# ANNUAL REPORT 2023



CENTRE FOR MARINE SOCIOECOLOGY

# INTRODUCTION

Australia is a marine nation with over 87% of the population living within 50 km of the coast,<sup>1</sup> 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, is 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, with our marine industries contributing \$118.5 billion in 2020-21 to Australia's overall economy.<sup>2</sup>

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

The Centre for Marine Socioecology (CMS), is a 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 CMS has continued to grow domestic and international recognition for research excellence and impact in challenging domains and innovative ways of communicating complex matters, and for the training of students in interdisciplinary research. 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 Environment

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.



# THANKS FROM CMS DIRECTOR AND DEPUTY DIRECTOR

This report outlines a selection of the fantastic research, knowledge sharing and other activities undertaken by the Centre for Marine Socioecology in 2023. We have enjoyed the activity of the past year, the shared experiences, and are pleased and proud to share this summary with you. The breadth and diversity of the activities and the level of achievement described in this annual report continues to clearly illustrate that CMS remains a strong and vibrant locus for high quality interdisciplinary and transdisciplinary research and training.

We wholeheartedly thank all those who have actively contributed to CMS activities, whether they be our students, researchers, collaborators, stakeholders or those simply interested in what we do and what may be solutions to some of the challenges facing coastal and ocean systems around Australia and the world. CMS ongoing success, its continually growing national and international reputation and its impact at local through to global scales would not be possible without their generosity and enthusiasm. After nearly a decade in operation, each new year sees an increasing diversity of CMS activities and an ever-growing depth in the innovative contributions. We continue to be proud of CMS outputs and outcomes and we look forward to continuing this work with all of those with an interest in marine socioecology in 2024.

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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 College of Sciences and Engineering; and from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Australian Antarctic Division (AAD). We have also welcomed 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 Hannah Fogarty

# RESEARCH THEMES AND THEME LEADS

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





**Knowledge Production** 



Dr Rachel Kelly



**Dr Rebecca Shellock** 



Science Engagement & Impact



**Dr Beth Strain** 



Dr Connie Cirkony

# STEERING COMMITTEE



Prof Gretta Pecl, CMS Director



Dr Rich Little, CSIRO proxy



Ms Paris Tuohy, student rep



Prof Natalie Stoeckl, TSBE



Dr Beth Fulton, CMS Deputy Director



Assoc Prof Catriona Macleod, IMAS



Dr Jonny Stark, AAD



Dr Alistair Hobday, CSIRO



Assoc Prof Joanna Vince, CALE



Dr Ian Dutton, NRE Tasmania



Adjunct Prof Ingrid van Putten, CSIRO



Prof Jenn Scott, CHM



Mr Martin Exel, Austral Fisheries

CMS is overseen by a Steering Committee, and 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.



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# 2023 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 two of our researchers on the Highly Cited list, including **Alistair Hobday** and **Chris Wilcox**. These 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 fields reflecting the highly interdisciplinary nature of the work we do at CMS. More information is available here: https://clarivate. com/highly-cited-researchers/



Alistair Hobday



Chris Wilcox

**Alistair Hobday** was elected Australian Academy of Science Fellow 2023. Fellows of the Australian Academy of Science are among the Nation's most distinguished scientists, elected by their peers for ground-breaking research and contributions that have had a clear impact. ATSE Fellows recognised extraordinary expertise across engineering, applied science and technology.



Overseeing a diverse research portfolio as the Research Director for Sustainable Marine Futures, Alistair is a multi-disciplinary 'big thinker'. He is a world-renowned marine scientist whose research focuses on building ocean resilience under climate change.



**Chloe Lucas** was awarded Tasmanian 2023 Young Tall Poppy of the Year, a prestigious title within the scientific community. Chloe is a geographer whose research focuses on forms of communication that can bridge social divides and foster climate citizenship. Chloe leads the Curious Climate Schools project, which asks students what they want to know about climate change, and matches them with experts to answer their questions. Over the last four years experts have answered more than 600 questions from 94 primary and high school classes around Tasmania, and have made 78 school visits.



# **Curious Climate Tasmania**

The Curious Climate Tasmania (CCT) team were finalists, and one of two 'highly commended' awards in the International Green Gown Awards, which is part of the United Nations High-Level Political Forum on Sustainable Development, in the 'Benefiting Society' category, for the Curious Climate Schools (CCS) program.

Curious Climate Tasmania is a collaboration across UTAS, started by CMS Director Gretta Pecl and Joceyln Nettelfold, and supported by an excellent leadership team. Dr Chloe Lucas subsequently developed and leads the Curious Climate Schools initiative which has run for several years. Curious Climate is a novel and highly successful science engagement program that links experts and the broader community to provide credible, relevant information about climate change and importantly is driven by public interests.

Read more and watch a short video here: https://www.greengownawards.org/university-of-tasmania-australia2

Over the last four years, Curious Climate Schools has:

CURIOUS SCHOOLS

CLIMATE

Facilitated 80 experts from UTAS and beyond to answer **604 questions** about climate change submitted by 94 primary and high school classes (around 3000 students) from 52 schools around Tasmania, and to make 78 school visits.

Emma Hamasaki and Olly Dove were 2023 Australian Museum Eureka Prize winners for science outreach. Emma and Olly were awarded the prize with their independent podcast team That's What I Call Science (TWICS), recognising the significant impact of the Tasmanian based volunteer-run radio show and podcast on Edge Radio, which reaches over 10,000 people per week.

See Eureka Prize winners here: https://australian.museum/get-involved/ eureka-prizes/2023-eureka-prize-winners/

TWICS Eureka Prize entry: https://www.youtube.com/watch?v=R7l40vLtzoQ



Coles B

Emma Hamasaki & Olivia Dove



Image: 'From Tasmania to the World: Outlook for the Oceans' panel session at the CMS Showcase 2023. Photo credit: Peter Allen

# Connections and collaborations to ensure a thriving future ocean: CMS Showcase 2023

The CMS held our annual showcase event in Hobart/Nipaluna on 11 August 2023, with over 160 people in attendance ranging from our members and students, to government representatives, industry representatives, researchers, and traditional owners and custodians.

The day was structured around a series of stakeholder panels which allowed stakeholders to shape discussion and agendas, as well as short presentation sessions for our interdisciplinary researchers, and Q&A sessions for open dialogue. The day prompted some important discussions, and ignited some important networking/collaboration relationships.

CMS Showcase 2023 Report can be viewed here: https://marinesocioecology.org/wp-content/ uploads/CMS\_Showcase-Report-2023\_WEB.pdf



HE CENTRE FOR MARINE SOCIOECOLOGY

Connections and collaborations to ensure a thriving future ocean Centre for Marine Socioecology Showcase 2023

11 August 2023 | lutruwita/Hobart UTAS Arts Centre, Hobart Waterfront

with environmentia dahits, novel todoutries, and ne participants. Sharing knowledge and perspectives help us understand and navigette the charges alwa well as facilitate how we can best prepare, even wh times are no certain. Sustanability I Sea Country I Climate Change Inter- and Trans disciplinarity I Partnerships Eco and Climate anxiety I movation

Images (L-R): CMS Showcase 2023 participants. Image credit: Gretta Pecl; Connections and collaborations to ensure a thriving future ocean: CMS Showcase 2023.

# CMS Interdisciplinary School 2023

In October, CMS hosted its' second interdisciplinary training course-a one-week spring school focusing on inter- and transdisciplinary approaches for sustainable marine futures.

The spring school brought together 20 Masters and PhD students, Post Doctoral Fellows, and other early career professionals from diverse backgrounds and disciplines (including socioecology, law, oceanography, art, ecology, health, and social sciences) to connect and learn about the theory and practice of undertaking inter- and transdisciplinary research. The aim of the course was to equip students with the skills necessary to understand and engage in interdisciplinary marine and climate change research.

The spring school was chaired by CMS knowledge broker **Rachel Kelly**, and **Natalie Ban** a CMS

visiting scientist and expert in transdisciplinary research.CMS members who presented at the course this year include Gretta Pecl, Beth Fulton, Rachel Kelly, Alistair Hobday, Ingrid van Putten, Maree Fudge, Rowan Trebilco, Aysha Fleming, Madi Green, Liam Fullbrook, Matt Palmer, Mary Mackay, Kathy Willis, Valeriya Komyakova, Scott Spillias, Chloe Lucas and Kirsty Nash. Other non-CMS presenters included Karen Grant (Outdoor Counselling) and Jamie Graham-Blair (UTAS). The course was supported by marine stakeholders Jane McGann (TSIC), Jennifer Hemer (NRM South), and Barrett Wolfe (IMAS), who presented realworld challenges for course participants to work together and develop interdisciplinary approaches to address.



Image: CMS Interdisciplinary School 2023 participants and hosts. Photo credit: Gretta Pecl

# CMS/IMAS species webinar series: The Long Hot Summer: Getting Ahead of the Heatwave

Each morning from 11-15th December 2023, CMS & IMAS hosted a special online webinar series titled The Long Hot Summer: Getting Ahead of the Heatwave. This series was a format of short synthesis talks followed by Q&A facilitated by a Chair, and was developed to share knowledge to raise awareness of current and projected marine conditions, and actions underway to support preparedness in light of the heatwave. Each session concluded by highlighting things we can all do to either minimise harm or facilitate learning that might better support our responses to future warming or heatwave-related events. Presentation slides and recordings can be viewed here: https://marinesocioecology.org/2023-webinar-series-the-long-hot-summer-getting-ahead-of-the-heatwave/

# The Long Hot Summer: Getting Ahead of the Heatwave MAS & CMS special online webinar series: 11<sup>th</sup> – 15<sup>th</sup> December 2023 Day 1 Hot seas ahead: Current and projected

Ocean and coastal changes and future projections - Chair Prof Mary-Anne Lea

• Marine heatwaves - what's happening & what can we expect? - Prof Neil Holbrook

ocean and coastal conditions for Tasmania

- How is the Integrated Marine Observing System adapting for the heatwave? Prof Chari Pattiaratchi (UWA)
- Where to access user-friendly observation and forecast information about ocean conditions? Dr Ed Doddridge
- Audience Q & A (20 mins)

Image: Day 1 of the special CMS/IMAS webinar series The Long Hot Summer: Getting Ahead of the Heatwave



# 2023 SNAPSHOT









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BOOKS & CHAPTERS



**FUNDING & GRANTS** 



REPORTS & OTHER PUBLICATIONS

**CMS EVENTS** 



RESEARCHERS



PUBLIC OUTREACH EVENTS/ACTIVITIES



AWARDS & PRIZES

# SUMMARY OF SCIENTIFIC PUBLICATIONS OVER THE LAST 6 YEARS (2018-2023)

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 over two and half times 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 436 papers from 2018 to 2023 which were available in Scopus (using SciVal software) on 29 March 2024.



# **Outputs in Top Citation Percentiles**

CMS Publications are in the top 10% most cited worldwide (field-weighted). For comparison UTAS 16.6%, Australia 16.9%



# **International Collaborations**

CMS publications co-authored with institutions in other countries/regions. For comparison UTAS 55.3%, Australia 58.0%.

