

Initiative “AI & Ocean” 2024-2027

PPR Océan & Climat

<https://www.ocean-climat.fr/Le-PPR/Actualites/Intelligence-artificielle-Appel-a-postdoc-et-data-challenges>

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PPR Océan & Climat

(French Research Program on Ocean & Climate)



PROGRAMME PRIORITAIRE DE RECHERCHE OCÉAN & CLIMAT 2021–2027

Coordination CNRS/Ifremer :
W. Sanchez, B. Blanke

President of the Scientific Board: Y. Shin

Actions and projects supported by the program:

- Projets de recherche (CLIMARCTIC, FUTURE-OBS, MEDIATION, RIOMAR, FUTURISKS, LIFEDEEPER)
- PhD scholarships
- Systematic Literature Reviews
- Postdoc fellowships: AI-Ocean, Ocean-based solutions

<https://www.ocean-climat.fr/>

Initiative “AI & Ocean”

Scope: <https://www.ocean-climat.fr/Le-PPR/Actualites/Intelligence-artificielle-Appel-a-postdoc-et-data-challenges>

Scientific and technological challenges targeted:

- “AI-native” approaches in the Digital twins of the Oceans
- Better exploitation of the potential of observation and simulation data
- Acceleration and portability of numerical codes

Scientific Approach:

- Structuring through “open” and “at-scale” ML-ready data challenges (benchmarks)
- Benchmarking of AI-native schemes vs. Operational systems
- Exploration of multiple solutions for each data challenge (postdocs)

Integration in the framework of the European Digital Twin of the Ocean platform (EDITO)

Coordination: R. Fablet (IMT Atl.), Y. Drillet (MOi), D. Durand (Covartec), Y. Shin (IRD), B. Blan   (CNRS)

Supporting resources:

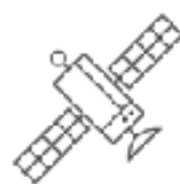
- Scientific and technological expertise of Ifremer, IMT Atlantique and Mercator Ocean International
- 2 research engineers to support the design and implementation of data challenges
- Up to 9 two-year postdoctoral fellowships (starting during fall 2025)

Open call for postdocs: https://github.com/ppr-ocean-ia/data-challenges-info/blob/main/AAP_PostDoc_IAOcean_VF.pdf

Kick-Off workshop: Brest, Octobre 8-10, 2025



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Initiative “AI & Ocean”: Ocean Data Challenges

<https://github.com/ppr-ocean-ia/data-challenges-info>

Scientific coordination: R. Fablet, IMT Atlantique

Technological coordination: Q. Febvre, J.F. Pill (Ifremer), K. Ait Mohand, G. Cossio (IMT Atlantique), Q. Gaudel (Mercator Ocean Intl)

Selected Data Challenges

- **DC1. Emulation of Global Ocean Reanalyses**
 - Scientific lead: J. Le Sommer (IGE), A El Aouni (Moi), S. Ouala (Odyssey), A. Storto (CNR)
- **DC2. Probabilistic short-term forecasting of global ocean dynamics**
 - Scientific lead: L. Drumetz, F. Sévellec (Odyssey), J. Le Sommer (IGE), S. Metref (Dallas)
- **DC3. Arctic Sea Ice Forecasting**
 - Scientific lead: S. Metref (Datlas), P. Rampal (IGE), J. Brajard (NERSC)
- **DC4. High-resolution monitoring and forecasting of tropical cyclones**
 - Scientific lead: Q. Febvre, A. Mouche, B. Chapron (Odyssey)
- **DC5. Marine Biodiversity Prediction**
 - Scientific lead: J.O. Irisson (LOV), L. Guidi (LOV), D. Mouillot (Marbec), A. Joly (LIRMM)

Distribution Date: September 2025 (before Kick-Off workshop)

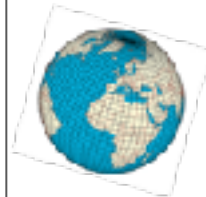
Git organisation for the development phase: <https://github.com/ppr-ocean-ia>



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How to follow? How to contact?

