



ReefTEMPS, FAIRs access to Reef ecosystem environmental measurements

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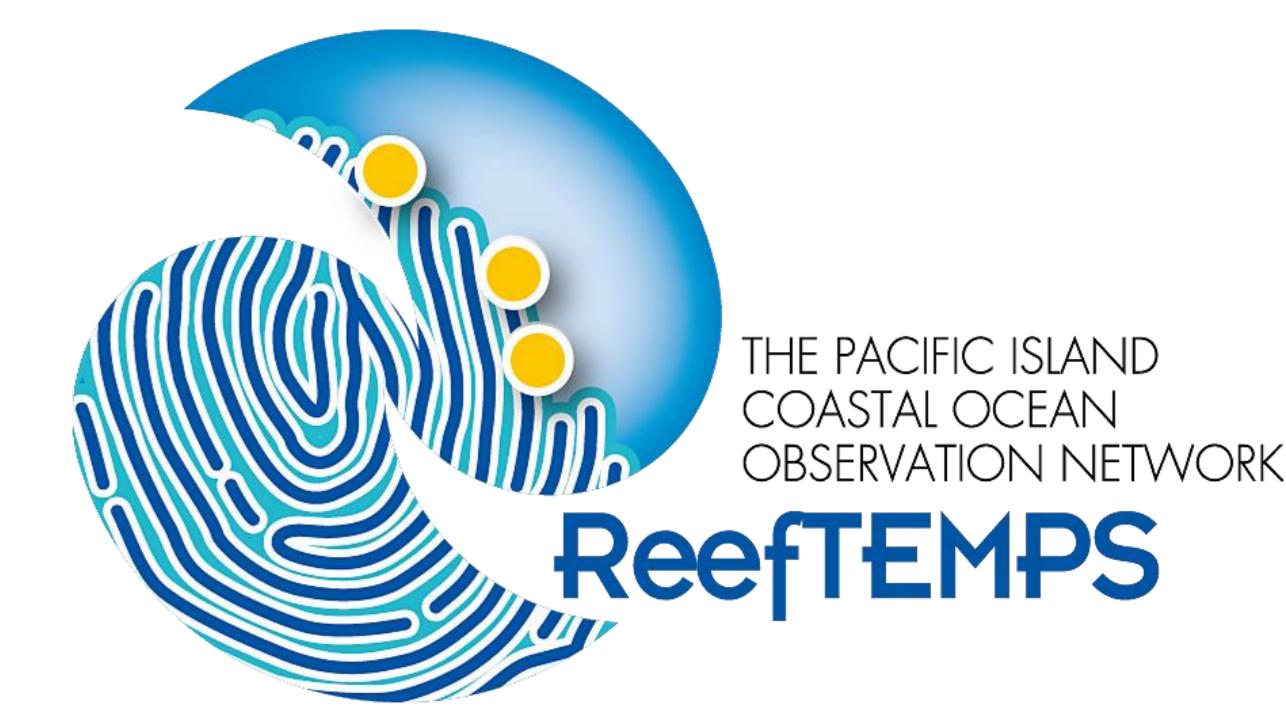
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ReefTEMPS, FAIRs access to reef ecosystem environmental measurements



Sylvie Fiat¹, Jérôme Aucan², David Varillon³, Régis Hocdé⁴



ReefTEMPS^a 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^b.

