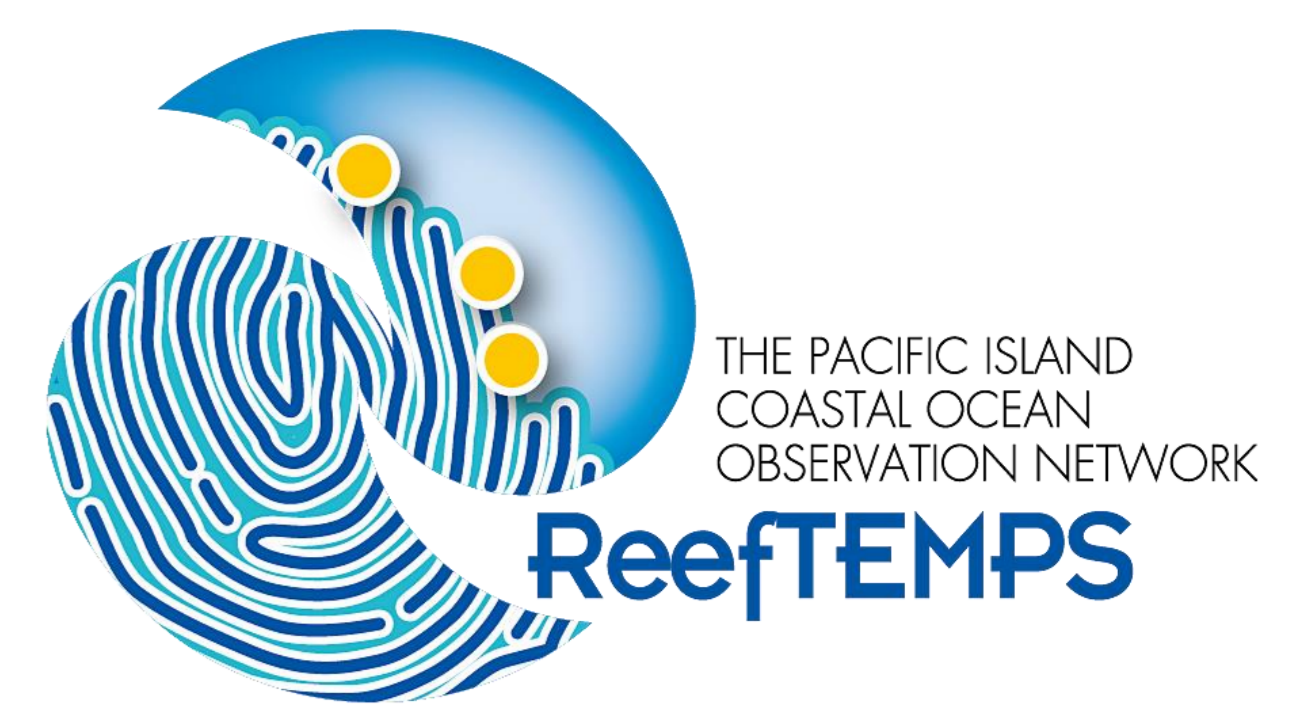
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ReefTEMPS, FAIRs access to reef ecosystem environmental measurements



Sylvie Fiat¹, Jérôme Aucan², David Varillon³, Régis Hocdé⁴



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.

