



CENTRE FOR MARINE SOCIOECOLOGY

INTRODUCTION

Australia is a marine nation with over 87% of the population living within 50 km of the coast, and our oceans play an important role ecologically, socially and economically. Our marine environment is critically important for the cultural practices of Indigenous communities and as the world's third largest marine jurisdiction, it's home to many marine species that occur nowhere else in the world. Our marine regions provide valuable services through the provision of food, energy, transportation, tourism, conservation and recreation, and by 2025 our marine industries are projected to contribute around \$100 billion each year to Australia's overall economy.

However, further demands and pressures on coasts and oceans are expected with increasing coastal populations, food security needs and emerging industries, such as renewable energies and offshore marine production systems. Managing these multiple uses, often with conflicting objectives, to ensure sustainable ecosystems, industries and social and economic benefits for communities is a major challenge globally.

The Centre for Marine Socioecology (CMS), is a unique collaboration between the University of Tasmania (UTAS) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), with support from the Australian Antarctic Division (AAD). It was established in 2014 to provide, develop and integrate the interdisciplinary teaching and research capacity required to underpin sustainable management of Australia's coastal zone and ocean in a rapidly changing world. It brings together an extraordinary diversity of disciplinary expertise, and considers multiple knowledge systems, in active collaborations, to directly address both the theoretical and applied aspects of marine socioecological systems.

We are extremely pleased to see in this annual report that the Centre has continued to grow international recognition for the challenging research being conducted and communicated in innovative ways, and for the training of students in interdisciplinary sciences. We look forward to its continued success into the future.

Professor Anthony Koutoulis Deputy Vice-Chancellor (Research) University of Tasmania

Dr Dan Metcalfe Director, CSIRO Oceans and Atmosphere

We acknowledge and pay respect to the traditional owners and custodians of sea country all around Australia, in particular *lutruwita* (Tasmania), and recognise their collective wisdom and knowledge of our oceans and coasts.



WORDS FROM CMS DIRECTOR AND DEPUTY DIRECTOR

This report outlines a selection of the research and other activities undertaken by the Centre for Marine Socioecology in 2022. We are pleased and proud to share this summary with you. The breadth and diversity of achievement described in this annual report illustrates clearly that the Centre continues to be a strong and vibrant locus for high quality interdisciplinary and transdisciplinary research and training.

We wholeheartedly thank the many people – our students, researchers, collaborators, and stakeholders – who have actively contributed to the Centre's activities. The Centre's ongoing success, continually growing reputation and impact at local through to global scales would not be possible without their generosity and enthusiasm. This is especially the case given the challenging circumstances that flowed into 2022, with everyone at a different point of their journey of coping, adapting, refocusing, and rebuilding. Each new year brings new aspects to CMS' activities and an ever-growing depth of diverse contributions. We continue to be proud of the Centre's outputs and outcomes and we look forward to continuing this work with you in 2022.

Crettakel

Professor Gretta Pecl (IMAS) Director

Dr Beth Fulton (CSIRO) Deputy Director











BACKGROUND

The Centre for Marine Socioecology brings together disciplinary expertise in physics, law, economics, biology, sociology, psychology, human health, art, media, philosophy and governance from the following University of Tasmania colleges, schools and institutes: the Institute for Marine and Antarctic Studies (IMAS), the College of Arts, Law and Education, the College of Health and Medicine, the Tasmanian School of Business and Economics, the School of Technology, Environments and Design; and from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Australian Antarctic Division (AAD). We are also fortunate to have valuable participation from other leading Australian and International institutes.

CMS embraces the extensive knowledge of the traditional owners of Australia, working collaboratively with Indigenous scientists, Elders and knowledge holders to collectively enhance our understanding of our oceans and coasts. **VISION** A WORLD-LEADING CENTRE TO SUPPORT INFORMED AND SUSTAINABLE MANAGEMENT OF MULTIPLE-USES IN MARINE AND COASTAL SYSTEMS

MISSION TO PROVIDE EXCELLENCE IN RESEARCH AND RESEARCH TRAINING THAT UNDERPINS THE SUSTAINABLE DEVELOPMENT OF THE MARINE DOMAIN FOR ALL USERS AND BUILDS THE NECESSARY CAPACITY TO PROVIDE SKILLS AND SOLUTIONS FOR INDUSTRY, GOVERNMENT AND THE COMMUNITY

CMS CORE TEAM



Director Prof Gretta Pecl



Deputy Director Dr Beth Fulton



Knowledge Broker Dr Rachel Kelly



Executive Support Officer Dr Cecilia Villanueva

RESEARCH THEMES AND THEME LEADS

Our work is actively working towards solutions across five key research themes



Coastal & Marine Governance



Dr Karen Alexander



Dr Pedro Fidelman



CHALLENGES

Sustainable Futures & Planetary Health



Dr Kirsty Nash



Dr Anna Farmery



Environmental Change & Adaptation



Dr Ingrid van Putten



Dr Rowan Trebilco

RESEARCH APPROACH



Knowledge Production



Dr Jess Melbourne-Thomas



Science Engagement & Impact



Dr Rachel Kelly



Dr Geoff Syme

STEERING COMMITTEE

CMS is overseen by a Steering Committee. Our Steering Committee is composed of members from CSIRO, and the different institutions and schools within the University that form part of CMS, a student representative, as well as a representative from AAD, and two independent representatives from government and industry.



Prof Gretta Pecl. **CMS Director**



Dr Rich Little, CSIRO proxy



Prof Chris Carter, IMAS proxy



Dr Jonny Stark, AAD



Dr Beth Fulton, **CMS Deputy Director**



Dr Alistair Hobday, **CSIRO**



Dr Satoshi Yamazaki, CoBE proxy



Prof Jenn Scott, CHM



Dr lan Dutton, **NRE** Tasmania



Dr Ingrid van Putten, **CSIRO**



Prof Catriona Macleod, IMAS



Mr Malcolm Johnson, student rep



Mr Martin Exel, **Austral Fisheries**



Dr Dugald Tinch,



Assoc Prof Joanna Vince, CALE



Dr Gilliam Slocum, AAD

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2022 HIGHLIGHTS

Clarivate Highly Cited Researchers



Citations by our peers is one important measure (among many!) of research impact and quality. Each year Clarivate produces the Highly Cited Researchers list that identifies global research scientists and social scientists who have demonstrated exceptional influence, as reflected through their publication of multiple papers frequently cited by their peers during the last decade. This year, we are pleased to say that CMS has four of our researchers on the Highly Cited list, including Alistair Hobday and Chris Wilcox, and our Director and Deputy Director, Gretta Pecl and Beth Fulton. All four researchers were identified as Highly Cited in the 'Cross-Field' category which identifies researchers who have contributed to highly cited papers across several different research fieldsreflecting the highly interdisciplinary nature of the work we do at CMS. More information is available here https://clarivate.com/highly-cited-researchers/

Beth Fulton was elected Australian Academy of Science Fellow 2022 and Academy of Technological Sciences & Engineering Fellow 2022. Fellows of the Australian Academy of Science are among the Nation's most distinguished scientists, elected by their peers for groundbreaking research and contributions that have had a clear impact. ATSE Fellows recognised extraordinary expertise across engineering, applied science and technology.







Peter Puskic meeting the iconic Ocean hero Sylvia Earle

Peter Puskic attended the UN Ocean Conference held in Lisbon, Portugal supported by CMS and the Early Career Ocean Professional Programme. Tony Smith was awarded the K. Radway Allen award, the highest honour awarded by the Australian Society for Fish Biology, recognising Tony's contribution in fish and fisheries sciences and leadership This is the fourth year in a row that member has received this prestig



Curious Climate Schools

Curious Climate Schools is an engagement and research project supported by CMS, that aims to address children's unanswered questions and concerns about climate change. The project was officially launched in 2021 and led by **Chloe Lucas** (and co-led by **Gretta Pecl**, Gabi Mocatta, Kim Beasy, and **Rachel Kelly**).

Over the last two years, Curious Climate Schools has engaged with more than 2000 Tasmanian school students between the ages of 9-18. Eighty experts (from CMS, other UTAS centres and schools, and other universities) have volunteered their time and expertise to answer children's burning questions about climate. These answers are publicly available on the project website. The website also provides information for children, teachers, and other adults on how to handle feelings about climate change, what people of all ages can do to be part of the solution, and how young people's questions are part of a larger global conversation about climate action, including work by the United Nations and the IPCC.

In 2022, the success of the project was recognised in multiple international awards, including:



- United States National Academies of Science, Engineering and Medicine Eric and Wendy Schmidt Award for Excellence in Science Communication (Chloe Lucas on behalf of the project team)
- 2. University of Tasmania Vice-Chancellor's Engagement Award (Project team - Chloe Lucas, Gabi Mocatta, Gretta Pecl, Kim Beasy, Rachel Kelly)
- 3. 2022 New Directions for Climate Communication Research Fellowship from the International Assocation for Media and Communication Research (Curious Climate Schools - Chloe Lucas, Gabi Mocatta).
- 4. Australasian Green Gown Award for Benefitting Society (Project team - Chloe Lucas, Gabi Mocatta, Gretta Pecl, Kim Beasy, Rachel Kelly).

These awards recognise the importance of listening to young people's concerns about climate change, and the value of providing them with relevant and trustworthy responses to their questions about all aspects of climate change.





FRIDAY 25TH NOVEMBER 2022 | SPRING BAY MILL, TRIABUNNA

Tasmanian Ocean Summit

In November, several CMS affiliates were invited as speakers, panellists, and chair at the Tasmanian Ocean Summit which was hosted by the Australia Institute Tasmania). These key speakers at the summit included Gretta Pecl, Beth Fulton, Jess Melbourne-Thomas, Ingrid van Putten, and Alistair Hobday, and also Ian Dutton and Martin Excel (both CMS Steering Committee). The focus of the submit was the review of Tasmania's main marine law, the Living Marine Resource Management Act 1995. The aim of the one-day event was to bring together diverse stakeholders from all around the state (including researchers, fishers, local community members, Indigenous community members, government representatives) and foster collaborative discussion on ocean sustainability for Tasmanian waters: *From global to local, for the ocean we want*.

https://australiainstitute.org.au/event/tasmanian-ocean-summit-2022



2022 SNAPSHOT

83 OF ONFERENCES & PRESENTATIONS











REPORTS & OTHER PUBLICATIONS



CMS EVENTS



RESEARCHERS



BOOKS & CHAPTERS



FUNDING & GRANTS



PUBLIC OUTREACH EVENTS/ACTIVITIES



AWARDS & PRIZES

SUMMARY OF SCIENTIFIC OUTPUTS

CMS strongly values our direct connections with local stakeholders and the applied impacts of our research. However, we also have a strong academic impact at a global scale. Our staff and students have collectively published with hundreds of international co-authors, with citation metrics more than **triple** the world average for similar publications.