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Webpage: <https://www.ocean-climat.fr/Le-PPR/Actualites/Intelligence-artificielle-Appel-a-postdoc-et-data-challenges>

Mailing list: ppr_ocean_climat_ia@cnrs.ifremer.fr

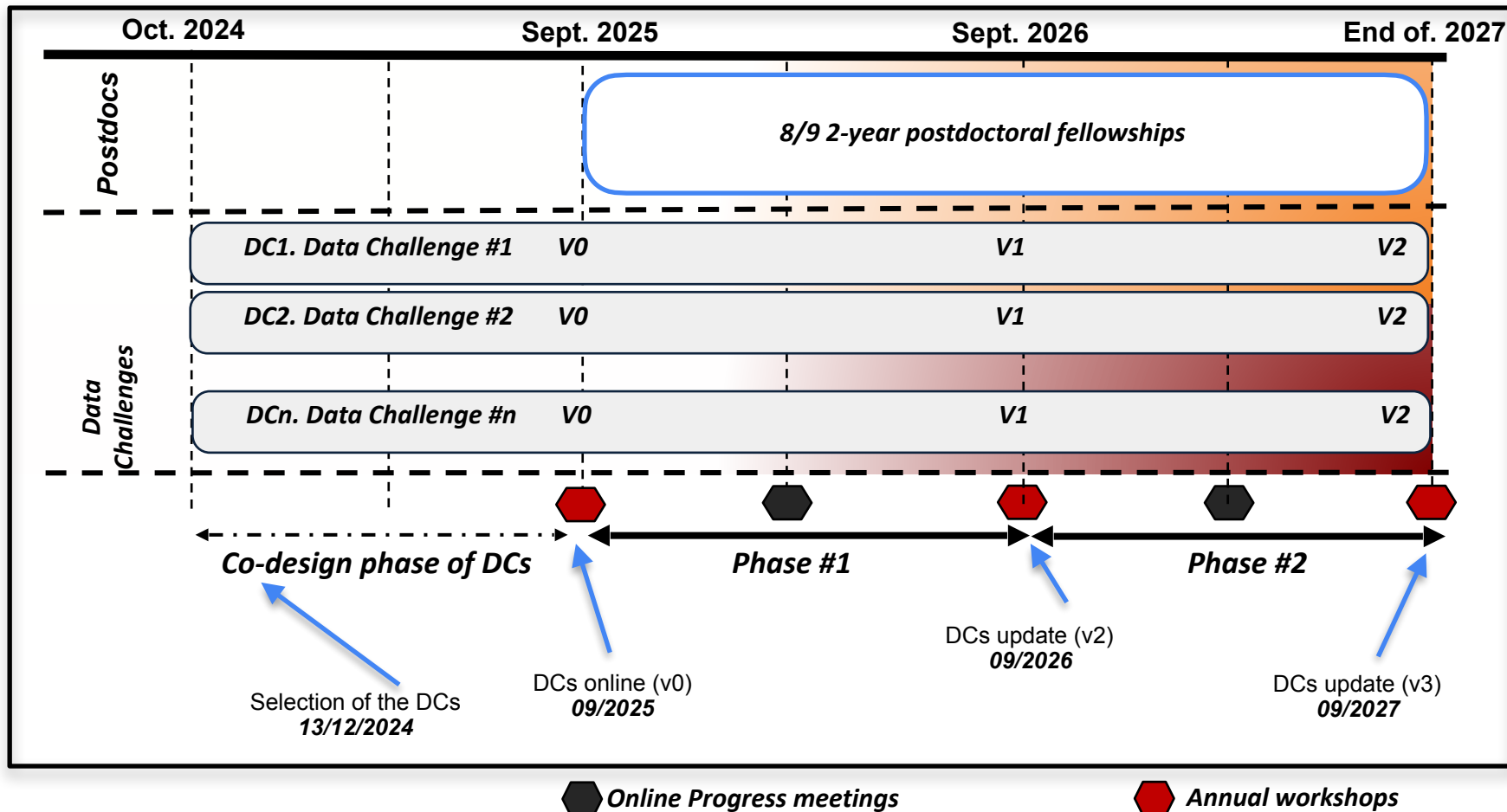
Slack workspace “ppr-ocean-climat-ia”

Git organisation for the development phase: <https://github.com/ppr-ocean-ia>

Annex.

Timeline of the initiative

Ocean Data Challenge Timeline



Postdoc Fellowship Timeline

