

Jens Daniel Müller

Climate Data Scientist & Project Coordinator

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ABOUT ME

I'm biogeochemist exploring how the ocean takes up and stores carbon. My work combines global CO₂ measurements with data science and model simulations. Since 2025, I have been a Research Fellow at the Carbon to Sea initiative, where I coordinate OAEMIP – the first global ocean alkalinity enhancement model intercomparison project – to assess the potential of ocean-based carbon dioxide removal (CDR). From 2020 to 2025, I was a Postdoc with Nicolas Gruber at ETH Zurich, where I tracked the accumulation of carbon in the global ocean, and coordinated RECCAP2.

PROFESSIONAL EXPERIENCE

Research Fellow

Carbon to Sea Initiative

- 📅 10/2025 - Present 📍 Washington, United States (remote)
- Coordination of OAEMIP, the first global Model Intercomparison project for Ocean Alkalinity Enhancement

Postdoctoral Researcher

ETH Zurich

- 📅 07/2020 - 04/2025 📍 Zurich, Switzerland
- Lead author of three high-impact publications on ocean CO₂ uptake and acidification
 - Coordinated the international project RECCAP2 synthesizing greenhouse gas fluxes
 - Co-lecturer for four semesters in *Global Biogeochemical Cycles and Climate*
 - Supervised three master's theses and four semester projects
 - Contributed to the establishment of WMO's *Global Greenhouse Gas Watch*

Visiting Researcher

Max Planck Institute for Meteorology

- 📅 01/2019 - 06/2020 📍 Hamburg, Germany
- Training in data science methods for oceanography and climate research

Postdoctoral Researcher

Leibniz Institute for Baltic Sea Research Warnemünde

- 📅 06/2018 - 06/2020 📍 Rostock, Germany
- Led four-month sailing expedition *BloomSail*
 - Conducted first profiling pCO₂ measurements in the Baltic Sea to quantify cyanobacteria biomass production

EDUCATION

PhD in Chemical Oceanography

University of Rostock & Leibniz Institute for Baltic Sea Research Warnemünde

- 📅 07/2014 - 06/2018 📍 Rostock, Germany
- Developed a highly precise pH measurement system
 - Co-lecturer for two semesters in *Aquatic Chemistry*
 - Authored a textbook and served as lead author on four scientific publications

MSc in Biological Oceanography

University of Kiel & GEOMAR Helmholtz Centre for Ocean Research Kiel

- 📅 10/2010 - 09/2012 📍 Kiel, Germany
- Specialization: Marine Biogeochemistry
 - Master Thesis: Three-month diving expedition in Patagonia

BSc in Chemistry

Philipps University of Marburg

- 📅 10/2008 - 09/2009 📍 Marburg, Germany

Pre-Diploma in Chemistry

Humboldt University of Berlin

- 📅 10/2006 - 09/2008 📍 Berlin, Germany

PUBLICATIONS

40+ peer-reviewed publications

- 🔗 <https://tinyurl.com/GoogleScholar-MuellerJD>
- 1500 citations
 - 4 publications in high-impact journals: Nature Climate Change, Nature Reviews Earth & Environment, Science Advances, AGU Advances

1 textbook on the biogeochemistry of the Baltic Sea

🔗 <https://doi.org/10.1007/978-3-319-61699-5>

30+ conference presentations and posters

20+ contributions to TV, radio, online, and print media

SOCIAL ENGAGEMENT

Transatlantic Crossing 📅 09/2012 - 06/2013

Academic sailing club in Kiel e.V.

Ghana 📅 01/2008 - 03/2008

Development aid project

Mongolia 📅 07/2007 - 09/2007

Development aid project

Growtogether e.V. 📅 10/2006 - 06/2010

Founded and served as President

Referee 📅 06/2002 - 05/2005

Refereed basketball up to the regional league

CORE COMPETENCIES

R Programming Language

Project Management

Team Leadership

Communication and Public Relations

LANGUAGES

German Native (C2)

English Fluent (C1)

French Proficient (B2)

TRAINING & CERTIFICATIONS

Design Thinking

Life Design Lab | Prof. Sebastian Kernbach

📅 09/2024

4-day workshop: Application of design thinking in life and career planning

Leadership Essentials

Consulting and Training Institute (BWI)

📅 04/2021

4-day workshop: Effective team leadership and event moderation

Yachtmaster Offshore (Sportseeschifferschein)

German Sailing Federation (DSV)

📅 06/2012 - Present

Official license for operating commercial motorized and sailing vessels.

Certified Research Diver

Research Diving Center | Christian-Albrechts-University of Kiel

📅 10/2009 - Present

>200 dives | Certifications in Nitrox diving and Advanced European Scientific Diver (AESD)

RESEARCH PROJECTS

OAEMIP Ocean Alkalinity Enhancement Model Intercomparison Project

📅 10/2025 - 10/2028 📍 Washington, United States

🔗 <https://www.carbontosea.org/2025/03/20/oe-model-intercomparison-project/>

- OAEMIP was launched in October 2025 with six leading modeling centers joining the core team

RECCAP2 Regional Carbon Cycle Assessment and Processes 2

📅 07/2020 - 07/2020 📍 Zurich, Switzerland

🔗 <https://tinyurl.com/RECCAP2-special-issue>

- Foundation of the Global Carbon Budget through assessment of carbon flows between land, ocean, and atmosphere.
- 10 ocean-related publications in a special issue of AGU.

BloomSail Research Sailing Expedition

📅 05/2018 - 09/2018 📍 Gotland, Sweden

🔗 <https://doi.org/10.5194/bg-18-4889-2021>

- Four-month sailing expedition to quantify CO₂ fixation by summer cyanobacterial blooms in the Baltic Sea.
- Funded by an Early Career Grant from the National Geographic Society.
- Results published in Biogeosciences.

EU BONUS INTEGRAL

📅 07/2017 - 09/2020 📍 Rostock, Germany

🔗 <https://www.io-warnemuende.de/integral-home.html>

- Integration of marine greenhouse gas measurements from various ICOS stations for innovative ecosystem monitoring in the Baltic Sea.
- Development of new monitoring approaches for the Baltic Sea under HELCOM and the EU Marine Strategy Framework Directive.

EU BONUS PINBAL

📅 04/2014 - 03/2017 📍 Rostock, Germany

🔗 <https://www.io-warnemuende.de/pinbal-home.html>

- Development of a spectrophotometric pH sensor for brackish water.
- Commercialization of the instrument through industrial partner 4H-Jena (formerly Contros) and subsequent operational deployment in environmental monitoring.

AWARDS

3 PhD Awards

Briese, German Society for Water Chemistry, Research Foundation Baltic Sea

Best Poster Award

Baltic Sea Science Congress

German National Academic Foundation

Scholarship for doctoral studies

Prize for the best Abitur of the year

PERSONAL INFORMATION

Nationality

German

Date of Birth

February 5, 1986, Berlin, Germany

Residence Permit for Switzerland

B EU/EFTA

Marital Status

Father of two children, born in 2019 & 2022

Interests

Contact improvisation, mountain hiking and skiing, photography, offshore sailing