

French National Report



GLOSS GE XVIII – March 2025 - Panama

TG Networks in France

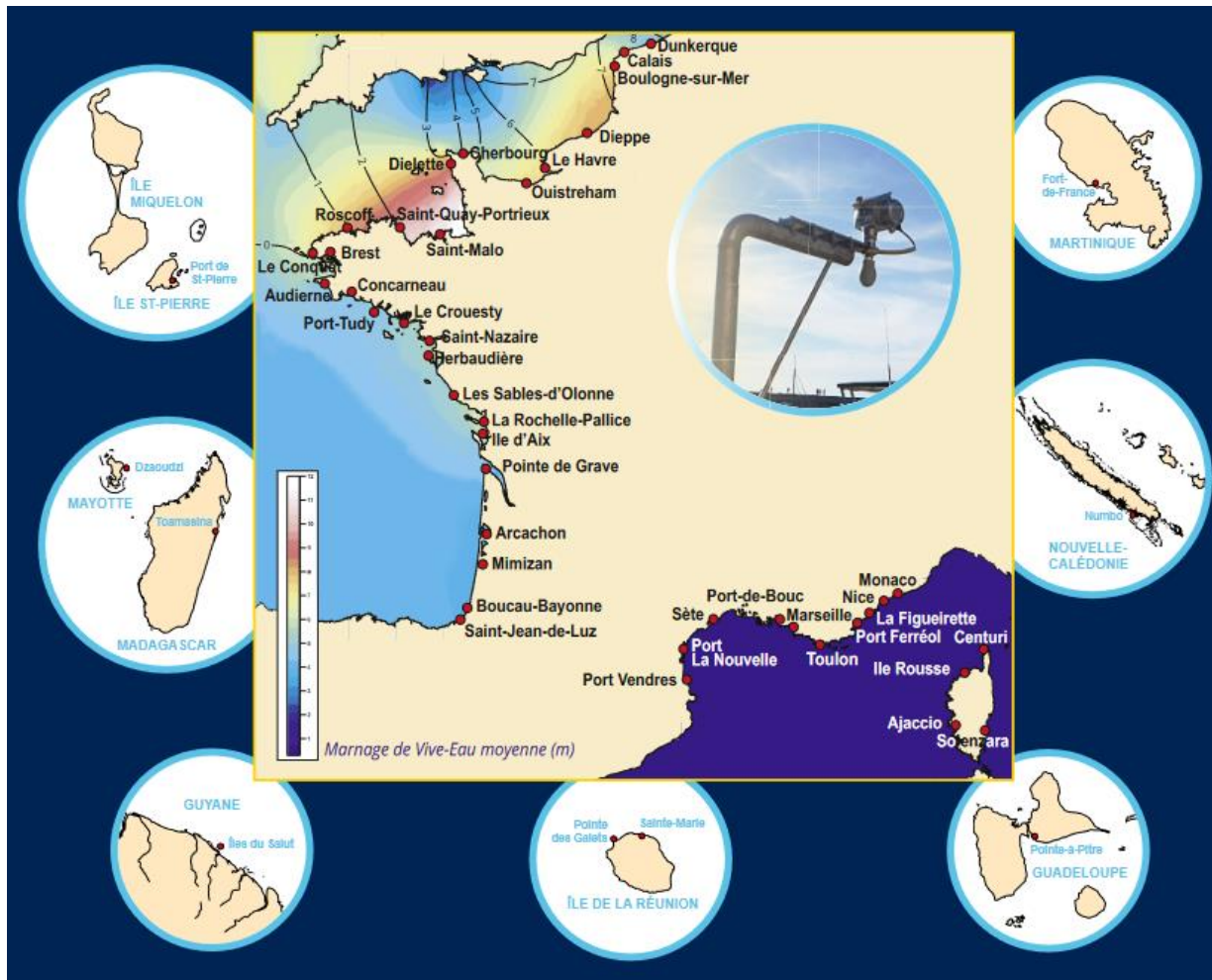


RONIM network

50 stations,
multi-purpose,
all-radar network

Real-time transmission
for **wave-submersion**
vigilance (Météo-France)
and **tsunamis detection**
(CENALT)

