


Dr Caitlin D. Kuempel

Lecturer · Griffith University, Australia
✉ c.kuempel@griffith.edu.au  [cdkuempel](https://orcid.org/0000-0001-9488-9488)

Education

The University of Queensland, PhD Conservation Science, St. Lucia, QLD, Australia Nov. 2014- Aug. 2018
Northeastern University, M.S. Marine Biology, Nahant, MA Dec. 2013
University of Iowa, B.S. Environmental Bioscience (with honors), B.A. French, Certificate in Sustainability, Honors in coral morphometrics, Iowa City, IA May 2012

Employment history

Lecturer, Marine Ecosystem Modelling, Griffith University, Nathan, Australia July 2022-present
Post-doctoral Fellow, ARC Centre of Excellence for Coral Reef Studies, UQ, Brisbane, Australia Feb. 2020-June 2022
Post-doctoral Fellow, NCEAS, Santa Barbara, CA Sept. 2018-Dec. 2019
Conservation Planning Consultant, IUCN and The University of Queensland July-Aug. 2018
Volunteer Researcher: University of Queensland and WWF Indonesia Sept.-Oct. 2016
Research Assistant: Smithsonian Tropical Research Institute, Bocas del Toro, Panama April-Oct. 2014
Conservation Intern: Central Caribbean Marine Institute, Little Cayman, Cayman Islands Jan.-April 2014
Short-Term Fellow: Smithsonian Tropical Research Institute, Bocas del Toro, Panama June-Dec. 2013
Research Assistant: University of Iowa Department of Geoscience, Iowa City, IA May 2009-2010

Positions of leadership

Academic

- Australian Rivers Institute Early Career Researcher representative (2023- present)
- Griffith Coding Club co-founder and organiser
- World Wildlife Fund Coral Reef Rescue Initiative Monitoring and Data Management Lead (2020-2022)
- Centre for Biodiversity and Conservation Science Management Committee (2021-2022)
- NCEAS Diversity Team representative (2018-2019)
- Reviewer for international publications
- Society for Conservation Biology University of Queensland/Brisbane Chapter (2015-2017)
- PhD seminar series, The University of Queensland, St. Lucia, QLD, Australia (2014-2015)

Community

- RLadies Brisbane Organising Committee (2020-present)
- Software Carpentries instructor
- UNEP MPA Toolbox and Learning Platform (2021)
- STEM engagement activities
 - Brisbane Girls Grammar School Year 9 Geography incursion (2023)
 - Linn-Mar High School Ventures program mentor (2022-present)
 - UQ Twilight Talk Series (2020) -Queensland Catch a Rising Star Program, Queensland National Science Week (2016)
- Reef Life Survey Volunteer (2017)

Professional Membership

Reef Life Survey, Australian Marine Sciences Association, Australian Coral Reef Society, Society for Conservation Biology, International Society for Reef Studies

Academic distinctions, prizes, and awards

- University of Queensland Faculty of Science Awards Rising Star - Academic category Finalist (Dec. 2020)
- APEC Science Prize for Innovation, Research and Education Award - shortlisted for Australian nominee (2020)
- University of Queensland Dean's Award for Outstanding HDR Theses (2018)

Top 5 publications (h-index 13, Google Scholar) - Griffith Expert, ORCID, Google Scholar

1. Kuempel, C.D., Frazier, M., Verstaen, J., Rayner, P.E., Blanchard, J.L., Bouwman, L., Cottrell, R.S., Froehlich, H.E., Gephart, J.A., Jacobsen, N.S., McIntyre, P.B., Metian, M., Moran, D., Nash, K.L., Tobben, J., Williams, D.R., Halpern, B.S. (2023). Environmental footprints of farmed chicken and salmon bridge the land and sea. *Current Biology*
2. Halpern, B.S., Frazier, M., Verstaen, J., Rayner, P.E., Clawson, S.G., Blanchard, J.L., Cottrell, R.S., Froehlich, H.E., Gephart, J.A., Jacobsen, N.S., Kuempel, C.D., McIntyre, P.B., Metian, M., Moran, D., Nash, K.L., Tobben, J., Williams, D.R. (2022). The environmental footprint of global food production. *Nature Sustainability*
3. Kuempel, C.D., Frazier, M., Nash, K.L., Sand Jacobsen, N., Williams, D.R., Blanchard, J.L., Cottrell, R.S., McIntyre, P.B., Moran, D., Bouwman, L., Froehlich, H.E., Gephart, J.A., Metian, M., Tobben, J., Halpern, B.S. (2020). Integrating life-cycle and impact assessments to map food's cumulative environmental footprint. *One Earth* (12 citations)
4. Kuempel, C.D. Adams, V.M., Possingham H.P., Bode M. (2018) Bigger or better: the relative benefits of protected area network expansion and enforcement for the conservation of an exploited species. *Conservation Letters* (39 citations)
5. Jones, K.J., Klein, C.J., Halpern, B.S., Venter, O., Grantham, H., Kuempel, C.D., Shumway, N., Friedlander, A.M., Possingham, H.P., Watson, J.E.M. (2018). The location and protection status of Earth's diminishing marine wilderness. *Current Biology* (226 citations)

