INTRODUCTION

Australia is a marine nation with over 80% of the population living within 50 kilometres of the coast, and our oceans play an important role ecologically, socially and economically. Our marine environment is critically important for the cultural practices of Indigenous communities and as the world’s third largest marine jurisdiction, 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, and by 2025, just 5 years away, our marine industries are projected to contribute around $100 billion each year to Australia’s overall economy.

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

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

We are extremely pleased to see in this annual report that the Centre has gained well-deserved international recognition for the challenging research being conducted and communicated in innovative ways, and look forward to its continued success into the future.

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

Dr Tony Worby
Director, CSIRO Oceans and Atmosphere

We acknowledge and pay respect to the traditional owners and custodians of sea country all around Australia, in particular lutruwita (Tasmania), and recognise their collective wisdom and knowledge of our oceans and coasts.
The Centre for Marine Socioecology continues to go from strength to strength in both research and post graduate training. We bring together disciplinary expertise in physics, law, economics, biology, sociology, psychology, philosophy and governance from the Institute for Marine and Antarctic Studies, College of Arts, Law and Education, the Discipline of Geography and Spatial Sciences, the College of Health and Medicine, the Tasmanian School of Business and Economics, the School of Technology, Environments and Design, the CSIRO and the Australian Antarctic Division (AAD). 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.

In this report we are pleased to showcase a selection of our research and other activity from 2019. Wholehearted thanks to all our students, researchers, collaborators and stakeholders, for their ongoing efforts in the Centre of Marine Socioecology. Not only has your generosity and enthusiasm enriched our collective efforts, but the contributions and outcomes are being realised across a broad spectrum of activity, relevant at local, regional and global scales.

We continue to be proud of the Centre's outputs and outcomes and are delighted to see the Centre's rapidly developing international reputation.

We look forward to continuing this work with you in 2020.

**Professor Gretta Pecl (IMAS UTAS)**
Director

**Dr Beth Fulton (CSIRO)**
Deputy Director

**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
Socioecology is a challenging new area of research that combines multidisciplinary, interdisciplinary and trans-disciplinary components. The demands of a growing human population have necessarily triggered rapid and ongoing ‘blue’ growth. However, marine ecosystems cannot support ongoing growth without transformational change in their use and governance as well as innovative solutions towards improved understanding, monitoring and protection. To meet the challenge of sustainable oceans, a coordinated, interdisciplinary and transdisciplinary approach is needed. The Centre for Marine Socioecology was created out of a common desire to provide the knowledge needed to support the current and future use of our marine coasts and oceans. We bridge research excellence in physical, natural, social sciences and humanities to inform future development of individual sectors such as food production, energy generation, transport, recreational and cultural value. Our work is actively working towards solutions in the following areas:
Our Theme Co-Leads:

Coastal & Marine Governance: Karen Alexander and Pedro Fidelman

Sustainable Futures & Planetary Health: Kirsty Nash and Anna Farmery

Environmental Change & Adaptation: Ingrid van Putten and Rowan Trebilco

Knowledge Production: Jess Melbourne-Thomas and Maree Fudge

Science Engagement & impact: Rachel Kelly and Geoff Syme

Across these connected themes our research delivers:

- Understanding of socioecological systems and the interactions that characterise them
- Research integration, synthesising understanding of socioecological challenges and how to effectively meld perspectives from multiple disciplines, working with a range of stakeholders to co-produce knowledge
- Technical expertise and tools around qualitative and quantitative approaches to inform management of multiple uses in our coastal and marine domains.
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2019 HIGHLIGHTS

CMS Annual Showcase

The second annual CMS Showcase Event, held on Wednesday 29th of May at the Hobart Function and Conference Centre, brought together over 110 representatives from across our marine industry sectors, State Government, non-governmental organisations, UTAS, CSIRO, AAD and the public. Presentations focussed on ‘Interdisciplinary research to support the UN Decade of Ocean Science for Sustainable Development’, and stakeholders participated in panel discussions followed by Q & A sessions exploring sustainable behaviours, and potential opportunities for marine Australia under a changing environment.