Field-Weighted Citation Impact takes into account the differences in research behaviour across disciplines, revealing how the number of citations received compares with the average number of citations received by all other similar publications indexed in the Scopus database (a value of 1 indicates the world average). All the metrics were calculated based on 360 papers from 2018 to 2022 which were available in Scopus (using SciVal software) on 21 December 2022.

Overall research performance for 2022¹

Scholarly Output 360 60.6% All Open Access

Citation Count 6,847

Authors **1,842**

Citations per Publication

Field-Weighted Citation Impact **3.07**

¹Entity: CMS Publications 2021 Year range: 2016-2022 Data source: Scopus, up to 16 Mar 2022

Publications by subject area



Outputs in Top Citation Percentiles

CMS Publications are in the top 10% most cited worldwide (field-weighted). For comparison UTAS 16.5%, Australia 16.8%



International Collaborations

CMS publications co-authored with institutions in other countries/regions. For comparison UTAS 55.4%, Australia 57.5%.

Publications in Top Journal Percentiles

CMS Publications are in the top 10% of journals by CiteScore Percentile. For comparison UTAS 41.7%, Australia 40.4%



Academic-Corporate collaboration

Publications with both academic and corporate affiliations. For comparison UTAS 3.1%, Australia 3.4%



PUBLICATIONS

PAPERS

- 1. Alexander KA 2022. A social license to operate for aquaculture: Reflections from Tasmania. Aquaculture, 550, 737875. https://doi.org/10.1016/j.aquaculture.2021.737875
- 2. Alexander KA, Marx K, Hunt L & Zhang M 2022. Antarctic representation in print media during the emergence of COVID-19. *Antarctic Science*. https://doi.org/10.1017/S0954102022000049
- **3. Bax N** & Bayley D 2022. Yorke Bay, Falkland Islands: a question for coastal management. *Frontiers in Ecology and the Environment*, 20(7), 404–404. https://doi.org/10.1002/fee.2555
- Bax N, Barnes DKA, Pineda-Metz SEA, Pearman T, Diesing M, Carter S, Downey RV, Evans CD, Brickle P, Baylis AMM, Adler AM, Guest A, Layton KKS, Brewin PE & Bayley DTI 2022. Towards Incorporation of Blue Carbon in Falkland Islands Marine Spatial Planning: A Multi-Tiered Approach. *Frontiers in Marine Science*, 9. https://doi.org/10.3389/fmars.2022.872727



Figure 1 in Bax et al. (2022), showing the blue carbon habitats considered in the paper, Frontiers in Marine Science.

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- Condie CM, Alexander KA, Fulton EA, Vince J, & Condie SA 2022. Reducing socio-ecological conflict using social influence modelling. *Scientific Reports*, 12(1), 22002. https://doi.org/10.1038/s41598-022-26570-8
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- **11. Constable AJ** 2022. Imperatives for integrated science and policy in managing greenhouse gas risks to the Southern Polar Region. *Global Change Biology*. https://doi.org/10.1111/gcb.16219
- 12. Constable AJ, French S, Karoblyte V & Viner D 2022. Decision-Making for Managing Climate-Related Risks: Unpacking the Decision Process to Avoid "Trial-and-Error" Responses. *Frontiers in Climate*, 4. https://doi.org/10.3389/fclim.2022.754264
- 13. Cvitanovic C, van Putten El, Tuohy P, & Annand-Jones R 2022. Normalizing failure: when things go wrong in participatory marine social science fieldwork. *ICES Journal of Marine Science*. https://doi.org/10.1093/ icesjms/fsac153



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Figure 2 from Fulton et al. (2022) depicting the catch composition through time for the Gulf of Thailand, ICES Journal of Marine Science.



Graphical abstract from Karcher et al. (2022)

- **19.** Gallagher JB, Shelamoff V & **Layton C** 2022. Seaweed ecosystems may not mitigate CO2 emissions. *ICES Journal of Marine Science*. https://doi.org/10.1093/icesjms/fsac011
- 20. Goldsworthy L 2022. Consensus decision-making in CCAMLR: Achilles' heel or fundamental to its success? International Environmental Agreements: Politics, Law and Economics. https://doi.org/10.1007/s10784-021-09561-4
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- **24. Hardesty BD**, **Willis K**, & **Vince J** 2022. An imperative to focus the plastic pollution problem on place-based solutions. *Frontiers in Sustainability, 3.* https://doi.org/10.3389/frsus.2022.963432

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- **34.** Konkes C, Nixon C, **Lester L** &, Williams K 2022. Coal versus coral: Australian climate change politics sees the Great Barrier Reef in court', *Queensland Review* https://doi.org/10.1017/qre.2022.10
- **35.** Lavers JL, Bond AL & Rolsky C 2022. Far from a distraction: Plastic pollution and the planetary emergency. *Biological Conservation*, *272*, 109655. https://doi.org/10.1016/j.biocon.2022.109655



Graphical abstract from Lavers et al. (2022

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- 37. Layton C, Vermont H, Beggs H, Brassington GB, Burke AD, Hepburn L, Holbrook N, Marshall-Grey W, Mesaglio T, Parvizi E, Rankin J, Semolini Pilo G, & Velásquez M 2022. Giant kelp rafts wash ashore 450 km from the nearest populations and against the dominant ocean current. *Ecology*. https://doi.org/10.1002/ ecy.3795
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- 46. Mills KE, Armitage D, Eurich JG, Kleisner KM, Pecl GT, & Tokunaga K 2022. Co-production of knowledge and strategies to support climate resilient fisheries. *ICES Journal of Marine Science*. https://doi. org/10.1093/icesjms/fsac110
- **47.** Morris RL, Bilkovic DM, Walles B & **Strain EMA** 2022. Nature-based coastal defence: Developing the knowledge needed for wider implementation of living shorelines. *Ecological Engineering*, *185*, 106798. https://doi.org/10.1016/j.ecoleng.2022.106798
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Figure 1 from Murunga (2022), showing a modified spectrum of public engagement, Environmental Science & Policy.

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	Business-as-usual 2030	More sustainable 2030
Characters		
Multi-use deep- water ocean facility	Monoculture sea bream farms	Artificial coral reef
Fish scanners	Microplastic scanner	Within the seamer
Transport		
Art credit: Sacha Bryning	Black Hawk helicopters	Solar-powered dinghies

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	Business-as-usual 2030	More sustainable 2030
Indigenous & Traditional Peoples' perspectives Fischer et al 2021		At credit: Dean Greeno
Food for all	RUSINESS AS USUAL 200	NOCE SUSTAINABLE 200
Offshore Blue Economy		
Climate-driven species redistribution	Species skifting: Unit where stift noviets so bhase so	

One Earth One Earth key articles on Biodiversity Conservation: The journal One Earth put together a collection of their key articles that highlights the challenge we face, the shortcomings of past efforts, and potential solutions to help ensure we are successful in bending the biodiversity curve and achieving the 2050 vision. Several of **Vanessa Adams** papers were featured, and one from **Gretta Pecl** that was published together with our Future Seas and Species on the Move Collaborators Dr Tero Mustonen and Chief Edwin Ogar. https://www.cell.com/one-earth/collections/biodiversity-conservation

BOOK AND BOOK CHAPTERS

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 - a. Layton C, Gleason M. Chapter 2: Evaluating the need for kelp forest restoration.
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 - c. **Layton C**, Pérez Matus A, González AV, Coleman MA. Chapter 7: Future-proofing kelp forest restoration for climate change.
- 2. Climate, Society and Elemental Insurance Capacities and Limitations. Edited By Kate Booth, **Chloe Lucas**, Shaun French.
- Foxwell-Norton K, Lester L (2022), '(Not) saving the Great Barrier Reef from disaster: Media then and now', Communicating Endangered Species: Extinction, News and Public Policy, Routledge, E Freedman, S Shipley Hiles and DB Sachsman (ed), UK, pp. 1-16. ISBN 9781003041955.
- Hutchins B, Lester L, Miller T (2022) 'Greening Media Sport: Sport and the Communication of Environmental Issues', Communication and Sport, De Gruyter, ML Butterworth (ed), Berlin, Germany, pp. 369-386. ISBN 9783110657074 ([Research Book Chapter).



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Antarctic fieldwork, image credit: UTAS image gallery.

- Leane E (2022). Ice Islands of the Anthropocene: the Cultural Meanings of Antarctic Bergs, in *Postcolonial Literatures of Climate Change*, Brill, R McDougall, JC Ryan, and P Reynolds (ed), Leiden and Boston, pp. 361-382. ISBN 97890045
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- 10. Van Leeuwen J, Walker TR & Vince J. Chapter 22: PLASTIC POLLUTION The challenges of uncertainty and multiplicity in global marine governance. In Routledge Handbook of Marine Governance and Global Environmental Change. Publisher: Routledge. DOI: 10.4324/9781315149745-27
- Vince J (2022), 'Challenges and Opportunities for Southern Ocean and Antarctic Governance', Polar Cousins: Comparing Antarctic and Arctic Geostrategic Futures, University of Calgary Press, C Leuprecht and D Causey (ed), Canada, pp. 155-178. ISBN 9781773854373

REPORTS

- Bindoff NL, Boyd PW, Constable AJ, King MA, McGee J & Pecl G 2022. Antarctica and the Southern Ocean: insights from the 2022 IPCC WGII report
- Eger AM, Bennett S, Zimmerhackel J, Rogers A, Burton M, Filbee-Dexter K, Wernberg T, Gacutan J, Milligan B, Vergés A 2022. Quantifying the ecosystem services of the Great Southern Reef. Report to the National Environmental Science Program. University of New South Wales
- Graba-Landry A, Champion C, Haddy J, Lyle J, Mossop D, Pearn R, Pecl G, Pethybridge H, Wolfe B and Tracey S 2022. Opportunities and impacts of range extending scalefish species: understanding population dynamics, ecosystem impacts and management needs. Report to the Fisheries Research and Development Corporation, Project No 2018-070.
- 4. Hedge P, Souter D, Jordan A, Trebilco R, Ward T, van Ruth P, Cowlishaw M, Lara-Lopez A, Barrett N, Thornborough K, Nichol S, Przeslawski R, Parr A, Kendrick A, Holmes T, Pattiaratchi C, Ferns L (2021) Establishing and supporting a national marine baselines and monitoring program. A report from the Baselines and Monitoring Working Group prepared for Australia's National Marine Science. https://www. marinescience.net.au/workinggroups/
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- Seivwright A, Kocar S, Fabian M, Lester L 2022. 'Towards a Shared Understanding and Articulation of a Common Population Outcomes Framework', Tasmanian Government Department of Premier and Cabinet, Hobart, Tasmania[Consultants Report]
- 7. Stoeckl N, Adams V, Larson S, Mahony T, Steel R, Allen S, Emmerling M, Jarvis D, Ogier E, Navarro M, Chuah SH, Langlois T & Pecl G 2022. "Integrated data requirements for natural resource management", Report to the Resilient Landscapes Hub of the Australian Government's National Environmental Science Program. University of Tasmania, Hobart. https://nesplandscapes.edu.au/wp-content/uploads/2022/07/ Integrated-data-requirements-report.pdf



