Mitchell Chandler, PhD.

Ocean & Climate Scientist — Quantitative Researcher — Spatial Analyst — Science Communicator

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Scientist with over five years of experience conducting independent and collaborative research, data analysis, technical writing, and science communication. Skilled at gathering, processing, analysing, and visualising large spatio-temporal observational and model data sets to tackle complex problems. Strong communication and outreach abilities enable research insights to be effectively conveyed to specialist, government, and public audiences.

Technical Skills

MATLAB [>10-years], Julia [<1-year], ArcGIS Pro [<1-year], R [<1-year], Python [>1-year], Microsoft Office (Word, Excel, Powerpoint, Publisher, Teams), Google Suite (Docs, Slides), Affinity Designer, LaTeX, Driver's License

Education

University of California San Diego **2019 – 2025**
Doctor of Philosophy in Oceanography

University of Auckland **2018**
Bachelor of Science (with First Class Honours) in Geophysics

University of Otago **2015 – 2017**
Bachelor of Science in Marine Science and Geography

Experience

The Wilderness Society **2025 – present**
Postdoctoral Energy and Climate Researcher

- Conducted spatial analyses of oil and gas development on US Federal lands using ArcGIS Pro and Julia to help drive conservation decisions.

Scripps Institution of Oceanography **2019 – 2025**
Graduate Research Scientist & Teaching Assistant

- Analysed large ocean, atmosphere, climate, and bathymetry observational data sets and model output using MATLAB to produce data-driven insights into ocean variability and its impacts.
- Constructed and validated statistical models that integrated data from a variety of sources.
- Communicated technical results and research findings to experts, government, and the public using written, oral, and visual formats (3 first-author journal publications, 18 presentations and 6 posters at international conferences, 3 public articles, 2 exhibited art pieces, 1 federal agency report).
- Mentored two Master of Science students in coding, data processing and analysis, and science writing.
- Created, planned and taught ocean, climate, and atmosphere courses to approximately 10 graduate students and over 100 undergraduate students for which I received an 'Outstanding Teaching Assistant Award'.

American Geophysical Union **2024 – 2025**
Science Policy Fellow

- Regularly met and discussed policy topics with a network of science policy professionals and federal staff.

University of Otago **2019**
Research Data Technician

- Organised and processed multiple decades of coastal data using MATLAB and Microsoft Excel which provided collaborators the ability to access and use this data in research and local government projects.

University of Auckland **2018**
Student Researcher

- Analysed 25 years of satellite data using MATLAB to understand mechanisms driving a coastal ocean current.
- Managed a time-sensitive research project to completion, resulting in 1 first-author journal publication.

Cawthron Institute **2016 – 2017**
Research Intern

- Led the collection of remote sensing data and development of spatial analysis workflows to produce a model used to forecast coastal urbanisation and identify associated socioecological risks.

Journal Publications *Google Scholar*

Chandler M, Sprintall J, Zilberman NV. (2025). ENSO influences subsurface marine heatwave occurrence in the Kuroshio Extension. *Journal of Geophysical Research: Oceans*. doi: 10.1029/2025JC022899

Chandler M, Zilberman NV, Sprintall J. (2024). The deep western boundary current of the Southwest Pacific Basin: insights from Deep Argo. *Journal of Geophysical Research: Oceans*. doi: 10.1029/2024JC021098

Chandler M, Zilberman NV, Sprintall J. (2022). Seasonal to decadal western boundary current variability from sustained ocean observations. *Geophysical Research Letters*. doi: 10.1029/2022GL097834

Floerl O, Atalah J, Bugnot AB, **Chandler M**, Dafforn KA, Floerl L, Zaiko A, Major R. (2021). A global model to forecast coastal hardening and mitigate associated socioecological risks. *Nature Sustainability*. doi: 10.1038/s41893-021-00780-w

Chandler M, Bowen M, Smith RO. (2019). The Fiordland Current, southwest New Zealand: mean, variability, and trends. *New Zealand Journal of Marine and Freshwater Research*. doi: 10.1080/00288330.2019.1629467

Chandler M, Meek M, Belote RT. (in prep). Statistical modeling of oil and gas development potential can aid in conservation planning.

McTague S, Edwards C, Pedersen N, Cacapit A, **Chandler M**, Sandin S. (in prep). Who's next door? Using large-area imagery and GIS to understand neighbour patterns of coral and algae at Palmyra Atoll.

Additional Graduate-Level Coursework

Advanced Statistical Techniques, Applied Mathematics, Numerical Modelling, Data Analysis, Science Communication, Geophysical Fluid Dynamics, Fluid Mechanics, Ocean-Atmosphere Interactions