^α <http://reeftemps.science>

^β www.ir-ilico.fr

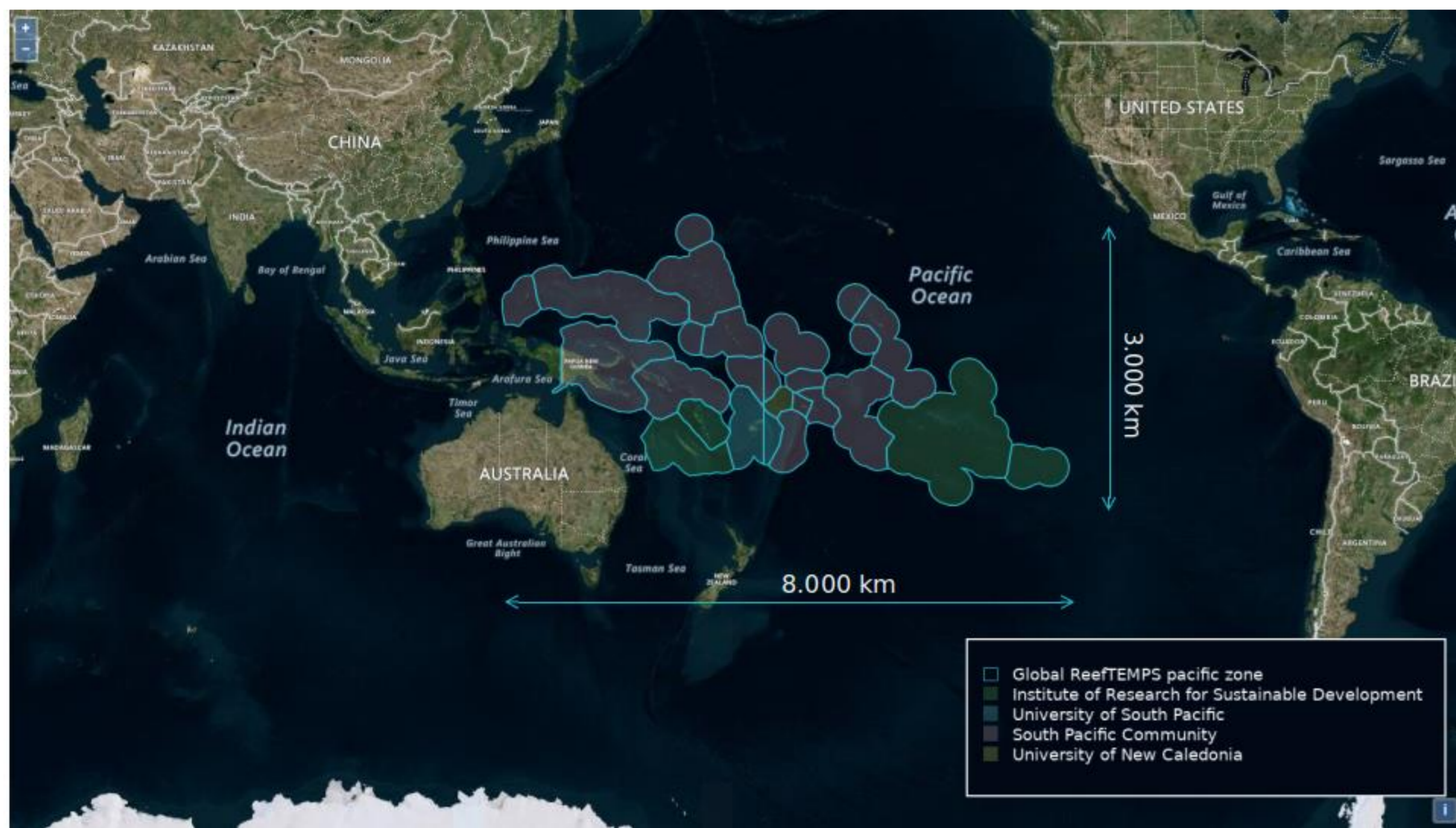
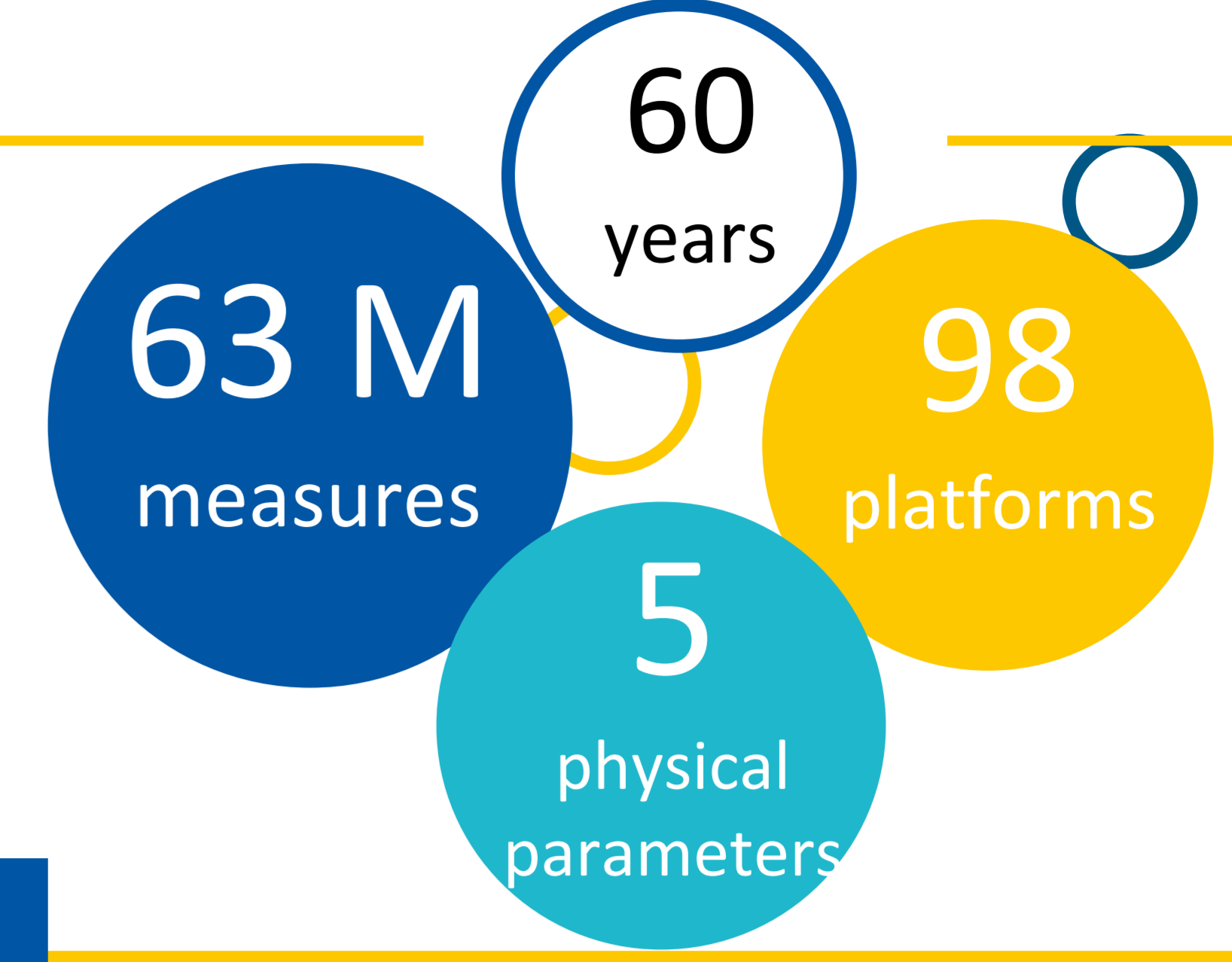