# **Publications in Top Journal Percentiles**

CMS Publications are in the top 10% of journals by CiteScore Percentile. For comparison UTAS 39.1%, Australia 38.0%



# Academic-Corporate collaboration

Publications with both academic and corporate affiliations. For comparison UTAS 3.2%, Australia 3.4%



# PUBLICATIONS

# PAPERS

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Image: Figure 2 in Audzijonyte et al. (2023), showing a schematic illustration drawn by Amy Coghlan of the model groups and background resources used in the study, PLOS Biology

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Image: Figure 3 in Cao et al. (2023), showing the estimated impacts of anthropogenic stresses on global blue food production, Nature Sustainability

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- 11. Condie CM, Alexander KA, Fulton EA, Vince J & Haward M (2023). Polarised perspectives in salmon aquaculture warrant a targeted long-term approach to communication. Aquaculture Reports, 30. https:// doi.org/10.1016/j.aqrep.2023.101557
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Image: Figure 1 in Cooke et al. (2023), showing diagram for achieving sustainable and vibrant fish populations and fisheries, Reviews in Fish Biology and Fisheries

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# Types of Fraudsters in Online Surveys

Fraudulent respondents, or fraudsters, are survey respondents who: a) are ineligible respondents due to the study specifications,

- b) take the survey repeatedly to either distort results or take advantage of incentives, and/or
- c) are potentially eligible but have responded in a way that may challenge the validity of survey results or noticeably distort research data.1.2



# Existing tools to deter, prevent, detect, and remove fraudsters Useful for: 💆 🖓 🚗 🐥 🥶



#### **Compensation alternatives** {4} Incentives are mail-only, lottery-based, 📜 🧖 🚓 🔻 or not incentivized

### Prevent fraudsters from taking the survey

<b>{5}</b> }	Pre-survey screening Survey access requires multiple screenings to access	20a -	22
<b>6</b> }	Digital prevention Use of CAPTCHAs, Cookies, and IP address checks to prevent access	20	
{7}}	IP address blocking Block access to the survey from particular IP address locations	2 A a	

## Detect fraudsters during and after data collection



accompanied by reporting

## Bots

Automated software designed to take surveys with the ability to make multiple responses in quick succession. Typically assumed to be the biggest threat to online surveys due to ease in identification. Relatively preventable and detectable through typical software checks (e.g., CAPTCHAs, cookies, etc.).4,5,6

# Duplicate takers

Individuals, groups, or bot respondents who take a survey multiple times to either distort results, or take advantage of survey incentives. Duplicate responses can occur within a short period or across the entire course of the survey period. Duplicate takers can potentially avoid traditional fraud detection techniques (e.g., survey metadata, responses, etc.).<sup>7,8,9</sup>

# Alias scammers

Individuals or groups who falsify their identity or disregard the terms of consent agreements to participate in the survey. They may respond genuinely but tend to finish surveys with the express intent to receive incentives. Therefore, they can typically be screened through a combination of detection techniques (e.g., trick questions, survey metadata, etc.).<sup>0,11,12</sup>

# Response distorters

Individuals who may or may not be eligible for the survey yet manipulate their responses in a way that disrupts data validity. They intentionally trick the survey to receive incentives, game results in their favor, or bully researchers for personal reasons. Due to their sophistication, they are difficult to deter and prevent through standard techniques.<sup>13,14,15</sup>

# Careless responders

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Individuals who are potentially eligible for the survey but respond in unlikely ways. Their behavior may be caused by inattentiveness, choosing to skip or speed through the survey, or an unfamiliarity with survey aspects such as having low map literacy. While not expressly fraudsters, they are often screened due to their data distorting responses.<sup>16,17,18</sup>

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  <sup>14</sup> Chandler & Paolacci, 2017
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### Image (*left*): Cover of 'Ending Plastic Waste: Community Actions Around the World'

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Image: Cover of 'Marine Ecosystem Assessment for the Southern





- Lansbury N, Moggridge B, Creamer S, Ireland L, Buckley L, Evans G, Milsom O, Pecl G & Mosby V (2023). Aboriginal and Torres Strait Islander Peoples' voices and engagement in the Intergovernmental Panel on Climate Change: Advice to inform the Australian Government towards IPCC Assessment Report 7, An independent report commissioned by the Australian Government (Department of Climate Change, Energy, the Environment and Water), Canberra.
- Mcllgorm A & Nichols R (2023). The economic contributions of recreational fishing to NSW. A report to the NSW Department of Primary Industries, prepared by ANCORS, University of Wollongong, August 31st 2023.

Image: Cover of 'Aboriginal and Torres Strait Islander Peoples' voices and engagement in the Landsbury et al 2023 report on advice to inform the Australian Government towards the Intergovernmental Panel on Climate Change Assessment Report 7.







Image: Cover of 'Code Blue: Our Oceans in Crisis'

- Morgan W, Bradshaw S, King T, Gardner J, Hughes L, Karoly D & Pecl G (2023). Code Blue: Our Oceans in Crisis. Climate Council of Australia, 69p
- Peterson C, Primo Perez C, Elliott C. Flies E, Vince J, Wickham M, Gill M, Zwart R & Hyslop S (2023). A submission to the review of the draft Tasmanian waste and resource recovery strategy. Prepared by the University of Tasmania, February.
- SN Kompas T, Mallon K, Bojko M, Nhu Che T, Strain E, McKinlay M, Van Ha P. Economic Impacts from Sea Level Rise and Storm Surge in Victoria, Australia over the 21st Century A TECHNICAL REPORT PREPARED FOR THE VICTORIAN MARINE AND COASTAL COUNCIL

# OTHER PUBLICATIONS

- Constable AJ & Melbourne-Thomas J. "More than 200 scientists from 19 countries want to tell us the Southern Ocean is in trouble". *The Conversation*, 18 October 2023. https://theconversation.com/morethan-200-scientists-from-19-countries-want-to-tell-us-the-southern-ocean-is-in-trouble-215529
- DOSI (2023). "Incorporating Deep-Ocean Biodiversity into Climate Change Policy" Policy Brief. Deep-Ocean Stewardship Initiative. https://www.dosi-project.org/wp- content/uploads/deep-biodiversityand-climate-change.pdf (Co-authored by CMS member Bax N)
- Goldsworthy L, Haward M & Press T. "Can next week's special meeting in Chile break the deadlock over East Antarctica's marine park proposal?". *The Conversation*, 14 June 2023. https://theconversation.com/ can-next-weeks-special-meeting-in-chile-break-the-deadlock-over-east-antarcticas-marine-parkproposal-206531
- MacLeod C. "Can seaweed save the world? Well it can certainly help in many ways". The Conversation, 10 March 2023. https://theconversation.com/can-seaweed-save-the-world-well-it-can-certainly-help-inmany-ways-201459
- 5. Murray L, Nash KL, Breheny M, Severinsen C, Erueti B, How does learning about the future of the ocean impact children's emotional wellbeing? *The Niche (BES membership magazine)*, Winter 2023.
- Dawkins R, Subramaniam RC, Melbourne-Thomas J. Adapting for success: building resilient seafood supply chains. CSIRO News. https://www.csiro.au/en/news/All/Articles/2023/June/Seafood-supplychains. 15 June 2023.
- 7. Voyer M, Christopher T, **Nichols R** et al. University of Wollongong Illawarra Offshore Wind Zone Submission. https://www.uow.edu.au/ancors/blue-energy-futures-lab/

SandyBay.Unicentre.208 Maths – the Universal Language

# CONFERENCES & PUBLIC PRESENTATIONS

Image: Beth Fulton keynote presentation at ACSME 2023. Image credit: Beth Fulton

# **CONFERENCE CONVENING & SYMPOSIA**

- Condie CM, Fulton EA, Vince J, Haward M, Alexander K & Condie SA, "Socio-ecological influence modelling reveals effective strategies for reducing community conflict", EcoSummit Conference 23, Gold Coast Qld, 13-17 June 2023.
- Condie CM & Condie SA, "Social Influencing Modelling: A case study of Australian salmon aquaculture", SMMR (UK) Webinar (Sustainable Management of Marine Resources), July 2023
- Condie SA & Condie CM, "A definitive measure of social licence to operate", EcoSummit Conference 23, Gold Coast Qld, 13-17 June 2023.
- **4. Evans K**. International symposium of the United Nations Regular Process on strengthening the ocean science-policy interface. Paris, France 12-13 December 2023.
- Evans K, Canonico G, Hodgson I, Schmidt J. "Session 12: Improving pathways for delivery of multidisciplinary ocean observations into marine assessments across multiple scales". Effects of Climate Change on the World's Ocean, Bergen, Norway, 17-21 April 2023.
- **6. Fulton EA**. 16th Annual Australia-China Symposium on Marine Sciences for Sustainable Development, Australian Academy of Science, Sydney, NSW, 20-21 November 2023.
- Goldsworthy L. "Conservation challenges for the Commission for the Conservation of Antarctic Marine Living Resources". New Zealand and Australia Antarctic Conference, Ötautahi Christchurch, 25-28 July 2023.



- 8. Henderson AF, Hindell MA, Wotherspoon S, Biuw M, Lea M-A, Kelly N & Lowther AD. "Assessing the viability of estimating whale abundance from tourist vessels", SCAR Biology Conference, July 2023.
- Komyakova V, Jaffrés J, Maas C, Satchithananthan D, Wilson E & Windsor T. "Evolution in the field of fish habitat associations: a comprehensive review of years of research" International Temperate Reef Symposium (Jan 2023)
- **10.** Nichols R. "Considerations in using ocean accounts for economic monitoring of marine industries". The 6th Symposium on the Oceans in National Income Accounts, Busan Republic of Korea, 26-27 April 2023.
- **11. Pecl GT**. "Detection, attribution, and prediction under species on the move", Species on the Move Conference 2023, Florida, USA, 14-19 May 2023.
- **12. Uffman-Kirsch L**. "Legally Supported Stakeholder Engagement in Marine Governance", University of the Aegean Celebration of Research, Lesvos Greece, 12-13 September 2023.
- **13.** Willis K & Serra-Goncalves C. "Marine pollution stories of lessons learned in science-informed management", Australian Marine Science Association Conference, Gold Coast, 2-6 July 2023.