Congratulations to CMS student Kathy Willis, working with Denise Hardesty, Joanna Vince and Chris Wilcox, for winning the best Poster Award and Maree Fudge, working with Marcus Haward, Karen Alexander, Emily Ogier, Peat Leith and Catriona Macleod, for the best talk for her presentation “Revisiting legitimacy of participation in marine governance and decision-making”.

A CAN INSTALL W ATER REFILL STATIONS REDUCE SINGLE–USE PLASTIC BOTTLE LITTER?

THE PROBLEM
- Globally, plastic bottles are the third most littered item on beaches, along rivers and in cities1.
- The littered bottles harm wildlife through ingestion and by acting as a vector for invasive species to reach new habitats2.

A SOLUTION?
- Plastic bottles are the most littered item in the Brisbane River, Queensland, Australia3.
- An organisation installed water refill stations called Go 2 Zones at 4 litter hotspots to try and reduce plastic bottle litter.

GO 2 ZONE REFILL STATION

APPROVEDC 2019 HIGHLIGHTS

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GO 2 ZONE REFILL STATION

APPROVED
In August for National Science Week, CMS led a large, collaborative public engagement project called Curious Climate Tasmania (www.curiousclimate.org.au). In collaboration with ABC Radio, IMAS, UTAS, CSIRO and other sections of UTAS, the project aimed to find out what climate change questions the public were curious about, before we put teams of scientists together to road-trip around Tasmania and answer those very questions. A two-week radio call out from ABC resulted in over 300 questions from the public being lodged online, and extensive locally-relevant media content being developed in response by ABC, with support of many local scientists.

The project culminated in four public forums across Tasmania (Queenstown, Launceston, St Helens, Hobart) where a panel of engaging scientists answered the top 8 questions received from each region, followed by Q&A with the scientist panel. Over 550 people, aged from 10 to 89, attended these events, and at each location, questions from the audience continued for at least 45 minutes longer than the 30 minutes of question time originally scheduled! In addition to the live events, the project generated 28 interviews with scientists and many online news features, with some recording over 90,000 audience views.

Survey data from both audiences and journalists demonstrated how such new approaches to audience-led local journalism and science
Communication can deliver relevant local news and provide trusted, relevant sources of information on complex issues. The team will be publishing results from surveys completed by attendees in a number of scientific publications, and the presentations made at the public events are available online via the website www.curiousclimate.org.au. The project was generously sponsored by National Science Week and the Tasmanian Government, through the Tasmanian Climate Change Office.

ABOVE Leon Compton from ABC Radio hosted the Hobart public forum at the Stanley Burbury Theatre.

Video footage of the presentations and special interviews can be found on the Curious Climate YouTube Channel https://www.youtube.com/playlist?list=PLdQWgI2EmCJbYwd7MP11RYK3ZViHjN8Pk
Future Seas
https://futureseas2030.org/

The Centre for Marine Socioecology is a registered partner for UN Decade and we are pleased to say that Future Seas is listed as a voluntary commitment for the UN Oceans Conference that was to be held in June (prior to COVID-19 outbreak) (https://oceanconference.un.org/commitments/?id=35402) - one of only 56 voluntary commitments from academic organizations.

Future Seas develops evidence-informed scenarios of the future by 2030, for each of 12 key challenges (including graphical depictions of each challenge), and then generates a tangible plan for possible actions at local, regional and global scales. These actions are designed to realise a vision for 2030 which is in line with achieving an equitable and sustainable future (as outlined by the United Nations Sustainable Development Goals).

Approximately 40% of the Future Seas group are PhD students and Early Career Researchers, providing an excellent opportunity to train and mentor the next generation of interdisciplinary researchers with the skills, experience and expertise necessary to help address some of the complex interdisciplinary challenges faced by society today.

Several workshops were held throughout 2019, culminating in a major five-day workshop in November 2019. The key motivation of the week-long workshop was to invite experts from around
the world to Tasmania, to be part of a Future Seas Traditional and Indigenous Working Group, to define and lead their own 'key challenge' for the ocean. We are grateful to have the leadership and ongoing involvement of the Snowchange Cooperative, an innovative network and scientific organization working with and representing local and Indigenous cultures around the world, and participation of Indigenous knowledge holders, scholars and Elders from Finland, Taiwan, Canada, Greenland, New Zealand, Papua New Guinea and of course Australia.