Figure 1. The ReefTEMPS network federates 4 data producers covering in part the South, South West and West Pacific: the Institute of Research for sustainable Development, the Pacific Community, the University of the South Pacific and the University of New Caledonia.



Figure 2. Installation of a sensor by a diver.



Figure 3. Underwater sensor.

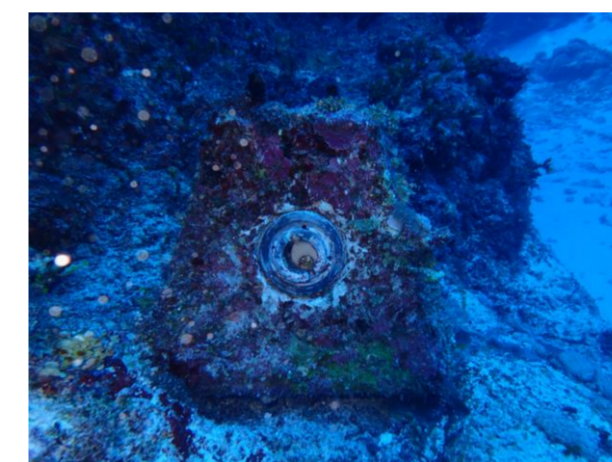


Figure 4. Underwater platform.

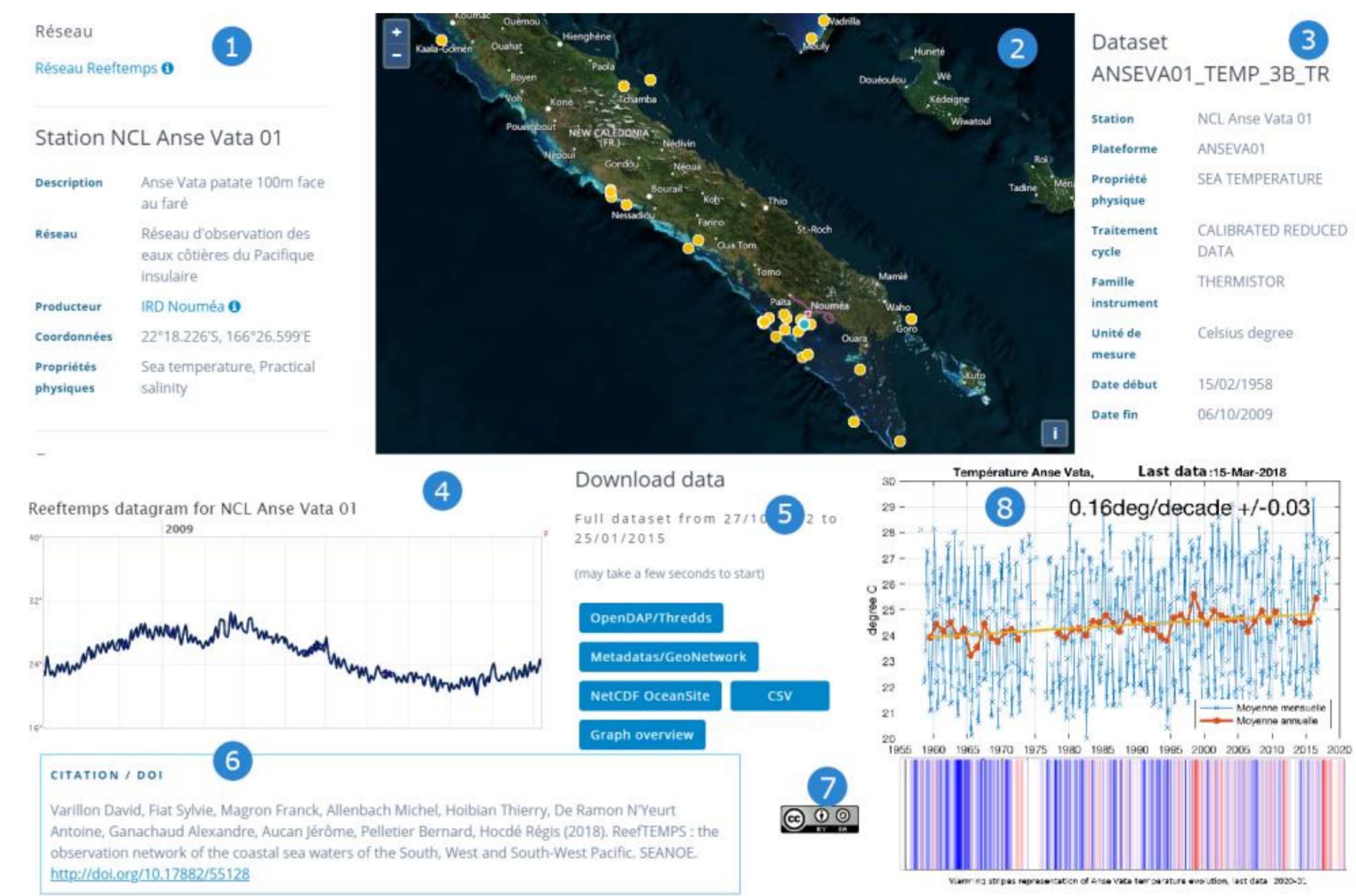


Figure 5. Getting Anse Vata (New Caledonia) temperature data in ReefTEMPS : 1/ station metadata, 2/ station location on interactive map (blue spot), 3/ Dataset metadata, 4/ Interactive datagram to preview data, 5/ Download available, 6/ DOI reference, 7/ Data licence, 8/ Data science products as a result.