# PLENARIES AND KEYNOTES

- Bax N. "Bridging the Ice-Ocean-Deep Divides: Blue Carbon and Biodiversity Protection in Polar Regions" 56th European Marine Biology Symposium Reykjavik, Iceland, 4-8 September 2023.
- Evans K. "The Southern Ocean in the global UN ocean decade". SOOS Symposium, Hobart, 14-18 August 2023.
- **3.** Fulton EA. "Complexity creates holes in predictive capacity: Is that really a bad thing?", Gordon Conference in Predictive Ecology, Easton USA, 4-9 June 2023.
- **4. Fulton EA**. "Highlighting the value of maths in a climate-changed world". Australian Conference on Science and Mathematics Education 2023, Hobart, Tasmania, and online, 30 Aug-1 Sept 2023.
- **5. Fulton EA**. "Transformations via Giving People a Big Picture" Transformations 2023, Transformative Partnerships for a Better World, Sydney, 13-15 July 2023.
- Fulton EA, Melbourne-Thomas J, van Putten I, Dutra LXC, Thomas L & Ogier EM. Session 4: "Assessing climate change risk to fisheries: real world applications, capacity building, and social learning". ECCW0-5, Bergen, Norway. 17-21 April 2023.
- 7. Layton C, Smid E, Bennett S, Ling S, Strain E, Wright J & Johnson J. "Restoring Australia's endangered giant kelp (*Macrocystis pyrifera*) forests". ECCWO-5, Bergen, Norway. 17-21 April 2023.
- 8. Melbourne-Thomas J. "A Standardized, Large-Scale Ecosystem Assessment for the Southern Ocean and the Underpinning Role of Biodiversity Data" Opening Keynote, TDWG Biodiversity Information Standards International Conference, Hobart, 9-13 October 2023. https://doi.org/10.3897/biss.7.110481
- Melbourne-Thomas J. "Supporting Conservation and Land Managers Climate Adaption Interventions" Keynote, Tasmanian Community Landcare Conference 2023, Triabunna, 13-15 October 2023.
- **10.** Morrison TH, **Ogier EM**, Cohen P, Hughes T & **Pecl GT**. "New interventions for marine ecosystems in rapid transition: A first-cut global assessment". ECCWO-5, Bergen, Norway. 17-21 April 2023.
- **11. Pecl GT**. "Climate change & the redistribution of marine species in south-east Australia", Launceston Centrostephanus conference, 1-2 February 2023

- 12. Pecl GT, Alexander KA, Nash KL, Novaglio C, Melbourne-Thomas J, plus 100+ collaborators, Session 16: "Future Seas: What could the ocean look like by 2030 if we shared it equitably, and used the knowledge we already have available?". ECCWO-5, Bergen, Norway. 17-21 April 2023.
- **13. Pecl GT**. "Fisheries in a warming world and changing ocean: what's in store and what's needed to ensure a thriving future?". 12th International Conference & Workshop on Lobster (and Crab) Biology and Management, Fremantle, Western Australia, 22-17 October 2023.
- **14.** Willis K. "The state of marine plastics in Australia". Leaders for Nature Forum- Australian Tourism C-Suite, Conservation Volunteers Australia, Melbourne, 1 February 2023.



# INVITED SPEAKERS

- 1. Audzijonyte A. "Temperature and fish body sizes: many issues still remain". Guest lecture, University of Bergen, Norway, October 2023.
- 2. Evans K. "Scoping studies and beyond for shorebirds, seabirds and marine mammals". NESP Marine and Coastal Hub Showcase, Canberra, 15 March 2023.
- **3.** Evans K. "The global seascape of ocean activities/initiatives". Megamove project workshop, Canberra, ACT, 23-24 February 2023.



- 4. Evans K. "The Global Ocean Observing System for marine life. OceanPredict Science Team Meeting, 8 November 2023.
- 5. Evans K. "The IODP in the UN ocean decade". International Ocean Discovery Program Meeting, Wollongong, NSW, 12-13 October 2023.
- 6. Fulton EA. "Communicating Scientific Research to Policy Makers". Arctic Frontiers, Fram Center, Tromsø, Norway, February 2023.
- 7. Fulton EA. "Moving Tasmania towards the new ocean paradigm", Tasmanian Ocean Summit 2023, Triabunna, TAS, 17 November 2023.
- 8. Green ME. "Molecular Tools to Enhace Fisheries Data Collection". Tuna Australia Science-Industry meetings, Sydney, NSW, November 2023.
- 9. Greeno D. "Moving Tasmania towards the new ocean paradigm", Tasmanian Ocean Summit 2023, Triabunna, TAS, 17 November 2023.
- 10. Komyakova V. "Artificial structures as marine habitats", The Royal Society of Tasmania, Launceston, Tasmania, 28 May 2023.
- **11. McDonald J**. "Moving Tasmania towards the new ocean paradigm", Tasmanian Ocean Summit 2023, Triabunna, TAS, 17 November 2023.
- 12. Melbourne-Thomas J. "Ocean and Antarctic climate research, why it matters and tipping points", Australian Environmental Grant Makers Annual Forum, Triabunna, Tasmania, 27-30 October 2023.
- 13. Ogier EM. "Moving Tasmania towards the new ocean paradigm: reflections", Tasmanian Ocean Summit 2023, Triabunna, TAS, 17 November 2023.
- 14. Ogier EM. "Salmon politics, the environment and social licence", Australian Environmental Grant Makers Annual Forum, Triabunna, Tasmania, 27-30 October 2023.
- 15. Pecl GT. Workshop 2: The climate-fisheries nexus within the UN decade of ocean science for sustainable development: Co-designing actions and solutions for a productive, healthy and resilient ocean. PICES 5th Climate Change Symposium, Norway, 17-21 April 2023.
- 16. Pecl GT. "History and the Future of Species on the Move", Species on the Move Conference 2023, Florida, USA, 14-19 May 2023.
- 17. Pecl GT. "Identifying & communicating climate-driven changes in our oceans", Australian Environmental Grant Makers Annual Forum, Triabunna, TAS, 27-30 October 2023.
- 18. Pecl GT. "Healthy marine systems need collaboration and cooperation across sectors", Tasmanian Ocean Summit 2023, Triabunna, Tasmania, 17 November 2023.
- 19. Pecl GT. "Climate-driven species re-distribution in marine coastal systems", 16th Annual Australia-China Symposium on Marine Sciences for Sustainable Development, Australian Academy of Science, Sydney, NSW, 20-21 November 2023.
- 20. Subramaniam RC. "Modelling marine ecosystems". Invited seminar to higher research degree students, University of Sydney, March 2023.
- 21. Subramaniam RC. "Modelling marine ecosystems". Guest lecture to undergraduate students, University of New South Wales, March 2023.
- 22. Vince J. "Polar Cousins: Comparing Antarctic and Arctic Geostrategic Futures", Guest speaker in Expert Panel, Canberra, 5 July 2023.

# **GENERAL PRESENTATIONS**

- Audzijonyte A. "Size based Tasmanian rocky reef model shows importance of benthic production for reef ecosystem functioning", International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.
- 2. Audzijonyte A. "Temperature and fish sizes. Do size based models reflect empirical observations?" 6th Workshop on Trait-Based Approaches to Ocean Life, Copenhagen, Denmark, August 2023.
- **3.** Audzijonyte A. "Temperature, humans and fish sizes". Fisheries Society of the British Isles, Essex, UK, July 2023.
- Audzijonyte A. "Temporal and spatial trends in recreational fishing effort based on passive data from smart phone applications and drone aerial surveys". World Recreational Fisheries Congress, Melbourne, Victoria, 19-23 February 2023.
- Bax N, Robinson L & Kershaw J. "Exploring the Mesophotic Zone: Investigating Coral Gardens as Model Habitats in the Falkland Islands", 8th International Symposium on Deep-Sea Corals, Edinburgh, Scotland, 29 May - 2 June 2023.
- Bax N, de Lecea A, Pineda-Metz S, Frinault B, Roman Gonzalez A, Downey RI, Sands C, Morley S & Barnes D. 'Uncovering the Blue Carbon Potential of the Burdwood Bank: Insights from Seafloor Ecosystem Engineers and Benthic Surveys' 8th International Symposium on Deep-Sea Corals, Edinburgh, Scotland, 29 May 2 June 2023.
- Bastiansen A & Strain EM. "Conserving the live bearing sea star through population studies and community engagement". International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.
- 8. Bennett S. "Biogeography, Function and Impacts of Herbivory on Australian Temperate Reefs", International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.
- Boothroyd A, Adams V, Alexander K & Hill N. "Marine Protected Area planning in the CCAMLR Domain 9 region." XIII SCAR Biology Symposium 2023, Christchurch, New Zealand, 31 July – 4 August 2023.
- **10. Brown C**. "Anticipating trends in technology so we can enhance the productivity and sustainability of Australia's seafood industries", AMSA 2023, Gold Coast, Queensland, July 2023.
- Cayne L. "Harnessing intraspecific variation in thermal tolerance, and restoring Australia's endangered giant kelp (*Macrocystis pyrifera*) forests", International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.
- Condie CM, Fulton EA, Vince J, Haward M, Alexander K & Condie SA. "Socio-ecological influence modelling reveals effective strategies for reducing community conflict", Ecosummit, Gold Coast, Queensland, June 2023.
- **13. Condie SA** & **Condie CM**. "A definitive measure of social licence to operate", Ecosummit, Gold Coast, Queensland, June 2023.
- Condie SA & Condie CM. "Social Influencing Modelling: A case study of Australian salmon aquaculture", SMMR (UK) webinar, online, July 2023.
- **15. Cottrell R**. "Raw material origins mediate the influence of feed innovation on the environmental footprint of aquaculture feeds", AMSA 2023, Gold Coast, Queensland, July 2023.



- **16. Cresswell K**. "Using a fishery to mitigate the impact of climate change on a temperate reef system", International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.
- Fudge M. "Centrostephanus rodgersii: ecosystem pest or profitable migrant? Managing range-shifting species across jurisdictions and differing interests along east coast Australia", AMSA 2023, Gold Coast, Queensland, July 2023.
- **18. Green ME**. "Molecular Monitoring in Fisheries Management: Does it work?". Indo-Pacific Fish Conference, Auckland, New Zealand, November 2023.
- **19. Green ME**. "eDNA to Reconstruct Fisheries Landings". Australia / New Zealand eDNA conference. Hobart, Tasmania, February 2023.
- **20. Grilli NM**. "How far are we from a global instrument on plastic pollution?". Social Sciences HDR Conference 2023, Launceston, Tasmania, December 2023.
- **21. Johnson MS**. "Anguillid spectres of lutruwita", Haunted Shores: Aquatic Surfaces & Depths, Southampton, UK, April 2023
- **22. Johnson MS**. "Understanding divergent and convergent discourses on climate risk perspectives and landscape values in Huon Valley, Tasmania", The Institute of Australian Geographers Conference. Perth, Australia, July 2023.

- 23. Johnson MS, Jones C, & Yildiz D. "Conversations on Eco-Anxiety: Collaborative Writing As A Tool For Reflection And Action In Geography", The Institute of Australian Geographers Conference. Perth, Australia, July 2023.
- **24. Karcher DB**, **Cvitanovic C**, Colvin R & **van Putten I**. "Mainstreaming knowledge exchange success at the interface of marine research and policy". ASLO 2023, Mallorca, Spain, 4-9 June 2023.
- **25.** Mynott S. "Uplifting community knowledge to support marine conservation and climate resilience" International Marine Protected Areas Congress, Vancouver, Canada, February 2023.
- **26. Ogier EM**. "How does 'social' figure in assessment of interventions for marine ecosystems in rapid transition?", AMSA 2023, Gold Coast, Queensland, July 2023.
- **27. Pecl GT**. "A decadal nationwide assessment of climate-driven species redistribution using citizen science data", World Recreational Fishing Conference, Melbourne, Victoria, 19-23 February 2023.
- **28.** Pecl GT. "A decadal nationwide assessment of climate-driven species redistribution using citizen science data", Species on the Move Conference 2023, Florida, USA, 14-19 May 2023.
- **29. Pecl GT**. "Climate-driven 'species-on-the-move' provide tangible anchors to engage the public on climate change", Species on the Move Conference 2023, Florida, USA, 14-19 May 2023.
- 30. Phillips GAC, Krueck N, Ogier E, Barrett N, Dutton I & Hartmann K. "(Are there) multiple benefits attained through partially protected areas?" Australian Marine Sciences Association Conference, Gold Coast, July 2023.
- 31. Phillips GAC, Krueck N, Ogier E, Barrett N, Dutton I & Hartmann K. "Exploring the potential benefits of Partially Protected Areas and Other Effective Marine Conservation Measures in Australia." Indo-Pacific Fish Conference, and Australian Society for Fish Biology, Auckland, New Zealand, November 2023.





