

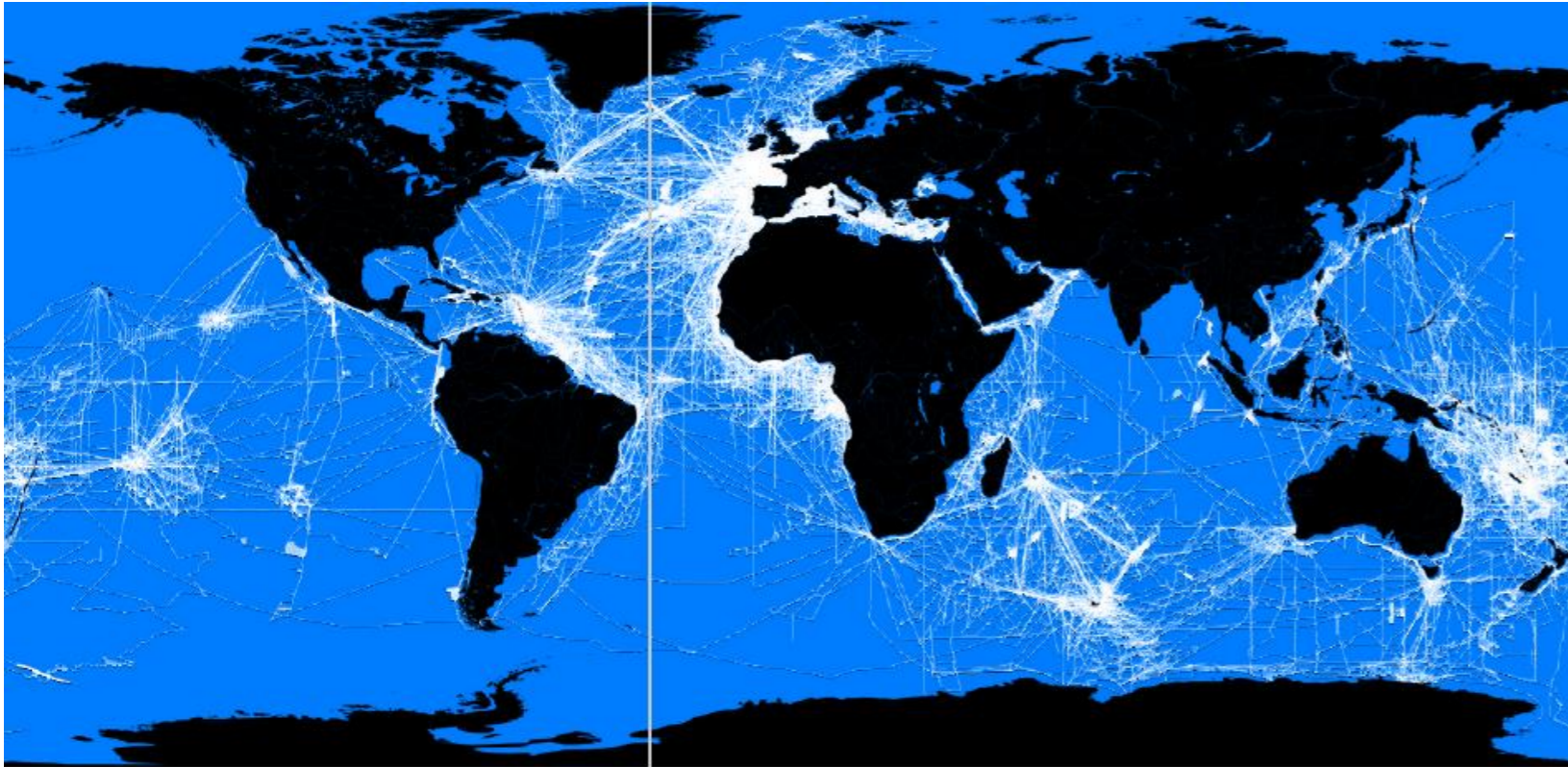
What Will the French oceanographic Fleet Look like in the Future



Maximilien Simon et al.