Every 5 years complete
levelling and equipment
maintenance



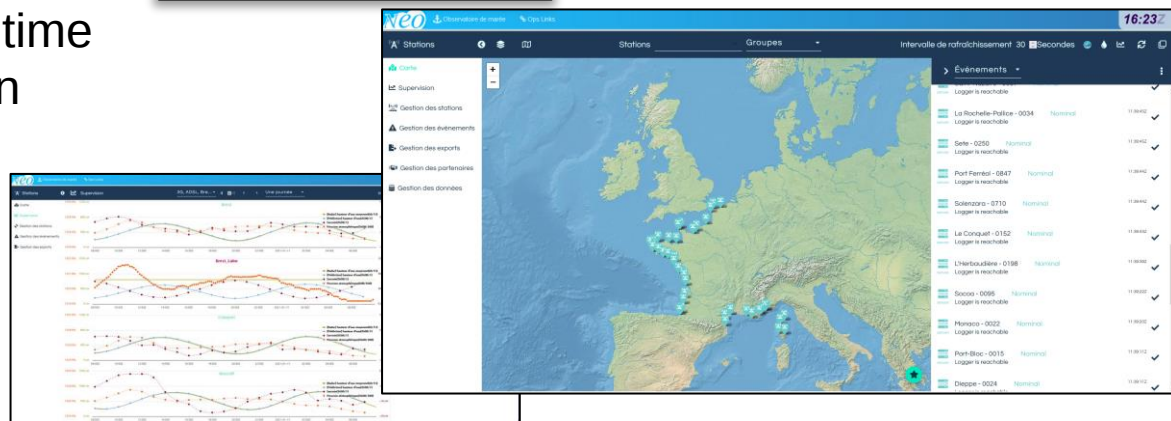
TG Networks in France



RONIM network

2021-2022 : major modernisation

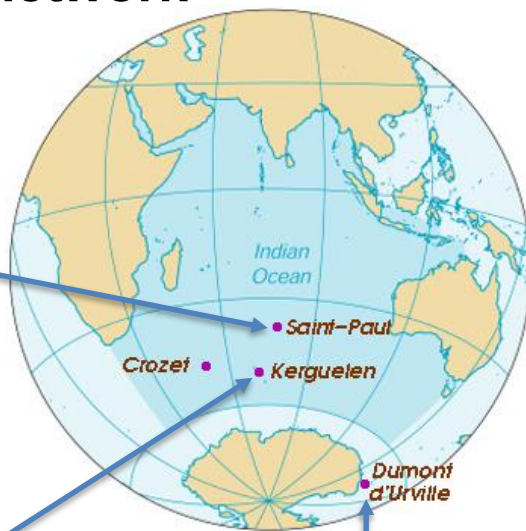
- Replacement of data-loggers and GPRS transmission systems
- New sensors (weather)
- Supervision software
- Better assessment of real time recording and transmission issues
- Improvement of Network Reliability