- **32. Puskic PS**. "Implications of plastic ingestion on the growth and fledging success of seabirds" Victorian Biodiversity Conference, Melbourne, Victoria, February 2023.
- **33.** Puskic PS. "Building early-career capacity in the context of the Ocean Decade", AMSA 2023, Gold Coast, Queensland, July 2023.
- **34. Sbrocchi C**. "NSW Eastern Rock Lobster Fishery: who benefits?", AMSA 2023, Gold Coast, Queensland, July 2023.
- **35. Serra-Goncalves C**. "Stopping marine debris at the source: effectiveness of Source Reduction Plans in Australia", AMSA 2023, Gold Coast, Queensland, July 2023.
- **36.** Spillias S. "Collaborative intelligence for modelling marine social-ecological systems". 2023 Modelling and Simulation (MODSIM), Darwin, Northern Territory, July 2023.
- **37. Spillias S**. "Expert perceptions of seaweed farming for sustainable development". International Seaweed Symposium, Hobart, Tasmania, February 2023.
- Strain EM. "Does scaling up restoration projects deliver better socio ecological outcomes". AMSA 2023, Gold Coast, Queensland, July 2023.
- **39. Strain EM**. "Assessing the coastal protection benefits of mangroves and artificial rock revetments". Ecosummit, Gold Coast, Queensland, June 2023.
- **40. Strain EM**. "Assessing the role of natural and restored giant kelp forests in modifying seawater chemistry". ISS, Hobart, Tasmania, February 2023.
- **41. Strain EM**. "Assessing the role of natural kelp forests in modifying seawater chemistry". International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.
- 42. Subramaniam RC, Ruwet M, Boschetti B, Plagányi E, Schrobback P & Melbourne-Thomas J. "Building resilient and sustainable rock lobster supply chains", International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.
- **43.** Subramaniam RC, Ruwet M, Boschetti B, Plagányi E, Schrobback P & Melbourne-Thomas J. "Building resilient and sustainable rock lobster supply chains". The International Conference and Workshop on Lobster Biology and Management, Fremantle, Western Australia, October 2023.
- **44. Tracey S**. "A national survey to understand the nature and scale of Australia's recreational Southern Bluefin Tuna fishery", World Recreational Fishing Conference, Melbourne, Victoria, 19-23 February 2023.
- 45. Ward D, Melbourne-Thomas J, Richards A, Fulton EA, Fulton D, Scheufele G, Szetey K, Trebilco R & van Putten I. "Planning for sustainable marine socio-ecological futures in the context of tipping points: a participatory gaming approach", 5th International Symposium on Effects of Climate Change on the World's Oceans, Bergen, Norway, 17-21 April 2023.
- 46. Ward D, Melbourne-Thomas J, Richards A, Fulton EA, Fulton D, Scheufele G, Szetey K, Trebilco R & van Putten I. "Understanding and predicting social-ecological tipping points: a case study for the temperate marine environment of Tasmania's east coast", International Temperate Reef Symposium, Hobart, Tasmania, January 2023.
- **47. Wright B**. "Identifying the potential of floating artificial benthic ecosystems to underpin offshore development", International Temperate Reef Symposium (ITRS), Hobart, Tasmania, January 2023.

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# OTHER SCIENTIFIC PRESENTATIONS & WORKSHOPS

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Image: Panel and speakers at the AMSA session on "The Future of Sustainable Seafood in Australia". CMS member Rich Cottrell co-led with Chris Brown and Caitie Kuempel, and Carla Sbrocchi was also a speaker. Image credit: Rich Cottrell

# OTHER SCIENTIFIC PRESENTATIONS

Innovation

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- 1. **Condie CM**. "Reducing conflict in Tasmanian Salmon Aquaculture: the application of social influence modelling". CMS Seminar Series, Hobart, Tasmania, 27 July 2023.
- 2. Condie CM. "What is social influence modelling?", CMS Day, Hobart, Tasmania, 2 June 2023.
- **3. Karcher DB**. "Mainstreaming successful knowledge exchange at the interface of marine science and policy", Centre for Tropical Marine Research, Bremen, Germany, 17 May 2023.
- **4. Karcher DB**. "Learning from successful knowledge exchange at the interface of marine science and policy", NESP Climate Systems Climate College, Online, 31 August 2023.
- 5. Karcher DB. "Connecting science with policy and practice: Lessons from science-policy bright spots", Future Oceans Lab, Vigo, Spain, Online, 12 September 2023.
- **6.** Kelly R. "Interdisciplinary Early Career Researchers Perspectives and Potential Partnerships", NITRO Oceana, Online, 1 December 2023.
- **7.** Komyakova V. "Solution-based approaches to human impacts in the marine environment. What I do, and how I got here." CMS Seminar Series, Hobart, Tasmania, 16 June 2023.
- Murray L. "How does learning about the future of the ocean impact children's emotional wellbeing?: Insights from ocean literacy educators in Aotearoa New Zealand". CMS Seminar Series, Hobart, Tasmania, 22 September 2023.
- **9. Spillias S**. "Food system conversations: harnessing the sea to manage pressure on terrestrial food systems". CMS Seminar Series, Hobart, Tasmania, 27 April 2023.
- **10. Subramaniam RC**. "Building resilient and sustainable seafood supply chains". CSIRO Fisheries Forum, April 2023.
- **11. Willis K**. "How data can help solve plastic pollution", Western Philippines University Seminar, Aborlan, Palawan, 16 November 2023.



# PANELS

- Barrett N, Gardner C, Philips GAC & Card S. Panellists in "Fisheries management: The Value of MPAs for Small-Scale Fisheries Management", Masters in Marine Science unit KSA726 (organised by Valeriya Komyakova), 9 October 2023.
- 2. Bennett S, Strain EM, Elsom S, Gowlett-Holmes K & Barron M. Panellists for "Reviving giants", August 2023.
- **3.** Cottrell R, Sbrocchi C & Brown C. Panellists in "The future of sustainable seafood in Australia" at AMSA 2023, Gold Coast, Queensland, 4 July 2023.
- Frusher S, Hurd C & Howe D. Panellists in 'Exploration of Marine-based Solutions to Battle Climate Change.", Masters in Marine Science unit KSA726 (organised by Valeriya Komyakova), 13 October 2023.
- 5. Fulton EA. Panellist for "No Fences" Ocean Business Leaders Summit, March 2023.
- Goldsworthy L, Nielsen H & Seng C. Panellists in "Antarctic Governance Gap: Exploring the challenges and opportunities for more equitable governance of research and management", Masters in Marine Science unit KSA726 (run by Valeriya Komyakova), 11 October 2023.
- Keane J, Ling S, Miller K & Christie H. Panellists in "A Prickly Problem: What Can We Do About the Longspined Sea Urchin?", Masters in Marine Science unit KSA726 (organised by Valeriya Komyakova, student team supported by Brigette Wright), 13 October 2023.



Image: Presenters and panellists at the KSA726 student-led workshop "A prickly problem: what can we do about the long-spined sea urchin?" (top row: Abdulaziz Alammar, John Keane, Samuel Deller, Axel Jansson, Hehe Gu, Jiaqi Zong, Yu En Chang; front row: Scott Ling, Valeriya Komyakova, Brigette Wright). Image credit: Scott Ling

- Komyakova V. Invited panellist on the SDG Student Hub panel on Quality Education, 2023.
- Komyakova V. Invited panellist on the Assessment and Academic Integrity Symposium, Online, UTAS, Hobart, Australia, 2023.
- **10. Pecl GT**. Panellist for "The Future Ocean Realm" Ocean Business Leaders Summit, March 2023.
- 11. Pecl GT. Panellist on "Environment and Climate Change" for The Tasmanian Youth Parliament - an annual event that brings together young, politically engaged Tasmanians to discuss important political and social issues, and provides a voice to government from these youth, 14 July 2023.
- **12. Pecl GT**. "Is the IPCC still relevant?", panel for the Australian Antarctic Program Partnership, moderated by Greg Johannes, 18 October 2023.
- **13. Pecl GT**. Invited panellist at The Tasmanian Ocean Summit 2023, "Panel 1: What does marine protection look like in a changing ocean?", 17 November 2023.
- Strain EM, MacLeod C, Wong A & Isdale G, panellists in "Restoring the Derwent Estuary?", Masters in Marine Science unit KSA726 (organised by Valeriya Komyakova), 10 October 2023.

- 15. Tony P, Haward M & Leane E in "Conduits of knowledge and peace: managing Antarctic infrastructure and people as important resources", Masters in Marine Science unit KSA726 (organised by Valeriya Komyakova, student team supported by Lyn Goldsworthy), 11 October 2023.
- **16. van Putten I**. delivered lectures to the Monsoon School at Leibniz-Zentrum für Marine Tropenforschung (ZMT) Germany on "Drivers of Marine Conflict", November 2023.
- **17. Vince J**. Invited speaker "Future of Human Activities in the Antarctic and Southern Ocean" at the UTas Antarctic and Southern Ocean Mission Integrator Workshop 1, 16 October 2023.
- **18.** Willis K. "Waste in Our Waterways", Waste Expo Australia, Melbourne, 25-26 October 2023.

# STUDENT CONFIRMATION SEMINARS

Edith Shum, "Species as placemakers in light of environmental change", 11 September 2023.

# WORKSHOPS

- Andreotta M. IMAS workshop "The psychological roots of the rejection (and acceptance) of science", 26 May 2023.
- Bax N, Hourigan T & Buckenmeyer A. "Creating Vital Metrics for Cold Water Corals: Establishing an Essential Ocean Variable (EOV) for Scleractinia and Stylasteridae" 8th International Symposium on Deep-Sea Corals, Edinburgh, Scotland, 29 May - 2 June 2023.
- Bax N. Invited participant cold-water coral taxonomy and red listing workshop, Sandgerði, Iceland, 10-16 September 2023.
- Bax N. Invited participant Deep Ocean Collective Solution Accelerator workshop, La Jolla, CA, USA, 2-5 October 2023.
- 5. Easton A, Coughlin T, Satchithananthan D, **Wright B** & **Komyakova V**. Artificial Reef Risk Assessment tool stakeholder workshop, Hobart, Australia, 2023.
- Evans K. Regional workshop in support of the third World Ocean Assessment for the Indian Ocean including the Arabian Sea and the Bay of Bengal, the Red Sea and Gulf of Aden, and the ROPME/RECOFI regions, Mahe, Seychelles, 4-7 August 2023.
- 7. Evans K. Regional workshop in support of the third World Ocean Assessment for the region of the North Atlantic, the Baltic Sea, the Mediterranean Sea, and the Black Sea, Lisbon, Portugal 25-27 September 2023.
- 8. Evans K. Ocean Futures, scenarios and Pathways workshop. Berlin Germany 14-15 December 2023.
- **9.** Fulton EA. Arctic Conference workshop "Communicating Scientific Research to Policy Makers", 2 February 2023.
- 10. Henderson AF, Hindell MA, Wotherspoon S, Biuw M, Lea M-A, Kelly N & Lowther AD. "Assessing the viability of estimating whale abundance from tourist vessels", SCAR Krill Expert Group, workshop on the path to developing a krill stock hypothesis, 20-24 March 2023.
- **11. Hoareau, K**. "Enabling Effective Knowledge Systems that Support a Blue Economy", The Blue Economy Cooperative Research Centre's 2023 Participants Workshop, 16-18 May 2023. https://blueeconomycrc.com.au/phd/kelly-hoareau/

- Hardesty BD, Willis K & Harms N. United Nations Coordinating Body for the Seas of East Asia (COBSEA) workshop, "Harmonising marine litter monitoring across the region" - side event to the 'The Economist Global Plastics Summit', Bangkok, Thailand, 9 October 2023.
- Melbourne-Thomas J. invited presentation on "Climate change and Antarctic Marine Living Resources", CCAMLR Climate Change Workshop, 4-8 September 2023.
- 14. Nichols R. "Rights-based management: key concepts and components". Korean Maritime Institute workshop, "Rights-based management in the context of climate change", Seoul Republic of Korea, 29 August 2023.
- Pecl GT, Fudge M & Ogier EM. CMS-CSIRO-IMAS workshop on Integrative assessments for marine social-ecological systems, CSIRO Hobart, Tasmania, 14 December 2023.
- Prince-Ruiz R & Willis K. World Oceans Day Plastic Free Workshop with the Plastic Free Foundation, online, 5 June 2023.
- Trebilco R, Pecl GT, Spillias S, Stitzlein C, Melbourne-Thomas J, Fulton EA, Fudge M, Ogier EM & Hobday AJ. "Advancing Integrative Assessments for Marine Social-Ecological Systems", CMS/CSIRO workshop, Hobart, Tasmania, 14 December 2023.