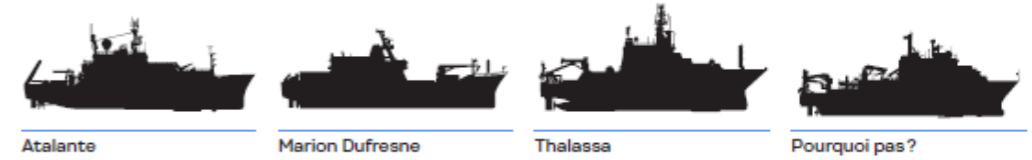
25/09/2025

The French oceanographic fleet (FOF)

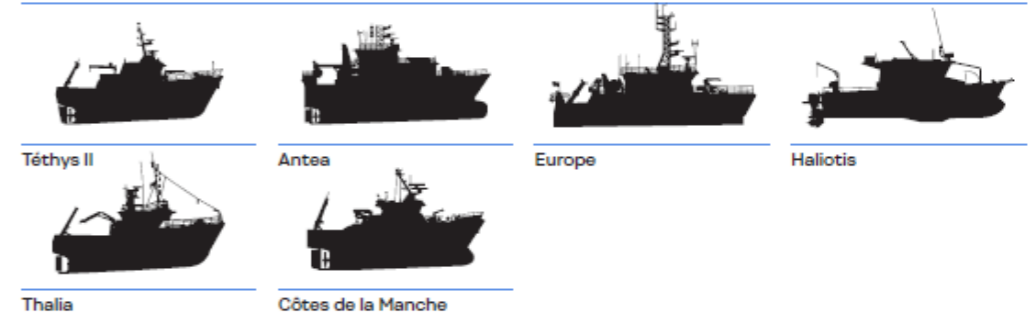


Map of French oceanographic campaigns around the world since 1920

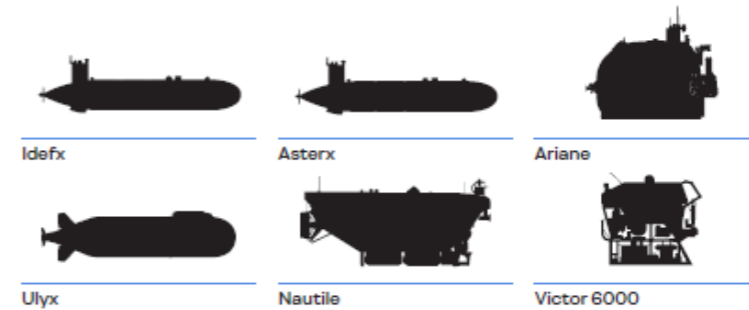
Deep-sea vessels



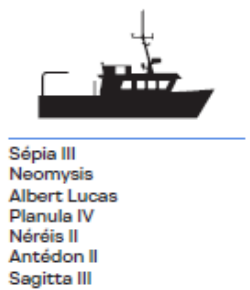
Coastal and regional vessels



Underwater vehicles



Local vessels



A global and ambitious foresight exercise

An 18-month collective and participative foresight exercise.

Objective: to define the broad outlines of the next plan for renewing the FOF's resources to meet research needs, including the need to reduce its carbon footprint.

4 areas of work: scientific needs, technologies, partnerships, carbon footprint

20 recommendations and a white paper published on the sidelines of the UNOC



SESSION 1
QUELS BESOINS SCIENTIFIQUES ET TECHNOLOGIQUES POUR L'AVENIR ?

<p>Océan physique et biogéochimique XAVIER CAPET, CNRS, LOCEAN</p>	<p>Biologie marine et biodiversité SARAH SAMADI, MNHN, ISYEB</p>
<p>Paléoclimat et paléo-environnement VIVIANE BOUT-ROUMAZAILLES, CNRS, LOG</p>	<p>Biologie halieutique et gestion des ressources PIERRE PETITGAS, Ifremer, RBE et MATHIEU DORAY, Ifremer, RBE</p>
<p>Géosciences marines, MILENA MARJANOVIĆ, CNRS, IGP</p>	<p>Enseignement JACQUES DÉVERCHÈRE, UBO, Geo-Ocean</p>

Handwritten notes and sketches:

- Laurent Merriek **Ship-ST** (Lorient/Nantes) Architecture navale
 Bureau d'étude innovant, qui pousse (jusque dans les limites du raisonnable)
 → Arctic Conti
 → Polar pod
 → Fram veur
- Maximilien Simon → Conduire exercice de prospective de puis 18 mois pour la FOF
- Chloé Batisson, responsable comm de la FOF
- Olivier Lefort, directeur de la FOF → prospective touche l'Ifremer
- Marjolaine Matébas, cheffe de mission **Momassat**
 chercheuse en écologie des grands fonds
- Victor Martin, unité Navires et Systèmes embarqués