**Future Seas Key Challenges**

1. **WARMING WORLD, CHANGING OCEAN:** ADAPTATION AND MITIGATION FOR RESILIENT MARINE SYSTEMS.
2. **SAFEGUARDING MARINE LIFE:** CONSERVATION OF BIODIVERSITY AND ECOSYSTEMS.
3. **FOOD FOR ALL:** DESIGNING SUSTAINABLE AND SECURE FUTURE SEAFOOD SYSTEMS.
4. **CONNECTING TO THE OCEANS:** SUPPORTING OCEAN LITERACY AND PUBLIC ENGAGEMENT.
5. **CLEANER SEAS:** REDUCING MARINE POLLUTION.
6. **OCEANS AND SOCIETY:** FEEDBACKS BETWEEN OCEAN AND HUMAN HEALTH.
7. **OCEAN RESOURCE USE:** BUILDING THE COASTAL BLUE ECONOMY.
8. **DEEP ASPIRATIONS:** TOWARDS A SUSTAINABLE OFFSHORE BLUE ECONOMY.
9. **POLEWARD BOUND:** ADAPTING TO CLIMATE DRIVEN SPECIES REDISTRIBUTION.
10. **THE FUTURE OF OCEAN GOVERNANCE.**
11. **SHARING OUR OCEANS FAIRLY:** IMPROVING INTERNATIONAL RELATIONS AROUND OCEAN ISSUES.
12. **A FAIR OCEAN FUTURE FOR EARTH’S FIRST PEOPLES.**

**Summary Papers**

- **S1. IMPACT:** Impact for the oceans: making science more meaningful for industry, society and government.
- **S2. EQUITY:** Equity of our future oceans: reflections on outcomes and practice.
- **S3. BEHAVIOUR CHANGE:** Driving desirable change: how do we achieve ‘the ocean we need for the future we want’?
CMS strongly values our direct connections with local stakeholders and the applied impacts of our research; however we also have strong academic impact at the global scale. Our staff and students have collectively published with hundreds of international co-authors, with citation metrics more than double 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 world average).

**Overall research performance for 2019**

<table>
<thead>
<tr>
<th>Scholarly Output</th>
<th>Authors</th>
<th>Field-Weighted Citation Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>453</td>
<td>2.44</td>
</tr>
</tbody>
</table>

**2019 publications across disciplines**

- Environmental Science (31.6%)
- Agricultural and Biological Sciences (25.9%)
- Earth and Planetary Sciences (9.8%)
- Biochemistry, Genetics and Molecular Biology (2.3%)
- Social Sciences (14.4%)
- Economics, Econometrics and Finance (5.2%)
- Multidisciplinary (4.0%)
- Other (6.9%)
**Outputs in Top Citation Percentiles**

CMS Publications in top 10% most cited world wide

- 33.3%

**Publications in Top Journal Percentiles**

CMS Publications in top 10% journals by CiteScore Percentile

- 77.8%

**International Collaboration**

CMS publications co-authored with institutions in other countries

- 64%

Values for University of Tasmania and Australia are 19.3% and 18.7%, respectively for 2015-2019

Values for University of Tasmania and Australia are 39.6% and 37.2%, respectively for 2015-2019

Values for University of Tasmania and Australia are 50.1% and 52%, respectively for 2015-2019
At CMS, we try to ensure active dissemination of our publications within academic, public, industry and policy spheres. Part of that involves an active social media team (thank you Rachel Kelly, Mary Mackay and Liam Fullbrook!), and production of a wide-range of graphics and infographics.