- 8. Trebilco R, Fischer M, Hunter C, Hobday A, Thomas L, Evans K 2021. Australia state of the environment 2021: marine. Independent report to the Australian Government Minister for the Environment, Commonwealth of Australia, Canberra. https://soe.dcceew.gov.au/marine/introduction
- Wolfe et al NESP report card report (Barrett Wolfe, Shannon Kjeldsen, Jan Strugnell, Sue-Ann Watson and Gretta Pecl (2022), National Assessment of Climate-Driven Species Redistribution using Citizen Science Data. Report to the National Environmental Science Program. University of Tasmania)
- Ziegler P, Welsford D, Maschette D, Cleeland J, Phillips GAC, Lyle J, Wotherspoon S, Dell J, Nowara G 2022. Science to support Australia's Southern Ocean Fisheries 2018-2021: FRDC Project 2018-124.
- IPCC Report Working Group II Impacts, Adaptation and Vulnerability
 In the Australasian chapter (which includes NZ and Australia), Gretta Pecl was responsible for assessing
 all available material and drafting:
 - Coasts and oceans section
 - Great Barrier Reef 'box' (special focus section)
 - Marine food
 - Tourism

Together with a colleague, she was charged with drafting the Indigenous section of the Australasian chapter. To do this, they convened a working group of Indigenous Contributing Authors to ensure the section addressed key issues relevant to the Indigenous Peoples and was written in a culturally appropriate way. Other sections of the broader IPCC report that Gretta co-authored included: a 'moving plate' cross-chapter box highlighting how climate change has impacted where food can be grown or sourced, a water borne disease cross chapter box, and an Indigenous Peoples cross chapter box. She was also part of a working group aiming to include as much Indigenous material in chapters as possible and ensure culturally appropriate terminology throughout the report.

OTHER PUBLICATIONS (E.G. ARTICLES IN THE CONVERSATION, ETC)

- Beasy K, Lucas C, Mocatta G, Pecl G & Kelly R. How well does the new Australian Curriculum prepare young people for climate change? *The Conversation*, 23 May 2022. https://theconversation.com/howwell-does-the-new-australian-curriculum-prepare-young-people-for-climate-change-183356?utm_ source=twitter&utm_medium=bylinetwitterbutton
- 2. Champion C & Pecl G. Citizen science data reveal that climate, currents and species traits all contribute to the early stages of marine species redistributions. Behind the Paper, Nature Ecology & Evolution, 14 December 2022. https://ecoevocommunity.nature.com/posts/citizen-science-data-reveal-that-climate-currents-and-species-traits-all-contribute-to-the-early-stages-of-marine-species-redistributions?utm_source=user_mailer&utm_medium=email&utm_campaign=notify_contributor_about_creating_a_post



Figure 3 from article 'Citizen science data reveal that climate, currents and species traits all contribute to the early stages of marine species redistributions', showing the velocity of climate change, its directional agreement with ocean surface currents, and the locations of out-ofrange observations, Behind the Paper, Nature Ecology & Evolution.

- 3. Hardesty BD, Wilcox C, Vince J, & Richardson K. "740,000km of fishing line and 14 billion hooks: we reveal just how much fishing gear is lost at sea each year". *The Conversation*, 13 Oct 2022, https://theconversation.com/740-000km-of-fishing-line-and-14-billion-hooks-we-reveal-just-how-much-fishing-gear-is-lost-at-sea-each-year-192024
- 4. Herraiz Borreguero L, Naveira Garabato A, Melbourne-Thomas J. "Troubling new research shows warm waters rushing towards the world's biggest ice sheet in Antarctica" *The Conversation*, 3 Aug 2022, https://theconversation.com/troubling-new-research-shows-warm-waters-rushing-towards-the-worlds-biggest-ice-sheet-in-antarctica-187483
- 5. Mackey B, Chiew F, Pecl G, Hennessy K, Rickards L, Howden M, Tapper N, Lansbury N, Nidumolu U 2022. New IPCC report shows Australia is at real risk from climate change, with impacts worsening, future risks high, and wide-ranging adaptation needed The Conversation, 28 February 2022. https:// theconversation.com/new-ipcc-report-shows-australia-is-at-real-risk-from-climate-change-with-impacts-worsening-future-risks-high-and-wide-ranging-adaptation-needed-176691
- Moggridge BJ, Pecl G, Lansbury N, Creamer S, Mosby V 2022. IPCC reports still exclude Indigenous voices. Come join us at our sacred fires to find answers to climate change – *The Conversation*, 4 March 2022. https://theconversation.com/ipcc-reports-still-exclude-indigenous-voices-come-join-us-at-oursacred-fires-to-find-answers-to-climate-change-178045



Minke whale surfacing through ice in Antarctica, where warming water will impact marine ecosystems. Image credit: Jess Melbourne-Thomas

- 7. Pecl GT, contributed to AMSA position statement on climate change. If anyone wanted to share the statement in any way, the weblink is https://www.amsa.asn.au/position-statements, Faceboook post https://www.facebook.com/australianmarinescienceassociation and LinkedIn post https://www.linkedin.com/posts/australian-marine-sciences-association_amsa-strongly-supports-the-drastic-and-immediate-activity-6904914591671820288-voWp
- Pecl GT, Wolfe B, Champion C, Strugnell J & Watson S-A. Thousands of photos captured by everyday Australians reveal the secrets of our marine life as oceans warm. *The Conversation*, 29 August 2022. https://theconversation.com/thousands-of-photos-captured-by-everyday-australians-reveal-thesecrets-of-our-marine-life-as-oceans-warm-189231
- Pecl GT & Wolfe B. Redmap report cards for Tasmania, New South Wales and Western Australia
- 10. Pecl GT & Wolf B. Redmap Decadal Report Card
- 11. Puskic P. Blog "UNOC 2022 Lisbon, Portugal", 13 September 2022, https:// marinesocioecology.org/wp-content/ uploads/UNOC-2022-Lisbon.pdf
- 12. Willis K, Hardesty BD, Wilcox C & Vince J. Local efforts have cut plastic waste on Australia's beaches by almost 30% in 6 years. The Conversation, 9 June 2022. https://theconversation.com/local-effortshave-cut-plastic-waste-on-australiasbeaches-by-almost-30-in-6-years-184243





CONFERENCE CONVENING & SYMPOSIA

- 1. Audzijonyte A, Silva C and Krueck N. World Small Scale Fisheries Congress (Europe). 12-14 September 2022, Online.
- Kelly R, Shellock R and Schadeberg A. "Ocean futures: engaging science and society in visions of the future". ICES Annual Science Conference (Dublin). 19-22 September 2022.
- Lucas C, Mocatta G, Kelly R, Beasy K and Pecl G. "Curious Climate Schools: What do children want to know about climate change?" Institute of Australian Geographers Conference, Armidale NSW. 4-7 July 2022.



- 4. Melbourne-Thomas J, Jordan R, Kong T, Lowe L and Schuyler Q. "Connecting the dots: knowledge brokering for impact and innovation" Australian Academy of Science Theo Murphy Initiative Symposium. February-March 2022. https://aas.eventsair.com/knowledge-brokering/
- 5. Mynott S & Dobson KL. "Working together for a sustainable future: bridging the gap between science and policy", Ocean Sciences Meeting (virtual). 24 February- 4 March 2022.

- Simon M, McDonald J, McGee J and Brent K. "Participatory Decision Making in Cloud Seeding Governance", IUCN Academy of Environmental Law Colloquium (in person), Brisbane, Queensland. 11–15 July 2022.
- 7. **Trebilco R**, Hunter C and **Fischer M**. "Integrating assessment and governance of the marine environment across dimensions", Australian Marine Science Association conference, 7-11 August 2022.
- 8. Vince J & Willis K. "Non-state actors in governance solutions to plastic pollution", 7th International Marine Debris Conference, Busan, South Korea. 18-23 September 2022.
- **9.** Vince J, Responder to Keynote and Expert Panel Member "Exploring the future of Antarctica and the Southern Ocean".

PLENARIES AND KEYNOTES

- Bax N, Gallo N, Stratmann T, Bravo ME and Talma S. "What are the greatest challenges to the deep sea? Deep Ocean Early Career Researchers (DOERs) Perspectives". Deep Ocean Observing Strategy "Addressing Global Challenges in the Deep Sea through Collaboration", annual meeting, online, 3rd May 2022.
- 2. Leane E, "Mixed Signals: The Impact of Wireless on the Australasian Antarctic Expedition (1911-14)" Wireless Institute of Australia annual conference, Hobart/Online, 8 May 2022.
- **3.** Nowak B, "Parasites, Fish and Feeding the World". ICOPA2022, Copenhagen, Denmark, 21-26 August 2022.

INVITED SPEAKERS

- Audzijonyte A. Introduction and welcome "Digital data, citizen science and the new age of fisheries analyses" (in person talk). World Small Scale Fisheries Congress (Europe). 12-14 September 2022, Online, https://www.youtube.com/watch?v=VoBCh0AghEc.
- 2. Bax N. "The deep sea, the climate, and the next generation", 2022 United Nations Climate Change Conference, Sharm El Sheikh, Egypt, 6-18 November 2022.
- **3. Bax N**. "Blue carbon: the ocean's role in fighting climate change", 2022 United Nations Climate Change Conference, Sharm El Sheikh, Egypt, 6-18 November 2022.
- **4. Bax N**. "SEABED 2030: mapping for people and the planet", 2022 United Nations Climate Change Conference, Sharm El Sheikh, Egypt, 6-18 November 2022.
- Cottrell RS, Halpern BS, Hamilton HA, Penrose B, Carter CG, Adams LK, Johne A and Blanchard JL. "Sourcing practices matter more than ingredients for the environmental footprint of salmon aquaculture feeds", World Aquaculture Society conference, Singapore, 29 November - 02 December 2022.
- Cottrell RS, "Optimising aquaculture feeds to support ecosystem-based management Environmental pressures and biodiversity assessment", Blue Economy CRC Tasmanian Salmon Symposium 2022, Hobart, Australia, 10-11 May 2022.
- **7.** Evans K. "Follow the Blue Brick Roak", Dorothy Hill Symposium, University of Queensland, November 2022.
- **8.** Lacharité M. "Exploring Blue Economy hazards and opportunities through an online registry", Webinar: Risks & Opportunities for the Blue Economy Cooperative Research Centre, Online, 17 Aug 2022.