TG Networks in the French Southern and Antarctic Territories

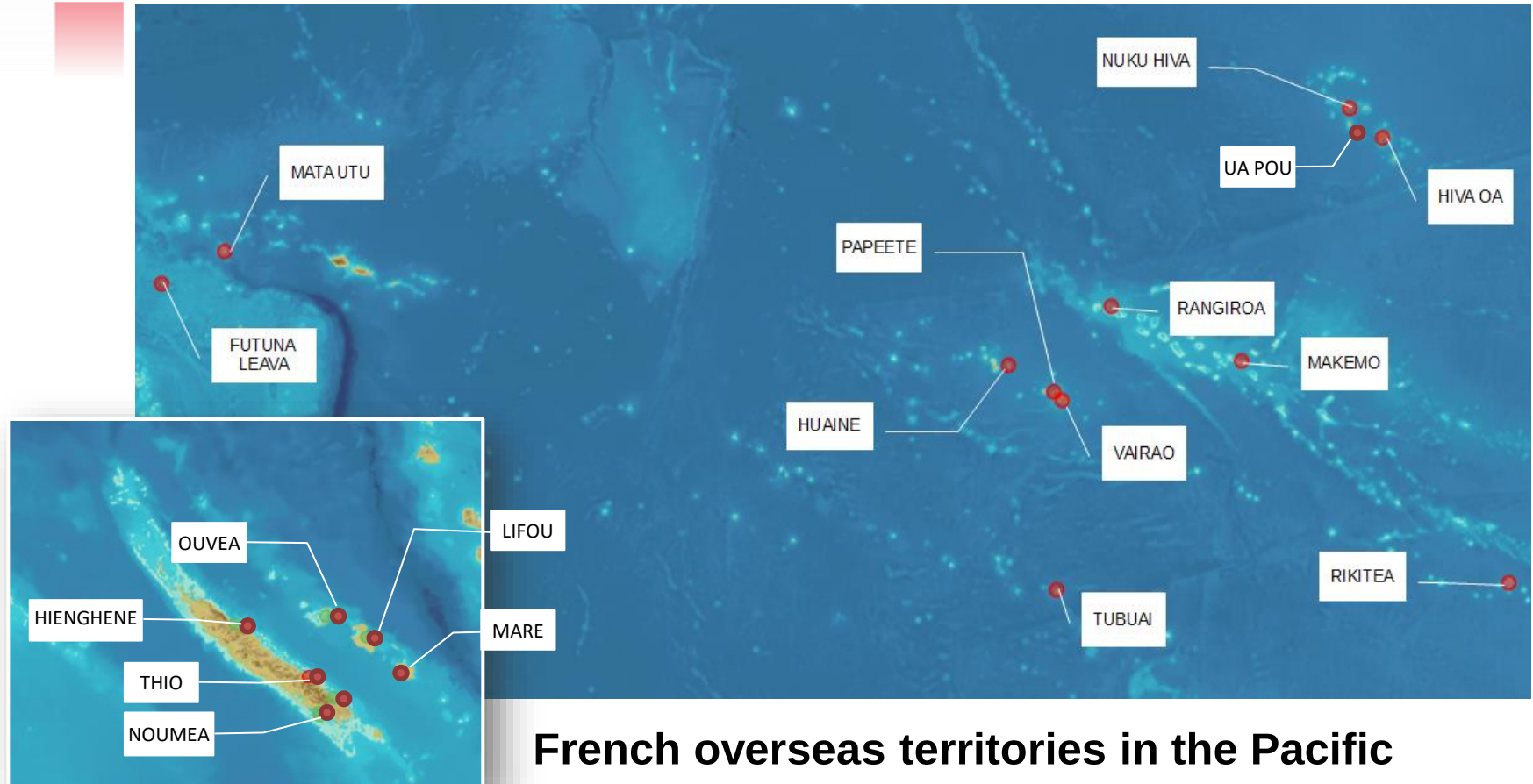


ROSAME network



- Operated by LEGOS and LIENSs labs, DT/INSU, IGN, IPEV, TAAF
- Pressure sensors and radar collocated with GNSS
- Real-time data transmission
- Kerguelen is part of IOTWS
- Subject to important environmental stress and maintenance difficulties
- Deployment of GNSS-IR at DDU and Kerguelen (2024), Crozet and Amsterdam (in progress in 2025)

TG Networks in France (Pacific)



