

Minutes – PISCO Steering Committee

24 June 2026

Participants

O. Maury, S. Berthet, R. Person, O. Aumont, S. Masson, C. Richon, A. Tagliabue, X. Capet, C. Perruche, C. Ethé, and L. Bopp (from 11:00 onwards).

Introduction

Olivier A. recalled that the Steering Committee is expected to meet three times a year. The purpose of this meeting is to review the progress of ongoing developments, while decisions regarding the future direction and development roadmap of PISCES will be made during an other Steering Committee session.

1. Ongoing developments

- **NEMO–PISCES**

The following developments have been merged into the main NEMO branch (although they are not yet included in an official release):

- Explicit representation of diazotrophy (P6Z);
- Revision of the zooplankton grazing scheme;
- Integration, validation, and optimization of the sediment module.

Work is continuing on:

- Improvements to the iron cycle (authigenic iron);
- Development of a NEMO test case on POC lability (Lucie Hallard internship);
- Diagnostics of subduction at the base of the mixed layer;
- Mean-state tuning for CMIP7 to reduce oxygen biases.

Discussions highlighted that these biases may be related to the dynamics of NEMO v5, including insufficient ventilation and a marked weakening of the AMOC.

- **CROCO–PISCES**

Current developments aim to align CROCO–PISCES with the NEMO v5 implementation, including the sediment module.

Development of the MUSCL advection scheme is continuing in order to replace WENO5, which is computationally more expensive and does not guarantee tracer positivity. Additional testing will be required before implementation.

Discussions also covered:

- Reproducibility issues associated with AGRIF when changing domain decomposition;
- Harmonization between CROCO–PISCES and NEMO–PISCES;
- Development of the croco_pytools utilities.

The reproducibility issues remain limited to specific coastal configurations and do not affect the simulated mean state.

2. Zooplankton grazing in PISCES–NEMO v5

The results presented indicate that PISCES implemented in NEMO v5 produces chlorophyll concentrations that are too low at the global scale, particularly in eastern boundary upwelling systems and productive coastal regions.

Changes introduced in the grazing parameterization explain part of the observed differences. Version 3.6 provided a better agreement with observations.

Olivier A. will test a return to the version 3.6 grazing formulation to identify the changes responsible for the reduced performance of the latest PISCES version.

3. Working Group: "Pre/Post-processing Tools"

The working group, coordinated by Laurent Oziel within the TRACCS project, is continuing the development of standardized tools, diagnostics, and evaluation metrics for PISCES.

A presentation of the group will be proposed during the September PISCO meeting to encourage broader community involvement.

4. Training courses

Upcoming training events were reviewed:

- PISCES Training Course: 21–23 September 2026 (13 participants selected from 30 applications);
- CROCO Summer School (IMARPE, Peru): 23 November – 4 December 2026;
- CROCO–PISCES Training Course (Chile): 11–22 January 2027.

5. PISCO Meeting (24–25 September)

The meeting will include 16 presentations and approximately 50 participants.

To better engage early-career researchers, several initiatives were proposed:

- Creation of a dedicated mailing list;
- A discussion session reserved for early-career researchers at the end of the first day;
- An informal social event to encourage networking.

An invitation to an external speaker from another modelling community is also being considered for a plenary lecture.

6. French Ocean Modelling Foresight Exercise

The national ocean modelling foresight exercise has resulted in a first synthesis document, which will be presented in early July in Toulouse.

PISCO representatives involved in this initiative will report back to the community on discussions related to marine biogeochemistry.

7. TRACCS – PC8 Progress Update

WP1 of TRACCS ("PISCES for Climate Models") is supported by two community-funded positions:

- One research engineer, expected to start in early October;
- One postdoctoral researcher, currently under recruitment.

TRACCS activities are intended to complement the work already carried out within PISCO on climate-related topics.

Sarah Berthet and Renaud Person will coordinate WP1 with the support of the wider PISCO community.

A meeting will be held on 14 or 15 September to define the scientific priorities of WP1, clarify their scope, and identify the contributors for each topic.