Image credit: Rowan Trebilco


CONFERENCES & PUBLIC PRESENTATIONS

CONFERENCE CONVENING & SYMPOSIA

Professor Gretta Pecl co-convened the Species on the Move conference held on July 22-26, in Kruger National Park, South Africa. CMS was a major sponsor and CMS members from across many disciplines attended, presented and co-chaired sessions. The conference was carbon offset by supporting the Ekuri community forest in the Cross River State of Nigeria, recognized as the largest and best communally managed forest in West Africa totalling 33,600ha, and a recipient of the prestigious UNDP Equator Award in 2004. We are pleased to say the conference was family-friendly, providing free onsite child-care for participants children – this included visits to see rescued baby rhino’s being rehabilitated, opportunities to climb on ranger helicopters and excursions to plant trees in Kruger National Park!

As part of the conference, Gretta ran a communicating science workshop together with Adriana Verges, and participated in an ‘Engaging the public in science’ panel as well as an Early Career Researcher career pathway Q & A session.

Mary-Anne Lea led a pre-conference workshop ‘On transboundary conservation options for migratory marine predators in the high seas’. Speakers addressed conservation challenges for sharks in the Galapagos, marine vertebrates in the Southern Ocean, through to bycatch of migratory turtles, High Seas governance and IUCN Key Biodiversity Areas, Important Birds Areas and Important Marine Mammal Areas.
Mackay, M & Kelly, R. Understanding perceptions, participatory processes, and potential for effective marine management. MARE Conference, 24-28th July, Amsterdam, Netherlands

Trebiolo R, Constable A, Hofmann E, Murphy E, Melbourne-Thomas J. Marine Ecosystem Assessment for the Southern Ocean: MEASO 2018 and beyond. IMBeR Conference 17th-21st June, Brest, France

Vince, J. Critical Turn in Marine Spatial Planning Panel, MARE Conference, 24-28th July, Amsterdam, Netherlands

KEY NOTES

Alexander, K. Navigating our way to Marine Spatial Planning: A Global Perspective. Victorian MSP Summit, January

Audzijontye, A. Is global warming causing animals to shrink? Society of Experimental Biology Satellite Meeting, 2-5 July, Seville, Spain

Fulton, EA. Juggling biodiversity & food security – keeping all the balls in the air. FAO International Symposium on Fisheries Sustainability: Strengthening the Policy-Science Nexus, 18th-21st November Rome

Fulton, EA. Peter Larkin Memorial Lecture in fisheries science. Trials and Tribulations of Ecosystem Based Management, 10-12th September, Vancouver, Canada.

Hobday, AJ. Understanding and quantifying the state and variability of marine ecosystems. IMBeR Conference 17th-21st June, Brest, France

Hobday, AJ. In a fast-changing world – what does good science look like? Australian Society for Fish Biology, 14-17th October, Canberra, Australia

Hobday, AJ. (2019) Climate change and adaptation in costal ecosystems. Keynote. UCI climate change symposium. Monmouth University, April 17th, New Jersey, USA

Nash, K. Planetary Boundaries and the Sustainable Development Goals on a Blue Planet Australian Society for Fish Biology, 14-17th October, Canberra, Australia


Pecl, GT. Allan Sefton Memorial Lecture. What does climate change mean for Australia’s coasts and oceans? University of Wollongong, 16th August, Wollongong, Australia.

Pecl, GT. Our Oceans in the Anthropocene, International Association of the Pan-Pacific Anthropocene, Plenary lecture. Taipei, May 2019
Pecl, GT. Ocean Climate Change and the Implications for Human Health and Wellbeing, Australasian College for Emergency Medicine 2019 Annual Scientific Meeting, Plenary lecture

Van Putten, IE. How difficult can it be: trade-off decisions in a time of blue economy growth. IMBeR Conference 17th-21st June, Brest, France

Willis, K. The success of local waste management to reduce plastic pollution. Stormwater New South Wales Conference, 27-29th August, Coffs Harbour NSW

INVITED SPEAKERS

Alexander K & Pecl GT. Tasmanian Mediators Network – presentations on conflict & climate change, April, Hobart

Blanchard, J. Why marine-terrestrial linkages matter for sustainable food systems. Interdisciplinary Centre for Conservation Science, Oxford University, 2nd October, United Kingdom

