MER
Newsletter

July 2026

The Editor Column

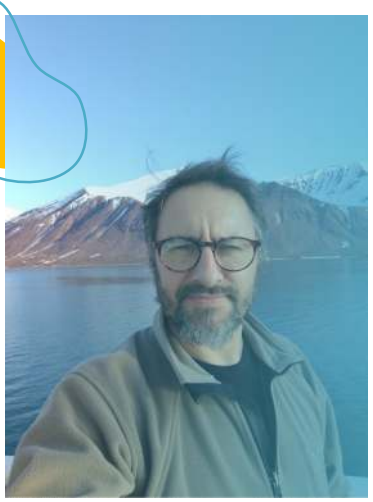
It is my great pleasure to introduce this new edition of the MER Newsletter.

Having had the privilege of teaching in the programme since 2007, I have witnessed its remarkable evolution and the inspiring journeys of so many students. From September 2026, I am privileged to succeed my colleague Professor Jörg Schäfer as Academic Coordinator of the MER Master at the University of Bordeaux. Having served as Deputy Coordinator since 2011, I am deeply grateful for Jörg's commitment and for the opportunity to build on the strong foundations established through his leadership, together with the invaluable contributions of Professor Ionan Marigómez, the successive MER Coordinators, and our colleagues across all partner universities.

For more than two decades, the MER programme has offered far more than an excellent education in marine sciences. Through the complementary strengths of our five partner universities, it has created an exceptional international experience, bringing together students from around the world who learn from one another, discover new cultures and build lifelong friendships alongside scientific excellence.

I am particularly delighted that the University of Bordeaux will host the second MER Summit in September 2026. Bringing together students, alumni, colleagues and partners, this event will be a wonderful opportunity to reconnect, strengthen our community and celebrate everything that makes this programme so unique.

The Summit will also open an exciting new chapter, as MER2030 becomes SosMER. While the name evolves, our shared values—academic excellence, international collaboration and a strong sense of community—remain at the heart of our programme. I look forward to welcoming many of you to Bordeaux.



Professor Jérôme BONNIN
University of Bordeaux

Bordeaux, 20th July, 2026

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Women Marine Scientists' Day 2026 – Event Summary

On 8 May 2026, the Plentzia Marine Station of the University of the Basque Country (PiE-UPV/EHU) hosted the Women Marine Scientists' Day, a workshop organized within the RiMER 2026 programme of the MER Consortium. The event brought together students, researchers, and academics to celebrate the contributions of women to marine and environmental sciences while promoting dialogue on career development, diversity, and scientific leadership.

The programme began with introductory remarks highlighting the role of women in science and within PiE-UPV/EHU, followed by an interactive "Coffee with a Scientist" session. Participants had the opportunity to engage in informal conversations with seven invited women scientists and professionals from diverse backgrounds, including marine ecology, ecotoxicology, analytical chemistry, renewable energy, sustainability, science communication, and marine bioresources.

The invited speakers represented a wide range of scientific disciplines and career stages, providing participants with diverse perspectives on research and professional development. The group included **Maddi Astigarraga Bergara**, a scientific illustrator and science communicator focused on making scientific knowledge more accessible through visual communication; **Oihane Abarrategi Ranero**, an expert in renewable energy and offshore energy integration; **Olgalú Hernández Manrique**, a biologist and sustainability researcher working on biodiversity, One Health, and the interface between STEM and social sciences; **Miren Bego Urrutia Barandika**, a professor specializing in the physiological energetics of marine bivalves and a strong advocate for science outreach; **Wiame El Ouahabi**, a young researcher in marine ecotoxicology and oil-spill impacts; **Naroa López Herguedas**, a postdoctoral scientist in analytical chemistry and environmental toxicology; and **Natalia Prieto Vidal**, whose research focuses on marine organisms as sustainable sources of bioactive compounds and biomaterials. Together, they showcased the breadth of opportunities available within marine and environmental sciences while highlighting the value of interdisciplinary collaboration and international research experiences.

Through personal testimonies and career reflections, the invited speakers shared their experiences balancing scientific careers with personal challenges, overcoming barriers, and building international research trajectories. Their stories highlighted the importance of perseverance, collaboration, communication, and inclusiveness in science.

The event concluded with a collaborative role-play workshop and a round-table discussion, encouraging participants to reflect on gender equality, mentorship, and the value of diverse perspectives in scientific research. Overall, the workshop provided an inspiring platform for networking, knowledge exchange, and fostering the next generation of women scientists in marine and environmental fields.

RiMER 2026: Advancing Marine Science Through International Collaboration and Knowledge Exchange

15-19th June, Plentzia

From 15 to 19 June 2026, the Plentzia Marine Station of the University of the Basque Country (PiE-EHU) hosted Part II of the 20th International Postgraduate Course *Research in Marine Environment and Resources (RiMER 2026)*, organized within the framework of the MER2030 Erasmus Mundus Joint Master Degree. The event brought together postgraduate students, researchers, and experts from leading European and international institutions to explore some of the most pressing challenges facing marine ecosystems and ocean sustainability. Throughout the week, participants engaged in a multidisciplinary program that combined keynote lectures, scientific discussions, workshops, and collaborative activities. The event provided an exceptional platform for exchanging knowledge and fostering international cooperation in marine environmental research.

The program opened with a focus on **Marine Microbial Ecology**, highlighting the fundamental role that microorganisms play in the functioning of ocean ecosystems. Lectures by **Txetxu Arrieta** (CSIC-IEO, Canary Islands) and **José Manuel González** (U La Laguna, Canary Islands) addressed microbial diversity, ecological processes, submarine hydrothermal systems, and microbial communities in polar environments. The day also paid tribute to the scientific legacy of Professor Markus Weinbauer, whose contributions significantly advanced the field of marine microbial ecology.

A key highlight of the week was the visit to the **International Symposium of Oceanography of the Bay of Biscay (ISOBAY 2026)** in Donostia-San Sebastián. This visit allowed students to interact with a broader scientific community and gain insight into current research and management challenges affecting the Bay of Biscay and the wider Atlantic region.

The third day focused on **Marine Biodiversity and Global Change**, addressing the impacts of climate change on marine species and ecosystems. Presentations explored topics such as coral adaptation (**Mathieu Poulicek** (U Liège)), microbial responses to environmental stressors (**Vladimir Kaberdin** (PiE-EHU)), stranded cetaceans as indicators of environmental change (**Denis Benito** (Sareus, PiE-EHU)), and the resilience of marine ecosystems to ocean warming (**Ernesto Villarino** (AZTI-BRTA)). These discussions emphasized the importance of understanding biological adaptation and ecosystem responses in a rapidly changing world.

The theme of **Healthy Oceans** guided the fourth day, bringing together experts working on emerging contaminants and antimicrobial resistance (**Itziar Alkorta** (EHU) and **E Punnadath Preetham** (Cochin U S&T; Kerala, India)), marine disease modelling (**Gorka Bidegain** (PiE-EHU)), and the impacts of plastics on marine environments (**Miren P Cajaraville** (PiE-EHU)). Through a One Health perspective, speakers highlighted the strong connections between environmental health, animal health, and human well-being, underlining the need for integrated approaches to marine conservation and management.

The programme concluded with the **Exploring the Sea** session, featuring presentations on Antarctic biodiversity (**Iñaki Saiz-Salinas** (PiE-EHU)) and the future of taxonomy in marine science (**Mathieu Poulicek** (U Liège)). The closing activities encouraged reflection on the importance of biodiversity knowledge and scientific observation for understanding and protecting ocean life.

Overall, RiMER 2026 successfully reinforced its role as an international forum for education, scientific exchange, and capacity building in marine environmental research. By bringing together students and experts from diverse disciplines and countries, the programme contributed to developing the next generation of marine scientists committed to addressing global environmental challenges and promoting sustainable ocean stewardship.

Coming Master Thesis Defenses, get ready after summer!