Image: Handing a copy of the book 'Ending Plastic Waste' to the Vice President of Palau, Uduch Sengebau Senior, at the Economist Impact 'Global Plastics Summit', Thailand. Book chapter author, Rebecca Prince-Ruiz (left), and book editors, Kathy Willis (centre-left) and Denise Hardesty (right). Image credit: Kathy Willis



Image: Delphi Ward and Jess Melbourne-Thomas facilitating the Best Kelp Secrets tipping point game as a CMS Theme event, Hobart, June 2023. Image credit: Brigette Wright



Images: Delphi Ward talking about the Best Kelp Secrets tipping point game as part of the 'Gamifying Government' panel at the PAX Australia gaming convention, October 2023. Image credit: Nathan Harrison

- Sbragaglia V, Audzijonyte A, Venturelli P "Toward the integration of digital recreational fisheries data for research & monitoring". Workshop at the World Recreational Fishing Conference, Melbourne, Victoria, February 2023.
- **19.** Shellock R. CABAH/CMS Science to Policy workshop, 14-16 February 2023.
- **20. Ward D**, **Melbourne-Thomas J** & **Wright B**. facilitated a CMS Theme Event: "Best Kelp Secrets tipping points game", IMAS Hobart, Tasmania, 14 June 2023.
- **21.** Willis K, Hardsty BD, Brodie S & Barrett J, "Marine Litter Monitoring in the Philippines" capacity building workshop. 13-24 February 2023 in Subic Bay, Zambales & 6-16 November 2023 in Puerto Princesa, Palawan.
- 22. Vince J. Invited participant of "Impacts of rocket launch debris entering Australian Marine Parks -Workshop" by Parks Australia and the Department of Industry, Science and Resources, Canberra, ACT, 20 September 2023.

# AWARDS, PRIZES & FELLOWSHIPS

Image credit: Rowan Trebilco

- Narissa Bax, awarded Deep Ocean Early Career Researcher (DOER) Honorarium from the Schmidt Ocean Coalition.
- 2. Chloe Lucas, awarded Tasmanian 2023 Young Tall Poppy of the Year.
- Curious Climate Team (led by Gretta Pecl and Chloe Lucas), finalist and one of two 'highly commended' awards in the International Green Gown Award 2023, part of the United Nations High-Level Political Forum on Sustainable Development, in the 'Benefiting Society' category, for the Curious Climate Schools (CCS) program, which is led by Chloe Lucas.
- 4. Olly Dove and Emma Hamasaki, awarded Australian Museum's Eureka Prize for STEM Inclusion 2023 as part of the *That's What I Call Science* team.
- 5. Phillipa McCormack, awarded 2023 Early Career Research Fellowship with Natural Hazards Research Australia.
- Phillipa McCormack, awarded a Future Making Fellowship at the University of Adelaide (3-year full time research position, \$50K establishment grant).

- 7. Phillipa McCormack, awarded the 2023 University of Adelaide Award for Outstanding Achievement: Excellence in Research (Early Career), \$5,000.
- 8. Jess Melbourne-Thomas, inducted into the Tasmanian Honour Roll of Women for service to the environment; science and research.



# FUNDING & SCHOLARSHIPS

Brent K, Jones A, Wawryk A & **McCormack PC**. Green Adelaide Blue Carbon funding for the project 'Navigating the legal regime for blue carbon projects in South Australia', \$46,883.

Cassey P, Toole K, Castles M & **McCormack PC**. Sustainability FAME funding, University of Adelaide for the project 'Mapping the gaps: Building capacity to improve legal frameworks for environmental crime in Australia', \$19,803.

Edgar G, **Pecl GT** and other IMAS staff. 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.

**Gallagher K**. Richard Ernest Glazebrook Environment Scholarship for the project 'Socioecological considerations for an emerging kelp industry in Tasmania: towards Aboriginal rights and justice, a sustainable Blue Economy, and resilient coastal ecosystems', \$10,000.

**Green ME**. Molecular Monitoring Tools for Fisheries Management 2023-2025, \$871,461.

**Komyakova V**. 2023-2024 Department of Natural Resources and Environment Tasmania \$34,000 Development of interactive artificial reef deployment risk assessment tool: Stage 2. Richardson BJ, Akhtar-Khavari A, **McCormack PC** & Fitzsimons J (DP240100719), 'Using Conservation Covenants for Ecosystem Restoration & Climate Adaptation', \$301,846.

**Shum E**. Tasmanian Land Conservancy's Bird Conservation Fund Scholarship for the project 'Species as placemakers in light of environmental change', \$2,000.

**Shum E**. Holsworth Wildlife Research Endowment Grant Application for the project 'Species as placemakers in light of environmental change', \$7,475.

**Strain EM** & **Komyakova V**. Port Tasmania PhD funding for the project "Developing bespoke ecoengineering strategies for the Port of Hobart" \$40,000.

**Strain EM**. TNC "Setting restoration targets for flat oyster reef functioning" \$75,000.

# OTHER OUTPUTS & ACHIEVEMENTS

# PROMOTIONS

- Sean Tracey was promoted to Level E.
- Rachel Nichols was promoted to Level C, University of Wollongong.
- Finite Boulot was promoted to Level B
- **Scott Bennett** was promoted to Level B
- **Graham Wood** was promoted to Level C

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# COMMITTEES, WORKING GROUPS, PANELS & NETWORKS

INVESTIGATOR

Image credit: Rowan Trebilco

- **Bax N**, member of the GOOS BioEco Panel attendance at EuroSea Symposium on Ocean Observing and Forecasting, UNESCO Paris, 21 September 2023.
- **Bax N**, member of the GOOS BioEco Panel attendance at Horizon Europe Marco-Bolo Project, Paris, 18 September 2023.
- **Evans K**, elected joint coordinator for the third cycle of the United Nations Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects (Regular Process).
- **Evans K**, appointed to the World Meteorological Organisation Task Team on Climate and Fisheries.
- Fulton EA. Executive Member of NITRO Oceania, a network of leaders fostering interdisciplinary and transdisciplinary research and education within and across organisations. Beth is the CMS representative in NITRO Oceania.
- **Hobday AJ**, elected as Australian Academy of Technological Science & Engineering (ATSE) Fellow.
- **Kelly R**, appointed as an expert on Centre for Sustainable Ocean Science (SOS) advisory board, Finland.
- **Komyakova V**, appointed Deputy Chair of the UTAS Learning and Teaching Committee.
- **Komyakova V**, joined UTAS Theory of Change Co-Design Team.
- **Komyakova V**, joined College of Science and Engineering (UTAS) Inclusion, Diversity and Equity Committee.
- Helbourne-Thomas J & Trebilco R, appointed to the IMBeR Scientific Steering Committee.
- **Nash KL**, appointed in the Governing Capacity Building position on the Steering Committee for the Tasmanian Women in Waves Initiative.
- **Pecl GT** (co-lead), **Ogier EM**, **Gurney G**, **Sullivan A** & **Layton C**, SNAPP Working Group (Science for Nature and People Partnership) https://snappartnership.net/teams/governing-changing-oceans/
- **Pecl GT**, appointed as a Councillor for the Australian Biodiversity Council.

- Pecl GT, CORDIO Advisory Board. Coastal Oceans Research and Development in the Indian Ocean (CORDIO) East Africa leads non-governmental research and conservation organization based in Mombasa, Kenya, dedicated to marine and coastal ecosystems in the Western Indian Ocean (WIO). They work to synergize marine scientific research with conservation policy and practice on a regional scale. https://cordioea.net/
- **Pecl GT**, Steering Committee for the third 'Species on the Move' international conference, convened in Florida, May 2023.
- **Pecl GT**, Honorary member of the Indigenous Peoples' and Community Conserved Territories and Areas Consortium (ICCAs); ICCA promotes appropriate recognition of, and support to, the territories and areas conserved by Indigenous and local communities.
- **Pecl GT**, Lenfest funded working group: Enhancing adaptive capacity assessment in US fisheries decision making: Identifying barriers and ways to overcome them.
- **Pecl GT**, UN Decade Programme working group: Fisheries Strategies for Changing Oceans and Resilient Ecosystems by 2030 (Fish SCORE 2030).
- **Pecl GT**, Global redistribution of biodiversity: a macro and eco evolutionary approach to understand species vulnerability to global changes (BIOSHIFTS), CESAB working group.
- **Pecl GT** & **Tracey S**, Steering Committee for the 10th World Recreational Fishing Conference, Melbourne, Victoria, 19-23 February 2023.
- Phillips GAC, member of the Pool of Experts (PoE) of the United Nations Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects (Regular Process).
- **Vince J**, member of the Scientist's Coalition for a Plastics Treaty.
- **Willis K**, appointed on the Management Committee for the Australian Citizen Science Association.
- **Willis K**, Science Committee for the European Citizen Science Association conference, Vienna.
- **Willis K**, Science Committee for the CSIRO Ending Plastic Waste Symposium, 23-25 May 2023.
- **Wood G**, elected to the Academic Senate within the UTAS College of Arts, Law and Education.