Blanchard, J. Why marine-terrestrial linkages matter for sustainable food systems, Stockholm Resilience Centre/Swedish Royal Academy of Sciences, 30th August, Stockholm, Sweden

Blanchard, J. Why marine-terrestrial linkages matter for sustainable food systems, Institute for Aquatic Resources, Aqua-SLU, 27th August, Sweden

Fulton, EA. Building Knowledge, Capacity, and Collaborations to Develop Indicators for Ecosystem-Based Fisheries Management in Case Studies across the World. Invited webinar for the EBFM Tools Network, May 2019


McDonald, J. (2019) Australia’s approach to coastal adaptation planning, Climate Change, Coasts and Communities Symposium,. Keynote. Urban Coasts Institute climate change symposium. Monmouth University, April 17th, New Jersey, USA

McDonald, J. (2019) Governing geoengineering research for the Great Barrier Reef, Monmouth University Faculty of Science Seminar


Richardson, B. The Art of Environmental Law: How Can Aesthetics Improve Our Environmental Decisions? University of Western Cape, 5th April, South Africa

Richardson, B. Time and Sustainability: What is Missing and What Does Environmental Law Need to Do? University of Cape Town, 3rd April, South Africa

Pecl, GT. Ocean warming, global redistribution of species and climate communications, University of Eastern Finland, September 2019

Pecl, GT. Marine climate change, ecosystems & human well-being, Norway seminar and lecture, University of Tromso, September 2019
Pecl, GT. Species on the move and communicating climate change. Tasmanian Climate Symposium, October 2019

Pecl, GT. Climate-driven species re-distribution in marine coastal systems. Coral Reefs Centre of Excellence Annual Conference, Sydney October 2019


Willis, K. Getting consumers to reduce, reuse and refill bottled water. CSIRO Cutting Edge Science and Engineering Symposium “Waste innovation for a circular economy”, Melbourne VIC

GENERAL PRESENTATIONS

Alexander, K. ‘Antarctic Ambassadors’ – what do we really know? Scientific Committee on Antarctic Research’s (SCAR) Standing Committee on Antarctic Humanities and Social Sciences (SC-HASS) April, Ushuaia, Argentina

Alexander, K. Conflict over marine and coastal ‘common’ resources. Australian Marine Science Association, 7-11th July, Fremantle, Australia

Audzijontye, A. Do fishes get smaller in warmer waters? ICES annual meeting, 9th-12th September, Gothenburg, Sweden


Blanchard, J. Addressing terrestrial limits to marine aquaculture growth. ICES annual meeting, 9th-12th September, Gothenburg, Sweden

Cullen-Knox, C. Publicised scrutiny and mediatised environmental conflict in aquaculture. MARE Conference, 24th-28th July, Amsterdam, Netherlands


Cottrell, RS. Potential for novel feeds to aid sustainable aquaculture growth, Poster presentation. ICES Annual Science Conference, 9-12th September, Gothenburg, Sweden


Haas, B. Regional Fisheries Management Organizations and developing best practice. IMBeR Conference 17th- 21st June, Brest, France

Haas, B. Regional Fisheries Management Organizations and the Sustainable Development Goals. MARE Conference, 24th-28th July, Amsterdam, Netherlands

Hobday, AJ. (2019) Forecasting for marine resource users. GFDL/NOAA Lunchtime seminar series. April 16th

Hobday AJ. (2019) Foresighting to guide scientific investment and preparation for a disrupted future. IMBeR Open Science Meeting, June 17th-22nd, Brest, France
Hobday, A J. & Gaitán-Espitia, J-D. (2019) Climate change adaptation efforts for species may be antagonistic to natural evolutionary responses. Species on the Move International Conference, 22nd-26th July, Kruger National Park, South Africa

Kelly, R. Social licence for marine protected areas. MARE Conference, 24-28th July, Amsterdam, Netherlands

Ison, S. Linking marine science to action: the role and utility of Outcome Mapping. IMBeR Conference 17th-21st June, Brest, France

Ison, S. Social network analysis: How do social and institutional characteristics support long-term marine conservation? MARE Conference, 24th-28th July, Amsterdam, Netherlands