Other Publications

Kuempel, C.D. (2023) Sedimentation sifted out of global pollution priorities. *Science*

Wakwella, A., Wenger, A., Kuempel, C.D., et al. (2022) Managing Watersheds for Coral Reefs and Public Health. A Vibrant Oceans Initiative Whitepaper.

Kuempel C.D., McGowan J., Estradivari, Handaynai C., Daniel D., Possingham H., Ahmadi, G. (2017) Conservation priority gaps in the Sunda Banda Seascape, Indonesia

Grant income

- CBCS Small Grants Scheme (\$4,500 across three successful proposals) (2021)
 - ARC Laureate Postgraduate Scholarship (\$119,376 over 4 years) Nov 2014-2018
- Seafood Footprint Displacement Top-up Scholarship (Dr. Carissa Klein, \$5,000) March-June 2018
- 50 Reefs Top-up Scholarship (\$5,000) Sept. 2017
- University of Queensland Career Development Award (\$5,000) May 2017
- Taylor and Francis University of Queensland Library Excellence Award in Research (\$1,000) May 2017
- Smithsonian Tropical Research Institute Short-Term Fellowship (\$2,000) June-Nov. 2013

Supervision

- Maria Christofidis, Griffith PhD student (2023-present), Co-primary supervisor: Assessing and planning for climate change impacts to aquaculture to inform resilient and sustainable expansion
- Alana McPherson, Griffith Honours student (2023-present), Co-primary supervisor: Evaluating marine protected areas
- Sophie Petrie, Griffith Environmental Science Capstone Project (2023-present), primary supervisor. The potential impacts of land-based aquaculture on threatened species in Queensland.
- Emma Arnett, Master's Student (2020-2021), Co-primary supervisor: Quantifying redundant global fisheries trade
- Ella Sinclair, Volunteer (2020): Primary supervisor for conducting literature review of monitoring and evaluation indicators for focal WWF Coral Reef Rescue Initiative countries

Select general audience publications (links provided)

1. *Kuempel, C.D.* (2023) Farmed salmon or chicken? Environmental footprint research can guide eco-conscious consumers. [The Conversation](#)
2. Almaraz, M. and *Kuempel, C.D.* (2022) The impact of excessive protein consumption on human wastewater nitrogen loading of US waters. [Global Water Forum](#)
3. *Kuempel, C.D.* and Alyssa Giffin (2021) Resilient reefs, resilient communities: how can we get there? [Catchment to Coast](#)
4. Jones, K., Friedlander, A. Halpern, B., *Kuempel, C.D.*, Klein, C. Grantham, H., Possingham, H., Watson, J., Shumway, N., Venter, O. (2018) New map shows that only 13% of the oceans are still truly wild. [The Conversation](#)
5. *Kuempel, C.D.* Southern Coral Sea (2017) [Reef Life Survey blog](#)

Select media interviews and engagement (links provided)

1. Which food is better for the planet? [The Washington Post](#)
2. Food for thought: the carbon footprint of salmon and chicken farming mostly stems from feed. [The Guardian](#)
3. To lower food emissions consider what your dinner ate. [Popular Science](#)
4. Farmed chicken and salmon have a global footprint. [Nature](#)
5. Coming out or not, earthquake aid, and what's the most eco-friendly meat? [Triple J Hack](#)
6. Female scientists encouraging children to embrace science [Courier Mail](#)

Teaching Experience

I currently convene 3804ENV Marine Ecosystem Modelling and 3606ENV Conservation Biology at Griffith University and teach into 3033ESC Environmental Data Analytics.