Image: At the CSIRO Ending Plastic Waste Symposium in Sydney, three of the four book editors of 'Ending Plastic Waste' (Justine Barrett, lower left, Kathy Willis, upper left, Denise Hardesty, upper right) had the opportunity to engage with leaders from three of the stories highlighted in the book (T.Hyde, from Plastics Circle, lower middle; L.Hardman, from Plastic Collective, lower right; and R. Prince-Ruiz, from Plastic Free July, top center). Image credit: CSIRO

# PUBLIC OUTREACH

Image: Valeriya Komyakova as a roving scientist at Beaker St Science Festival, Hobart. Image credit: Valeriya Komyakova



# PUBLIC PRESENTATIONS & EVENTS

- **Blanchard J**. "Future of fish supply under climate change", Blue Economy webinar: Thinking about the future of food, online, 6 December 2023.
- **Condie CM**. "Conflict and the Tasmanian salmon industry", Beaker Street Festival, Hobart, Tasmania, 5 August 2023.
- **Condie CM**. FRDC: Storm Bay Open House, 27 June 2023.
- **Cottrell R**. "Sustainably feeding our blue food", Blue Economy webinar: Thinking about the future of food, online, 6 December 2023.
- **Farmery A**. "Identifying management actions for a food-based approach to fisheries and aquaculture", Blue Economy webinar: Thinking about the future of food, online, 6 December 2023.
- **Fulton EA**. "Coping with complex seafood futures, one byte at a time", Blue Economy webinar: Thinking about the future of food, online, 6 December 2023.
- **Fulton EA**. "Protecting our Oceans with...Maths?", Coffee Keynotes at Hadley's, Beaker Street Festival, Hobart, Tasmania, 5 August 2023.
- **Greeno D**. "Keep calm and carry on..? Living (happily) through the climate crisis", Beer Aquatic & CMS Pub Panel Session, Hobart, Tasmania, 10 August 2023.
- **Johnson MS**. was a roving scientist at Beaker St Science Festival, Hobart, August 2023.
- **Johnson MS**, Hamasaki E, Sheppard E & Ng Y. "Searching for the Eel Song" performance at TEDxHobart, https://www.youtube.com/watch?v=pPXs0BAnD4Q, February 2023.
- **Johnson MS** & Reid A. "Values of the Valley" exhibition in Huon Valley Council's ARTBOX, https://www. huonvalley.tas.gov.au/services/my-community/arts-and-culture/artbox/, December 2023.
- **Komyakova V**. "Eco-engineering" was a roving scientist at Beaker St Science Festival, Hobart, Tasmania, August 2023.
- **Komyakova V**. Speaker at the engagement event for Newstead IMAS School visit, Hobart, Australia, 2023.
- **Lucas C** & **Pecl GT**. Climate Change Quiz presented at the Talent Quest Conference, Hobart, Tasmania, 2023.
- **Moccata G**. "Keep calm and carry on..? Living (happily) through the climate crisis", Beer Aquatic & CMS Pub Panel Session, Hobart, Tasmania, 10 August 2023.



Image: Gretta Pecl and Chloe Lucas with the climate change quiz designed by Chloe at the TalentFest Conference. Image credit: Gretta Pecl



Image: Meg Spiteri (left) and Brigette Wright (right) presenting their research on microplastic pollution at a Microscopes and Oddities station during Beaker Street Festival, Hobart. Image credit: Brigette Wright.

- Mossop D & Marshell A. (in collaboration with NRE Tasmania & IMAS teams). "Flathead Discovery Day" roadshow of eight public events covering the science and stewardship of sand flathead, held around Tasmania (Burnie, Coles Bay, Hobart, Launceston, St Helens, Swansea, Triabunna and Woodbridge), Jan - Feb 2023.
- Pecl GT. Q & A on all things squid at the 'Eat More Tassie Seafood' Marguee at the Australian Wooden Boat Festival, Hobart, Tasmania, 13 February 2023.
- Pecl GT. 'Science in the Pub' in Bergen, Norway as part of the One Ocean Week celebration hosted by the University of Bergen. Public Q & A about all things climate change, fish and the ocean, together with Francesco Werner, the chief science advisor in NOAA, 19 April 2023.
- Pecl GT. "Climate change and the natural systems of Australia", Wilderness Society Tasmania and Grassroots Action Network Tasmania, 4 June 2023.
- Pecl GT. "Keep calm and carry on..? Living (happily) through the climate crisis", Beer Aquatic & CMS Pub Panel Session, Hobart, Tasmania, 10 August 2023.
- Pecl GT. "Climate impacts in Tasmania and how to make a difference" National Science Week address for Hobart College at the Sustainability Learning Centre (SLC), 16 August 2023.
- **Pecl GT**. Keynote Speaker, Kingston High School Climate Summit, 30 November 2023.
- **Puskic P**. "Trash Talk: The Plastic Peril in our Oceans", The Royal Society of Tasmania and Beer Aquatic, Hobart, Tasmania, 31 August 2023.
- **Spiteri M** & **Wright B**. "Microplastic pollution", Roving Scientists and Microscopes and Oddities Scientists, Beaker Street Festival, Hobart, Tasmania, 4-5 August 2023.
- **Stoeckl N**. "Keep calm and carry on..? Living (happily) through the climate crisis", Beer Aquatic & CMS Pub Panel Session, Hobart, Tasmania, 10 August 2023.
- **Strain EM** & Fitzpatrick J. "Aliens vs. cannibals: what eating and outcompeting the live bearing sea star", Roving Scientists and Microscopes and Oddities Scientists, Beaker Street Festival, Hobart, Tasmania, 4-5 August 2023.
- **Strain EM** & Zimmermann D. "eDNA and all that stuff", Roving Scientists and Microscopes and Oddities Scientists, Beaker Street Festival, Hobart, Tasmania, 4-5 August 2023.

- **Strain EM**. "Marine restoration why bother", Colab Art & Science collaboration, Beaker Street Festival, Hobart, Tasmania, 4-5 August 2023.
- **Teston M**, **Audzijonyte A** & Coghlan A. Two sessions at IMAS to test and provide feedback on the Big Fish card game (https://BigFishCardGame.org)
- Webb A, Matthews B & **Ward D**. 'Gamifying Government' panel at PAX Australia Convention, Melbourne Convention and Entertainment Centre, 6 October 2023.
- **Willis K**. Piping Hot Australia Instagram feature for World Oceans Day, "Australia's ocean plastic waste problem", 5 June 2023.



Image (left): Big Fish card game testing session. Image credit: Asta Audzijonyte (right) Big Fish card game display. Image credit: Rani Ekawaty



Image: Olly Dove interviewing for the 'That's What I Call Science' podcast recording at the CMS Showcase 2023. Image credit: Hannah Fogarty

# PODCASTS

- CMS Showcase participants interviewed in "That's What I Call Science" podcast episode 214: Centre for Marine Socioecology Showcase. https://thatsscience.org/2023/10/08/episode-214centre-for-marine-socioecology-showcase/
- Narissa Bax in 100 Climate Conversations at the Powerhouse Museum, 21 October 2023: https://100climateconversations. com/narissa-bax/
- Emma Hamasaki in "Emma felt science should be fun to learn. Now she shares her passion through art and music", Breaking the Barriers of Science podcast, 24 August 2023. https:// www.sbs.com.au/language/japanese/en/podcast-episode/ breaking-the-barriers-of-science-podcast-making-sciencemore-accessible/uafk773yk
- Gretta Pecl in "Life on the move", Fear and Wonder podcast, 27 April 2023. https://theconversation.com/fear-and-wonderpodcast-how-species-are-responding-to-climate-changeand-how-humans-can-help-204359



# MEDIA

- **Narissa Bax** Falkland Kelp eDNA project featured in French national television series on TF1.
- **Narissa Bax** Falkland Kelp eDNA project launch in Monaco for Ocean Week 23 March 2023: https://vimeo. com/810621685
- **Swee-Hoon Chuah** was featured in article "Burgers, beers and behavioural economics: how 'nudges' can help our industry", Tasmanian Forests & Forest Products Network, 30 March 2023. https://www.tffpn. com.au/burgers-beers-and-behavioural-economics-how-nudges-can-help-our-industry/
- **Swee-Hoon Chuah** was featured in article "New lab a first for Tasmania", The Mercury, 4 April 2023.
- **Olly Dove** was featured in blog article "Increasing representation of diverse voices in STEMM", Australian Museum, 29 September 2023. https://australian.museum/blog/science/thats-what-i-call-science/
- Madeline Green was featured in article "Tasmanian fisheries forensics technology set to improve global catch management', 18 December 2023. https://www.imas.utas.edu.au/news/news-items/tasmanianfisheries-forensics-technology-set-to-improve-global-catch-management
- Emma Hamasaki was featured in article and podcast "Making science more accessible", SBS Japan, Breaking the Barriers of Science podcast, 24 August 2023. https:// www.sbs.com.au/language/japanese/en/podcastepisode/breaking-the-barriers-of-science-podcastmaking-science-more-accessible/uafk773yk
- Alistair Hobday was featured in article "When will the next ocean heat wave strike? Scientists develop early warning systems" by Warren Cornwall, Science, 23 August 2023. https://www.science.org/content/article/when-willnext-ocean-heat-wave-strike-scientists-develop-earlywarning-systems
- **Valeriya Komyakova** was featured in article "International Day of Women and Girls in Science", UTAS Newsroom, 9 February 2023. https://www.utas.edu.au/about/newsand-stories/articles/2023/international-day-of-womenand-girls-in-science
- Jess Melbourne-Thomas was interviewed on ABC live news on "Extreme weather linked to climate change the 'number one threat' to natural World Heritage sites, research finds", 28 July 2023. See also https://www. abc.net.au/news/2023-07-28/climate-biggest-risk-toworld-heritage-areas-research-finds/102656800 and https://www.youtube.com/watch?v=3Y0rLpDKSVA
- **Nick McClean** was featured in article "Indigenous" engagement in Commonwealth fisheries" UTS News, 1 June 2023. https://www.uts.edu.au/news/social-justicesustainability/indigenous-engagement-commonwealthfisheries



Image: Madeline Green working on her fisheries forensics technology project set to improve global catch management. Photo credit: Peter Allen

- Gretta Pecl was interviewed about "Code Blue: Our Oceans in Crisis report" for ABC Hobart Breakfast Radio, 8 November 2023. https:// www.abc.net.au/listen/programs/hobartbreakfast/hobart-breakfast/103059190
- **Gretta Pecl** was interviewed about "Code Blue: Our Oceans in Crisis report" for ABC TV Breakfast News, 8 November 2023.



Image: Gretta Pecl during a live TV interview with ABC TV Breakfast News. Image credit: ABC News

- Gretta Pecl was featured in article "Cards, cocktails in yurts and community chats help inspire climate action" in Western Australian Marine Science Institute, 31 October 2023. https://wamsi.org.au/news/cards-cocktailsin-yurts-and-community-chats-help-inspireclimate-action/
- Gretta Pecl in "Fear and Wonder podcast: how species are responding to climate change – and how humans can help", The Conversation, by Joelle Gergis and Michael Green, 27 April 2023. https://theconversation.com/fear-andwonder-podcast-how-species-are-respondingto-climate-change-and-how-humans-canhelp-204359
- Peter Puskic was featured on the Ocean Diagnostics blog. Peter and colleagues partnered with Ocean Diagnostics to test new imaging tools which use AI to detect and quantify plastics, 26 September 2023. https:// oceandiagnostics.com/ocean-diagnosticsblog/new-technology-accelerates-seabirdmicroplastics-research

- Elisabeth Strain features in "Kick starting seagrass restoration in Tasmania" YouTube video production by https://ozfish.org.au/ projects/tasmania-seagrass-restoration-trial/ September 2023.
- **Scott Spillias** was featured in articles in the Guardian, the ABC and the New York Times, 27 January 2023 & 15 March 2023.

https://www.theguardian.com/ environment/2023/jan/27/food-feed-and-fuelglobal-seaweed-industry-could-reduce-landneeded-for-farming-by-110m-hectares-studyfinds

https://www.abc.net.au/news/ rural/2023-01-27/seaweed-research-uqfuture-farming/101895072

https://www.nytimes.com/ interactive/2023/03/15/climate/seaweedplastic-climate-change.html

Joanna Vince was interviewed in "The uncertain future of the Antarctic and Arctic: why the arctic regions are crucial for global security" ABC National Big Ideas episode broadcasted on 21 August 2023. https://www.abc.net.au/listen/ programs/bigideas/arctic-regions-are-crucialfor-global-security-arctic-antarctic/102676504

# VISITORS



Sarah el Idrissi (Beaux arts de Paris) was hosted by Gretta Pecl and Beth Fulton in February 2023.