7-9th September, Plentzia

The MER Master Thesis Defenses 2026 will take place from **7 to 9 September at the Plentzia Marine Station (PIE-UPV/EHU)**, bringing together students, supervisors, researchers, and academic staff from partner institutions across Europe. Over three days, candidates will present their research in six parallel commissions covering a broad spectrum of marine and environmental sciences. All thesis presentations will be streamed live and will be publicly accessible via the MER streaming channel: EHU Streaming Channel.

The programme highlights the multidisciplinary nature of the MER Master's degree, with thesis topics ranging from marine ecology, oceanography, fisheries management, marine conservation, blue carbon, remote sensing, climate change, marine pollution, ecotoxicology, and biogeochemistry to biodiversity, geochemistry, and marine biotechnology.

The event concludes with a closing talk delivered by Andrés Rigual (University of Salamanca), Associate Professor in the Department of Geology and member of the Ocean Geosciences Research Group. His academic profile is available at University of Salamanca website. The programme will finish with the graduation ceremony and the presentation of the Best Student Awards.

Andres Rigual in the last Greenlandic campaign in 2025 with some MER colleagues (namely the editors of this newsletter!).

Get ready for it after your summer break!

In Memoriam
Dr. Markus Weinbauer
(2 October 1963 – 9 March 2026)

The MER MSc community is saddened by the passing of Dr. Markus Weinbauer, a member of our teaching staff in Marine Microbial Ecology and an internationally recognized researcher in the field of marine microbiology.

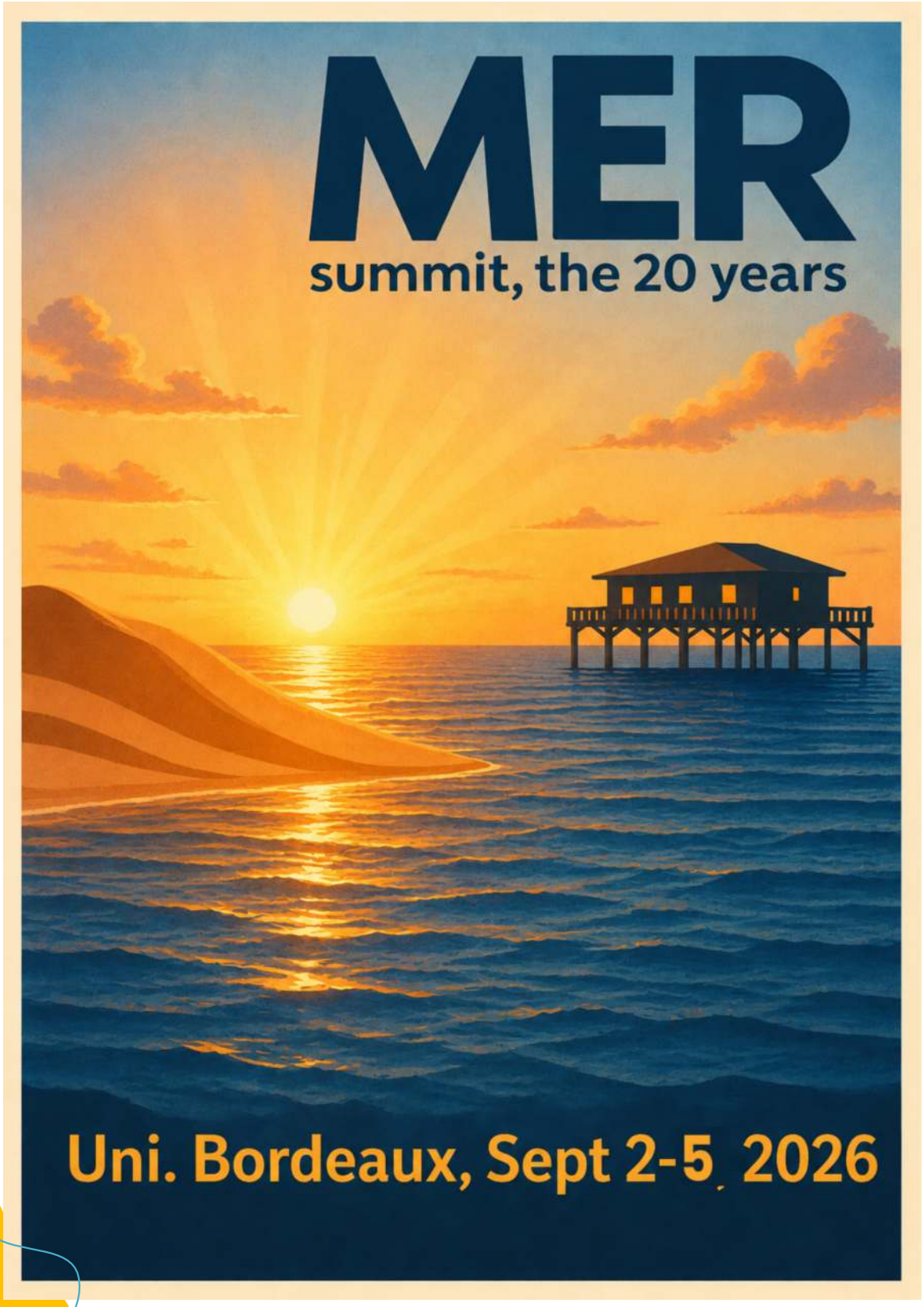
Throughout his career, Markus held positions at several leading research institutions, including the University of Vienna, the German Research Centre for Biotechnology (Braunschweig), STARESO – University of Liège, the Royal Netherlands Institute for Sea Research (NIOZ, Texel), and the CNRS Marine Research Station in Villefranche-sur-Mer, where he developed much of his scientific career.

His research made significant contributions to marine microbial ecology, particularly in the biology of cold-water corals and the diversity of marine viruses. His work advanced our understanding of the ecological and evolutionary processes shaping virus–host interactions in the ocean, highlighting the fundamental role of viruses in marine ecosystem functioning and the importance of viral genetic diversity in structuring marine ecosystems. His scientific achievements were recognized with the French Oceanographic Society Medal in 2005.

As a lecturer in the MER MSc programme, Markus shared his expertise with numerous students, contributing to the training of future marine scientists through his teaching and scientific perspective. He will be remembered with great affection by colleagues and students alike for his generosity, curiosity, and commitment to science and education. His contributions to the MER MSc programme and to the field of marine microbial ecology will leave a lasting legacy.

Eskerrik asko, Markus.
Vielen Dank.
Merci beaucoup.

MER summit



MER Summit

FINAL PROGRAMME

September 2

9:00-12:30 - Registration
12:30-14:00 - Lunch
14:00-15:00 - Opening Session
15:00-15:30 - P. Lejeune: STARESO
15:30-16:30 - Marine station session
17:00-18:30 - The future of a MER student & alumni networking
19:00-21:00 - Icebreaker

Université de Bordeaux - Domaine du Haut-Carré

September 3

9:00-10:30 - Anthropogenic impact on marine environment
11:00-12:30 - The road towards your first funding
12:30-14:00 - «Who-is-who» lunch
14:00-15:30 - Beneath the surface: why benthic ecosystems matter more than we think?
16:00-17:30 - Science communication, impacts on conservation
17:30-18:00 - X. Irigoien: The twilight saga 2001 or how many fishes in the world
18:00-18:30 - Photo competition

Université de Bordeaux - Domaine du Haut-Carré


September 4
9:00-10:30 - Fisheries & aquaculture
11:00-12:30 - Science diplomacy for ocean solutions
12:30-14:00 - Lunch - Science poster
14:00-15:30 - Technology in marine science
16:00-17:30 - Quiz party
17:30-18:00 - S. Rigaud : The Sea as Route and Meaning: Navigation, Colonisation and Symbolic Worlds in Prehistory
18:00-18:30 - A. Lefebvre : Whales as coastal resources at the end of the Pleistocene: new perspectives from the Bay of Biscay
20:00-23:00 - Cruise dinner
Université de Bordeaux - Domaine du Haut-Carré & Garonne river
September 5
9:00-10:30 - Darwin ecosystem visit
11:00-12:30 - Walk of water
12:30-14:00 - Closing session
14:00-15:30 - Lunch at Darwin
16:00-17:30 - Winery Tour - Château Lafitte
Darwin and Château Lafitte

I Went Looking for Answers, But the Common Eider Had Other Plans: Following elements, isotopes and rare earth signatures in a changing Baltic Sea

Simbiat Damilola Salaudeen (MER cohort 2024-26)
Under the supervision of Dr. Krishna Das
At the Freshwater and Oceanic Sciences Unit of Research (FOCUS)
University of Liège, Belgium

A dead seabird does not look like a storyteller, not at least at first glance. Yet, there is a story written into its tissues: in the elements it carried, in its isotope signatures, and in the differences between what was stored in its liver and locked in its feathers.