FINDABLE

doi:10.17882/55128

Unique and persistent identifier

SEANOE

Bi-annual updates
September 2019 update :
doi:10.17882/55128#66815

Findable by data generic search engines

ACCESSIBLE

HTTP HTTPS

OGC

Access through standards

DOWNLOAD & ACCESS OPEN

No registration, no restriction, no constraints, no fees

INTEROPERABLE

WMS WFS

SOS

CSW

Open DAP

Web Map Service
Web Feature Service

Sensor Observation Service

Catalog Service for the Web

Open-source Project for a Network Data Access Protocol

REUSABLE

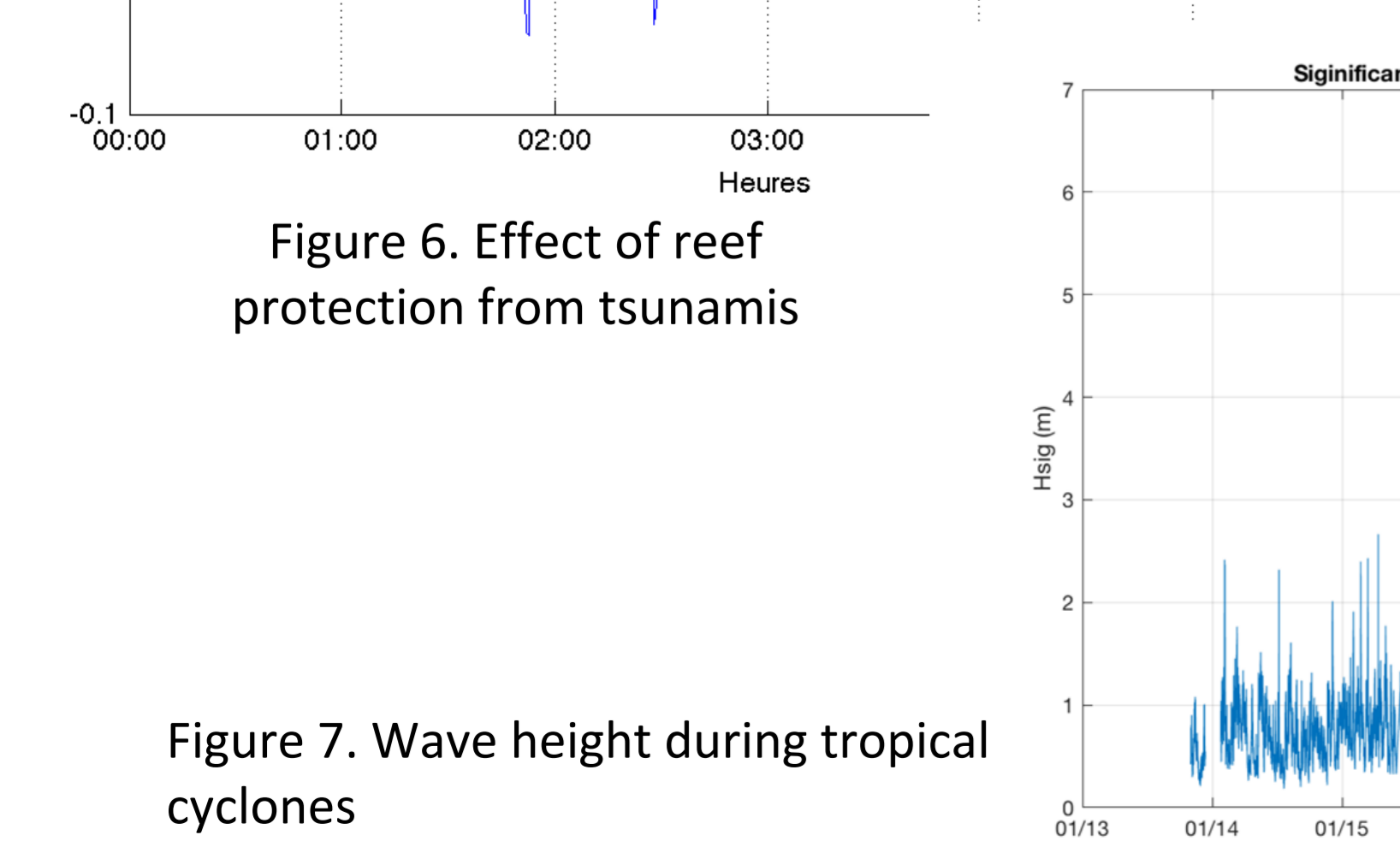
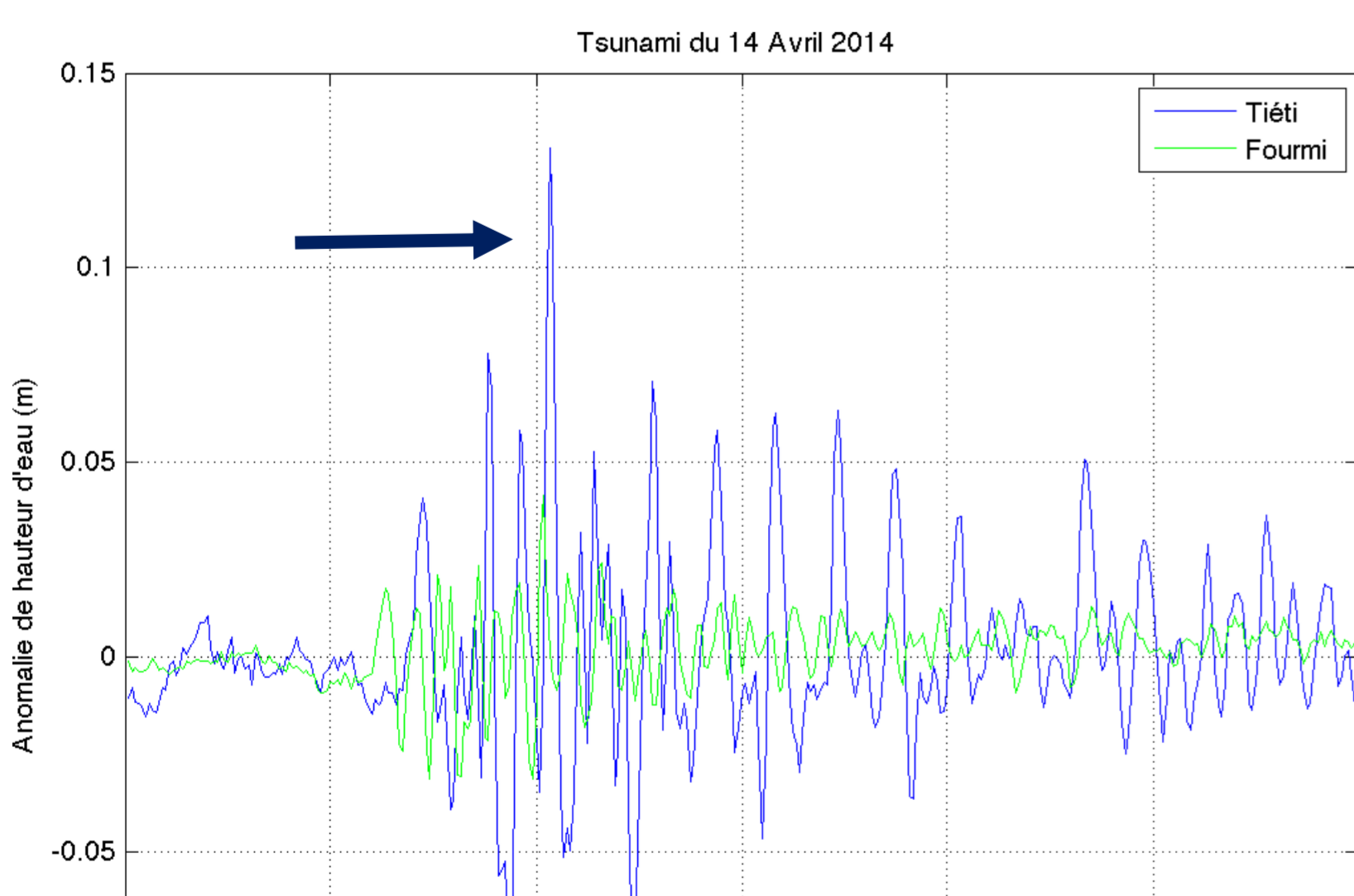
Rich metadata & multiple layers