^a <http://reeftemps.science>

^b www.ir-ilico.fr

60 years
63 M measures
98 platforms
5 physical parameters

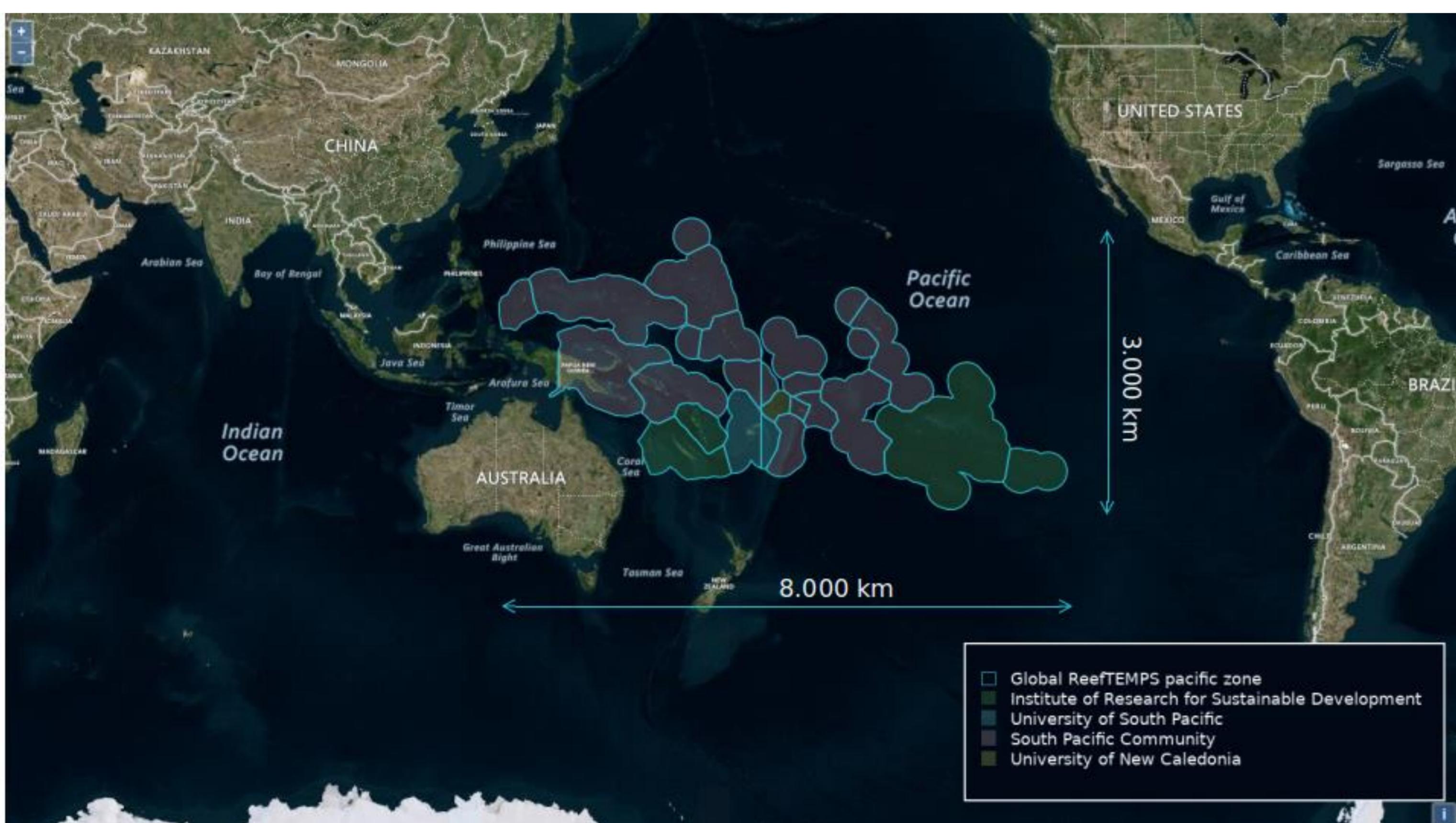


Figure 1. The ReefTEMPS network federates 4 data producers covering in part the South, South West and West Pacific: the Institute of Research for sustainable Development, the Pacific Community, the University of the South Pacific and the University of New Caledonia.



Figure 2. Installation of a sensor by a diver.



Figure 3. Underwater sensor.