My master's thesis began with bycaught common eiders (Somateria mollissima) collected along the Baltic coast of Schleswig-Holstein, Germany (Fig. 1), as part of the long-term wildlife health and population monitoring programme carried out by the Institute for Terrestrial and Aquatic Wildlife Research (ITAW), University of Veterinary Medicine Hannover, Germany.

One part of the story is the **Kieler Meeresfarm**, a sustainable mussel and algae aquaculture initiative operating an integrated multitrophic aquaculture approach, where mussels and algae are cultivated in ways that can contribute to nutrient removal from the marine environment. After the COVID-19 pandemic, common eiders discovered the mussel farm. For the eiders, this looked suspiciously like a free restaurant since blue mussels are an important part of their diet. For the mussel farmers, having a horde of hungry seabirds arrive as a recurring winter presence at the farm was not good news, as this came with heavy harvest losses. This is the kind of situation that only ecology could create: opportunity for one side and trouble for the other.

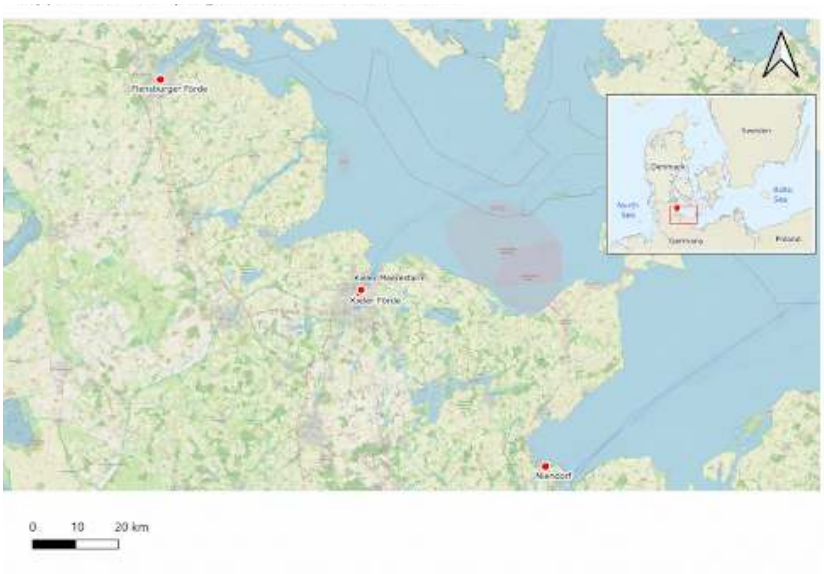


Figure 1. Approximate sampling locations (Basemap: OpenStreetMap contributors).

So, when I began analyzing the liver and feather samples, I was interested in the ecological story of what elements are present, their distribution between tissues, and whether stable isotopes could help explain differences in exposure. The liver and feathers provide two very different windows into the same animal; the liver is an active organ involved in metabolism and internal processing, whereas feathers are formed during growth and can preserve the chemical information from their growth period.

To answer the research questions, we used two complementary ecological tools - element quantification and stable isotope analysis. Some elements showed tissue-specific behaviour. Some were more strongly represented in the liver, e.g. total mercury, cadmium and arsenic (Fig. 2). Others appeared more consistently in the feathers, e.g. zinc, lead and nickel. Inter-tissue relationships were not the same across all elements.

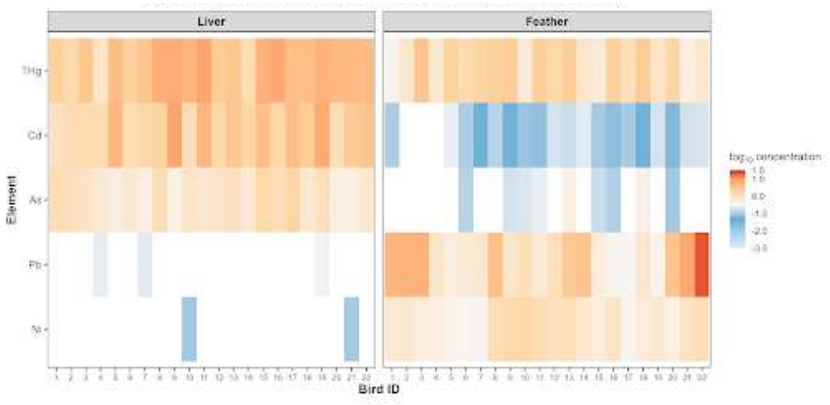


Figure 2. Heatmap of $\log_{10}$-transformed concentrations of selected non-essential trace elements measured in liver and feather tissues of *Somateria mollissima*. Rows represent individual birds and columns represent chemical elements. Colour intensity ranges from blue (lowest concentration) to red (highest concentration). White cells indicate concentrations below the quantification limit.

At first, it might be tempting to think that since feathers are easier to collect and less invasive, they might be a convenient substitute for internal tissues (we do not want to kill the already endangered birds). But the eiders really did say 'easier to collect' does not mean 'the same information'. This was especially clear for the rare earth elements.

When most people hear 'rare earth elements (REEs)', they probably picture smartphones, electric vehicles, and wind turbines, modern technologies that have become symbols of the transition towards a sustainable future. But every technological transition has its own environmental story. As the use of REEs increases in modern industries, so does our need to understand what happens when these elements enter natural systems.

Compared with legacy contaminants such as mercury, lead and cadmium, REEs are relatively new characters in ecotoxicology. We know they are present in the environment and that organisms can encounter them, but we are still investigating what the consequences of their presence are. Perhaps this uncertainty is what makes them fascinating.

In the liver, many REEs occurred at very low concentrations, with several values below quantification limits. Then, we moved to the feathers and saw another story, with several REEs (such as lanthanum, cerium, yttrium, praseodymium, neodymium, samarium and gadolinium) appearing consistently in the majority of the samples (Fig. 3). The feather data showed more structured relationships than the liver data, particularly among rare earth elements and between REEs and selected non-essential elements.

The liver showed fewer significant relationships, but still reflected associations among selected essential, non-essential and REE-related elements. This suggested that some groups of elements may share similar accumulation or deposition pathways, especially in feathers.

At this point, the question became 'Why are these tissues recording different signals?'

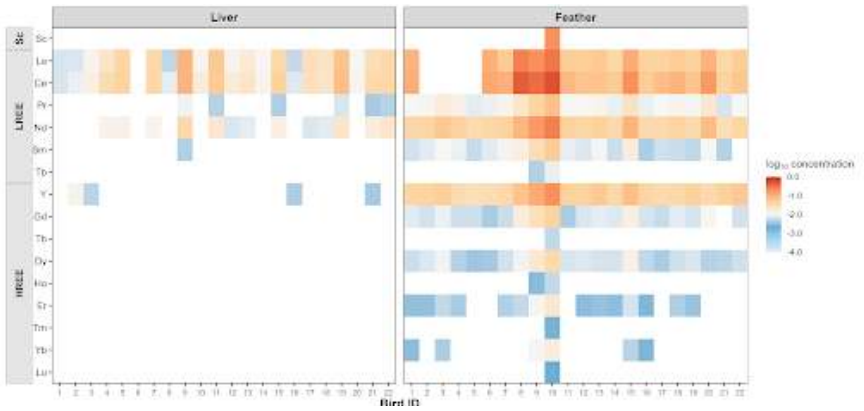


Figure 3. Heatmap of log_{10}-transformed concentrations of rare earth elements (REEs) measured in liver and feather tissues of Somateria mollissima. Rows represent individual birds and columns represent REEs. Colour intensity ranges from blue (lowest concentration) to red (highest concentration). White cells indicate concentrations below the quantification limit. LREE - Light Rare Earth Elements. HREE - Heavy Rare Earth Elements

The stable isotope results added another layer as they helped us to understand the ecology beyond the chemistry. Isotopes of carbon ($\delta^{13}C$), nitrogen ($\delta^{15}N$) and sulfur ($\delta^{34}S$) tell us about the diet, trophic positions and habitat use of organisms, and we were interested in whether differences in isotope values could help explain variation in element concentrations. There were distinct differences in the isotopic space occupied by liver and feather samples, and in all three isotope combinations, liver samples formed relatively compact clusters, whereas feather samples were more widely dispersed.

