Dr. Kristof Moeller

Associate Research Scientist (HABs and Biotoxins)

International Atomic Energy Agency, Marine Environment Laboratories

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Current position

Associate Research Scientist – IAEA Marine Environment Laboratories, Monaco, Principality of Monaco (2024–present)

Investigating harmful algal blooms (HABs) and marine biotoxins in the Radioecology Laboratory. Managing IAEA Technical Cooperation projects supporting approximately 30 Member States in developing marine monitoring capacities. Contributing to international science–policy processes including a joint FAO/IOC–UNESCO/IAEA guidance on monitoring of algal toxins in bivalve molluscs and participating in the IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB).

Education

Dr. rer. nat. ***magna cum laude*** – University of Bremen/Alfred–Wegener–Institute, Bremerhaven, Germany (2024)

Exploring the factors behind the expansion of the harmful dinoflagellate Alexandrium pseudogonyaulax in Northern European waters. Supervised by PD Dr. C. L. Meunier. ***Fellowship by the Deutsche Bundesstiftung Umwelt (DBU)****.*

M. Sc. Biochemistry – Ludwig–Maximilians–University Munich (2020)

B. Sc. Chemistry and Biochemistry – Ludwig–Maximilians–University Munich (2017)

Science-Policy Engagement

FAO/IOC-UNESCO/IAEA Joint Guidance: Contributed to international guidance on monitoring of algal toxins in bivalve molluscs (inter-agency expert group).

IOC-IPHAB: Participant in meetings of the Intergovernmental Panel on Harmful Algal Blooms (IOC-UNESCO) 2025 and 2026.

IAEA Technical Cooperation: Managing projects including ~30 countries; contributing to the development of harmful algal bloom and biotoxin monitoring frameworks.

IAEA Coordinated Research Programme: Co-authored CRP call on eutrophication–HAB linkages contributing to targets SDG 2 and SDG 14.1.

Peer Review: Reviewer for international journals in marine science and harmful algal blooms (5 manuscripts).

International Fieldwork and Research Stays

2023 – R/V Aurora – Baltic Sea – Alfred-Wegener-Institute/Aarhus University, Denmark (1 week)

2023 – R/V Alkor – Baltic Sea – University Hamburg – supervision of M. Sc. students (1 week)

2023 – Wien – Universität Wien – toxicological risk assessment of marine biotoxins (4 weeks)

2022/2023 – Aarhus University, Roskilde, Denmark – ecological time series analysis (3 weeks)

2022 – Black Sea – Alfred-Wegener-Institute/TÜBITAK Institute (1 week)

2020 – Uthörn – North Sea, Baltic Sea – (4 weeks, 10 days as expedition leader)

Conferences & Awards

2026 – International Conference on Harmful Algae ICHA, Chile, Punta Arenas – Poster presentation

2024 – Ocean Sciences Meeting OSM, USA, New Orleans – Poster presentation

2023 – International Conference on Harmful Algae ICHA, Japan, Hiroshima – Oral presentation – *ISSHA Maureen Keller Award for the best oral student presentation*

Selected Publications

Moeller K., Jakobsen H. H., Engesmo A., Karlson B., Carstensen J. "Time series analysis of the toxic dinoflagellate *Alexandrium pseudogonyaulax* across Northern European waters." Harmful Algae (2026).

Moeller K., Tillmann U., Pöchhacker M., Varga E., Krock B., Porreca F., Koch F., Harris T. M., Meunier C. L. "Toxic effects of the emerging *Alexandrium pseudogonyaulax* (Dinophyceae) on four trophic levels of the pelagic food web" Harmful Algae (2024).

Moeller K., Krock B., Koch F. "Method optimization of the simultaneous detection of B_{12} congeners leading to the detection of a novel isomer of hydroxycobalamin in seawater." Rapid Communications in Mass Spectrometry (2022).

Moeller K., Pinto–Torres M., Mardones J. I., Krock B. "Distribution of phycotoxins in Última Esperanza Province during the PROFAN expedition 2019." Progress in Oceanography (2022).

Skills

Scientific	Harmful algal bloom ecology and biogeography; marine biotoxin chemistry and analytical detection; ecological time–series analysis
Languages	German (native); English (fluent, C2); French (very good, B2–C1)
Computing	Very good: R/Shiny; good: Python; LaTeX; Excel, PowerPoint; open–source scientific software development (R/Python)
Analytical	Very good: LC-MS/MS, sterile cell culture, toxicological assays, good: NMR, FT–IR, LD–IR, UV–Vis, Raman spectroscopy