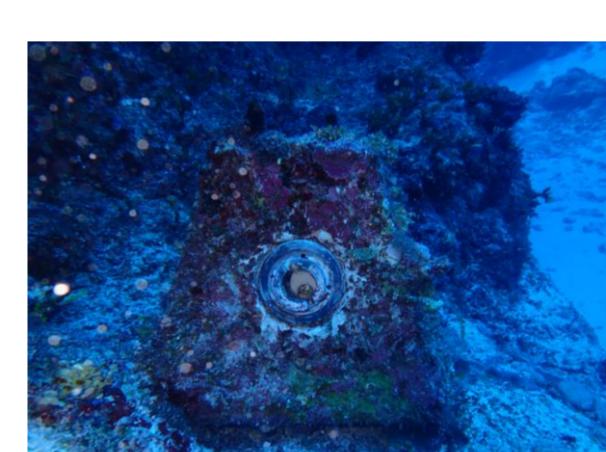


Figure 4. Underwater platform.

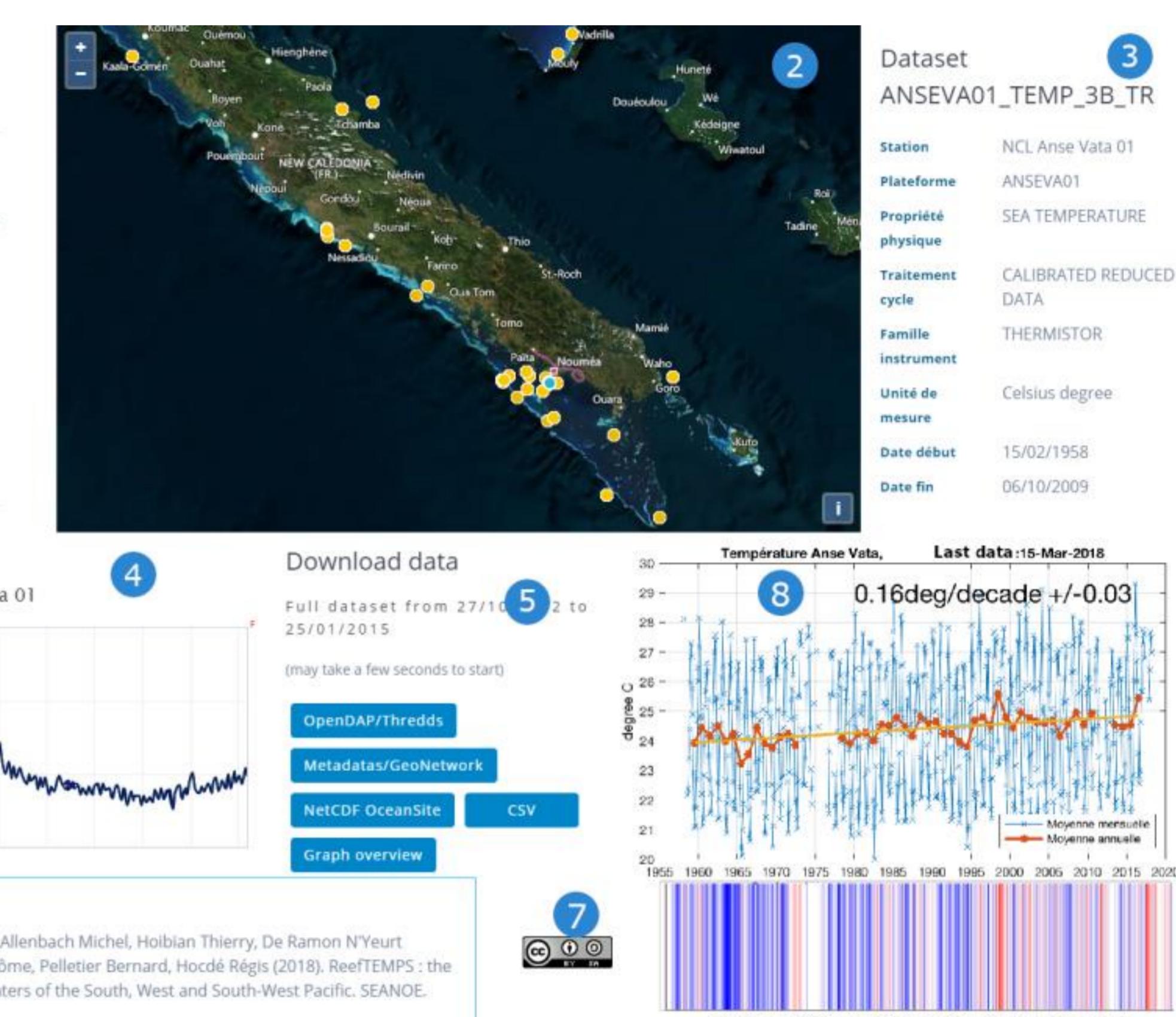


Figure 5. Getting Anse Vata (New Caledonia) temperature data in ReefTEMPS : 1/ station metadata, 2/ station location on interactive map (blue spot), 3/ Dataset metadata, 4/ Interactive datagram to preview data, 5/ Download available, 6/ DOI reference, 7/ Data licence, 8/ Data science products as a result.