When exploring the isotope-element relationships, some relationships appeared promising at first, but the statistical reality check came too quickly, and none of the isotope-element correlations remained statistically significant. For these eiders, diet did not perfectly predict chemical exposure. In the true fashion of nature, exposure, feeding behaviour, physiology, tissue formation and environmental conditions overlap.

This complexity is not unique to the Kiel Fjord or the German Baltic Sea, as studies of other common eider populations have shown that their chemical profiles reflect their environments. Research from Finland has shown that trace elements such as lead can reach biologically concerning levels in some individuals (Hollmén, 1998). In the Canadian Arctic, hepatic trace element concentrations differed among common eider colonies, highlighting the influence of local conditions (Mallory, 2017).

Figure 4. Working in the lab.

Central Baltic studies have shown that physiological state and timing can influence trace element patterns (McPartland, 2020). Diet studies from Danish waters have shown that eider feeding habits can change over time as prey availability changes (Laursen, 2022). Together, these studies tell us that an eider does not carry a universal chemical signature. Instead, it carries a local story.

If there is one thing I have learnt from my thesis, it is that environmental datasets tend to answer a question with another question. And perhaps, that is where great science begins. Also, great research is great collaboration.
NB: I had a lot of heart-to-heart talks with my R code. I am not proud of it, but most of them involved me begging it to show me where the errors were.

And finally, what is this piece finished without an image of the glorious common eiders?

https://www.allaboutbirds.org/guide/Common_Eider/id

Further reading

- Hollmén, T., Franson, J. C., Poppenga, R. H., Hario, M., & Kilpi, M. (1998). Lead poisoning and trace elements in common eiders *Somateria mollissima* from Finland. Wildlife Biology, 4(4), 193-203. **https://doi.org/10.2981/wlb.1998.022**

- Laursen, K., & Møller, A. P. (2022). Diet of eiders and body condition change from the late 1980s to the mid 2010s. Journal of Sea Research, 187, 102244. **https://doi.org/10.1016/j.seares.2022.102244**

- Mallory, C. D., Gilchrist, H. G., Robertson, G. J., Provencher, J. F., Braune, B. M., Forbes, M. R., & Mallory, M. L. (2017). Hepatic trace element concentrations of breeding female common eiders across a latitudinal gradient in the eastern Canadian Arctic. Marine pollution bulletin, 124(1), 252–257. **https://doi.org/10.1016/j.marpolbul.2017.07.050**

- McPartland, M., Noori, B., Garbus, S., Lierhagen, S., Sonne, C., & Krøkje, Å. (2020). Circulating trace elements: Comparison between early and late incubation in common eiders (Somateria mollissima) in the central Baltic Sea. Environmental Research, 191, 110120. **https://doi.org/10.1016/j.envres.2020.110120**

Land-based pollution on Caribbean fringing reefs

Nienke C.J. van de Loosdrecht (MER cohort 2019-2021)

Across the world, marine ecosystems are being reshaped by increasing human pressures along coastlines. Expanding coastal development, changing land use, intensifying maritime activity, and the increasing transport of pollutants from land to sea are altering nearshore environments. Understanding where pollutants enter the coastal waters, when exposure peaks and how these inputs interact with coastal hydrodynamics is essential for interpreting ecological effects in coastal ecosystems.

This is especially the case for nearshore ecosystems, such as fringing coral reefs. These ecosystems are vital for coastal communities but they are also among the first to be influenced by land-based processes. Land-based pollution often arrives in pulses and mixtures, shaped by rainfall and coastal hydrodynamics. After rainfall, material that has accumulated on land, (on streets, soils and in and around wastewater infrastructure) can be mobilized and delivered to the coast rapidly. The coastline determines the retention time of the pollutants, in well-flushed areas the inputs may disperse quickly while in more “retentive” settings pollutants can stay for longer periods and settle into sediments which may resuspend later. In other words, exposure is not only about the land-based processes but also about the timing and transport.

Figure 1. Fine-scale spatial variability of reefs along a Caribbean island coast.

My PhD focuses on this land-sea connection: land-based pollution (sediment, nutrients, and chemical contaminants) on Caribbean fringing reefs, and what this means for reef functioning. We mapped spatio-temporal distribution of pollution along the coastline and linked these patterns to indicators of reef condition and food web dynamics.

The first part of my PhD focused on mapping the spatio-temporal distribution of land-derived substances using stable nitrogen isotopes (δ15N) in macroalgae, a method which is widely applied to infer anthropogenic nitrogen sources such as sewage. Following rainfall, we observed elevated δ15N values, with strongest increases along urbanized coastlines.

In parallel, we detected higher levels of elemental pollution in these urban areas, consistent with co-occurring land-based inputs associated with urban runoff and/or wastewater-related sources. Overall, the results suggest that isotopic signatures in benthic organisms can serve as a proxy for anthropogenic inputs on coral reefs and show that precipitation increases the effect of land-use changes on pollution run-off to nearby coral reefs[1].

We then examined whether this anthropogenic signal was incorporated and transferred through the reef food web. To do so, we selected a impacted and a relatively unimpacted reef and assessed food web isotopic structure. At the more polluted site, the elevated δ15N signal was propagated from primary producers at the base of the food web to higher trophic levels of fish, indicating assimilation of anthropogenic nitrogen beyond basal resources and transfer through consumer pathways. In addition, the more polluted site exhibited a compressed food web structure, with narrower trophic niches. This pattern is consistent with lower trophic diversity on more impacted reef, and it suggests that land-based inputs may be associated not only with altered source signatures but also with changes in ecosystem functioning.

Figure 2. Reef fieldwork: collecting benthic samples to quantify land-derived pollutants.

[1]van de Loosdrecht, N. C., Visser, P. M., de Baat, M. L., Vermeij, M. J., & de Goeij, J. M. (2026). Macroalgal δ15N indicates land-derived elemental pollution on nearshore coral reefs of Curaçao, southern Caribbean. Marine Pollution Bulletin, 223, 118967. https://doi.org/10.1016/j.marpolbul.2025.118967.

Finally, we assessed chemical pollution using a targeted screening for anthropogenic organic contaminants. Across the coastline we detected a diverse set of chemical pollutants, including pesticides, pharmaceuticals and industrial chemicals. Several occurred at concentrations of concern in our risk assessment (i.e., within ranges where ecological effects have been reported). Additionally, in vitro bioassays indicated slight stress responses for several stress-response endpoints. To improve our ability to evaluate the ecotoxicological risks for coral reef organisms, in vivo bioassays with organisms relevant to reefs need to be further developed. These results highlight that nearshore reefs can be exposed to complex chemical mixtures in addition to sediment and nutrient inputs, and that such mixtures may be relevant when interpreting spatial patterns in reef condition.

Figure 3. Sampling after a rainfall event to capture sediment pulses flowing from inland bays to adjacent reefs.

Altogether, the findings show that land-based pollution on Caribbean fringing reefs is connected to coastal development and strengthened by rainfall pulses. Macroalgal δ15N tracked coastal development and co-occurring elevated concentrations of multiple nutrients and non-essential elements. At impacted sites, anthropogenic nitrogen signal propagated up the food web and coincided with food-web compression.

Figure 4. Cleaning passive samplers deployed on reefs; these samples accumulate organic contaminants over time.

