

# Edith Shum

Environmental Consultant | PhD Candidate

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## EDUCATION

### PhD Environmental Studies

University of Tasmania, Tasmania, Australia  
2023-present

Thesis: Species as placemakers in light of environmental change

### M.SC Marine Biology and Ecology

James Cook University, Townsville, Australia,  
2017-2018

Thesis: Understanding Marine Turtle Volunteers: Characteristics and motivations for engagement in conservation

### B.SC Honours Environmental Biology-Wildlife Biology

McGill University, Montreal, Canada,  
2012-2016

Honours: Temperature Preference of Fowler's Toad (*Anaxyrus fowleri*) between a Fed and Fasted State

## RESEARCH INTERESTS

- place attachment
- species-on-the-move
- community-based conservation
- climate change

## SKILLS

- Geospatial mapping and analysis (GIS)
- Data engineering and management
- Visual communication and design
- Application development & interactive dashboards
- Quantitative and qualitative analysis
- Remote field work

## PROGRAMS

RStudio	RShiny
██████████	██████████
QGIS	ArcGIS
██████████	██████████
ODK	NVIVO
██████████	██████████
postgreSQL	GeoServer
██████████	██████████
Adobe Suite	Microsoft Suite
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A social-ecologist with a research interest on the relationship between species, people and the environment. With over 7 years of marine environmental experience in the Middle East, Australia, Papua New Guinea, and the Solomon Islands, I am passionate about using visual tools to present information that engages with the wider community.

## ACHIEVEMENTS

### Published Scientist

Authored seven peer-reviewed scientific articles in leading scientific journals (7 accepted, 1 in review), delivering novel insights and methodologies to the field.

### Successful Grant Acquisitions

Led the development and submission of competitive grant proposals to secure research funding for upcoming projects.

### Interdisciplinary Collaborations

Worked alongside faculty, government agencies, Indigenous communities, non-profit organizations and community partners to co-develop and implement conservation initiatives.

### Improved Data Protocols

Redesigned and optimized data collection workflows on an open-source platform, developing over 30 custom mobile apps to digitize records and boost field efficiency.

## PROFESSIONAL EXPERIENCE

### Data Scientist

NESP Resilient Landscapes, Marine Coastal Hubs | Australia  
September 2025 - present

- Contributed to the development of State of Environment (SoE) 2026 measures for biodiversity in collaboration with DCCEEW, TERN, and other leading experts.
- Developed an interactive dashboard (RShiny interface) to assess the Living Planet Index for all non-listed species in Australia.

### Environmental GIS Consultant

Five Oceans Environmental Services LLC. | Muscat, Oman  
Jan 2020 - Dec 2022 (full-time), Dec 2022- present (freelance)

- **SHAMS Outlook Report for Coral Reefs and Marine Turtles**
  - Curated and designed the first nationwide outlook report for Saudi's government conservation organization.
- **NEOM Reef Restoration Strategy**
  - Created various infographics illustrating coral distribution and reef metrics data in the NEOM region.
- **Fujairah Whale and Dolphin Project**
  - Developed a platform to collect effort data during aerial and vessel surveys. Participated in numerous cetacean surveys, compiling data to analyse spatial and temporal patterns between survey periods.
- **Environment Society of Oman- Marine Mammal Atlas**
  - Led the design of Oman's first Marine Mammal Atlas
  - Developed various spatial and temporal maps for all 20 species of confirmed marine mammals found in Oman