French overseas territories in the Pacific

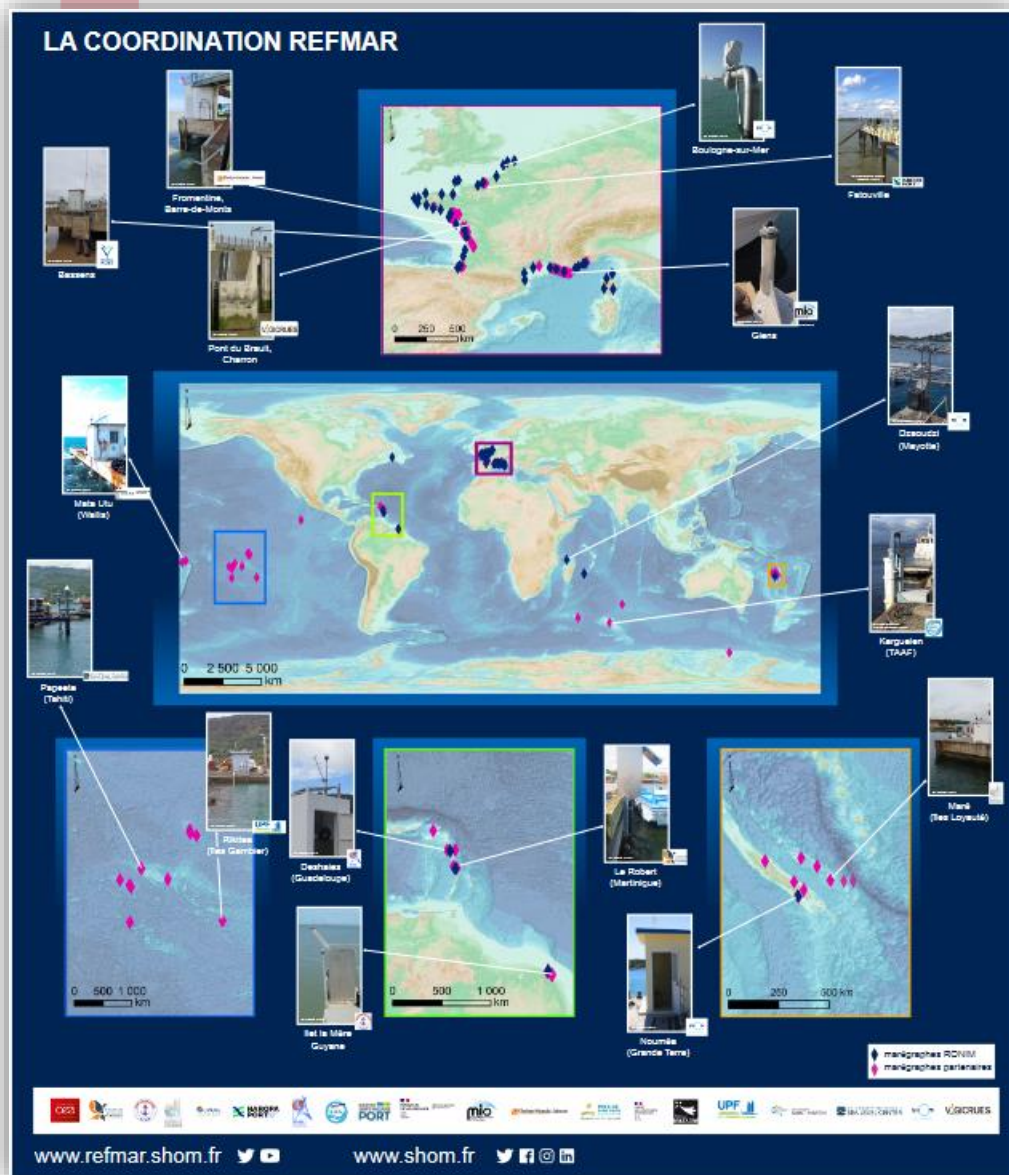
Tsunami oriented network

Several operators : Shom, UHSLC, Papeete Univ.