- **9.** Melbourne-Thomas J. "Challenges and lessons from working across diverse sectoral expertise", Webinar: Risks & Opportunities for the Blue Economy Cooperative Research Centre, Online, 17 Aug 2022.
- Melbourne-Thomas J. "Vulnerability assessment to underpin adaptation planning a wetlands case study". 2030 and beyond Adaptation for our future – National Adaptation Forum, Sydney, 1-2 November 2022.
- **11. Melbourne-Thomas J**, Syme L. "Integrating climate science and Indigenous perspectives". Australian World Heritage Forum, Canberra, 16-17 November 2022/
- **12. Mynott S**. "What is knowledge brokering, and what role does it play in creating science impact and innovation?", Australian Academy of Science Theo Murphy Initiative Symposium (virtual), February-March 2022.
- **13. Mynott S**. "How to reach your audience". Pacific Ecology and Evolution Conference, Victoria, Canada, 19-20 March 2022.
- **14. Pecl G**. "Adaptation planning for climate-driven species redistribution". 2030 and beyond Adaptation for our future National Adaptation Forum, Sydney, 1-2 November 2022.
- **15. Pecl G**, "Future Seas Project". Volvo Ocean Lovers Festival, March 2022.
- 16. Pecl G (host), Grimmer M, Moloney H & Exel M (presenters). "The Climate Emergency: Can your choices change our future?" Island of Ideas Public Lecture Series, 13 April 2022. https://www.utas.edu.au/events/2022/april/the-climate-emergency-can-your-choices-change-our-future/_nocache





- **17. Pecl G**, "Climate change impacts, adaptation and vulnerability", IPCC 6th Assessment Report Australian Authors Speak, organised by the Australian Society of Science, 1 March 2022.
- **18. Trebilco R**, invited presentation on "State of the Environment 2021: update for the National Marine Science Committee" for the National Marine Science Committee meeting, August 2022.
- **19. Trebilco R**, invited presentation on "Optimising IMOS contributions to the State of the Environment Report: progress and opportunities" for the IMOS annual planning meeting, September 2022.

GENERAL PRESENTATIONS

- 1. **Boothroyd A**, "Marine Protected Area Planning for Planning Domain 9, Southern Ocean", Joint Ecological Society of Australia & Society for Conservation Biology conference Wollongong Nov 2022.
- 2. Boothroyd A, "Building representative MPA networks: MPA planning in the Southern Ocean", Scientific Committee on Antarctic Research (SCAR) 10th Open Science Conference.
- **3.** Easton A, Coughlin T, **Komyakova V**. "Developing the first stage of an evidence-based artificial reef risk assessment tool" Ecological Society of Australia, Wollongong, NSW, Australia Nov 2022.
- **4. Komyakova V**. "Changing the game in STEM education: an idea to enhance competitiveness of our graduates on job market" Teaching Matters conference, UTAS, Tasmania, Dec 2022.
- Komyakova V, Wright B, Frusher S, Mohajernasab S, Shakourloo A, Abdussamie N and Haward M. Identifying the Potential of Artificial Floating Benthic Ecosystems to Underpin Offshore Development. Joint Ecological Society of Australia & Society for Conservation Biology Conference, Wollongong, Australia, 28 Nov - 2 Dec 2022.
- **6. McCormack P**, presentation to Department of Environment and Water, South Australian Government, about climate adaptation and biodiversity law, Oct 2022.
- Mynott S, Lovindeer R, Porobic J, Fulton EA, Allen S, Latornell D, Pethybridge H, Melbourne-Thomas J & Ban N. "An ecosystem approach to spill response planning". Arctic and Marine Oilspill Program (virtual, Canada).
- **8. Pitt C**. "Climate anxiety and mental health: How can we support individuals without pathologising distress?" Nature Feelz Symposium, Sydney Environment Institute, The University of Sydney, Dec 2022.
- **9. Phillips GAC**, Krueck N, **Ogier E**, Barrett N, Hartmann K & **Dutton I**. "The multiple values attained through partially protected areas". Australian Society for Fish Biology, Gold Coast, Australia, Nov 2022.
- Trebilco R, Fischer M, Hunter C, Hobday A, Thomas L & Evans K. "Integrated national assessment of the state the marine environment: progress and needs". Australian Marine Science Association Conference, Cairns, Australia, Aug 2022.
- 11. Willis K, Jones T, Cohen R, Burgess H, Lindsey J & Parrish J. "Who's hitchhiking to the Pacific Northwest? The occurrence of macrofouling in effort-controlled marine debris surveys", 7th International Marine Debris Conference, Busan, South Korea, Sept 2022.
- **12.** Willis K. "Using monitoring data to evaluate the effectiveness of plastic reduction interventions", 7th International Marine Debris Conference, Busan, South Korea, Sept 2022.

MARINESOCIOECOLOGY.ORG

Southern Ocean' symposium in December



ASSOCIATE PARTNERS SUPPORTER WORKSHOPS Above: CMS PhD candidate Mengzhu Zhang was a panelist at 'The Future of Work and Workforces in the Antarctic and

OTHER SCIENTIFIC PRESENTATIONS

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MAIOR PARTNERS

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- 1. Constable A and Pecl G, "IPCC WG2 key findings for Antarctica and Australia", Australian Antarctic Program Partnership, Wed 16 March 2022.
- 2. Fulton B, Wood G, Melbourne-Thomas J, Dutton I, Exel M, van Putten I. Tasmanian Ocean Summit 22, Triabunna, 25 Feb 2022.
- 3. Melbourne-Thomas J, "Vulnerability assessment to underpin adaptation planning a wetlands case study", NESP Climate Adaptation Forum, Sydney, 1-2 Nov 2022.
- 4. Mynott S, Melbourne-Thomas J, Ban N, Lovindeer R, Porobic J, Fulton EA. "Designing the future of contaminants management, together" Salish Sea Ecosystem Conference, 26-28 April 2022 (virtual).
- 5. Mynott S, Ban N, Melbourne-Thomas J, Lovindeer R, Allen S. "Managing for future change: identifying climate vulnerability, resilience and management options in parks with a marine component", Nanaimo, Canada, 12-14 December 2022.
- 6. Phillips GAC, "Géstion y gobernanza para la sostenibilidad de la costa: herramientas y experiencias de Australia y Chile". Webinar with Dr Francisco Bravo (CSIRO Chile) and Dr Stefan Gelcic (Instituto Mileno SECOS, Universidad Catholica, Santiago). Santiago, Chile, 13 Sept 2022.
- 7. van Putten I, "Using process tracing to understand potential for conflict in deep seabed mining projects". Australian Chapter of the Marine Social Sciences Network, 27 May 2022.
- 8. Wilson E, Hemer M, "Offshore Aquaculture as a Market for Ocean Renewable Energy" (webinar), 27 April 2022.
- 9. Zhang M, invited speakers at the Australian Chinese Youth Dialogue, talking about the importance of Antarctica to both our countries and [her] own experience of studying Antarctic Science, Hobart, 9 May 2022.



PANELS

- Bach L, Schache A, Storey J, Trebilco R & Layton C, panellists in "Climate Change Mitigation Do oceans hold the answer?"
- 2. Goldsworthy L, Haward M, Dunstan P & Welsford D, panellists in "Southern Ocean Fisheries Management".
- **3.** Layton C. "The Future is Now: Regenerating our Waters" panel discussion, organised by the National Museum of Australia, 23 Sept 2022.
- Leane E. Panel member (with Klaus Dodds), "Poles Apart," in GEographical Research webinar series, 25 Oct 2022.
- McInnes J, Puskic P & Cleeland J, "Conservation of Seabirds and Marine Predators in the Southern Ocean".
- **6. Pecl G**, "Answering your questions about adaptation and the upcoming IPCC report", NESP Climate Systems Hub and Griffith Climate Action Beacon, 2 March 2022, Online.
- 7. Pecl G, "Citizen Science to the Rescue", Blue Water Australia Summit, 8 June 2022.
- **8. Pecl G**, "Finding new fish in the warming waters of South East Queensland", Well Festival, hosted by Climate Action Beacon, Griffith University, 12th September 2022.
- Pecl G, de Lange B, Wolfe B & Constable A, panellists in "Conversations on Species Redistribution", Masters in Marine Science unit KSA726 (run by Valeriya Komyakova), 24-27 May 2022.
- Press T, Marx K, Bossi L, Ziegler P, "Stakeholder Engagement and the Australian Antarctic Program".
- Serra Goncalves A-C, Willis K, Wish-Wilson P (2022), "The Future of Ocean Plastics: Designing diverse collaboration frameworks" workshop (hosted by Puskic P), Scientific Council on Oceanic Research, UNEP, online, 5-7 April 2022.





- **12. Strain E**. Connecting land and sea. The Diverse Derwent A World Oceans Day Panel Discussion, 8 June 2022.
- Trebilco R, Hunter C, Fischer M, Hobday A, Thomas L, Evans K. Stakeholder Briefing on the Marine Chapter of the 2021 State of the Environment Report, 3 Aug 2022. https://www.dcceew.gov.au/scienceresearch/soe#marine
- **14.** Willis K. "Drowning in Plastics" panellist, webinar hosted by the Australian Water School, online, 5 Oct 2022.

STUDENT CONFIRMATION SEMINARS

Kelly Hoareau, "Science, technology and decision-making in the blue economy: addressing knowledge gaps", 5 Dec 2022.

WORKSHOPS

- 1. Audzijonyte A, International online workshop "Machine learning tools for species identification and fish size estimation in recreational and small-scale fisheries", 2-3 May 2022
- 2. Audzijonyte A, International workshop "Can citizen science, smartphone app and social media data be used for recreational fisheries management?", 15 Dec 2022
- **3.** Audzijonyte A, International workshop (hybrid) Recreational angling effort and engagement in the digital age", 26 Sept 2022.
- 4. Bax N, H Griffiths, A Post co-chairs "The Antarctic seafloor: ecosystem interactions and environmental drivers of change" Parallel Session, 10th Scientific Committee on Antarctic Research (SCAR) 2022 Open Science Conference, "Antarctica in a Changing World" India/Online, 1-10 Aug 2022.
- **5. Haward M**, presented "Marine Biodiversity in the Southern Ocean: Lessons from CCAMLR", Australia-China join workshop: Biodiversity, Law and Governance, Panel on Antarctica, 21-22 June 2022, online.
- IMAS workshops on "Challenges and opportunities in marine environmental management", organised by Valeriya Komyakova as part of the Masters in Marine Science unit KSA726, 24-27 May 2022 (pictured below).



- Melbourne-Thomas J, presented "Challenges and solutions for Antarctic marine biodiversity under climate change", Australia-China join workshop: Biodiversity, Law and Governance, Panel on Antarctica, 21-22 June 2022, online.
- 8. Shellock B & van Putten I, Fostering Diversity, Equity and Inclusion (DEI) into interdisciplinary marine research, IMECaN Workshop, 11 Oct 2022, online.

