Study of air-sea interactions in the Northeastern Tropical Atlantic and their impact on the African monsoon, from the diurnal cycle to interannual variability:

* Statistical analyses (sea surface temperature, air temperature, precipitation, etc.) at process scales (ranging from a few hours to several days) or using monthly averages, employing methods suited to studying ocean-atmosphere coupling.
* Regional coupled ocean-atmosphere and atmospheric forced modeling using the Weather Research and Forecasting (WRF) model.

Study of coastal ocean dynamics:

* Phenology and spatiotemporal variability of the West and Southern African upwelling systems.

Theoretical research on the influence of sea surface temperature in the Northeastern Tropical Atlantic on precipitation variability in West Africa:

* Funded by LEFE 2024, LMI-ECLAIRS, and the French Embassy in Senegal, conducted between July and November 2024.

Contribution to the HABITABLE project:

* Development of a decision-making tool for small-scale fishers on the Petite Côte (November and December 2024).

Forced modeling in the Northeastern Tropical Atlantic:

* Using the atmospheric component of the IPSL model, LMDZ (planned project).

### Pedagogical Engagement

Reviewer

* Laboratory of Atmospheric and Oceanic Sciences - Materials, Energy, and Devices (since July 2024).

Co-supervision and supervision of Master’s theses:

* Moussa Ndiaye (April-September 2024).
* Boubou Borso Niang (in progress).
* Abdoulaye Séne (in progress).