La planification à moyen terme (2044) n'a pas été en compte l'impact environnemental...
 2022: hausse du coût de l'énergie → décarbonation des missions (Ifremer, CNRS, IRB, universités marines...)
 Solutions techniques + modes opératoires scientifiques → COHETS Intégrer les enjeux environnementaux dans les missions de technologies

MERC. 29 Janv. 25

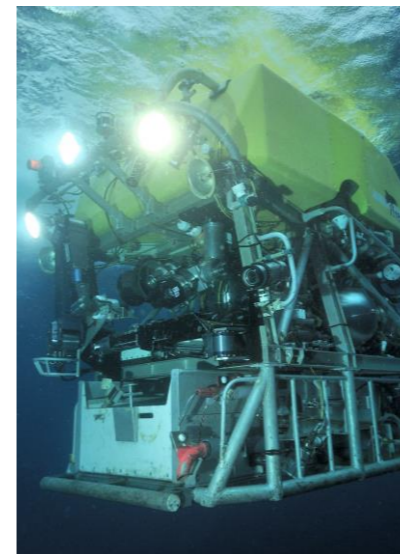
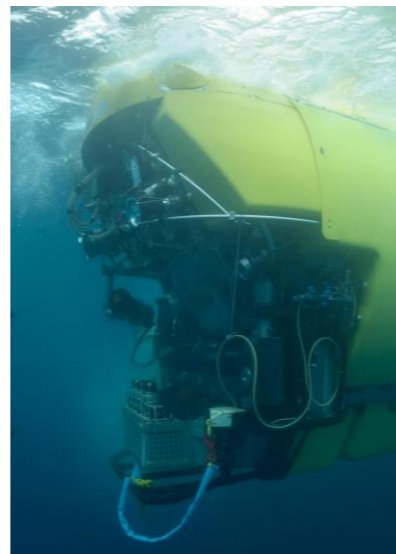
ASOBEAU ①



Modernizing the Fleet of ships and submersible vehicles to meet scientific needs

Rec. 1 → 8

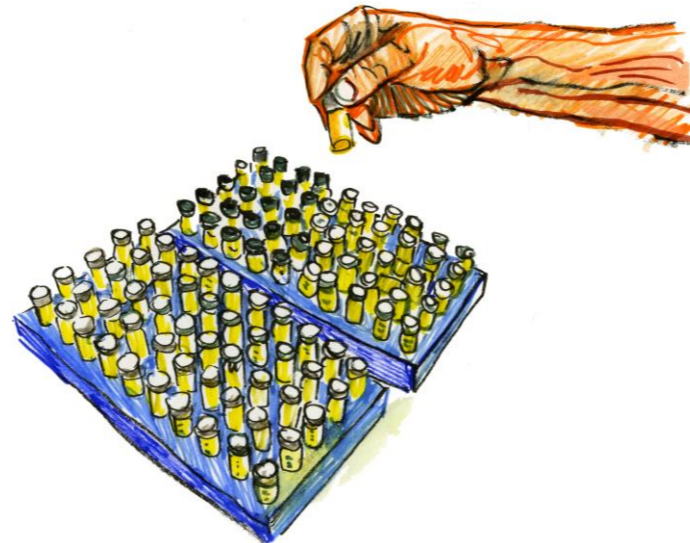
- Coastal and regional vessels
- High-sea vessels
- Submersibles
- USV and remote operations



Improving operations, renewing generations, developing partnerships

Rec. 9 → 18

- Enhance operational flexibility
- Improving data “FAIRness”
- Foster the generation transition
- Facilitate collaboration



Drawings by Damien Roudeau, Momarsat 2022 campaign, project led by Jozée Sarrazin and Marjolaine Matabos

Reduce our carbon footprint while maintaining a high level of service

Rec 19→20

Actions to be initiated as soon as possible

- Reduce the speed of ships in transit (inter- and intra cruises)
- Positioning ships to reduce transits via international collaboration
- Modify existing ships to switch to shore power

Wind energy for transits can make a major contribution to decarbonization

- Essential to study and build new types of hybrid vessel

Encourage development of new research practices



© KHMD – Ship ST



05/06/2025

Shaping the future of the French oceanographic fleet

Conclusion and perspectives

- ✓ The work covered all the issues of an oceanographic fleet, from scientific needs to partnerships.
- ✓ 20 recommendations and a white paper published on the sidelines of the UNOC 2025
- ✓ Based on these conclusions, we are working on a new renewal plan until 2040
- ✓ At the same time, we are putting in place a transformation plan, in particular for decarbonisation actions.