AWARDS, PRIZES & FELLOWSHIPS

- 1. Corrine Condie, award for best poster, AMSA Conference 2022.
- 2. Beth Fulton, Australian Academy of Science Fellow 2022, https:// www.science.org.au/news-and-events/news-and-mediareleases/two-firsts-academy-announces-2022-fellows
- Beth Fulton, Academy of Technological Sciences & Engineering Fellow 2022, https://www.atse.org.au/our-fellows/2022-newfellows/beth-fulton-ftse/
- **4. Dimuthu Jayakody**, student award for the best speed talk, Hawaii Conservation Conference 2021
- 5. Denis Karcher, CMS award for best student presentation.
- 6. Cayne Layton, Tall Poppy Award 2022.
- **7. Elizabeth Leane**, shortlisted for Scientific Committee on Antarctic Research Medal for Education and Communication, 2022.



Image credit: UTAS image library

Above: Corrine Condie and her awardwinning poster at AMSA Below: Beth Fulton was inducted into both the AASF and the ATSE!



Academy announces 2022 Fellows for outstanding contributions to science





Above (L-R): Dimuthu Jayakody, Cayne Layton and Chloe Lucas were some of the CMS affiliated students and researchers that received prestigious awards

- 8. Libby Lester, The Anne Dunn Scholar Award for research excellence, jointly awarded by the Australian and New Zealand Communications Association and the Journalism Education and Research Association of Australia 2022.
- 9. Chloe Lucas, representing the Curious Climate Schools team, awarded the Eric and Wendy Schmidt Awards for Excellence in Science Communications given by the USA National Academies of Science, Engineering, and Medicine in partnership with Schmidt Futures. https://www.nationalacademies. org/awards/excellence-in-communication/winners?utm_source=Awards+for+Excellence+in+Scie nce+Communication&utm_campaign=74051a205d-EMAIL_CAMPAIGN_2022_10_11_09_34&utm_ medium=email&utm_term=0_72d138f62b-74051a205d-439182023
- **10. Chloe Lucas** & Gabi Mocatta, 2022 Climate Communication Research award for Curious Climate School Edition. https://iamcr.org/awards/ccc-2022-awarded
- **11. Phillipa McCormack**, awarded the inaugural Early Career Research Fellowship, Natural Hazards Research Australia.
- **12. Kirsty Nash**, AMSA 2022 Emerging Leader in Marine Science Award.
- **13. Gretta Pecl**, Finalist Australian of the Year 2022.
- **14. Gretta Pecl** and **Scott Bennett**, Finalists Tasmanian STEM Awards for Scientist of the year.

Curious Climate program: student and community-led conversations with scientists on climate change, led by **Gretta Pecl**, **Chloe Lucas** and Gabi Mocatta and involving many CMS members, Green Gown Awards Australasia Benefitting Society Award.





Dr Kirsty Nash



Centre for Marine Socioecology University of Tasmania

15. Peter Puskic, IMAS student prize, Beyond Academia Prize.

16. Paris Tuohy and Corrine Condie, CMS second and third place for best student presentation.

17. Graham Wood, finalist in the ACTS Champions Awards.





Above: the Curious Climate Schools team

UNIVERSITY OF TASMANIA AWARDS

- 18. Gretta Pecl, 2022 CoSE Leadership Award.
- Chloe Lucas, Gabi Mocatta, Rachel Kelly, Kim Beasy and Gretta Pecl representing the Curious Climate Schools team, 2022 CoSE Engagement Award.
- **20. Maree Fudge** and **Emily Ogier**, 2022 CoSE Award for Progress in Inclusion, Diversity and Equity.
- 21. Valeriya Komyakova, 2022 CoSE Student Focus Award.
- Sarah Ugalde, Caleb Gardner, David Mossop, Mark Grassi, Norfaizny Hasweera, 2022 CoSE Teaching Merit Citation (Team) – AAI Sustainable Aquaculture course.
- **23. Jennifer Lavers**, 2022 CoSE Teaching Merit Citation (Individual).
- 24. Satoshi Yamasaki, 2022 CoBE Research Excellence Award.
- 25. Natalie Stoeckl 2022 CoBE Research Leadership Award.
- 26. Chloe Lucas, Gabi Mocatta, Rachel Kelly, Kim Beasy and Gretta Pecl representing the Curious Climate Schools team, 2022 UTAS Vice-Chancellor's Awards for engagement
- 27. The Bachelor of Science Sustainability Team including Emily Flies, Heather Lovell, Melinda McHenry, Aidan Davison, Ryan Brunton, Graham Wood, Vishnu Prahalad, Janine Arnold, Andrew Harwood and Nick Towle, 2022 Vice-Chancellor's Sustainability Award.

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Top to bottom: Gretta Pecl, Maree Fudge and Valeriya Komyakova

FUNDING & SCHOLARSHIPS

Ian Potter grant, Safeguarding natural values of the Great Southern Reef, led by Graham Edgar and involving **Scott Bennett** and **Gretta Pecl** from CMS working with several institutes across the GSR, \$2 million.

Bax N High Seas Alliance and DOSI Travel Fund for a Deep-Sea Scientist to attend COP-27, USD \$5000.

Bax N Shackleton Scholarship for the project Falkland Island coral gardens and rhodolith beds: carbon-rich natural archives in the mesophotic zone, £4000.

Cottrell RS, Pascoe S, Schrobback P, Dominguez-Martinez RM - CSIRO-UQ 2022 Coastal and Ocean Collaboration Funding, 'Resilience implications of growing import dependence for Australian seafood', \$12,758.

Cottrell RS, CoSE Early Career Researcher Mobility Grant, \$3000.

Hartman S, **Leane E**, Hardy A, Nielsen HE, Maher P, Hehir C, Heslinga J, Yeoman I, & Postma A. ADAPT: Adaptation through knowledge co-production to anticipate Antarctica's uncertain tourism futures. NWO (Dutch Research Council) 2022-26, \$402,112.

Kelly R, Pecl G, Chuah S-H, Adams V, van Putten I, Hatton MacDonald D, Matt Palmer, Mackay M, FRDC 2022-027 Targeting behavioural change in fisheries and aquaculture, \$99,353.

Phillips GAC, Krueck N, **Ogier E**, Hartmann K, Barrett N, **Dutton I** The multiple values attained through partially protected areas - FRDC 2021-070, \$227,634. **Phillips GAC** CoSE Early Career Researcher Mobility Grant - Travel to Chile for collaborative opportunities post-COVID-19, \$3,000.

ARC DISCOVERY GRANTS

Audzijonyte A, Krueck N, Richards S, Andersen K. Universal properties and application of species size distributions, \$456,000.

Edgar G, **Strain E**, Lefcheck J. Improved management of marine habitats by learning from historical change, \$625,764 (to start 2023).

Leane E, Philpott C, Samartzis P, Williams S, Walch M, Nielsen H, Fox W, Yasuda S. Creative Antarctica: Australian Artists and Writers in the Far South, \$314,000.

Morrison T, **Pecl G**, Hughes T. Novel governance for marine ecosystems in rapid transition, \$401,000.

Vince J, Haward M, Fulton E, Stephenson R. Governing during an ocean climate crisis: Building integrative capacity, \$464,726.

ARC FUTURE FELLOWSHIP

Adams V. Tackling land degradation: which policy, where, when, and why? \$905,168.

ARC DECRA

Farmery A, Improving food systems through fisheries and aquaculture, \$425,312.

OTHER OUTPUTS & ACHIEVEMENTS

- Beth Fulton, Alistair Hobday, Chris Wilcox, Gretta Pecl – Clarivate Highly Cited Researchers List https://clarivate.com/highly-citedresearchers/"
- **Elizabeth Leane** became a member of the ARC College of Experts for the Humanities and Creative Arts panel (2023-).
- Rowan Trebilco was elected to the Australian Academy of Science's Early- and Mid Career Researcher (EMCR) Forum Executive. The EMCR Forum's mission is to serve as the voice of Australia's early- and mid-career researchers, championing improvement in the national research environment through advocacy. The Executive provides a direct link between the EMCR Forum and the Council of the Academy.

PROMOTIONS

- **Cayne Layton** was promoted to level B.
- Asta Audzijonyte and Beth Penrose were promoted to level C
- Satoshi Yamazaki and Joanna Vince were promoted to level D.
- **Rowan Trebilco** was promoted to Senior Research Scientist.
- **Beth Fulton** was promoted to Chief Research Scientist.



Cayne Layton in the lab showing students seaweed he collected from nearby reefs.

age credit: Rowan Trebilc

COMMITTEES, WORKING GROUPS, PANELS & NETWORKS

- **Bax N**, leads a Sub-Antarctic Blue Carbon and Natural Archives Network.
- **Bax N**, member of the Challenger 150 UN decade action working groups in the South Atlantic and Southern Ocean.
- **Bax N**, member of the Deep Ocean Stewardship Initiative (DOSI) working groups on biodiversity and climate change.
- **Bax N**, Deep Ocean Observing Strategy (DOOS), Deep Ocean Early Career Researcher (DOER) program member.
- **Bax N**, Deep Sea Coral Symposium organising committee member.
- **Bax N**, member of CoastCarb Coastal ecosystem carbon balance in times of rapid glacial melt.
- **Boothroyd A**, President Wildcare Sea Spurge Remote Area TeamS (SPRATS) program.
- **Evans K**, elected to the position of joint coordinator of the Regular Process for the Integrated Assessment of the Marine Environment including Socio-Economic Aspects (the World Assessment).
- **Evans K**, appointed co-chair of the IOC-UNESCO Global Ocean Observing Network Expert Panel on Biology and Ecosystems.
- **Evans K**, appointed as a member of the World Meteorological Organisation Task Team on Weather, Climate and Fisheries.
- **Fulton EA**, member of Executive Committee of Network of Interdisciplinary and Transdisciplinary Organisations in the Oceania Region (NITRO-Oceania).
- **McCormack P**, Director (Education) and incoming Vice President, National Environmental Law Association.
- **McCormack P**, Director, Environment, Natural Resources and Energy Law Research Theme, Adelaide Law School, The University of Adelaide.