Datasets metadata
Data quality control flags
Sensors metadata
Observation service metadata

Provenance / Citation

Data usage licence

Creative Commons Attribution – ShareAlike 4.0 International



FAIR, SUSTAINABLE DEVELOPMENT

20 island states and overseas territories of the Pacific

Long-term monitoring

Natural disasters studying

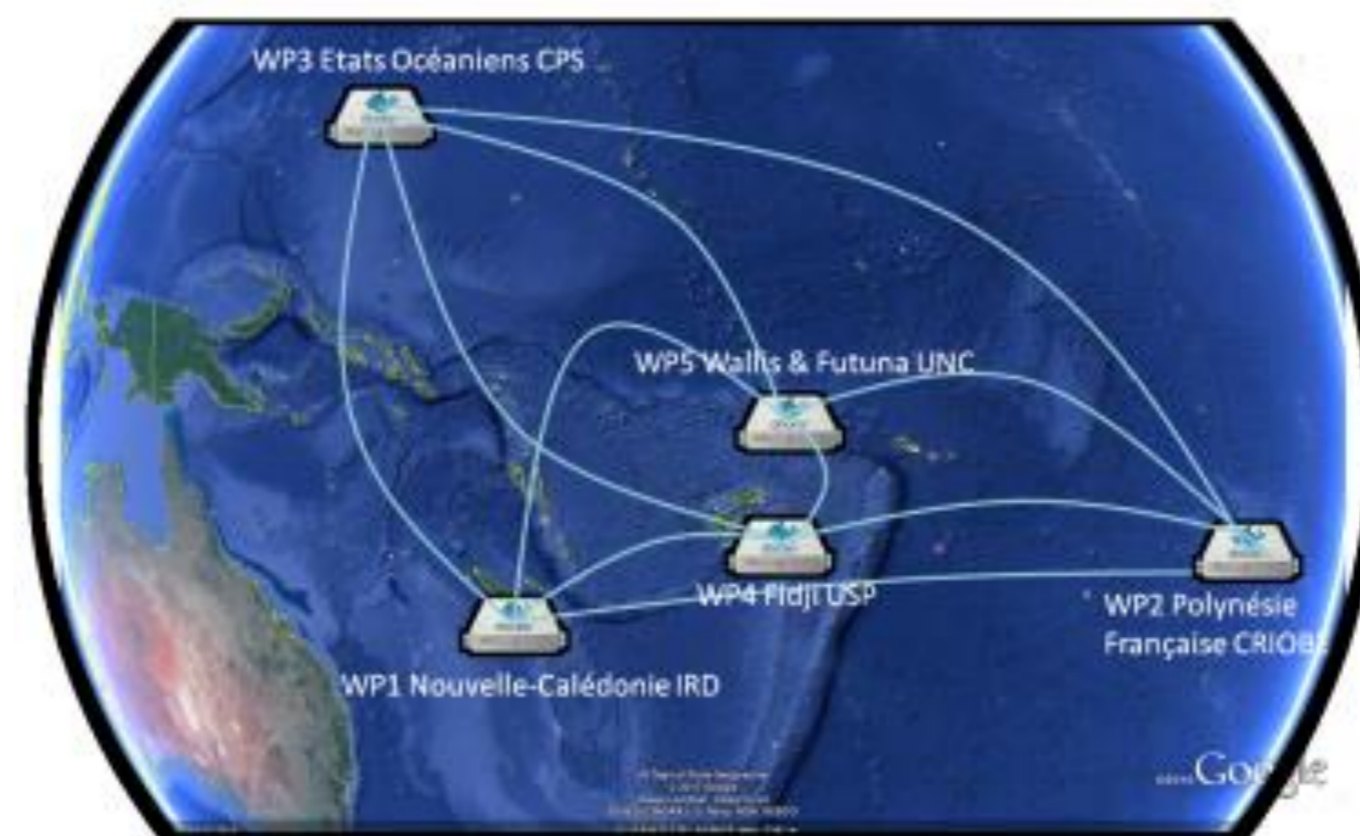


Figure 8. ReefTEMPS informatopn system deployment

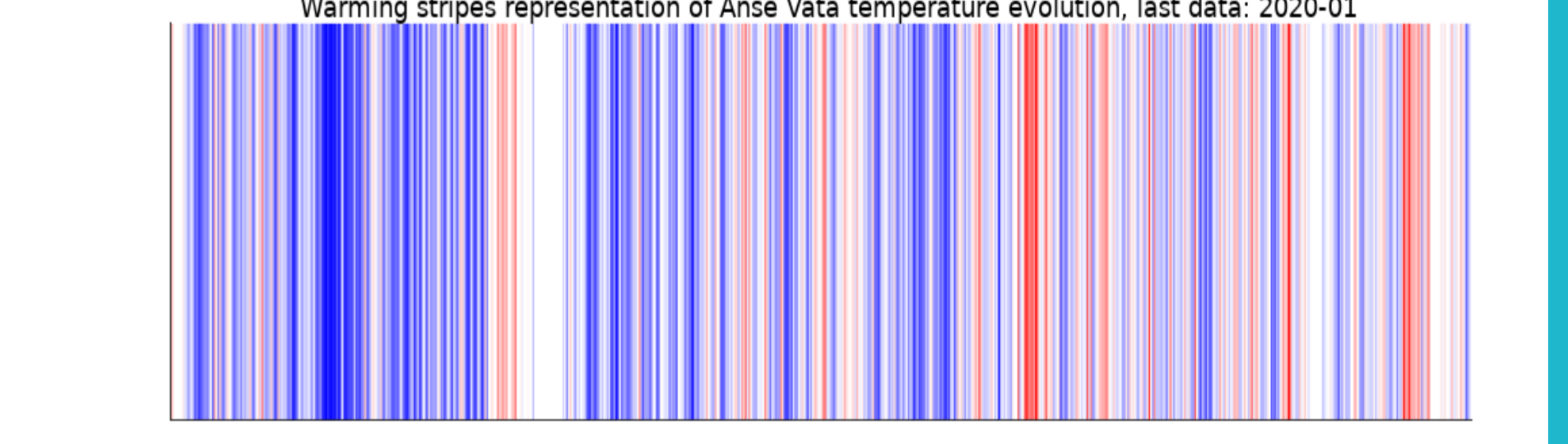
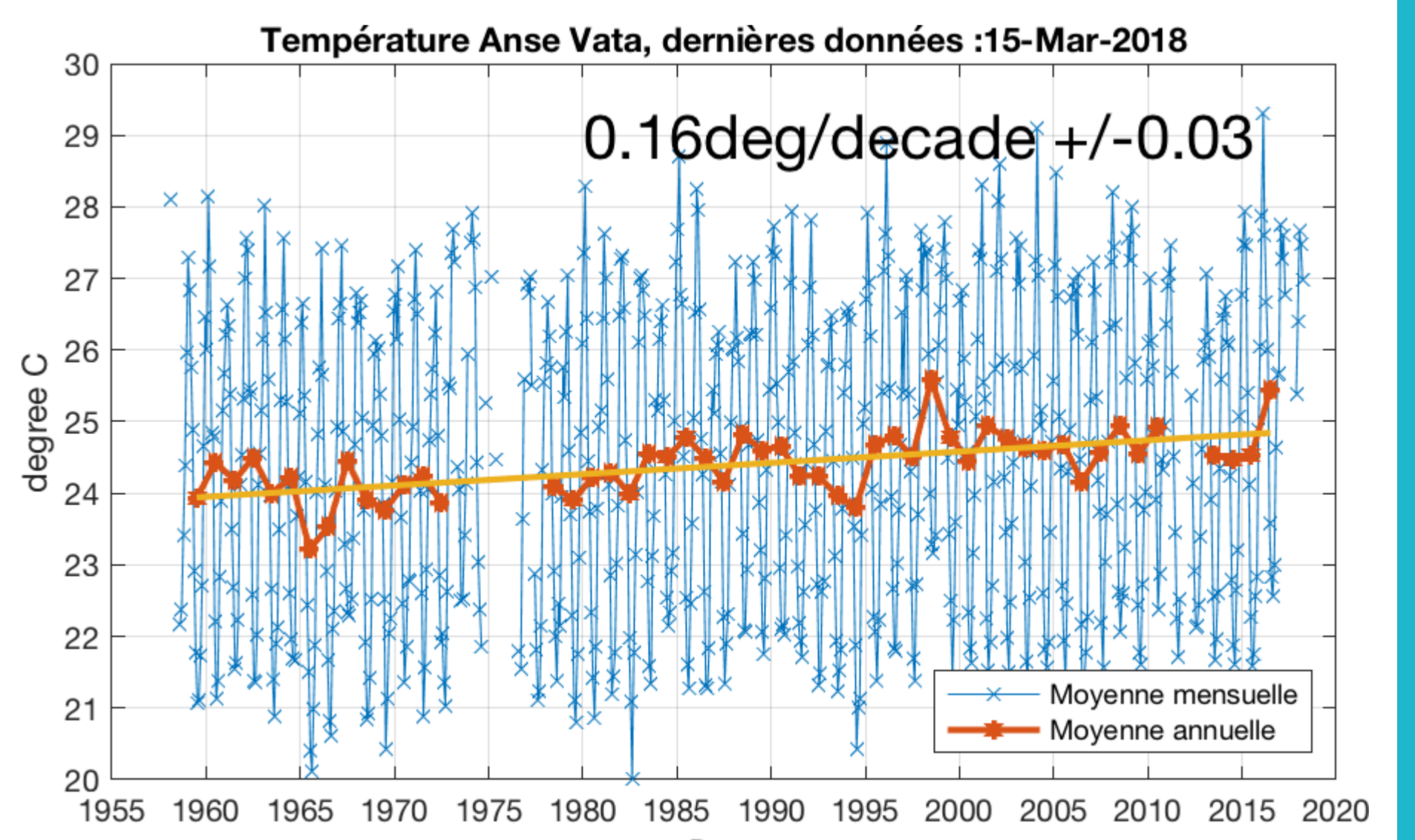


Figure 9. Global warming evidence