

PROFILE

Currently pursuing my PhD in fisheries and regional modelling for tropical coastal regions. I am passionate about environmental sustainability, fisheries management, food security and food-web dynamics to tackle climate change and natural resources exploitation problems. I worked on blue carbon cycling and mitigation methods at GEOMAR using remote sensing data and I managed large environmental datasets for habitat modelling and CVE characterisation. .

CONTACT

adamusidlowska@wp.pl

+49 15224099829

LinkedIn: Ada Musidlowska

Elisabethstrasse 120,
24143, Kiel, Germany

ADA MUSIDLOWSKA

EDUCATION

- BSc International Wildlife Biology | 2019-2023 | University of South Wales, United Kingdom, Wales

Bachelor thesis title: "Investigating the foraging behaviour and prey species of Orcinus Orca based on ecotypes"
Supervisor: Dr. Natalie Lubbock

- MSc Marine Environment and Resources | 2023-2025 Erasmus Mundus Joint Masters Degree (EU scholarship) | Universitiy of Southampton (England, United Kingdom), University of Basque Country (Spain), University of Azores (Portugal, Azores)

Master thesis title: "Assessing Marine Ecosystem Resilience: Simulating Fish Stock Responses to Environmental and Fishing Scenarios in the Western Baltic with the multispecies model OSMOSE"
Supervisors: Dr. Mariana Hill-Cruz and Dr. Mathias Zeller

ACADEMIC AND FIELD EXPERIENCE

RESEARCHER

GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel,
November 2025 - April 2026

- Extract and process large environmental datasets from CMEMS, GEBCO, EMODNET, CDS, NASA, GBIF
- Create and develop input datasets for AI model training for habitat suitability and quality control multi-regional spatial datasets for habitat model validation
- Coordinate with external research institutions to access and integrate data from multiple digital data platforms for "Sea4society-II" project

CORE COMPETENCIES

- Technical Skills R | Python | ArcGIS | OSMOSE Modelling | Microsoft Excel | Remote Sensing (SNAP, Bilko)
- Data & Analysis: Spatial data processing | Satellite imagery analysis | Large dataset management | Modelling | Data visualization | PCR | Foundational fish & otolith laboratory analysis (extraction, preparation)
- Field Methods: Scuba diving | Transect surveys | Habitat assessment | Passive acoustic monitoring | GPS | Camera traps | Habitat mapping | CTD
- Interpersonal Skills: Team management | Project coordination | Community engagement | Citizen science

LANGUAGES

- Polish (Native)
- English (Fluent, C2)
- German (A1/A2)

ECOSYSTEM MODELLING RESEARCHER

GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel, February 2025 - August 2025

- Calibrated and validated OSMOSE model for Western Baltic Sea fisheries assessment (ICES SD 22-24)
- Designed scenario experiments testing fishing pressure and climate change impacts (SSP1-2.6, SSP5-8.5) on cod, herring and sprat stocks
- Visualized and analyzed model output time-series stocks data for fisheries and food-web dynamics with use of Python and R

RESEARCH ASSISTANT

GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel, July 2024 - August 2024

- "Humboldt tippig -II" project - Conducted sensitivity analysis of OSMOSE ecosystem model for the Humboldt Current system and fisheries, applying IPCC scenarios
- Modified model input parameters (plankton availability, fishing), analyzed and visualised model output with climate scenarios
- Produced technical report documenting methods, results, and discussion for funding agency

---

BIODIVERSITY MONITORING ASSISTANT

Terra Sylvestris, Kalamos, Greece, June 2023-July 2023

- Monitored feral cat populations and conducted environmental impact assesment (EIA) for Kalamos Island (seagrass beds, coral reefs, rocky shores)
- Seagrass habitat mapping
- Conducted ornithological habitat surveys
- Engaged with local communities and lead education initiatives about ecology of the island

MARINE BIOLOGY INTERN

Atlantic Whale and Dolphin Foundation, Tenerife,
July-August 2021

- Conducted cetacean behavioural surveys and species ID of marine mammals in Tenerife habitat
- Analysed hydrophone recordings for cetacean echolocation pattern identification and passive acoustic monitoring
- Delivered science communication and citizen science engagement on ecotouristic whale-watching vessels
- Contributed to Marine Protected Area assessment and reporting

CONSERVATION RESEARCH APPRENTICESHIP

Operation Wallace, Akumal Bay, Mexico
March-April 2021

- Conducted coral reef monitoring using scuba diving belt and intercept transects, assessing benthic communities, fish diversity
- Mapped seagrass habitats using GPS and conducted turtle population surveys in Akumal Bay MPA
- Carried out ornithological surveys, bat population assessments and echolocation data collection in Calakmul Biosphere Reserve
- Conducted primate species ID and behavioural studies
- Performed reptile species surveys and camera trap data collection and analysis

ENVIRONMENTAL MONITORING APPRENTICESHIP

Selati Game reserve, South Africa
June-August 2022

- Deployed and operated radio-tracking and radio-collaring equipment to monitor key wildlife species across savannah habitat
- Conducted elephant impact assessments and ornithological biodiversity surveys
- Set up and retrieved camera traps and analysed wildlife occurrence data
- Collected genetic tissue samples and performed PCR analysis for conservation management purposes
- Assisted with animal immobilisation, collaring and relocation operations

RESEARCH CONTRIBUTIONS, EVENTS

- Published open Machine Learning ready datasets via Zenodo and Marine Data Portal following FAIR data principles from the "sea4society-II" CDRmare project. DOI: 10.5281/zenodo.19880836
- Presented findings at Ocean Symposium Digital Twins conference in GEOMAR and collaborated with stakeholders in SW Baltic Sea Workshop in CeOS, Kiel
- Lead a seminar for Biogeochemical modelling working group in GEOMAR with OSMOSE Western Baltic Sea project results
- Collaborated with researchers and stakeholders in SeaClear 2.0 Winter School on Maritime Robotics in Technical University Munich
- Attended CDRMare General Assembly in Berlin where I represented my "sea4society-II" work and exchanged ideas for future projects for next phase of CDRmare project

CERTIFICATES, TRAININGS

- "Location matters" - QGIS and geospatial methods summer school (July, 2026) - University of Bremen, The Data Science Centre
- Teaching the ocean - science communication (May, 2026) - Copernicus Marine Service
- Science communication workshop (February, 2026)-explaining findings to laypeople - CDRmare
- Python for Marine Data in Copernicus (January, 2026) – Copernicus Marine Service
- Python Course (January, 2026)– Helmholtz Information & Data Science Academy
- Ocean Data View Workshop (July, 2025) – Christian-Albrechts-Universität zu Kiel
- SSI Advanced Adventurer Scuba Diver (2024) – Best Spot Azores Dive Center and PADI Open Water Diver (2021) – CMAS

PROFESSIONAL EXPERIENCE AND VOLUNTEERING

- Outreach team and partnership, sponsoring team (since April 2026) - Erasmus Student Network Germany, Kiel and Bremen
- Student and Campus Ambassador (October 2022 - May 2023) - University of South Wales (UK)
- Volunteer in Forestry Management (July-August, 2020) - Inspira Juventude, Chaves (Portugal)
- Vice-president in Language Exchange Club - International Club (October 2021 - April 2022) - University of South Wales (UK)