In addition, contaminant screening revealed mixtures of anthropogenic chemicals (e.g. pesticides, pharmaceuticals, industrial compounds), some of which at risk-relevant concentrations. This combination of isotopic, elemental and chemical approach indicates that fringing reefs can be exposed to multiple, co-occurring land-based pollutants. If you are working on similar land-to-sea questions, especially tracing nitrogen sources, food-web isotopes, or chemical contaminant mixtures in coastal systems, I would love to connect.

PhD Candidate, Department of Freshwater and Marine Ecology (FAME), Institute for Biodiversity and Ecosystem Dynamics (IBED), University of Amsterdam

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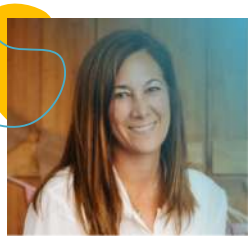

Stéfani Novoa Gautier

Current position: Senior ESG Consultant (Freelance) at ESG Institute

MER Cohort: 2006-2007

Why have you chosen working in (marine) science? When did you make this decision?

Growing up in the Basque Country, the sea was always part of my life. I spent countless hours by the coast, fascinated by the incredible diversity of life beneath the surface. What started as childhood curiosity gradually became a passion, and by the time I finished high school I knew I wanted to study marine science. For me, marine science has always been much more than understanding the ocean. It is about contributing to solutions for some of the world's biggest environmental challenges. Although my career has evolved from academic research to sustainability consulting, my motivation has remained exactly the same: helping protect our oceans through science and informed decision-making.

Which do you think is your main labor achievement?

Rather than pointing to a single publication or project, I would say my greatest achievement has been building a career that connects science with real-world impact.

Throughout my career I have worked in universities, research institutes, NGOs and international organisations. I've developed satellite algorithms to monitor coastal waters, coordinated citizen science projects, contributed to European research programmes and, more recently, worked with organisations and businesses to improve their sustainability performance.

Today, as a Senior ESG Consultant, I enjoy helping organisations translate scientific knowledge into practical strategies that support environmental responsibility and long-term sustainability. Seeing science influence decisions beyond academia is what I find most rewarding.

Which is the best thing about working in marine science for you?

The best part is that you never stop learning. Marine science is one of the most interdisciplinary fields you can imagine. During my career I have collaborated with oceanographers, ecologists, engineers, social scientists, economists and sustainability professionals from many different countries.

I also appreciate how diverse the work can be. One project may involve analysing satellite data, another interviewing stakeholders, another designing sustainability indicators or supporting organisations with environmental strategies. That variety keeps the work exciting.
Most importantly, it is incredibly rewarding to know that your work can contribute, even in a small way, to protecting ecosystems that are essential for both nature and society.

Which is the "B side"?

Marine science is a fascinating career, but it also comes with challenges that are not always visible. Like many researchers, I have experienced temporary contracts, uncertainty, funding pressures and the need to constantly adapt. For me, one of the biggest challenges has been balancing a scientific career with motherhood. Science often rewards flexibility, international mobility and long working hours, while raising a child requires stability, presence and time.

As a single mother, I have become much more conscious of finding ways to build a meaningful career without sacrificing family life. This has changed how I define success. Earlier in my career, success was mainly about publications, projects and scientific achievements. Today, it also means having a career that allows me to be present for my daughter while continuing to contribute to protecting our oceans. Finding that balance is not always easy, but it has made me more resilient, more efficient and more intentional about the work I choose to do.

Which are your personal strengths and weaknesses as (marine) scientist? (for instance, resilience, stubbornness, (in)patience, positivity/negativity, restlessness, etc.)
I believe one of my greatest strengths is curiosity. I genuinely enjoy asking questions, exploring complex problems and learning new things. I also enjoy connecting different disciplines. Throughout my career I have moved between marine science, citizen science, sustainability assessment and ESG consulting, and I enjoy translating scientific knowledge into practical solutions for different audiences. Another strength is resilience. Science teaches you to adapt, learn from setbacks and keep moving forward despite uncertainty. As for weaknesses, I have always had high standards for my work, which sometimes means I spend more time than necessary refining details. Over the years I have learned that delivering a strong solution on time is often more valuable than striving for perfection.

What is your relation with MER?
MER was a defining experience in my career. It provided an excellent scientific foundation while exposing me to an international environment that encouraged collaboration, critical thinking and curiosity. It also gave me the opportunity to build friendships and professional connections that have lasted throughout my career. Looking back, many of the opportunities I have had were possible because of the knowledge, confidence and international perspective I gained during the programme.

For how long have you been involved in the Master MER?
I joined the MER programme over fifteen years ago as a student (first generation), and although I completed the programme many years ago, I still feel connected to the MER community. It is wonderful to see how the programme continues to prepare new generations of marine scientists who will tackle the environmental challenges of the future.

What would be your advice for the MER students and their future career in marine science?
Stay curious, be open to opportunities and don't be afraid to step outside traditional career paths. When I was studying, many of the jobs that exist today in sustainability, ESG and corporate environmental strategy simply didn't exist. The world is changing rapidly, and marine scientists have valuable skills that are increasingly needed in governments, NGOs, international organisations and the private sector. Develop strong communication skills, learn to work across disciplines and continue building technical skills such as data analysis, programming and project management. --Finally, don't fall in love with a job title—fall in love with solving meaningful problems. If you remain passionate about making a positive impact, your career will evolve in ways you probably cannot imagine today.

Sohel Mahi

Current position: Project officer

Why have you chosen working in (marine) science? When did you make this decision?

I did not specifically choose to work in marine science. My academic background is mainly in international relations, cooperation and public policy, and my initial career goal was to work in diplomacy and international partnerships. I joined the University of Bordeaux through this position because programmes such as MER2030 bring together many of the topics that interest me: international cooperation, mobility, multicultural exchange and collaboration between institutions across Europe and beyond. While my role is primarily administrative and project-oriented rather than scientific, I work closely with students, academics and partners who are contributing to important research and education in the field of marine and environmental sciences. Working on MER2030 has allowed me to discover this field from a different perspective, and I am happy to support a programme that addresses major global challenges related to the oceans and the environment. It is rewarding to contribute, even indirectly, to such meaningful topics and to help make international collaboration in higher education possible.

Which do you think is your main labor achievement?

My main achievement related to marine sciences did not take place at the University of Bordeaux, but during a previous position at the French Embassy in Saint Lucia. At that time, I developed and coordinated a project called Ti Whale An Nou, which aimed to improve knowledge and monitoring of marine biodiversity in the Caribbean region. The project brought together researchers and local stakeholders to collect and share data on marine fauna and flora. I was involved in the design and writing of the project proposal and worked on securing funding through the French Solidarity Fund for Innovative Projects (FSPI). It was a rewarding experience that combined international cooperation, environmental protection and scientific collaboration. Looking ahead, I hope that the MER Community Summit 2026 will become another achievement that I am particularly proud of. The Summit will bring together students, alumni, academics and partners from across the MER2030 community to celebrate the programme's anniversary and strengthen connections within the network. Organising an event of this scale is a collective effort, and the entire MER team is working hard to create a memorable and meaningful experience for everyone involved. I am excited to contribute to this milestone and to help showcase the spirit and impact of the MER2030 community.

Which is the best thing about working in marine science for you?

For me, the best thing about working in marine science is the international dimension it brings. Although I am not a scientist myself, I have the opportunity to work with students, researchers and institutions from all over the world who share a common goal: better understanding and protecting our oceans and marine ecosystems. What I find particularly inspiring is that marine science naturally connects different countries, cultures and disciplines. Environmental challenges do not stop at national borders, and programmes such as MER2030 demonstrate how international cooperation can help address global issues. Through my role, I contribute to creating the conditions that allow this collaboration to happen, whether by supporting student mobility, coordinating partners or helping manage the programme.

It is very rewarding to know that, even from an administrative and project management perspective, my work supports education, research and future professionals who will contribute to the sustainable management of our oceans.