Funding : DPAM, W&F gouv, NC gouv



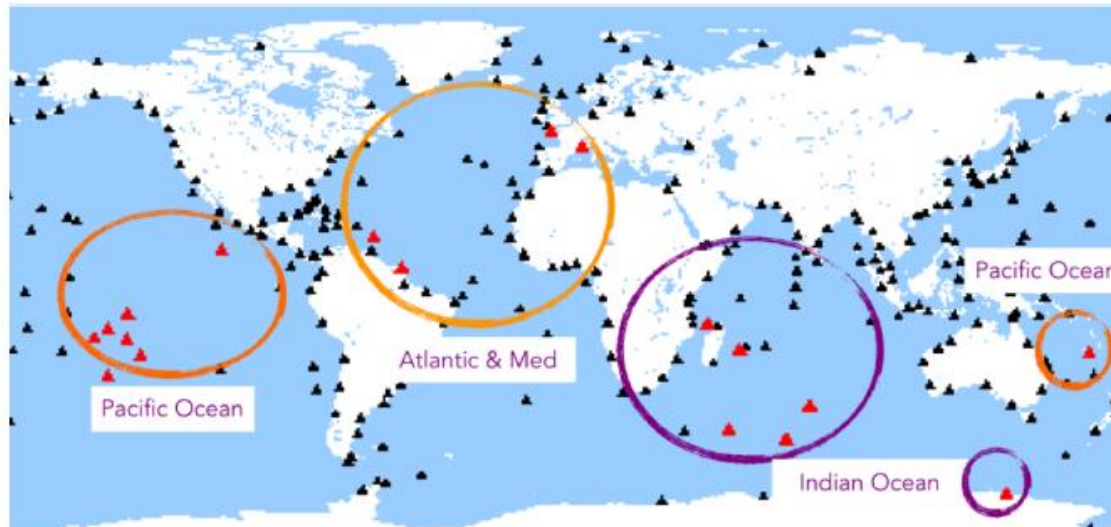
TG Networks in France

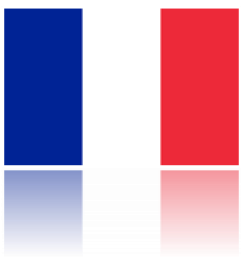


GLOSS Stations on French Territories

Italic : co-location with permanent GNSS

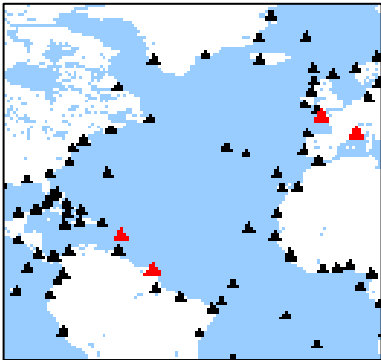
<i>Brest (242)</i>	<i>Reunion Is. (17)</i>	<i>Nouméa (123)</i>
<i>Marseille (205)</i>	<i>Kerguelen (23)</i>	<i>Papeete (140)</i>
<i>Fort-de-France (338)</i>	<i>Crozet Is. (21)</i>	<i>Rikitea (138)</i>
<i>French Guyana (202)</i>	<i>Saint-Paul Is. (24)</i>	<i>Nuku Hiva (142)</i>
<i>Dzaoudzi (96)</i>	<i>Dumont d'Urville (131)</i>	<i>Clipperton (165)</i>
<i>Leava, Futuna Island (353)</i>	<i>Makemo (354)</i>	<i>Rangiroa (355)</i>
<i>Tubuai (356)</i>		





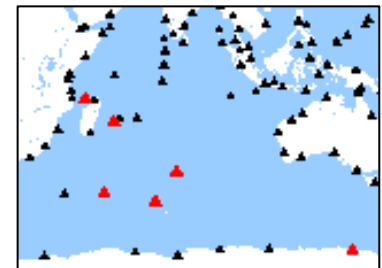
GLOSS Criteria - Atlantic & Med

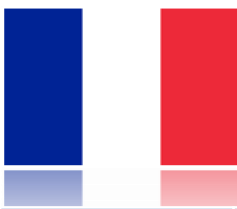
	Type	Precision	Control	Meteo	Last Levelling	GNSS	Real-Time
Fr. Guyana	Radar	1cm	Semestrial	Atm. Pressure temperature, humidity	2024	Yes	GPRS GTS
Fort-de-France	Radar	1cm	Semestrial	Atm. Pressure temperature, humidity	2015 (planned 2025)	Yes	GPRS GTS
Marseille	Radar Float	1cm	Semestrial	Atm. Pressure temperature, humidity	2023	Yes	GPRS
Brest	Radar	1cm	Semestrial	Atm. Pressure temperature, humidity	2024	Yes	GPRS



GLOSS Criteria - Indian Ocean

	Type	Precision	Control	Meteo	Last Levelling	GNSS	Real-Time
Réunion Is	Radar	1cm	Semestrial	Atm. Pressure temperature, humidity	2024	No	GPRS + GTS
Crozet	Disabled						
Kerguelen	Pressure Radar	1cm	Monthly	Atm. Pressure	2022	Yes	ARGOS, ADSL GTS
Saint-Paul	Pressure Radar	1cm	Semestrial	Atm. Pressure	2019	Yes	ARGOS
Dzaoudzi	Temporarily disabled	1cm	Semestrial	Atm. Pressure temperature, humidity	2024	Yes	GPRS + GTS
Dumont d'Urville	Pressure	1cm	Annual	Atm. Pressure	2019	Yes	ARGOS + ADSL