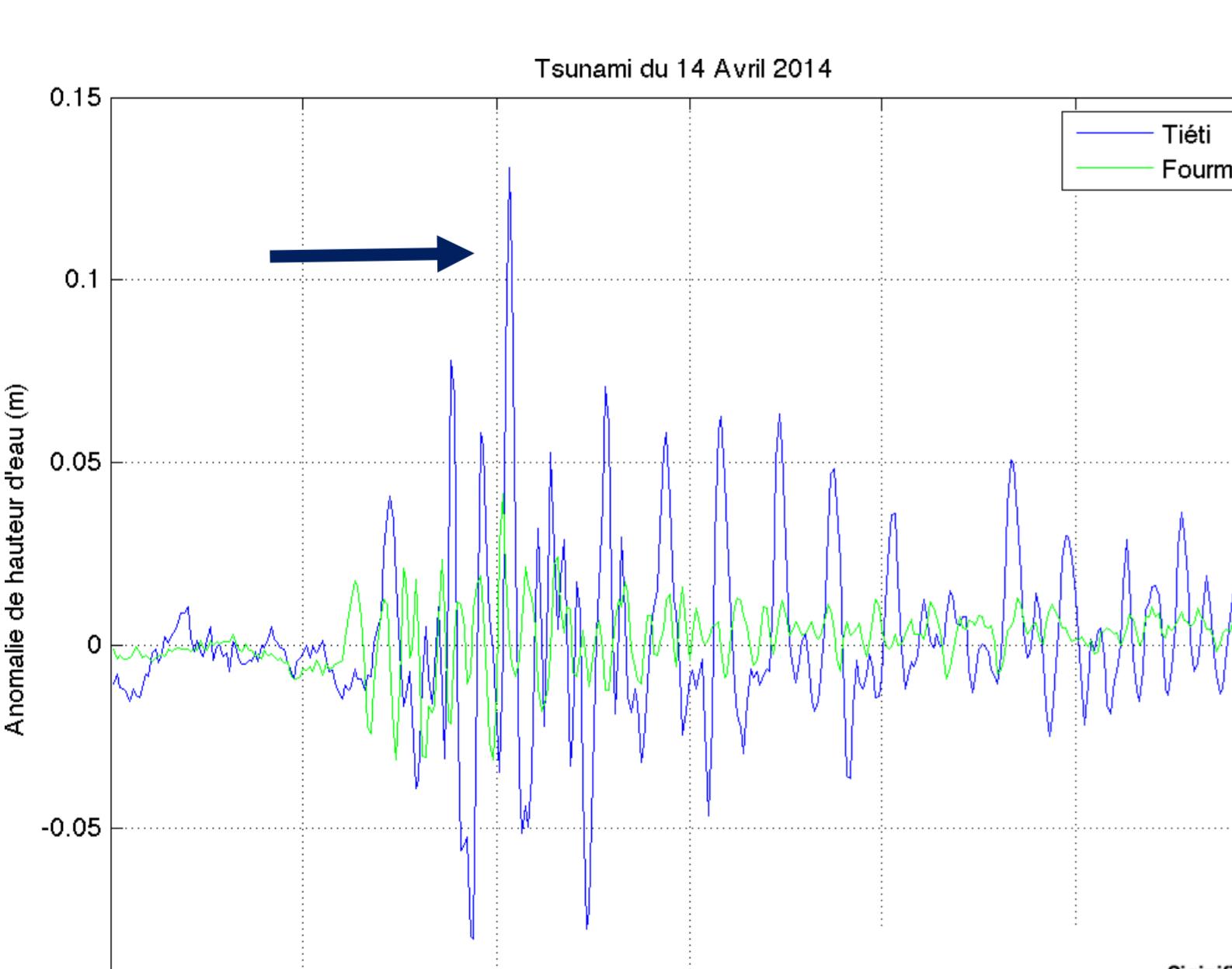