Which is the "B side"?
Like any international programme, one of the challenges is dealing with the administrative complexity behind the scenes. Students and academics usually experience the exciting side of MER2030 (mobility, international collaboration and learning opportunities) but a great deal of work is required to make all of this possible. Which are your personal strengths and weaknesses as (marine) scientist? (for instance, resilience, stubbornness, (in)patience, positivity/negativity, restlessness, etc.)

What is your relation with MER?
I joined the MER2030 programme as a Project Officer at the University of Bordeaux in November. My role is to support the administrative, financial and organisational management of the programme at the university of Bordeaux. I work closely with students, academics and partner institutions on a wide range of activities, including admissions, mobility, scholarships, reporting, communication and the coordination of consortium activities. As MER2030 is an international joint master's programme, my work involves interacting with people from many different countries and contributing to the collaboration that makes the programme possible. Although I am not involved in the scientific aspects of the programme, I see my role as helping to create the conditions that allow students and researchers to focus on learning, teaching and research. Being part of MER2030 has also given me the opportunity to discover the marine and environmental sciences community and to contribute to a programme that addresses important global challenges.

For how long have you been involved in the Master MER?
Since November 2025

What would be your advice for the MER students and their future career in marine science?
The advice I would give to MER students is to make the most of the international experience that the programme offers. The scientific knowledge and technical skills you acquire are essential, but the ability to work across cultures, adapt to different environments and build an international network can be just as valuable throughout your career.

I would also encourage students to remain open to opportunities that may not fit their original plans. Careers are rarely linear, and some of the most rewarding experiences can come from unexpected directions. Be curious, take initiative, and do not hesitate to engage with researchers, professionals, alumni and fellow students from different backgrounds.

Finally, remember that marine and environmental challenges are global issues that require ollaboration between scientists, policymakers, institutions, businesses and local communities. Whatever path you choose (research, conservation, industry, public policy or international organisations) your ability to work with others and communicate your expertise will be just as important as your scientific knowledge.

Mercury Monitoring in Pilot Whales

Rebeca von Hellfeld
MER Cohort: 2014-2016; **Birth place:** Germany

Our recent study explores whether minimally invasive skin biopsies can act as a proxy for internal mercury burdens in long-finned pilot whales. Using samples from the 2023 Isle of Lewis mass stranding, we found strong, age-dependent relationships between skin mercury levels and concentrations in key organs such as liver and muscle. This highlights the potential for non-lethal monitoring of pollutant exposure in live cetaceans. These findings contribute to wider efforts across the programme to improve marine contaminant surveillance and ecosystem health assessment under the Triple Planetary Crisis framework.

Figure 1. Photo by NOAA on Unsplash

References:

• https://doi.org/10.1111/mms.70170
• Full report here for further details.

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Challenges in the analysis of microplastics and nanoplastics in marine biological tissues: a review

Mary Carolin Kurisingal Cleetus
MER Cohort: 2021-2023; **Birth place:** Kerala, India

Despite the increase in microplastics research, accurately identifying and quantifying plastic particles less than 50 µm in marine organisms is one of the most significant challenges. This paper describes the effects of micro- and nanoplastics on marine organisms and critically evaluates the studies that have attempted to standardize and optimize micro- and nanoplastics extraction from marine tissues. The challenges, limitations, and methodological inconsistencies of current extraction approaches are discussed, with particular emphasis on the difficulties the scientific community faces in establishing reliable and comparable protocols. Furthermore, the inconsistency in particle-size definitions used in micro- and nanoplastics research is addressed, and a novel size-based nomenclature is proposed. Unlike previous reviews, which have primarily provided broad overviews of the various methodologies applied in micro- and nanoplastics studies, this review specifically focuses on the critical issue of extraction standardization and optimization.

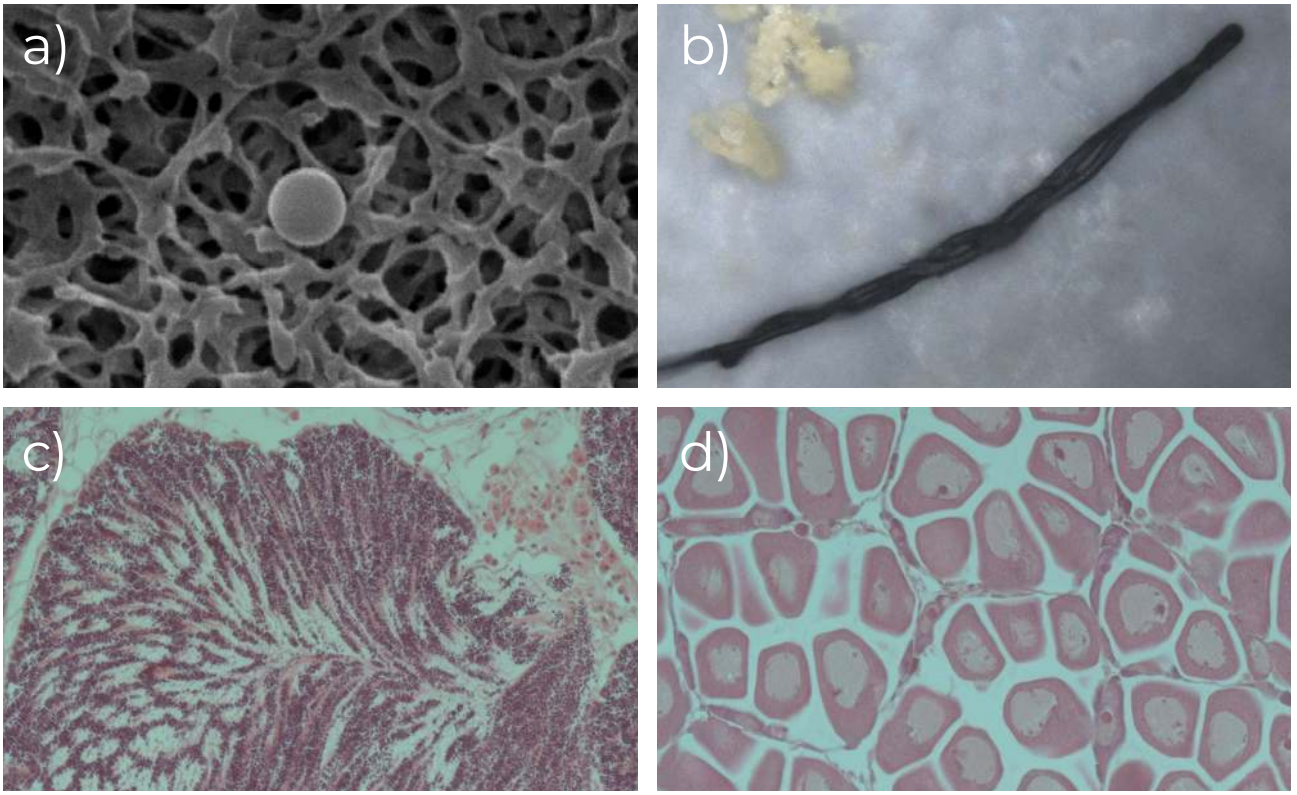


Figure 1**.** a) Polystyrene micro plastic b) micro plastic fiber c) male mussel gonad d) female mussel gonad

References:

• Kurisingal Cleetus, M.C., Fabbricino, M., Pontoni, L. et al. Challenges in the analysis of microplastics and nanoplastics extracted from marine biological tissues: a review. Environ Chem Lett 24, 485–510 (2026). **https://doi.org/10.1007/s10311-026-01902-6**

The Journey That Brought Me Back to Portugal

Joyce Dias Gois Rodrigues de Queiroz
MER Cohort: 2022-2024; **Birth place:** Brazil

When I joined the MER2030 programme, I never imagined it would shape my future in so many ways. Beyond the academic training, it gave me something even more valuable: the opportunity to work with inspiring researchers and build relationships that continued long after graduation.

During my master's, I had the privilege of developing my thesis in the Azores, one of the most beautiful places I have ever lived. There, I joined an incredible research team led by Professor Helena Calado. Working with such a supportive group not only strengthened my scientific background but also gave me the confidence to pursue opportunities that once felt out of reach.