- **McDonald J**, one of eight Lead Councillors, and **Pecl G**, one of 19 Councillors, on the new Biodiversity Council of Australia launched in December.
- **Melbourne-Thomas J**, National Committee for Antarctic Research (Australian Academy of Science).
- **Melbourne-Thomas J**, National Science Week Patron for Tasmania.
- **Nash KL**, member of working group: Food footprint and environmental justice hosted by Ben Halpern at NCEAS .
- **Pecl G**, Associate Editor njp Ocean Sustainability, Reviews in Fish Biology and Fisheries, Ecography, Frontiers Ocean Solutions.
- **Pecl G**, Advisory Board of CORDIO East Afrcia
- **Pecl G** and Evans E, Advisory Board for the Global Ecosystem of Ocean Solutions (GEOS)
- **Pecl G**, Advisory Panel for the Lenfest project 'Enhancing adaptive capacity assessment in fisheries decision making'
- **Pecl G**, Expert Advisor for 'The Anthropocene Judgements', Southern Cross University
- Pecl G, member of 'Fisheries Strategies for Changing Oceans and Resilient Ecosystems by 2030' (FishSCORE), a United Nations Ocean Decade programme
- **Pecl G**, member of the Science for Nature and People Partnership (SNAPP) Working Group on Climate Resilient Fisheries
- **Pecl G**, co-lead of the SNAPP working group Governing Changing Oceans
- **Pecl G**, working group member for BIOSHIFTS International Working Group, Center for the Synthesis and Analysis of Biodiversity (France)
- **Trebilco R**, Councillor for Tasmania on the National Council of the Australian Marine Science Association. https://www.amsa.asn.au/dr-rowan-trebilco
- **Trebilco R**, member of the Scientific Advisory Committee for ARDC EcoCommons. https://www.ecocommons.org.au/about/governance/
- **Trebilco R**, member of the Australian Academy of Science EMCR Forum Executive. https://www.science.org. au/supporting-science/early-and-mid-career-researchers-0/emcr-forum-executive-members
- **van Putten I**, Scientific Steering Committee member for the Sustainable Seas National Science Challenge, New Zealand.
- **van Putten I**, Research Advisory Board member for European Union project Climate Change and Future Marine Ecosystem Services and Biodiversity (FutureMARES).
- **van Putten I**, External Advisory Board of the University of Hamburg Cluster of Excellence CLICCS.
- **Vince J**, Associate Editor Policy Sciences.
- **Vince J**, Editorial Board member of Cambridge Prisms Plastics.
- **Vince J**, Victorian Marine and Coastal Council Expert Advisory Panel Member.
- **Willis K**, Member of the management committee of the Australian Citizen Science Association.

PUBLIC OUTREACH



Pictured right: Darla Hatton Macdonald with Dr Karl Kruszelnicki, Beaker Street Festival.

PUBLIC PRESENTATIONS & EVENTS

- Audzijonyte A & Pecl G presented at the Tasmanian Mermaids PADI Womens Dive Day 2022, July 2022.
- Bax N and S Pineda-Metz, 'A short story on blue carbon' presented on the Alfred Wagner Institute (AWI) @ AWIs4Future channel Wissenschaft fürs Wohnzimmer 'Science in the living room'. https://www.youtube.com/ watch?v=Odc5ooddKu4
- Kelly R, Lucas C, Jones C. ABC Futures internal panel, ABC Hobart, 26 Oct 2022.
- **Layton C**. Beer Aquatic Can underwater gardening save our giant kelp?
- MacDonald DH. 'How do you put a dollar value on Nature?' Beaker St Festival, Tassie Science Road Trip Stop 3: Launceston, 10 August 2022.
- Melbourne-Thomas J, Boulter S and Graham K. Climate Change Adaptation: What it means for Tasmania – UTAS Island of Ideas Public Lecture Series (National Science Week), 17 Aug 2022.
- **Pecl G**, Squid Day Out, Spring Bay Squid Festival, trayapana / Triabunna, 26 Nov 2022.
- Puskic P. Boundaries. Exhibited at Contemporary Art Tasmania as part of MONA FOMA (29 January - 6 March 2022). Tess Campbell and Sam Mountford created a spatial installation to present their new film On the Shoreline, which has been influenced by the research of Institute for Marine and Antarctic Studies scientist, Peter Puskic. https://contemporaryarttasmania.org/programs/ boundaries/
- **Strain B**, presented at Wild Island Threatened species, Hobart, 10 Aug 2022.





Gretta Pecl presenting at Squid Day Out.



Boundaries, by Tess Campbell and Sam Mountford, installation image. Image credit: Rémi Chauvin.

- **Strain B**, was a roving scientist at Beaker St Science Festival, Hobart, 5 Aug 2022.
- **Zhang M**, presented at the Australian Antarctic Festival, Hobart, 27 Aug 2022.

PODCASTS

Mibu Fischer in "That's What I call Science" podcast episode 146: A moment with Mibu. https://thatsscience.org/2022/03/27/episode-146-a-moment-with-mibu/





Gretta Pecl "Linnean Future"

The Linnean Future Podcast Series is an initiative by The Linnean Society of London in response to the ongoing planetary emergency. This series brings you stories from around the world that explore the impacts of climate change on every aspect of our lives. Find here.

Gretta Pecl "Going, Going, Gone"

Gretta Pecl and Sakhile Koketso join this episode to discuss the many impacts of biodiversity loss, the challenges of combatting climate change at various scales, why biodiversity matters to all of us, and how our current trajectory is on track to making us the 'crappiest ancestors ever' for all our future generations – though we still have time to avoid the worst, with the right actions now. https://asiasociety.org/center-us-china-relations/ep4-going-gone

Kathy Willis "Ocean Protect Podcast, Season 2, Episode 10 (May 2020) "CSIRO's Kathy Willis on preventing litter entering our oceans"

Dr Kathy Willis is a Fulbright Postdoctoral Fellow at the University of Washington and CSIRO Scientific Researcher on a mission to combat plastic pollution and reframe plastic as a valuable commodity rather than a throwaway item. In Kathy's second appearance on the pod, we discuss the recent good news about plastic pollution on Australian beaches, spatial and temporal trends in plastic washing up on beaches along the US Pacific Northwest, citizen science, 'biofoul' on marine debris, and community-led informal waste management programs. https://podcasts.apple.com/ga/podcast/local-action-on-plastic-pollution-withdr-kathy-willis/id1457637313?i=1000578338792

MEDIA

Scott Bennett and Cayne Layton were feature in article "IMAS researchers working to restore Tasmania's giant kelp forests with new large-scale project" – ABC News, by Isabella Podwinski. 24 Nov 2022. https://www.abc. net.au/news/2022-11-24/tasmania-giantkelp-forests-to-be-restored-under-newplan/101686756



Dr Cayne Layton and Dr Scott Bennett, photo credit: Luke Bowden, ABC News.

- Karen Evans featured on CSIROScope, "Dr Karen Evans is helping to seas the Ocean Decade" https://blog.csiro.au/ocean-decadedr-karen-evans/
- Mibu Fischer was featured in article "REVEALED: the Indigenous voices who guided Australia's State of the Environment report", by Callan Morse, National Indigenous Times, 25 July 2022. https://www-nit-com-au.cdn. ampproject.org/c/s/www.nit.com.au/revealedthe-indigenous-voices-who-guided-australiasstate-of-the-environment-report/?amp
- Stewart Frusher's research on artificial reefs was featured in article "Artificial Reefs Enhancing the marine environment", Maritime Times Tasmania, Winter 2022. http://www. maritimetas.org/sites/all/files/maritime/ maritime_times_issue_79_winter_2022.pdf
- Beth Fulton CSIRO Snapshot, "CSIRO's Dr Beth Fulton inducted as a fellow into the Australian Academy of Science" https://www.csiro.au/en/ news/News-releases/2022/Dr-Beth-Fultoninducted-as-a-fellow-into-the-Australian-Academy-of-Science

- Dean Greeno interviewed in article "lutruwita, maireener and ill omens", by Fiona Howie, 17 May 2022 https://www.fortysouth.com.au/ environment/lutruwita-maireener-and-ill-omens
- Elizabeth Lester and Francis Green (producers), "The Lost Birds of Tasmania". Earshot, ABC Radio National. Broadcast 22 October 2022, available at https://www.abc.net. au/radionational/programs/earshot/earshotpromise-me-lost-birds/14082222
- Chloe Lucas was recipient of the Eric and Wendy Schmidt awards for Excellence in Science Communication, given by the National Academies of Science, Engineering, and Medicine in partnership with Schmidt Futures; and was highlighted in article "Excellence in Science Communication", University of Tasmania, 26 October 2022. https:// universitytasmania.sharepoint.com/sites/newsand-events/SitePages/Excellence-in-Science-Communication.aspx
- Kim Beasy joined Danae Gibson on Breakfast RTR radio to chat about the changes on the Australian Curriculum about climate change in relation to related article in The Conservation co-authored by CMS members Chloe Lucas, Gretta Pecl and Rachel Pecl. 27 May 2022. https://rtrfm.com.au/story/climate-changeand-the-school-curriculum/
- Jess Melbourne-Thomas was featured in an article "Famous Tasmanians: 10 power players you've never heard of" – The Mercury, by Alex Treacy, 9 March 2022. https://www. themercury.com.au/news/tasmania/famoustasmanians-10-power-players-youve-neverheard-of/news-story/9d7435220103936b8e150 6f075532618
- Jess Melbourne-Thomas was listed as one of 100 Australian Green Power Players -The Australian, 25 Feb 2022. https://www. theaustralian.com.au/business/renewableenergy-economy/green-power-players-list
- Kirsty Nash provided comments and quotes for Mongabay (online newspaper) w.r.t paper on fish sourced micronutrients: https://news. mongabay.com/2022/01/bleached-reefs-stillsupport-nutritious-fish-study-finds/

- Kirsty Nash interviewed By Green + Simple (online magazine) for International Women's Day talking about climate change and equality: https://greenandsimple.co/2022/03/womenon-equality-and-climate
- Article "World's leading climate body paints a picture of a planet in turmoil" - The Australian Geographic, by Karen McGhee about IPCC latest report, including quotes from Gretta Pecl. 2 March 2022. https://www.australiangeographic. com.au/news/2022/03/worlds-leadingclimate-body-paints-a-picture-of-a-planet-inturmoil/
- Article "IPCC report: Australian coral, kelp, alpine and some forest ecosystems at risk of irreversible damage due to climate change" - ABC News, by Nick Kilvert and Belinda Smith, including quotes from Gretta Pecl, 2 March 2022. https://www.abc.net.au/news/ science/2022-03-02/ipcc-climate-changeaustralia-ecosystems-irreversible-coralkelp/100866682
- **Gretta Pecl** "From sunny Queensland to snow covered Collinsvale in southern Tasmania"

interview in Tasmanian Country Hour, 9 June 2022. https://www.abc.net.au/radio/programs/ tas-country-hour/tasmanian-countryhour/13913160

- Gretta Pecl was interviewed in ABC Southern Ocean Live Program. https://iview.abc.net.au/ show/southern-ocean-live
- Gretta Pecl was featured in article "Advocate for action to help fisheries adapt", by Corrina Ridgway, FISH magazine Vol 30, 20 June 2022, https://www.frdc.com. au/fish-vol-30-2/ advocate-action-helpfisheries-adapt



Gretta Pecl,

Interview with Women in Ocean Science team "Recognising Your Role in the Big Picture: A Conversation with Gretta Pecl", by Leah Shamlian. https://www.womeninoceanscience. com/blog/2022/7/29/recognising-your-rolein-the-big-picture-a-conversation-withgretta-pecl



- **Rowan Trebilco** was interviewed on ABC Radio Hobart 'Drive' on marine chapter of state of the environment report, 19 July 2022.
- Rowan Trebilco was quoted in CSIRO's media release on the 2021 State of the Environment Report. https://www.csiro.au/en/news/newsreleases/2022/state-of-the-environment-2021-report-released.

