

Naïna Mouras

PhD in Environmental Sciences

Personal profile

Born and raised in New Caledonia, I defended my **PhD** in environmental sciences in April 2026, conducted between the University of New Caledonia and Ifremer Nouméa. My thesis provides the first documentation of carbon and trace metal fluxes between mangroves and the Ouvéa lagoon.

I also founded **Palétuvia**, a citizen science project monitoring mangrove phenology. Sharing knowledge with young people and local communities is something I care deeply about.

Contact

naiina.mouras@gmail.com

+687 80 27 69

naina-mouras.fr

/naïna-mouras

Awards & Honors

France Young Talent, L'Oréal-UNESCO For Women in Science, 2025
L'Oréal Foundation-UNESCO

Best Student Presentation, AMSN Conference 2025, Tauranga (New Zealand)

"Sciences en bulles" Award, 2024, French Ministry of Higher Education and Research, with the participation of the Ministry of Culture

Best First-Year Presentation, Doctoriales ED469, 2023

Key Skills

Biogeochemistry & Fieldwork
Dissolved organic matter (CDOM, FDOM, EEM-PARAFAC), Orbitrap HRMS, SPE, porewater, trace metals, 24-hour field campaigns, remote atolls

Data
Python, R, data processing and visualization

Knowledge Transfer
Science communication, public engagement, student supervision, scientific writing (FR/EN)

Languages
French (native), English (fluent)

Education

PhD in Environmental Sciences, 2023-2026
University of New Caledonia (ISEA) and Ifremer Nouméa (LEAD).
Dissolved organic matter dynamics and interactions with trace metals, from mangrove soils to adjacent systems.

- Designed the research project and managed field campaigns and laboratory analyses
- Supervised one Master's student (6 months, 2024); taught plant biology (first-year undergraduate practicals)

Master Conservation & Valorization of Marine Resources, 2020-2022.
University Côte d'Azur, Nice.

- Master's thesis internship, Ifremer Nouméa
- First-year Master's internship, Oceanographic Institute, Albert I Prince of Monaco Foundation

Bachelor's in Life Sciences, Marine Systems Biology, 2017-2020.
University of La Rochelle

Publications

Published Articles

- **Mouras N.** et al., 2026a. Vertical and tidal variability of dissolved organic matter in mangrove soils: influence on dissolved trace metal dynamics. *Estuarine, Coastal and Shelf Science*, 333, 109785. https://doi.org/10.1016/j.ecss.2026.109785
- **Mouras N.** et al., 2026b. Seasonal dynamics of dissolved organic matter along an intertidal gradient in semi-arid mangrove soils (New Caledonia). *Biogeosciences*. https://doi.org/10.5194/bg-23-5847-2026
- **Mouras N.** et al., 2026c. Influence of mangrove zonation on dissolved trace metal dynamics in soils. *Marine Pollution Bulletin*, 231, 119926. https://doi.org/10.1016/j.marpolbul.2026.119926
- **Mouras N.** et al., 2025. Variability of the optical signatures of dissolved organic matter in soils of different mangrove stands (Ouvéa, New Caledonia). *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-025-36373-9
- Meyneng M., Siano R., **Mouras N.** et al., 2024. The origin of the matter matters: the influence of terrestrial inputs on coastal benthic microeukaryote communities revealed by eDNA. *Environmental DNA*, 6, e70041. https://doi.org/10.1002/edn3.70041

Under Review, Submitted, or In Preparation

- **Mouras N.** et al. (under review, *Journal of Hydrology*). Seasonal variability of dissolved organic matter outwelling from a semi-enclosed mangrove bay (Ouvéa, New Caledonia)
- **Mouras N.** et al. (under review, *Marine Chemistry*). Drivers of dissolved organic matter in estuarine porewater under ultramafic influence
- **Mouras N.** et al. (submitted, *Estuarine, Coastal and Shelf Science*). Dissolved and particulate trace metal outwelling from a semi-enclosed mangrove bay (Ouvéa, New Caledonia)
- **Mouras N.** et al. (submitted, *Marine Chemistry*). Exploratory assessment of Cu-binding dissolved organic matter dynamics in a carbonate semi-enclosed mangrove (Ouvéa, New Caledonia)
- **Mouras N.** et al. (in preparation). Linking fluorescent dissolved organic matter components to molecular composition in a tidal mangrove