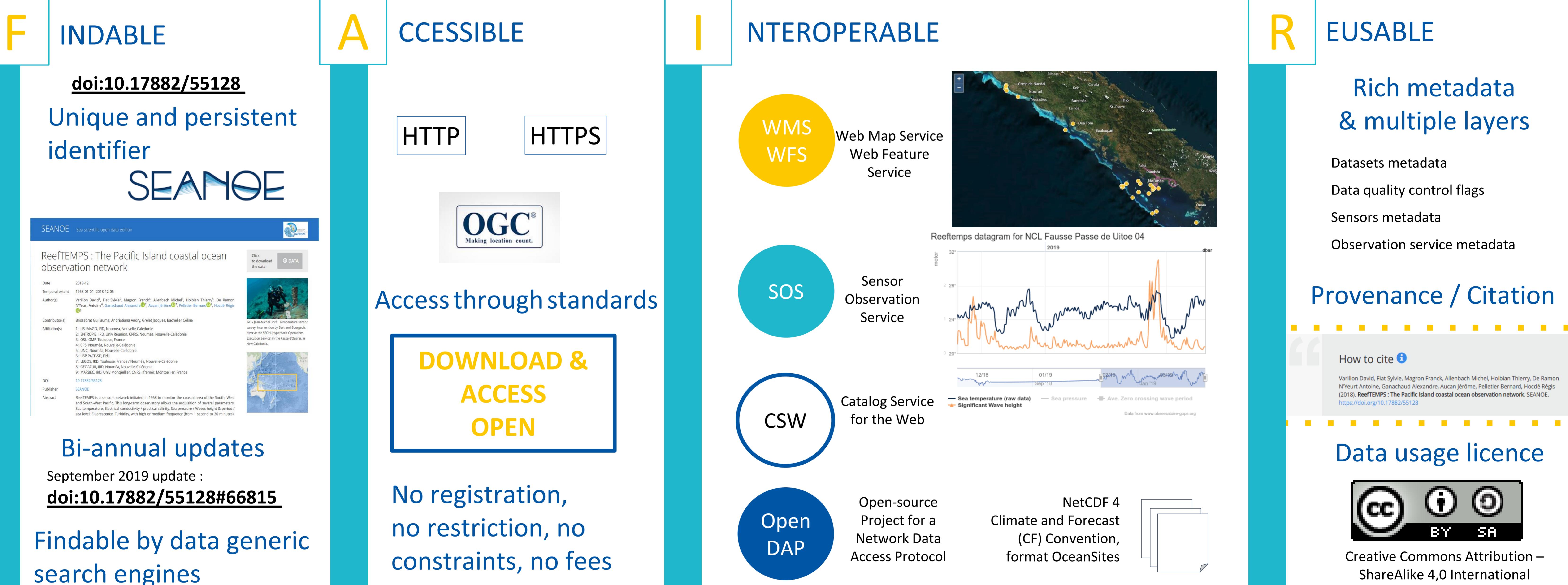