After completing the programme, I returned to Brazil. Although I was back home, my connection with the team never ended. I continued working remotely on a project focused on the integration of Marine Protected Areas and Maritime Spatial Planning, and it was during this period that my supervisor encouraged me to apply for the Doctoral INPhINIT Fellowship from the "la Caixa" Foundation.

Figure 1. With my supervisor, Dr. Helena Calado, and my master's co-supervisor, Débora Gutierrez.

When my supervisor first told me about this Fellowship, my first thought was that it would be highly competitive. But that wasn't enough to discourage me. There is a saying I have heard many times from people I love: "*The 'no' we already have; we have to chase the 'yes*'." That simple idea has stayed with me throughout many important decisions, and this became another opportunity worth pursuing.

Together with my supervisor, we started discussing possible research ideas. The topic we chose was completely new to me, which meant I had to build my understanding from scratch before I could even think about writing a convincing proposal. I read literature reviews, watched lectures, searched for reports and online resources, and anything that could help me better understand the subject and prepare a strong Motivation and Statement of Purpose.

After submitting the application, all I could do was wait. When I received the email inviting me to the interview stage, that was when the nerves really started. Interviews have never been my strongest point. I am naturally anxious, and I knew that my biggest challenge would not be the research itself, but presenting it with confidence.

I was not sure what to expect, so I tried to prepare myself as much as possible. I believe that the more you understand your project, the more naturally you can talk about it. Unfortunately, work and daily responsibilities did not leave me as much time as I would have liked, but I did everything I could to anticipate questions and organize my thoughts.

When the interview was over, I was convinced I could have done better. I left feeling disappointed, replaying my answers in my head and wondering what I should have said differently. The first results confirmed my fears, I had not been selected. I was so discouraged that I did not even check my position on the waiting list. Then, unexpectedly, I received another email. A candidate had declined the fellowship, and I had been offered the position.

I still remember that moment. It was a mixture of excitement, relief and gratitude. I had already imagined what this opportunity could mean for my future, but seeing it become reality was something completely different. Of course, alongside the excitement came the realization that I would once again leave my family and friends, this time for even longer. Fortunately, I also knew I would be joining an amazing team whose support made this decision much easier.
The MER programme changed my life by opening doors I never imagined possible. This fellowship is another chapter in that journey. Looking back, I have realised that opportunities often feel intimidating precisely because they challenge us to grow. It is easy to convince ourselves that we are not ready or that the competition is simply too strong. But if there is one piece of advice I would like to leave, it is this: you do not have to feel completely ready; you simply have to be willing to try.

Figure 2. Research fellowship award ceremony.

Beyond Borders: Why Global Collaboration is Our Only Path Forward

Md Shahidul Islam. Laboratory of Biological Oceanography, University of Liege.
MER Cohort: 2023-25; **Birth place:** Chapainawabganj, Bangladesh

As researchers, we often inhabit intellectual bubbles, viewing complex global problems through narrow, disciplinary lenses. In our frantic pursuit of the "next big thing," we frequently overlook the wide array of factors outside our own expertise that influence the very problems we aim to solve. This tendency to work in isolation often hides the true complexity of the challenges we face.

My journey began in a small city in Bangladesh. Finding my way to where I am today was far from easy. The academic landscape in our public universities is intensely competitive, often sorting students into subjects based on rigid admission test scores rather than personal affinity or passion. It is a "hit or miss" system that rarely accounts for individual potential. Fortunately, I found my purpose in fisheries and aquaculture, and my inquisitive mindset quickly turned toward finding practical, impactful solutions for my society.

Figure 1. Md Shahidul Islam onboard the RV Simon Stevin during a sampling campaign for his PhD under the MARE-WIND project. The research work focuses on investigating the environmental impacts and ecological dynamics of offshore wind farms.

By the time I graduated, Bangladesh had achieved remarkable self-sufficiency in fish production. As the industry matured, the research focus began to shift toward system optimization and safety, which fostered my research interest in trace metal analysis. What I uncovered was both fascinating and deeply alarming. The relentless, single-minded drive for high-quantity fish production had created significant, unintended consequences. We were seeing fish laden with heavy metals, creating substantial environmental risks and increasing long-term health hazards for the very population we were trying to feed. That experience was my first realization that even well-intentioned scientific progress can carry a hidden, dangerous cost if we fail to see the full picture.

When I moved to Europe in 2023 for the Erasmus Mundus (MER) program, the vast disparity in research focus between the Global South and the Global North became impossible to ignore. Perspectives on environmental protection, animal welfare, and ecosystem health differed drastically depending on where you stood on the map. In Bangladesh, our research was driven by the urgent, immediate needs of economic development and ensuring food security. In contrast, Europe, having already navigated that phase of development, was able to dedicate its resources to the long-term, sustainable management of its ecosystems.

This raises a vital question. Does this split in our priorities actually help us solve global problems? I believe it does not. In fact, it highlights a deep-seated dilemma in our field. Too often, ecotoxicological challenges are addressed through the skewed lens of a country's economic status. However, global environmental health cannot be restored by research that is geographically restricted. We live in a deeply interconnected world, and local actions inevitably have global repercussions.

We cannot claim to have solved the climate or pollution crisis by ensuring the "Global North" is pristine while ignoring the environmental vulnerabilities of the "Global South." Pollution does not respect national borders; what happens in one place rarely stays there. I learned this firsthand during my MER Master's thesis while researching mercury accumulation in Arctic wildlife. I discovered that the contamination of that remote, frozen environment was the direct result of human activities occurring thousands of miles away. That experience proved to me that we cannot work in isolation. If we truly want to heal the planet, our research must move beyond regional boundaries and reflect the global unity that these problems demand.

Today, as a doctoral researcher at the University of Liège, I see this same need for a broader perspective and collaboration when it comes to understanding the ecological impact of offshore wind farms in the North Sea. These structures are often lauded by engineers and policymakers as undisputed "positive gains" artificial reefs that foster massive biological abundance. However, from my perspective as a biologist, the picture is far more nuanced.

Figure 2. A velvet swimming crab (Necora puber) being sampled for trace metals and stable isotope analysis for the MARE-WIND project.

While these sites do boost local biodiversity, they are also highly prone to corrosion, potentially leaching significant quantities of metals into the surrounding environment.

This presents us with a set of difficult but necessary questions: Are we truly creating a healthy ecosystem, or are we inadvertently building a toxic trap? Does this rise in biological productivity end up fuelling the methylation of mercury, creating a hidden danger within the reef? We must be careful not to simply mask long-term environmental degradation with the immediate, surface-level allure of biodiversity.

To truly understand the impact of this green energy, we must look past mere engineering success and account for the chemical and biological realities of the entire, interconnected system. However, this challenge is not just interdisciplinary but also by a lack of transparency and cooperation between nations and industry stakeholders. For instance, it is relatively feasible to conduct research within Belgian North Sea wind farms, the same areas are often off-limits in German waters, where the offshore industry restricts access under the guise of security concerns. Compounding this, a lack of government pressure to cooperate allows these companies to hire private firms for impact assessments that serve only to meet minimal regulatory requirements, keeping critical data behind closed doors and away from the public and the scientific community.

Figure 3. Scientists from VLIZ and the MARE-WIND team on board the RV Simon Stevin angling to catch and tag fish for acoustic monitoring around offshore wind farms.

These real-world barriers reinforce the lessons I learned during my time with the Erasmus Mundus and MER programs. Working alongside many brilliant minds from across the globe transformed my understanding of our profession. It showed me that scientific progress cannot be achieved in isolation. My experiences taught me that we must embrace interdisciplinary studies that cross national borders, and that we have a shared responsibility to ensure our work is transparent and accessible. Ultimately, there must be a paradigm shift toward genuine, global collaboration. We can no longer afford to operate within the comfort of our disciplinary or regional silos. Countries with greater technological and financial resources have a profound responsibility to foster equitable, sustainable solutions that benefit our planet.

And to conclude, I must say, **GLOBAL SOLUTIONS NEED GLOBAL COLLABORATION**.