Scientific Conferences

- **Poster. Mouras N.** et al. Mangrove Carbon Outwelling: Tidal and Seasonal Controls on Dissolved Organic Carbon Export. AMSN Conference, Wollongong, Australia, 24-27 November 2026.
- **Oral presentation (co-author).** Marchand C., Hoane O., **Mouras N**. et al. CO_2 and $\delta^{13}C$-CO_2 Emissions from Carbonated Mangrove Soils: Evidence of Substrate Dissolution. AMSN Conference, Wollongong, Australia, 24-27 November 2026.
- **Poster (co-author).** Hoane O., **Mouras N**. et al. Seasonal Variability of Carbon Outwelling from a Semi-Enclosed Mangrove Bay in a Carbonated Low-Lying Island (Ouvéa, New Caledonia). AMSN Conference, Wollongong, Australia, 24-27 November 2026.
- **Oral presentation. Mouras N. et al.** Depth and tidal variability of dissolved organic matter in semi-arid mangrove soils. AMSN Conference, Tauranga, New Zealand, 3-6 November 2025. Best Student Presentation Award.
- **Oral presentation. Mouras N.** et al. Variability of the optical properties of dissolved organic matter in mangrove sediments (Ouvéa, New Caledonia). 6th Meeting of Francophone Researchers in Organic Geochemistry (FROG), Paris, France, 8-10 July 2024.

Citizen Science

Palétuvia (paletuvia.com)

Design and Development

A citizen science project to build the first phenological baseline for New Caledonia's mangroves. It aims to determine whether climate change is shifting the seasonal rhythms of mangrove trees, with possible effects on litterfall production and carbon storage. Each tree in the project carries a QR code: in two minutes, observers fill in a form on the stages of the annual cycle (young leaves, flowering, propagules, leaf fall), guided by an observation handbook.

Prototype on the Ouémo urban mangrove trail (Nouméa).
Planned deployment in Ouvéa and VKP with local residents and schools, and educational use with University of New Caledonia students.

Science Communication & Outreach

Youth Outreach and Educational Materials

- "Elles du Lagon": outreach program encouraging young girls to pursue marine science careers, Pacific Community (SPC), Nouméa (2024, 2025 and 2026)
- Comic book L'eau dans tous ses états : les secrets d'une forêt aux pieds dans l'eau (Water in All Its States: Secrets of a Forest with Its Feet in the Water), Laureate of "Sciences en bulles" 2024
- "Marine Science Twister": posters and educational games, Fête de la Science, Nouméa (2023)
- Contribution to the book Au cœur des mondes polaires (In the Heart of the Polar Worlds), Albert I Prince of Monaco Foundation, 2022

Media, Panel Discussions and Public Outreach

- **Documentary:** "Ils font bouger la Calédonie : Naïna Mouras, la science au féminin" (They Move New Caledonia: Naïna Mouras, Science from a Woman's Perspective). France Télévisions (2026)
- **Television and radio appearances:** Plein Cadre, France Télévisions (2025); news report, Nouvelle-Calédonie La 1ère (2023); Rythme Bleu (2023)
- **Panel discussions:** "Arts and Sciences", Océanopolis, Brest (2024); "Lagoon and Mangrove" with Prof. Claude Payri, Nouméa (2024)
- **Public events:** Urban mangrove tours with SOS Mangroves and CaledoClean; Fête de la Science (2023-2025); World Oceans Day (2022)

Community Involvement

- Co-founded the association FOM (Femmes scientifiques des Outre-Mer, "**Women Scientists of the French Overseas Territories**"), with fellow L'Oréal-UNESCO For Women in Science ambassadors