Kelly, R. Social licence for marine protected areas, IMBeR Conference 17th-21st June, Brest, France

Kelly, R. Recreational Fishers & Citizen Science: Stewards of the Ocean. National Recreational Fishing Conference, 10-11th December, Hobart, Australia

McDonald, J et al, Adaptation pathways for conservation law and policy. Species on the Move International Conference, 22nd-26th July, Kruger National Park, South Africa

Mackay, M. How psycho-social drivers are associated to responses to compliance incentives in a recreational fishery experiment. IMBeR Conference, 17th-21st June, Brest, France

Mackay, M. Multiple approaches to understanding recreational fishers' management preferences. MARE Conference, 24-28th July, Amsterdam, Netherlands

Mackay, M. Determining fishers' divergent management preferences in a consumptive recreational fishery. ICES Annual Science Conference, 9-12th September, Gothenburg, Sweden

McCormack, PC. Keeping up with species on the move: designing more flexible conservation laws for a changing world. Species on the Move International Conference, 22nd-26th July, Kruger National Park, South Africa

McCormack, PC. Reforming conservation laws for migratory marine species, Workshop on Conserving Migratory Marine Predators. Species on the Move International Conference, 22nd-26th July, Kruger National Park, South Africa

Pecl GT et al, How is Climate Change Altering Australia’s Coasts, Ecosystems & Recreational Fishery Species? National Recreational Fishing Conference, 10-11th December, Hobart, Australia

Pecl GT et al, Adaptation to climate change in marine coastal systems. Species on the Move International Conference, 22nd-26th July, Kruger National Park, South Africa

Richardson, B. The Art of Saving Biodiversity: Transformational Change with Aesthetics, public lecture, National Science Week, 13th August, Adelaide, Australia
Richardson, B. Restoring Ecosystems: Time and Space as Critical Dimensions of Successful Governance, International Conference on Legal Opportunities for the Conservation and Restoration of Urmia Lake, 14th April, University of Tehran, Iran


Trebilco R, Melbourne-Thomas J, Constable A. Implications of food web change for Southern Ocean Fisheries, conservation and Carbon Export. IMBER Open Science Conference, 17th – 21st June, Brest, France

Trebilco R. & Pecl G. Future Seas: challenges and emerging messages. Talk in ‘Visioning Ocean Futures’ workshop, IMBER Open Science Conference, 17th – 21st June, Brest, France

Uffman-Kirsch, LA. fiduciary model for citizen participation in marine space decision-making, MARE Conference, 24-28th July, Amsterdam, Netherlands

Vince, JZ. Effective integration and integrative capacity in marine spatial planning, MARE Conference, 24-28 June, Amsterdam, Netherlands

Vince, JZ. Challenges and opportunities for Southern Ocean and Antarctic Governance. Geostrategic Futures in the Southern Ocean and Antarctica Workshop, 5-6th December, Canberra, Australia

Vince, JZ. The plastic pollution crisis: constructing solutions in multilevel policy making. Ideas and Crisis Solutions Workshop, 2nd-3rd December, Melbourne, Australia

MARE Conference 2019, Amsterdam

A group of CMS researchers travelled to the Netherlands in July to attend the 10th MARE People and the Sea Conference. The MARE Conference is an international marine social sciences conference that is held every two years in Amsterdam. Our CMS researchers compiled a panel together entitled ‘Understanding perceptions, participatory process, and potential for effective marine management’ that was led by former CMS PhD students Mary Mackay and Rachel Kelly (now both Dr’s!). The panel was presented across two sessions and included presentations from Dr Maree Fudge, Bianca Haas, Sierra Ison, Coco Cullen-Knox, Dr Camilla Novaglio, Dr Emily Ogier, and Lisa Uffman-Kirsch.
COMMITTEES, WORKING GROUPS, PANELS & NETWORKS

Blanchard, J. Participant at the Stanford University “Oceans and the Future of Food” international workshop at Stanford University, Jan 29th-31st, United States of America.