Figure 6. Effect of reef protection from tsunamis

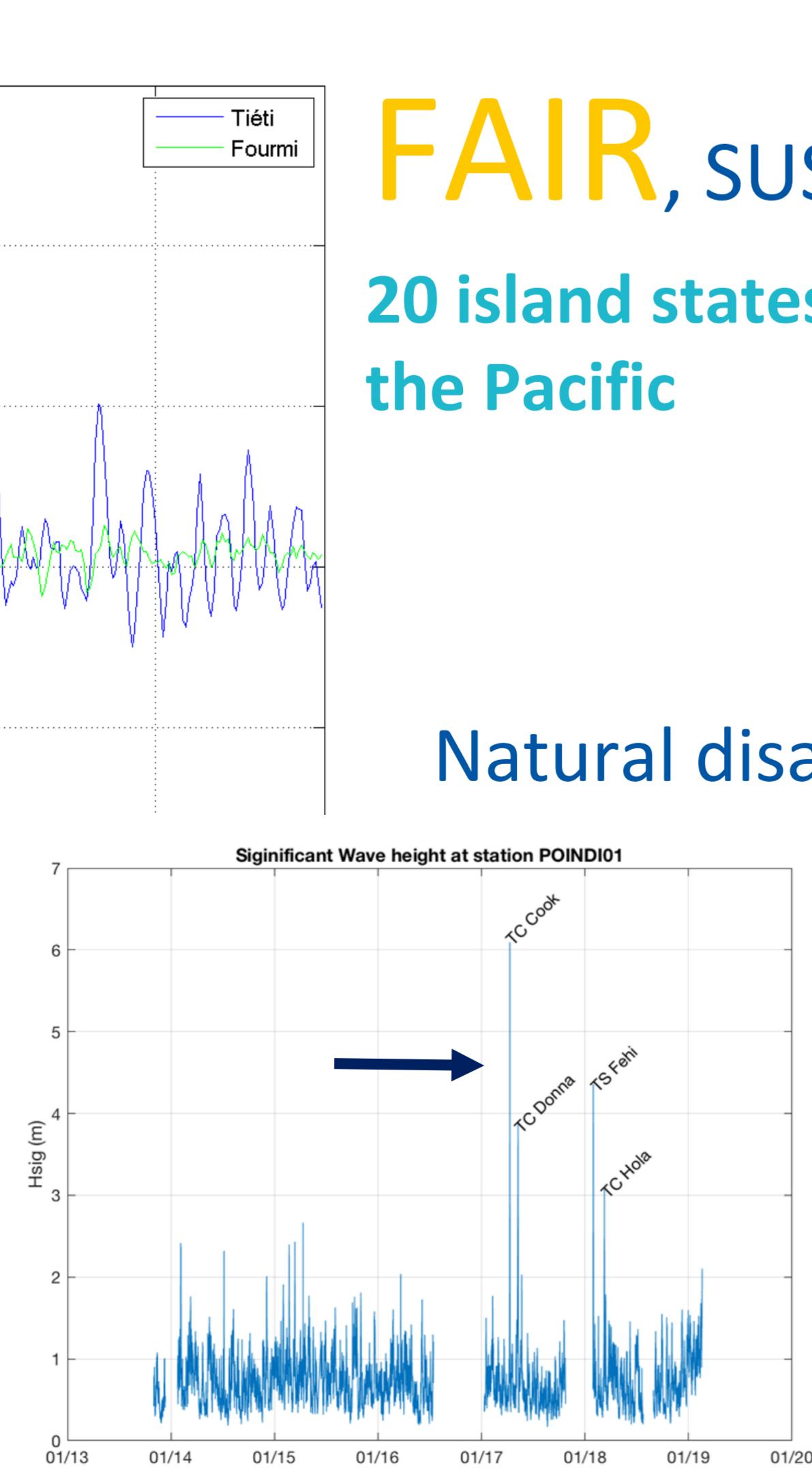


Figure 7. Wave height during tropical cyclones

FAIR, SUSTAINABLE DEVELOPMENT
20 island states and overseas territories of the Pacific