Valerio Sbragaglia (Department of Renewable Marine Resources, Barcelona, Spain) was hosted by Asta Audzijonyte in March 2023.



Amanda Schadeberg (Wageningen University, The Netherlands) was hosted by Rachel Kelly and Ingrid van Putten in May 2023. Dr Schadeberg presented in the CMS Seminar Series 2023.



Agustina Iwan from the CONICET in Argentina was hosted by Ingrid van Putten from September until November 2023 to work on bycatch in Argentinian fisheries.

**GBRMPA key members** visited the CMS and the Tasmanian Behavioural Lab (UTAS), hosted by **Ingrid van Putten** and **Gretta Pecl**, 1 June 2023.





**David Maynard & Jamie Allnut** (FRDC) visited the CMS and the Tasmanian Behavioural Lab (UTAS), hosted by **Gretta Pecl**, **Jess Melbourne-Thomas & Swee-Hoon Chuah**, 10 August 2023.





Natalie Ban (University of Victoria, Canada) was hosted by Gretta Pecl from Oct-Dec 2023. Prof Ban co-facilitated the CMS Spring School 2023, and presented in the CMS Seminar Series 2023.

**Caitie Kuempel** (Griffith University, Queensland) was hosted by Christopher Brown in November 2023. Dr Kuempel presented in the CMS Seminar Series 2023.

# CMS EVENTS

# Sea Country Film Launch

Sea Country premiered in Hobart on 6 January 2023. It is a Great Southern Reef film exploring Tasmanian Aboriginal connection to kelp forests. The film is co-produced by Scott Bennett, and featuring Dean Greeno. View the film here: https://www.youtube.com/ watch?v=xefEbsOXl4Q

# **SEA COUNTRY**

## 2023 International Temperate Reefs Symposium (ITRS)

CMS sponsored the conference session "Links with Human Society" at the International Temperate Reefs Symposium, held in Hobart, Tasmania on 8-12 January 2023. The focus of the conference is on temperate hard-bottom habitats, with a broad scope capturing natural rocky reefs, man-made structures, and biogenic surfaces.

## Curious Climate Showcase 2023



CMS co-hosted the inaugural Curious Climate Showcase on 28 February 2023 at CSIRO in Salamanca, Hobart. The event, which was opened by UTAS Vice-Chancellor Prof Rufus Black, sought to celebrate the success of the two programs including the many awards they have received - and to thank the many climate experts who have volunteered their time and expertise to provide climate information to answer questions submitted to the programs. https:// curiousclimate.org.au/



Image: Panel members at the 'You Can't Ask That (The Policy Version)' event in February 2023, facilitated by Ingrid Van Putten. Photo credit: Gretta Pecl

# You Can't Ask That (the Policy Version)!

A lively panel discussion and Q & A forum set in a local pub on 14 February 2023, providing 25 ECRs and PhD students with an opportunity to develop their understanding of the way that policy works and how policymakers operate. Facilitated by Adjunct Prof. **Ingrid Van Putten** with panellists: Dr Sarah Russell (ReCFIT, Tasmanian Government), Dr Kathleen Beyer (Climate Futures Group, UTAS), Dr **Ian Dutton** (Marine Resources, Department of Natural Resources and Environment Tasmania) and Brian Risby (State Planning Office, Department of Premier and Cabinet).

Image: Screenshot from Sea Country film.

**CMS Day**, held 2 June 2023. The day included presentations from CMS members, and a CMS students pitch funding session.

# Beer Aquatic & CMS Pub Panel Session:

"Keep Calm and Carry On..? Living (Happily) Through the Climate Crisis", Hobart, Tasmania, 10 August 2023. Event organised by **Rachel Kelly**. Panel members included **Gretta Pecl**, Gabi Mocatta, **Dean Greeno**, and **Natalie Stoeckl**.

## Connections and Collaborations to Ensure a Thriving Future Ocean: CMS Showcase 2023

The CMS held our annual showcase event in Hobart/ Nipaluna on 11 August 2023, with over 160 people in attendance ranging from our members and students, to government representatives, industry representatives, researchers, and traditional owners and custodians.

The day was structured around a series of stakeholder panels which allowed stakeholders to shape discussion and agendas, as well as short presentation sessions for our interdisciplinary researchers, and Q&A sessions for open dialogue. The day prompted some important discussions, and ignited some important networking/collaboration relationships.

CMS Showcase 2023 Report can be viewed here: https:// marinesocioecology.org/wp-content/uploads/CMS\_ Showcase-Report-2023\_WEB.pdf

## A Whale of a Difference: Southern Right Whale Culture and the Making of the Tasman World

This public lecture & yarn event discussed new insights into whale culture to reconsider the history of the Tasman world. Specifically, bringing evidence of changing whale culture in the early 19th century to help explain the very different colonial and Indigenous histories of whaling from Tasmania to southern Australia to Aotearoa New Zealand. This event was jointly hosted by the Australian Research Council (ARC) Centre for Australian Biodiversity and Heritage (CABAH) & Centre for Marine Socioecology (CMS), Institute for Marine and Antarctic Studies, University of Tasmania, held at IMAS Salamanca, Tasmania, on 8 November 2023.



Image: 'From Tasmania to the World: Outlook for the Oceans' panel session at the CMS Showcase 2023. Photo credit: Peter Allen



Image: CMS Showcase 2023 participants. Image credit: Gretta Pecl



Image: Connections and collaborations to ensure a thriving future ocean: CMS Showcase 2023.



Image: 'A Whale of a Difference' public lecture and yarn event with Chris Wilson. Image credit: Gretta Pecl

# **CMS Seminar Series Presentations**

- P.S. Anathan (ICAR-Central Institute of Fisheries Education). "Assessing vulnerability in an Indian context: insights & challenges", CMS Seminar Series, 3 February 2023.
- Scott Spillias (CSIRO/CMS). "Food system conversations: harnessing the sea to manage pressure on terrestrial food systems", CMS Seminar Series, 27 April 2023.
- Amanda Schadeberg (Wageningen University). "The role of science in the anticipatory governance of the mesopelagic zone", CMS Seminar Series, 2 May 2023.
- Swee-Hoon Chuah & Robert Hoffman (UTAS/ CMS). "Social connectedness promotes both coordination and cooperation in a [fisheries] resource dilemma experiment", CMS Seminar Series, 18 May 2023.
- Valeriya Komyakova (IMAS/CMS). "Solutionbased approaches to human impacts in the marine environment. What I do, and how I got here." CMS Seminar Series, 16 June 2023.
- Justine Lacey (CSIRO). "Prospecting for a social licence in reef restoration: why and how are SLO

models different in industrial and environmental contexts?", CMS Seminar Series, 12 July 2023.

- Corrine Condie (IMAS/CMS). "Socio-ecological influence modelling reveals effective strategies for reducing marine-based conflict", CMS Seminar Series, 27 July 2023.
- Bill Kaye-Blake (New Zealand Institute of Economic Research). "Harnessing the Blue Economy for communities and ecosystems", CMS Seminar Series, 31 August 2023.
- Linda Murray (Massey University/CMS). "How does learning about the future of the ocean impact children's emotional wellbeing?", CMS Seminar Series, 22 September 2023.
- Caitie Kuempel (Griffith University). "Improving food system sustainability through cumulative impact mapping", CMS Seminar Series, 14 November 2023.
- Natalie Ban (University of Victoria). "Fisheries reconciliation and spatial management", CMS Seminar Series, 24 November 2023.
- Matt Palmer (UTAS/CMS). "Some ideas from psychology about communicating climate change information", CMS Seminar Series, 29 November 2023.

## **Training Sessions**

## Science to Policy Workshop for Interdisciplinary Early Career Researchers

Three-day science-policy workshop in February 2023 was facilitated by Becca Shellock (ANU & CMS), and organised in collaboration with ARC Centre of Excellence for Australian Biodiversity and Heritage (CABAH). This workshop was completed by 20 interdisciplinary Early Career Researchers (ECRs).



Image: Panel members at the 'You Can't Ask That (The Policy Version)' event in February 2023, facilitated by Ingrid Van Putten. Photo credit: Gretta Pecl



Image: CMS Interdisciplinary School 2023.

- IMBeR ClimEco8 Summer School Sustaining the Ocean We Need for the Future We Want ClimEco summer schools are designed for 60-70 post-graduate students and early career researchers. ClimEco is an IMBeR event with CMS support, held at the ZRS-Mediterranean Institute for Environmental Studies in Slovenia, 19-24 June 2023. CMS members Chris Cvitanovic, Gretta Pecl, Ingrid van Putten and Beth Fulton all presented several sessions at ClimEco8. Learn more: https://imber.info/ event/imber-climeco8-summer-schoolsustaining-the-ocean-we-need-for-the-futurewe-want/
- CMS Interdisciplinary School 2023 In October, CMS hosted its second interdisciplinary training course – a oneweek spring school focusing on Inter- and transdisciplinary approaches for sustainable marine futures.

The Spring School brought together 20 Masters and PhD students, Post Doctoral Fellows, and other early career professionals from diverse backgrounds and disciplines (including socioecology, law, oceanography, art, ecology, health, and social sciences) to connect and learn about the theory and practice of undertaking inter- and transdisciplinary research. The aim of the course was to equip students with the skills necessary to understand and engage in interdisciplinary marine and climate change research.

CMS members who presented at the course this year include Gretta Pecl, Beth Fulton, Rachel Kelly, Alistair Hobday, Ingrid van Putten, Maree Fudge, Rowan Trebilco, Aysha Fleming, Madi Green, Liam Fullbrook, Matt Palmer, Mary Mackay, Kathy Willis, Valeriya Komyakova, Scott Spillias, Chloe Lucas, and Kirsty Nash. Other non-CMS presenters included Karen Grant (Outdoor Counselling) and Jamie Graham-Blair (UTAS). The course was supported by marine stakeholders Jane McGann (TSIC), Jennifer Hemer (NRM South), and Barrett Wolfe (IMAS), who presented real-world challenges for course participants to work together and develop interdisciplinary approaches to address.

AMSA/CMS Infographics Workshop with Dr Stacey McCormack (Visual Knowledge), 12 Sept 2023.



Image: Future Ocean Leaders panellists, Dr Alistair Hobday (CSIRO and CMS Steering Committee member), Prof Melissa McHenry (UTAS) and Prof Gretta Pecl (CMS Director), with Dr Rachel Kelly (CMS Knowledge Broker) and some of the CMS ECR cohort in December 2023. Photo credit: Rachel Kelly

## CMS Future Ocean Leaders Course

In the second half of the year, CMS hosted an ECR Leadership training course split into three modules, taken by over 20 students and early-career researchers.

Module 1: "Leadership fundamentals" – Understanding self and DiSC workplace personality assessment, facilitated by Michelle Swallow (Leadership & Change Consultants), 9 October 2023.

Module 2: "Styles of Leadership" – Colour wheel workshop focusing on the different styles of leadership and work preferences, facilitated by Mark Douglas (Ethos Consulting Pty Ltd), 2 November 2023.