Climate change and pollution pressures are not being adequately managed in our marine environment

EDUCATION

NEWS

EVENTS

Dr Rowan Trebilco, CSIRO Team Leader and co-lead author of the SOE Marine chapter says:

CAREERS -

"Australia's oceanic manne areas remain in generally good condition overall; however, some areas are deteriorating rapidly.

The State of the Environment Report shows that pressures arising from climate change and poliution are not being adequately managed in Australia's marine environment. There is a need for widespread uptake of integrated management approaches to effectively manage Australia's marine environment.

Nearshore environments, like reefs, are in poor and deteriorating condition due to climate change and cumulative pressures.

Climate change continues to warm and acidity the ocean. Marine heatwaves also affect the quality of marine ecosystems. Several major marine heatwaves have been experienced in Australian waters over the last five years, contributing to an overall deteriorating trend for the marine environment.

Looking at pressures and components in isolation only tells part of the story for our manne environment. The SOE Report suggests that new national systems are needed for integrated, inclusive and participatory ocean management. This could be enabled by a national integrated, adaptive, long term marine environmental monitoring with strong indigenous engagement."

Outcomes for species and ecosystems are generally poor

Dr Helen Murphy, CSIRO Principal Research Scientist and co-lead author of the SOE Biodiversity chapter says:

- Rowan Trebilco and Mibu Fischer were featured in the ECOS article: "State of the Environment report highlights pressures on our coasts and oceans". https://ecos.csiro.au/soe-highlightspressures-on-our-coasts-and-oceans/
- Rowan Trebilco quoted in Article in Research Professional News quoting. https://www. researchprofessionalnews.com/rr-newsaustralia-politics-2022-7-governmentpromises-to-do-better-after-direenvironment-report-card/
- Rowan Trebilco quoted in article in The Mandarin. https://www.themandarin.com. au/195091-csiro-experts-weigh-in-on-stateof-the-environment-report/

- Joanna Vince was interviewed by ABC Northern Tasmania and Josh Sampson FIVEAA Adelaide, about 'Local waste management successfully reduces coastal plastic pollution', article published 9 and 10 June 2022 (respectively).
- Paper led by Kathy Willis was highlighted in article "Scientists report 'heartening' 30% reduction in plastic pollution on Australia's coast" in The Guardian, 9 June 2022 https:// www.theguardian.com/australia-news/2022/ jun/09/scientists-report-heartening-30reduction-in-plastic-pollution-on-australiascoast. This paper was also featured by the World Economic Forum https://www.weforum.org/ videos/australian-coastal-plastic-pollutiondown-by-nearly-30 and interviews with SBS World News Australia, and numerous Australian radio stations.
- Paper led by Kathy Willis was given a Research Highlight in Nature Reviews Earth & Environment by editor Chen Y. (2022) Local solutions to global pollution, https://doi. org/10.1038/s43017-022-00322-8

VISITORS

Jon Reum and Phoebe Woodworth-Jeffcoats from NOAA were hosted by **Rowan Trebilco** and **Julia Blanchard**, October-November 2022.



RESEARCH -

WORK WITH US





CMS EVENTS

Future Seas Performance

In the year 2030, the Reverie floating platform is the ultimate in offshore luxury: a high-end tourist destination, fish farm and energy source. Without warning, it's been taken down by hijackers. Now, Reverie designer Lara Nguyen is reluctantly pulled out of retirement to help infiltrate the facility she left a decade ago - and to face her own dark secrets.

Full Metal Aquatic is a high-stakes action thriller set in the oceans a decade from now. But crucially, the story takes place in two different futures. Working with researchers from the Future Seas project, writers Jordan Prosser and David Finnigan will tell the story of the Reverie's hijacking in the future we hope to see - and in the future we want to prevent.

The performances were originally planned to be in person but were presented online due to COVID-19.

The event took place in two parts: a performance by David Finnigan and Jordan Prosser, followed by a game and discussion hosted by experts which unpacks the critical forces that are shaping the future of our oceans.





FULL METAL AQUATIC A FUTURE SEAS THRILLER

CMS hosted three performances on 2-3 February 2022, tailored to three audiences: the Future Seas contributors, the general public and key marine stakeholders. The events were attended by approximately 150 people.



Climate change matters: the Australian context - An Expert Panel organised by the Centre for Marine Socioecology

To coincide with the release of the second part of the IPCC 6th Assessment Report – Climate Change 2022: Impacts, Adaptation and Vulnerability, based on the work from IPCC Working Group II., the first global update on climate change since 2014, CMS hosted an in-person and online forum on 1 March 2022 to help inform and support policy makers and those interested in how Australia can reduce its vulnerability to the impacts of climate change.

The panel included CMS Lead Authors of the IPCC assessment reports **Gretta Pecl**, **Jess Melbourne-Thomas** and **Andrew Constable** and climate experts from IMAS Phillip Boyd and Neil Holbrook, chaired by **Alistair Hobday**.

The panel was attended by approximately 80 people, with over 100 also joining online.



Symposium "Connecting the dots: Knowledge brokering for impact and innovation"

This symposium was organized by **Jess Melbourne-Thomas** and aimed to empower early- and midcareer researchers to recognise and understand how knowledge brokering can enhance the impact and innovation of their research, contexts in which they are already knowledge brokering, and the skills and practice of knowledge brokering over 4 days sessions during February and March 2022.

The symposium was made possible thanks to funding from the Theo Murphy Initiative (Australia), through the Australian Academy of Science, CMS and CSIRO.



CMS Webinar: Anticipatory Ecology Meets Speculative Design

This webinar by multidisciplinary designer Sophie Falkeis, featured the project "First Encounters" - a multimedia walk-in installation - as well as the recently founded platform "The Encounters Lab", displaying a cross disciplinary approach to communicating scientific data through means of visual storytelling, turning empirical facts into emotional realities.

SPFAKERS

Rowan Trebilco

(CSIRO & CMS)

Mibu Fischer

CMS Seminar and Q&A panel on the marine chapter of the 2021 State of the Environment Report

The State of the Environment Report (SoE) provides an independent and authoritative 5-yearly synthesis of the state and trend of Australia's environment and of the effectiveness of the management structures that are in place to mitigate and reduce negative impacts and support sustainability. It is tabled in Parliament as a legislative requirement every 5 years and aims to help shape policy and action, influence behaviours, and assess our actions as stewards of the Australian environment. The 2021 SoE report was released by Minister Tanya Plibersek with her 'State of the Environment Address' to the National Press Club on 19 July 2022.

The marine chapter of the 2021 SoE report was written by CMS/CSIRO researchers **Rowan Trebilco**, **Mibu Fischer**, **Alistair Hobday**, and **Karen Evans** and CSIRO researchers Cass Hunter and Linda Thomas (acting as independent experts on behalf of the Department of Climate Change, Energy, the Environment and Water).

CMS hosted a panel to hear first-hand from the authors Rowan Trebilco, Mibu Fischer and Karen Evans about the key findings, how indigenous knowledge was woven with western science in the chapter, and how the chapter and the report fits into the bigger picture of international efforts to chart a path to the oceans we want for the future we need.







Karen Evans (CSIRO & CMS)

CHAIR



Indi Hodgson-Johnston

- > Webinar: "Addicted to Growth: Societal Therapy for a Sustainable Wellbeing Future" by Prof Bob Costanza https://marinesocioecology.org/Events/webinar-addicted-to-growth-societal-therapy-for-a-sustainablewellbeing-future-by-prof-bob-costanza/
- Seminar "Warmer, warmer, hot! Temperature dependencies in food web projections: An Odyssey", by Phoebe Woodworth-Jefcoats and Jon Reum https://marinesocioecology.org/Events/seminar-warmer-warmer-hottemperature-dependencies-in-food-web-projections-an-odyssey-by-phoebe-woodworth-jefcoats-andjon-reum/



Webinar: "Beyond GDP: Toward a Sustainable Wellbeing", by Ida Kubiszewski https:// marinesocioecology.org/Events/ webinar-beyond-gdp-toward-asustainable-wellbeing-by-idakubiszewski/





CMS internal showcase

CMS had an in-house day in late July for CMS students and members. It was a great day full of activities to share our research and reconnect after the COVID-induced hiatus. We were very lucky to have members from the north and interstate joining us.

The day included a sneak peak of the beautiful 'Sea Country' film funded by CMS and produced by Stefan Andrews and Scott Bennet, with the participation of CMS member Dean Greeno. There were also networking activities, fabulous presentations from ECRs and students, 'taster' sessions on behavioural economics, a "You can't ask that! The Academic Version" session, some project-generation workshops and 'pitch' funding sessions, finishing up with a relaxing BBQ and a heap of science-y and CMS-y haikus.



Denis Karcher (middle) received the best student presentation award, and Paris Tuohy (left) and Corrine Condie (right) received highly commended awards



Clockwise, Prof Swee-Hoon Chuah presenting on Behavioural Economics and Nudging. Project development session. Matt Teston and Meg Spitieri pitching for funds to help with their Masters research projects. Matt Teston and Brigette Wright led the "You can't ask that!!! The Academic Version", featuring panel members Prof Natalie Stoeckl, Dr Graham Wood, Dr Valeriya Komyakova and Prof Gretta Pecl.



Training sessions

- Publishing with impact and pitching for suggest with Madi Green and Alistair Hobday CMS members Dr Madi Green and Dr Alistair Hobday ran a session on pitching and presentation skills in early July. The session was attended by more than 50 people (in person and online).
- Seminar on visual communication and Infographics workshop with Stacey McCormack
- Cultural training course by the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS)

The course was taken by 20 members and students and was completed this year



I completed it – fantastic course! Wish I could have done it with others, in hindsight, as lots to talk through.

Emily Ogier

AIATSIS

I'm so grateful to CMS for supporting me to do it. It was really fantastic. I learned such a lot – including a whole lot of things that I would never have thought to look up or find out about on my own. I am particularly proud to be part of CMS, knowing that it is a group that really values cultural competency. Thank you so much for the chance to do it!



Phil McCormack



It has been worth spending time!

Manon Simon



I just thought I'd chip in to say that I have finished this course now and it was excellent. It was a bit of an investment in terms of time and emotion to do it properly, but if you haven't already done it, I would say that it is well worth the effort.