The MER Baby Chronicles: Memoirs of the Unofficial MER Mascot (Class of 2026)

Qismah Omorinsola
Mum Cohort: 2024-2026, born in Bilbao!

Hello everyone!

My name is Qismah Omorinsola. Well... that's only the beginning of my very long name. My parents eventually gave me ten names, but for everyone's sanity, let's stick with Qismah.
I made my grand entrance on a cool, quiet February night in Bilbao, just a stone's throw from San Mamés Stadium. My parents named me Qismah, meaning Destiny, because they believed my arrival was part of a beautiful plan. My Yoruba name, Omorinsola, means "the child walked into wealth". Judging by the number of people who have spoilt me since then, I think they may have been onto something.

Spain was my first home, and I must say, I quite enjoyed it. Everywhere we went, people smiled at me, called me beautiful, asked for my name, and sometimes even sang to me whenever I got tired of being a tiny, well-behaved baby and decided to express my opinions rather loudly. I quickly realised that Spanish grandmas are basically superheroes.
There was one tiny problem, though.

In Nigeria, baby girls usually have their ears pierced almost immediately after birth. In Spain, everyone insisted I had to wait a few months. So there I was: no earrings, endless energy, and apparently the voice of a tiny opera singer. Naturally, people kept asking my mum if I was a boy.
Excuse me. I am clearly a very pretty little princess.

I think that's why my mum started dressing me in so much pink. Whenever someone asked, she would smile and reply, "Es una chica."

Eventually, my adventures continued north to Liège, Belgium, where I discovered that the weather has a wonderfully unpredictable personality. Sometimes it rains. Sometimes the sun appears for five minutes just to remind everyone it exists. Sometimes all four seasons happen before lunchtime.

I also began attending the Sart Tilman crèche, where I had a swell time making friends and playing with fascinating toys and even started picking up a little French. As with any respectable daycare student, I proudly completed the compulsory module titled "Sharing Every Virus Known to Humanity". Team spirit, they call it.

One of my favourite Belgian adventures was visiting the children's farm at Sart Tilman. Imagine my excitement – real goats! Chickens! Rabbits! Donkeys! Actual animals that don't live underwater!

It was a refreshing change because my mum seems determined to surround me with marine life. She insists she'll let me choose my own career one day, but somehow my bookshelf is filling up with ocean stories, my toys include whales, turtles and octopuses, and my wardrobe occasionally reminds people that dolphins and rays make excellent fashion accessories. I've barely celebrated my second birthday, and I already own enough marine animals to start a tiny aquarium. Coincidence? I think not.

Of course, my mum wasn't the only one studying. I also became a very active member of the MER community.

I've had coffee with Skye, lounged around with Jemal, spent time with Paul, Victoria and Oriana (who were delighted to meet me), met Dibash, Menuka and Dan at Unamuno Residence, waved enthusiastically to Carlijne on the bus, met Sebastián, Nur and Elias in Gorliz, bumped into Arky on the streets of Plentzia, and met Iago, José, Irazu and Reyes at the Liège Sunday Market.

I've also crossed paths with professors and staff, including my mum's supervisor, Krishna, who very wisely understood that toys are an excellent way to win my approval.
Some of my mum's classmates have experienced my greatest talent firsthand. Marieke and Emily had the privilege of hearing one of my award-winning opera bus concerts. You're welcome.

Between all these important social engagements, I found time to pose in my Athletic Bilbao jersey (it's never too early to choose a football club) and visit Puppy, the famous flower puppy outside the Guggenheim Museum (he wasn't very chatty, but he made an excellent photo companion). I have also celebrated Eid with my family in Liège and explored markets in Plentzia. Although I still haven't forgiven my mum for trying delicious Basque cakes at the Plentzia market without offering me a single bite. I'll remember that.

Looking back, I realise I've grown up surrounded by an extraordinary community. Long before I understood what marine science was, I learnt that family can stretch across countries, languages and cultures and that some of the nicest people in the world answer to names like MER classmates.

I'm still very young, so I haven't made it to lectures yet. Give me a few years.

Until then, I'll keep perfecting my multilingual babbling, collecting cuddles across Europe, and proudly serving as the Unofficial MER Mascot, Class of 2026.

I can't wait to meet the rest of you.

With love,

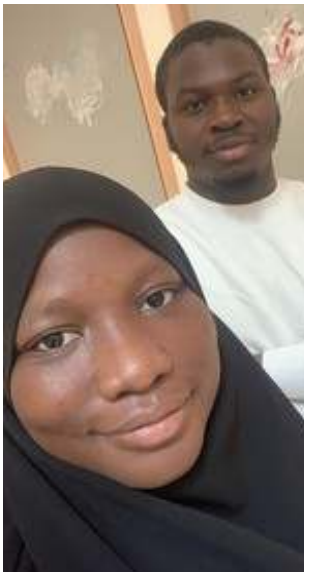
Qismah





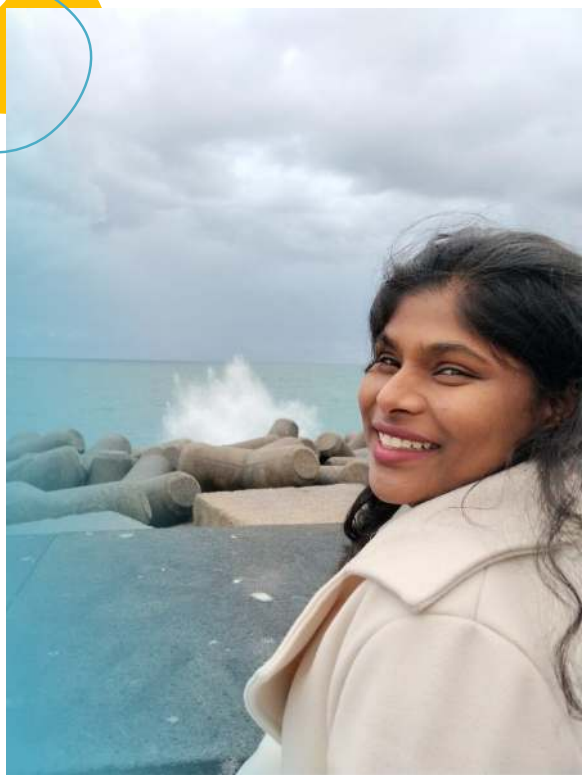


kabank




Mary Carolin Kurisingal Cleetus

MER Cohort: 2021-2023
Birth place: Kerala, India
Current location: Naples, Italy



Although my passion for microplastics research began during my final years at university in India, the real spark came when I started an internship at the Plentzia Marine Station during my second semester under the supervision of Dr Manu Soto. That spark grew stronger when I pursued a professional placement during the July summer break, which naturally led me to join the same research team for my master's thesis within the PLASTEMER project, where I continued working on microplastics and marine organisms.

Currently, I am in the second year of my PhD at the Stazione Zoologica Anton Dohrn in Naples, where I investigate the resilience of the Mediterranean mussel to microplastic pollution and its link with genetic variability. One of the main objectives of my research addresses the challenges associated with the extraction and quantification of ultra-small microplastics (1–50 µm). Based on this work, I recently published my first PhD review paper in the high-impact journal Environmental Chemistry Letters. Some of the highlights of my PhD so far include presenting my findings on the development and optimisation of protocols for extracting these tiny plastic particles at the European Geosciences Union General Assembly 2026 (EGU 2026) in Austria and at the Plastamination national conference in Italy. I will also be presenting my work at the MICRO 2026 international conference in Spain.

In addition, I was awarded an external grant through the European Marine Biological Resource Centre Italy (EMBRC-IT) Secondary Access Call, where I served as the principal investigator. This opportunity allowed me to collaborate with an outstanding microplastics research team at the CNR-ISP (Istituto di Scienze Polari). Looking back, I am grateful for the opportunities, collaborations, and challenges that have shaped my journey so far, and I look forward to contributing further to the field of marine microplastics research.

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Front and back cover photo: **Nienke C.J. van de Loosdrecht**

Design and illustrations: **NorArte Visual Science**