Natural disasters studying



Long-term monitoring

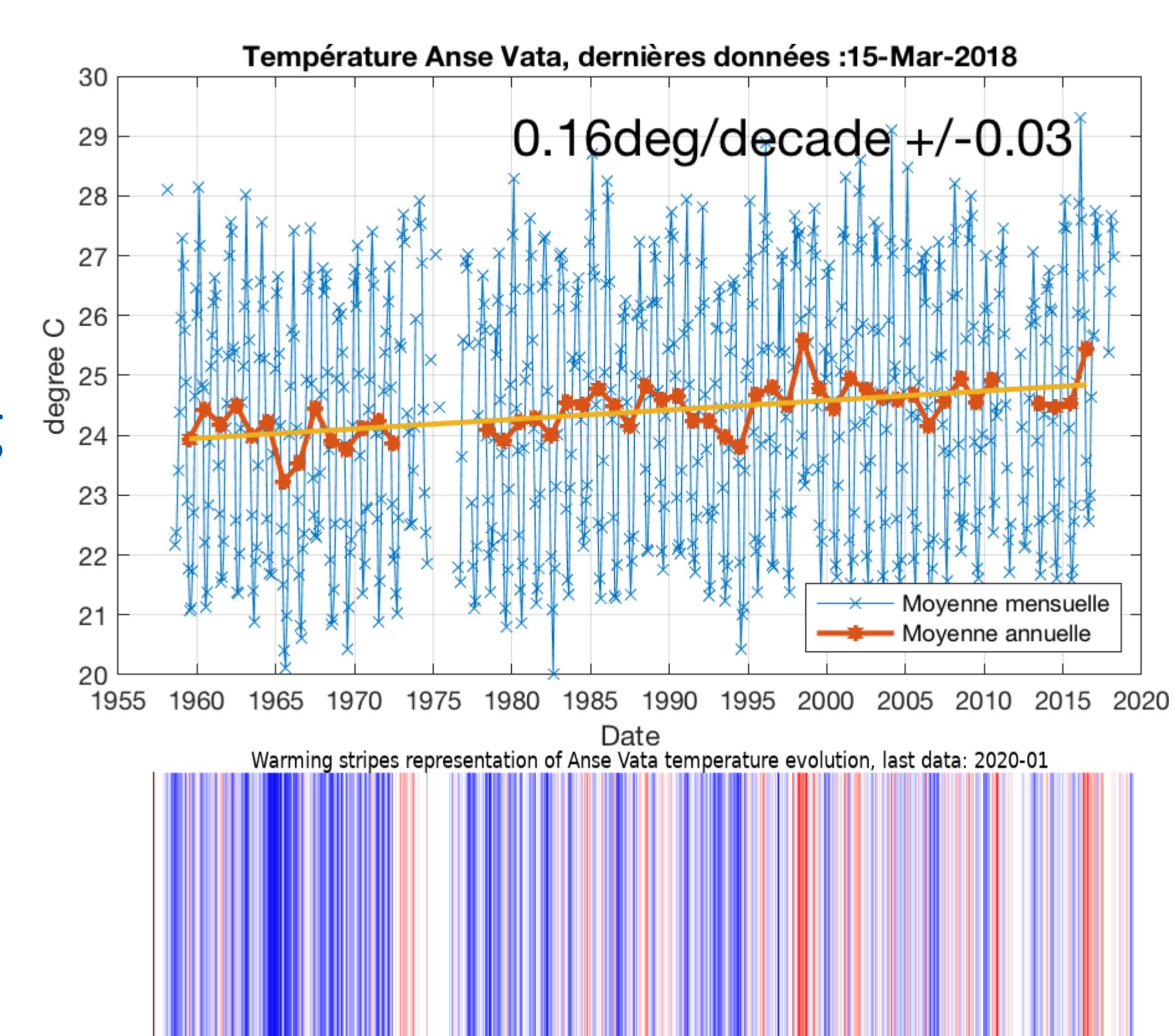


Figure 9. Global warming evidence

Open source software architecture

Figure 8. ReefTEMPS informatopn system deployment

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