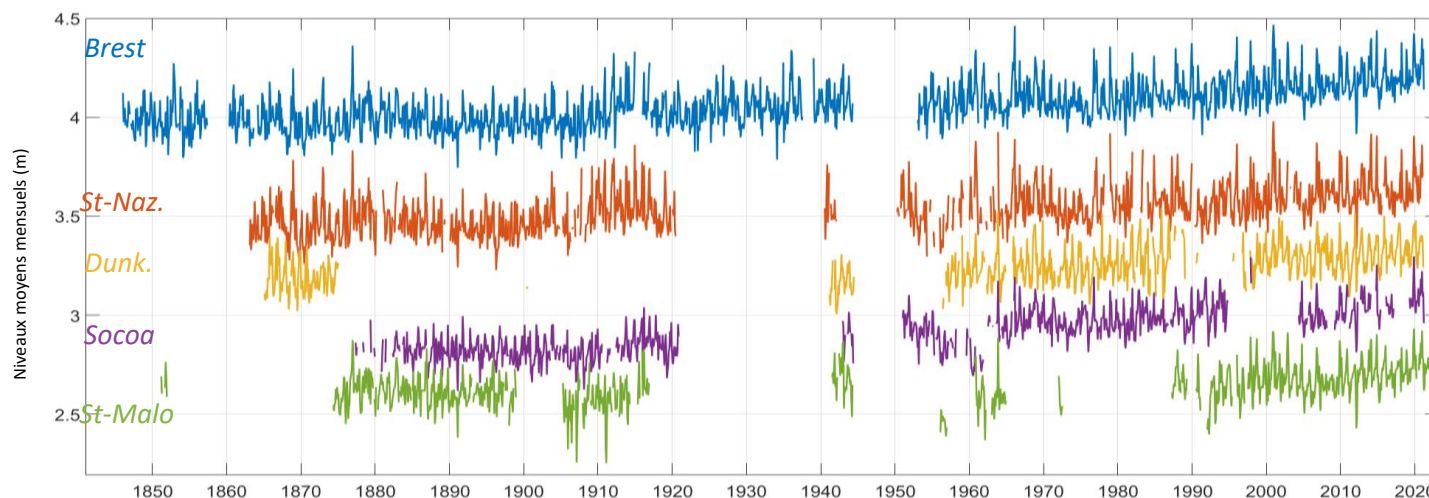
GLOSS Criteria - Pacific Ocean

	Type	Precision	Control	Meteo	Last Levelling	GNSS	Real-Time
Nouméa	Radar	1cm	Semestrial	Atm. Pressure temperature, humidity	2021	Yes	GPRS + GTS
Rikitea	Radar + Pressure	1cm	Shom/DPAM		2023	Yes	GTS
Papeete	Radar Pressure	1cm	UHSLC		2019	Yes	GTS
Nuku Hiva	Radar	1cm	UHSLC		2016	Yes	GTS
Clipperton	Pressure (campaigns)	5cm	>Annual		2015	Campaign	No
Leava Futuna	Radar Pressure	1cm	Annual	Atm. Pressure	2022	Yes	GTS
Makemo	Radar Pressure	1cm	Annual	Atm. Pressure	2023	Yes	GTS
Rangiroa	Radar Pressure	1cm	Annual	Atm. Pressure	2023	Yes	GTS
Tubuai	Radar Pressure	1cm	Annual	Atm. Pressure	2023	Yes	GTS

DATA rescue

Online inventory : <https://refmar.shom.fr/data-archaeology/liste-inventaire>.

Projects led by the Shom with its partners:



Brest (Pouvreau, 2008)
[1846-actu]



Saint-Nazaire (Ferret, 2016)
[1863 – actu]



Dunkerque (Latapy, 2020)
[1865-actu]



St Malo / St Servan
[1850-actu]



Socoa/Saint-Jean-de-Luz
[1875 – actu]



Estuaire de la Seudre (Bourcefranc-Le-Chapus)
[1878– actu]



Pertuis Charentais (Gouriou, 2012)
[1850s-actu]

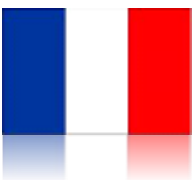


Douala (Cameroun) (Fossi Fotsi, 2022)
[1950s-actu]



Abidjan (Côte d'Ivoire) (Rokyatou, 2018)
[1949-actu]





GLOSS Session - 2025

Thank you for your attention