Anna Farmery

GRADUATED STUDENTS

Lynda Goldsworthy, PhD



Kelsey Richardson, PhD



Danielle Smith, PhD (graduated in absentia)



Manon Simon, PhD



Julian Manning, PhD



Brigette Wright, Master of Marine & Antarctic Studies



SUBMITTED THESES

Carla Sbrocchi title: "Practical insights for integrating social dimensions in fisheries management"; supervisors: Prof Kate Barclay (University of Technology Sydney), Dr Elizabeth Fulton (CSIRO/CMS), Emeritus Prof William Gladstone (University of Technology Sydney), Prof Laura Nahuelhual (Universidad Austral de Chile/ CentroIDEAL)

Catarina Serra Goncalves

(approved), title: "Assessing temporal trends of marine debris and the effectiveness of individual plastic debris mitigation strategies at a national and local level in Australia."; supervisors: Jennifer Lavers (CMS), Alex Bond, Andrew Fischer, Heidi Taylor

Niyomi Pethiyagoda (approved), title: "Relative values of the coastal and marine environment: Ecosystem service valuation in multi-use governance contexts"; supervisors: Emily Ogier (IMAS), Prof Darla Hatton MacDonald (UTAS), and Dr Richard Little (CSIRO)

Peter Puskic title: "Impacts of plastic ingestion on seabirds"; supervisors: Dr Andrew Bridel (IMAS), Dr Lauren Roman (CSIRO), Assoc Prof Mary-Anne Lea (IMAS)

FUTURE PROJECTS & EVENTS FOR 2023

- 'Sea country' Film launch 6 January 2023, featuring Dean Greeno and co-created by Scott Bennett
- International Temperature Reef Symposium 2023, 8-12 January 2023, Hobart- CMS has sponsored a socioecology session and student prize
- CMS and CABAH 'Science to Policy' course for early career researchers – February 2023, developed and run by Rebecca Shellock
- SNAPP workshop on "Governing Changing Oceans", 12-15 April, Bergen, Norway – co-led by Prof Tiffany Morrison from JCU and Gretta Pecl, Emily Ogier and Pip Cohen from CMS. Cayne Clayton, Andrew Sullivan and Coco Cullen-Knox will also be participating
- Effects of Climate Change on the World's Ocean Conference, 17-21 April, Bergen, Norway – Gretta Pecl, Emily Ogier and Cayne Clayton will be presenting. Gretta will also be a panellist for a University of Bergen 'Science Bar' event called "Ocean, climate and fish: A conversation with leading experts on the future of fish", with NOAA's Chief Science Advisor Cisco Werner
- Karen Evans will be taking on a leadership role with the United Nations World Ocean Assessment as a joint coordinator for the third cycle. Karen will be working with Roberto de Pinho, the Group of Experts team and the Secretariat at the United Nations Division of Ocean Affairs and Law of Sea, along with UN Oceans, ocean experts & the ocean community to deliver comprehensive information on the state of the marine environment, marine industries, marine management and socioeconomic aspects for use in decision making.
- CMS has a symposium session and associated workshop at EcoSummit 2023, being held on the Gold Coast in June. Rachel Kelly is convening the session called 'Creating appetite for climate action – the future is now'
- AMSA 2023, Gold Coast, July 2023, Kathy Willis, Peter Puskic and Ana Catarina Serra-Goncalves will be chairing the symposium session on Marine, and Mibu Fischer is one of the co-convenors.

ANNEX

EXECUTIVE TEAM

Gretta Pecl, CMS Director Beth Fulton, Deputy Director Cecilia Villanueva, Executive Support Officer Rachel Kelly, Knowledge Broker

THEME LEADERS

Coastal & Marine Governance: Karen Alexander & Pedro Fidelman Environmental Change & Adaptation: Ingrid van Putten & Rowan Trebilco Knowledge Production: Jess Melbourne-Thomas Science Engagement & Impact: Rachel Kelly & Geoff Syme Sustainable Futures & Planetary Health: Kirsty Nash & Anna Farmery

CMS MEMBERS

Alistair Hobday, CSIRO Andrew Constable, AAD Anna Farmery, U. of Wollongong Asta Audzijonyte, IMAS Aysha Fleming, CSIRO Barbara Nowak, IMAS Barrett Wolfe, IMAS Benjamin Richardson, School of Law Beth Fulton, CSIRO Beth Penrose, TIA Beth Strain, IMAS Brigette Wright, IMAS Camilla Novaglio, IMAS Cara Stitzlein, CSIRO Carolina Garcia Imhof, Pacific Community New Caledonia Catriona MacLeod, IMAS Cayne Layton, IMAS Cecilia Villanueva, IMAS Chloe Lucas, Geography, Planning & Spatial Sciences Chris Cvitanovic, ANU Chris Wilcox, CSIRO & Minderoo Foundation Connie Cirkony, School of Education Darla Hatton MacDonald, TSBE David Mossop, NRE Tasmania David Smith, CSIRO Dean Greeno, Riawunna Centre

STEERING COMMITTEE

Alistair Hobday, CSIRO Beth Fulton, CSIRO Catriona Macleod, IMAS Chris Carter, IMAS Dugald Tinch, TSBE Gillian Slocum, AAD Gretta Pecl, IMAS

SOCIAL MEDIA TEAM

Catarina Serra Goncalves Tormey Reimer

STUDENT REPRESENTATIVE

Malcolm Johnson

Delphi Ward, CSIRO

Dirk Welsford, AAD

Dugald Tinch, TSBE

Humanities

Elisavet Spanou, IMAS

Elizabeth Leane, School of

Elizabeth Lester, School of

Creative Arts and Media

Emma Hamasaki, IMAS

Fabio Boschetti, CSIRO

Geoff Syme, CSIRO

Gretta Pecl, IMAS

Ian Butler, ABARES

Jan Shaw, IMAS

& IMAS

Humanities

Aquaculture

Genevieve Phillips, IMAS

Graham Wood, School of

Hannah Fogarty, Huon

Ingrid van Putten, CSIRO

Javier Porobic, CSIRO

Jenn Scott, School of

Psychological Sciences

Jennifer Lavers, IMAS

Jan McDonald, School of Law

Jeffrey McGee, School of Law

Jess Melbourne-Thomas, CSIRO

Eva Plaganyi-Lloyd, CSIRO

Eloise Wilson, IMAS

Emily Ogier, IMAS

Denise Hardesty, CSIRO

Ian Dutton, NRE Tasmania Ingrid van Putten, CSIRO Jenn Scott, School of Psychological Sciences Joanna Vince, School of Social Sciences

CMS ALUMNI

Angela Abolhassani Bianca Haas Brigette Wright Coco Cullen-Knox Danielle Smith Dean Greeno Elisavet Spanou Eloise Wilson Emma Hamasaki Florence Briton Hannah Fogarty Joseph Wenta Jonny Stark, AAD Martin Exel, Austral Fisheries Rich Little, CSIRO Satoshi Yamazaki, TSBE

Kathy Willis Kelsey Richardson Larelle Bossi Lynda Goldsworthy Lynna Cortes Rueda Manon Simon Mary Mackay Maree Fudge Rachel Kelly Richard Cottrell Sheryl Hamilton Yannick Rousseau

Joanna Vince, School of Social Sciences Jonathan Reum, University of Washington Jonny Stark, AAD Joseph Wenta, University of Newcastle Julia Blanchard, IMAS Julia Santana Garcon, IMAS Karen Alexander, Heriot-Watt University Karen Evans, CSIRO Kathy Willis, CSIRO Katie Cresswell, IMAS Keith Sainsbury, IMAS Kirsty Nash, IMAS Larelle Bossi, IMAS Leo Dutra, CSIRO Linda Murray, Massey University Lynna Cortes Rueda, School of Law Madeline Green, CSIRO Marcus Haward, IMAS Maree Fudge, IMAS Mark Hemer, CSIRO Martin Exel, Austral Fisheries Mary Mackay, CSIRO Mary-Anne Lea, IMAS Matthew Andreotta, CSIRO Mibu Fischer, CSIRO Myriam Lacharite, IMAS

Narissa Bax, IMAS Natalie Stoeckl, TSBE Peat Leith, TIA Pedro Fidelman, U. of Queensland Phillipa Cohen, James Cook University Phillipa McCormack, University of Adelaide & UTAS School of Law Rachel Kelly, IMAS Rachel Nichols, University of Wollongong Rebecca Shellock, ANU Rich Little, CSIRO Richard Cottrell, IMAS Robert Stephenson, St. Andrews Biological Station Rosie Byers, IMAS Rowan Trebilco, CSIRO Sara Mynott, University of Victoria Sarah Fischer, IMAS Sarah Ugalde, IMAS Satoshi Yamazaki, TSBE Scott Bennett, IMAS Scott Condie, CSIRO Sean Tracey, IMAS Stewart Frusher, IMAS Stuart Corney, IMAS Swee-Hoon Chuah, TSBE Tony Smith, IMAS & CSIRO Valeriya Komyakova, IMAS Vanessa Adams, Geography, Planning & Spatial Sciences

CMS STUDENTS

Undergrad

Giarn Čarroll, IMAS Monique Maclaine, Riawunna Centre & CoSE

Honours and Masters

Matt Teston, IMAS Megan Spiteri, IMAS Patrick Hudson, IMAS

PhDs

Amara Steven, TSBE Angus Henderson, IMAS Anne Boothroyd, IMAS Carla Sbrocchi, UTS Catarina Serra Goncalves, IMAS Clare Pitt, School of Psychological Sciences Corrine Condie, IMAS Danielle Smith, School of Law Denis Karcher, ANU Dimuthu Jayakody, Geography, Planning & Spatial Sciences Julian Manning, IMAS Katie Marx, School of Humanities Kelly Hoareau, IMAS Kelsey Richardson, School of Social Sciences Liam Fullbrook, School of Social Sciences Linda Hunt, School of Creative Arts and Media Lisa Uffman-Kirsch, School of Law Lynda Goldsworthy, IMAS Lynnlee Chikudza, IMAS Malcolm Johnson, Geography, Planning & Spatial Sciences Manon Simon, School of Law Mengzhu Zhang, IMAS Michael Murunga, IMAS Niyomi Pethiyagoda, IMAS Paris Tuohy, ANU Peter Puskic, IMAS Pricilla Rakotoarisoa, IMAS Rani Ekawaty, IMAS Sheku Sei, IMAS Sierra Ison, IMAS Tormey Reimer, IMAS

Centre for Marine Socioecology (CMS) Institute for Marine and Antarctic Studies

20 Castray Esplanade Battery Point, Hobart Tasmania, Australia 7004

+61 3 6226 6379

Gretta.Pecl@utas.edu.au (Director) Beth.Fulton@csiro.au (Deputy Director)

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Image credit: Rowan Trebilco