Module 3: "Values-based leadership and panel session", 6 December 2023.

CMS/IMAS species webinar series: The Long Hot Summer: Getting Ahead of the Heatwave Every morning from 11-15th December 2023, CMS & IMAS hosted a special online webinar series titled The Long Hot Summer: Getting Ahead of the Heatwave. This series was a format of short synthesis talks followed by Q&A facilitated by a Chair, and was developed to share knowledge to raise awareness of current and projected marine conditions, and actions underway to support preparedness in light of the heatwave. Each session concluded by highlighting things we can all do to either minimise harm or facilitate learning that might better support our responses to future warming or heatwave-related events. Presentation slides and recordings can be viewed here: https:// marinesocioecology.org/2023-webinar-seriesthe-long-hot-summer-getting-ahead-of-theheatwave/



Image: Day 1 of the special CMS/IMAS webinar series The Long Hot Summer: Getting Ahead of the Heatwave

# GRADUATED STUDENTS

Carla Sbrocchi, PhD



Liam Fullbrook, PhD



Peter Puskic, PhD



Image: Peter Puskic PhD graduation with supervisors and CMS members.

## Meg Spiteri, Masters



Corrine Condie, PhD



Michael Murunga, PhD



Image: Michael Murunga PhD graduation with supervisor Gretta Pecl.

## Matt Teston, Masters



### Lizzie Drew, Honours



# SUBMITTED THESES

**Corrine Condie:** "Resolving Coastal Tensions or Living with Conflict: What is the fate of Tasmania's coasts?"; supervisors Marcus Haward (IMAS/ CMS), Jo Vince (UTAS/CMS), Katie Creswell (IMAS/CMS), Elizabeth Fulton (CSIRO/CMS), Karen Alexander (Heriot-Watt University/CMS).

Liam Fullbrook: "Integrated ocean management in Australia: The impact of persistent problems"; supervisors Assoc Prof Joanna Vince (UTAS/CMS), Prof Marcus Haward (IMAS/ CMS), Dr Tony Smith (IMAS/ CSIRO), Prof Stewart Frusher (IMAS/CMS).

Malcolm S. Johnson: "Changing Coastalscapes: Advancing methods to support local climate adaptation"; supervisors: Dr Vanessa M. Adams (UTAS) and Prof Jason Byrne (UTAS)

Michael Murunga: "Evaluating some of our marine science communication activities and exploring effective models of science communication"; supervisors Prof Gretta Pecl (IMAS/CMS), Prof Catriona MacLeod (IMAS/CMS), Dr Emily Ogier (IMAS/CMS).

**Carla Sbrocchi:** "Practical insights for integrating social dimensions in fisheries management"; supervisors Dr Kate Barclay (UTS), Dr Elizabeth Fulton (CSIRO/CMS), Dr Bill Gladstone (UTS), Dr Laura Nahuelhual (Universidad Austral de Chile).

# FUTURE PROJECTS & EVENTS FOR 2024

## Sea Change Project (official launch July 2024)

- Project leads: Prof Gretta Pecl and Dr Rachel Kelly
- Case-study lead: Dr Jess Melbourne-Thomas
- Project manager: Dr Liam Fullbrook

## CMS Showcase 2024 - Hobart, Tasmania (17-18th July)

• Tentative topic/focus: Integrated Management of the Marine Estate

# CMS Interdisciplinary Spring School 2024 – Hobart, Tasmania (October 2024, dates TBC).

• Guest chairs: Prof Jess Blythe (Brock University) & Dr Cassandra Brooks (University of Colorado Boulder)

# ANNEX

### **EXECUTIVE TEAM**

Gretta Pecl, CMS Director Beth Fulton, Deputy Director Hannah Fogarty, Executive Support Officer Rachel Kelly, Knowledge Broker

### THEME LEADERS

Coastal & Marine Governance: Joanna Vince & Maree Fudge Environmental Change & Adaptation: Rowan Trebilco & Valeriya Komyakova Knowledge Production: Rachel Kelly & Rebecca Shellock Science Engagement & Impact: Beth Strain & Connie Cirkony Sustainable Futures & Planetary Health: Ingrid van Putten & Richard Cottrell

### CMS MEMBERS

Alistair Hobday, CSIRO Alyssa Marshell, IMAS Andrew Constable, AAD Angela Dean, University of Queensland Anna Farmery, University of Wollongong Asta Audzijonyte, IMAS Aysha Fleming, CSIRO Barbara Nowak, IMAS Barrett Wolfe, IMAS Beth Fulton, CSIRO Beth Penrose, TIA Beth Strain, IMAS Brigette Wright, IMAS Camilla Novaglio, IMAS Cara Stitzlein, CSIRO Carla Sbrocchi, UTS Carolina Chong-Montenegro, Trinity College Dublin Carolina Garcia Imhof, Pacific Community Catriona MacLeod, IMAS Cayne Layton, IMAS Cecilia Villanueva, IMAS Chloe Lucas, Geography, Planning & Spatial Sciences Chris Cvitanovic, UNSW Chris Wilcox, Minderoo Foundation Christopher Brown, IMAS Connie Cirkony, School of Education Corrine Condie, CSIRO Darla Hatton MacDonald, TSBE David Mossop, NRE Tasmania David Smith, CSIRO Dean Greeno, Riawunna Centre

### CMS STUDENTS

#### Undergrad

Giarn Carroll, IMAS Monique Maclaine, Riawunna Centre & CoSE

## Honours and Masters

Patrick Hudson, IMAS Caitlin Kensett Smith, IMAS Matthew Teston, IMAS Megan Spiteri, IMAS

### PhDs

Amara Steven, TSBE Andrew Sullivan, IMAS Angus Henderson, IMAS,

### STEERING COMMITTEE

Alistair Hobday, CSIRO Beth Fulton, CSIRO Catriona MacLeod, IMAS Gretta Pecl, IMAS

### SOCIAL MEDIA TEAM

Kianna Gallagher Liam Fullbrook

### STUDENT REPRESENTATIVE

Angus Henderson Brigette Wright Paris Tuohy

Delphi Ward, CSIRO

Dirk Welsford, AAD

Emma Church, IMAS

Emma Hamasaki, IMAS

Fabio Bochetti, CSIRO

Geoff Syme, CSIRO

Gretta Pecl, IMAS

Hannah Fogarty, IMAS Hanne Nielsen, IMAS

Helena Baird, IMAS

Ian Butler, ABARES

Jan Shaw, IMAS Javier Porobic, CSIRO

Jenn Scott, School of

Jennifer Lavers, IMAS

IMAS

Sciences

University

Humanities

Jonathan Reum, University of Denise Hardesty, CSIRO Washington Jonny Stark, AAD Elisavet Spanou, IMAS Elizabeth Lester, School of Joseph Wenta, University of Newcastle Judith Mutuku, UTAS Creative Arts and Media Elle Leane, School of Humanities Julia Blanchard, IMAS Eloise Wilson, IMAS Emille Boulot, School of Law Emily Ogier, IMAS Julia Santana Garcon, Minderoo Foundation Karen Alexander, Heriot-Watt University Karen Evans, CSIRO Eva Plaganyi-Lloyd, CSIRO Kathryn Allan, IMAS Kathy Willis, CSIRO Genevieve Phillips, IMAS Katie Cresswell, IMAS Keith Sainsbury, IMAS Georgina Gurney, James Cook Kim Beasy, School of Education Kirsty Nash, IMAS Larelle Bossi, IMAS Leo Dutra, CSIRO Graham Wood, School of Liam Fullbrook, UTAS Linda Murray, Massey University Lynda Goldsworthy, IMAS Lynna Cortes Rueda, School of Law Madeline Green, IMAS lan Dutton, NRE Tasmania Marcus Haward, IMAS Ingrid van Putten, CSIRO Maree Fudge, IMAS Jan McDonald, School of Law Mark Hemer, CSIRO Martin Exel, Austral Fisheries Mary Mackay, CSIRO Jeffrey McGee, School of Law, Mary-Anne Lea, IMAS Marycarmen Martinez Diaz, CSIRO Matthew Andreotta, CSIRO Psychological Sciences Mibu Fischer, CSIRO Myriam Laharité, IMAS Jess Melbourne-Thomas, CSIRO Narissa Bax, IMAS Joanna Vince, School of Social Natalie Stoeckl, TSBE

lan Dutton, NRE Tasmania Ingrid van Putten, CSIRO Jenn Scott, UTAS Joanna Vince, UTAS

### CMS ALUMNI

Angela Abolhassani Bianca Haas Brigette Wright Carla Sbrocchi Coco Cullen-Knox Corrine Condie Dean Greeno Elisavet Spanou Eloise Wilson Emma Hamasaki

Florence Briton Hannah Fogarty Joseph Wenta Kathy Willis Kelsey Richardson Larelle Bossi Liam Fullbrook Lizzie Drew Lynda Goldsworthy

Mary Mackay

Matthew Teston Megan Spiteri Michael Murunga Peter Puskic Rachel Kelly Richard Cottrell Sheryl Hamilton Yannick Rousseau

Jonny Stark, AAD Martin Exel, Austral Fisheries

Natalie Stoeckl, UTAS

Rich Little, CSIRO

Natasha Chassagne, Geography, Planning & Spatial Sciences Nicholas McClean, UTS Niyomi Pethiyagoda, IMAS Peat Leith, TIA Pedro Fidelman, University of Queensland Peter Puskic, IMAS 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 Roshni Subramaniam, CSIRO Rowan Trebilco, CSIRO Ruby Annand-Jones, CSIRO Sara Mynott, University of Victoria Sarah Fischer, IMAS Sarah Ugalde, IMAS Satoshi Yamazaki, TSBE Scott Bennett, IMAS Scott Condie, CSIRO Scott Spillias, CSIRO Sean Tracey, IMAS Steven Rust, IMAS Stewart Frusher, IMAS Stuart Corney, IMAS Swee-Hoon Chuah, TSBE Tony Smith, IMAS, CSIRO Valeriya Komyakova, IMAS Vanessa Adams, Geography, Planning & Spatial Sciences

Norwegian Polar Institute Anne Boothroyd, Geography, Planning & Spatial Sciences Brigette Wright, IMAS Catarina Serra Goncalves, IMAS Clare Pitt, School of Psychological Sciences Corrine Condie, IMAS Denis Karcher, ANU Dimuthu Jayakody, Geography, Planning & Spatial Sciences Edith Shum, Geography, Planning & Spatial Sciences Ilaria Stollberg, IMAS

James DelBene, ANU Julian Manning, IMAS Katie Marx, School of Humanities Kelly Hoareau, IMAS Kianna Gallagher, School of Creative Arts and Media Lillian Stewart, IMAS Linda Hunt, IMAS / School of Creative Arts and Media Lisa Uffman-Kirsch, School of Law Lynnlee Chikudza, IMAS Malcolm Johnson, Geography, Planning & Spatial Sciences

Mengzhu Zhang (Maggie), IMAS and Ocean University of China Natalia de Miranda Grilli, School of Social Sciences Olivia Dove, IMAS Paris Tuohy, ANU Rani Ekawaty, IMAS/CSIRO Renee Melkert, IMAS Sierra Ison, IMAS Tormey Reimer, IMAS Vaibhavi Dwivedi, UTAS Victoria Heinrich, School of **Psychological Sciences** 

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