Fulton, EA. Participant at Expert Workshop on Adaptive Management of Fisheries in Response to Climate Change, November, Rome

Fulton, EA. Contributing author on Working group 4 on individual key ecosystem services – Biomass from Fisheries: Provisioning Services and Benefits, for the UN SEEA Experimental Ecosystem Accounting Revision https://seea.un.org/content/seea-experimental-ecosystem-accounting-revision

Melbourne-Thomas, J. Lead author for the IPCC’s Special Report on the Oceans and Cryosphere in a Changing Climate (Polar Regions chapter) and contributing author to the report’s Summary for Policy Makers, launched September 2019

Nash, K. Panel Member for Tasmanian STEM State Forum ‘Gender Diversity Panel’, September, Hobart, Australia


Pecl, GT. Understanding Disaster Risk Forum, Australian Institute for Disaster Resilience, October 2019

Pecl, GT. Climefish invited guest, participating in two workshops on climate change adaptation and stakeholder engagement, Tromsø Norway. https://climefish.eu/

Richardson, K. Invited participant to the ICES/FAO Working Group Meeting on Fishing Technology and Fish Behaviour, April, Shanghai, China

Kelsey Richardson presenting at the Global Ghost Gear Initiative, FAO

Global Ghost Gear Initiative

Kelsey Richardson was in Vanuatu during June, at the invitation of FAO and the Global Ghost Gear Initiative, where she talked about the global estimate of fishing gear losses. Kelsey has also been invited to participate as an expert for an upcoming GESAMP working group (group of experts on scientific aspects of marine protection) focused on seabased sources of marine litter.
Alexander KA, Ogier EM, Evans, JD. Aquaculture-Community Futures: North West Tasmania. Fisheries Research & Development Corporation - $172,996


Cresswell KA, Keane JPN, Ogier EM, Yamazaki S. Evaluation of the subsidy for the Centrostephanus fishery. Department of Primary Industries, Parks, Water & Environment Abalone Industry Reinvestment Fund - $40,000


Osmundsen T, Tvettras R, Alexander KA. Social License to operate for aquaculture (SoLic). The Research Council of Norway Grant - $65,369

PecGT. Intergovernmental Panel on Climate Change (IPCC): participation in the development of the Working Group II volume of the Sixth Assessment Report. Department of Environment and Energy (Cwth): Grant - $22,500

PecGT & The Curious Climate team. Video production for Curious Climate live events. Tasmanian Climate Change Office, $10,000

PecGT, Scott JL, McGee JS, Nowak BS, Lester EA, Vince JA, Norris K, de Salas KL & the Future Seas team. Future Seas: Transforming Australia into a “Marine Knowledge Nation.” Research Enhancement Program University of Tasmania: Internal Funding - $50,000


Tracey S, Lyle JM, Haddy JA, PecGT. Pethybridge H. Opportunities and impacts of range extending scalefish species: understanding population dynamics, ecosystem impacts and management needs. Fisheries Research & Development Corporation - $249,587

Vince JZ. Geostrategic Futures in the Southern Ocean and Antarctica. Department of Defence grant - $122,409

Wilcox C, et al. Improving efforts to reduce IUU fishing through expanding human capacity and implementing new tools to improve maritime surveillance. Australian Department of Foreign Affairs and Trade - $3,300,000

Wilcox C, et al. Stocktaking of IUU fishing in Asia and the Pacific. United Nations Food and Agriculture Organization - $191,000
1. Beth Fulton, Alistair Hobday and Reg Watson made it to the ‘Clarivate Analytics Highly Cited List’ for 2019. Highly Cited Researchers are selected for their exceptional research performance, determined by production of multiple highly cited papers that rank in the top 1% by citations for field and year in Web of Science.

2. Karen Alexander was a part of the Salmon Environmental Interactions Team who were awarded the College of Science and Engineering & University of Tasmania Research Award.

3. Beth Fulton was the recipient of the K. Radway Allen Award; the highest honour awarded by the Australian Society for Fish Biology recognising Beth’s outstanding contributions in fish and fisheries science.

4. Bianca Haas was one of 5 global recipients of the Marine Stewardship Council Scholarship Research Program providing funding to attend two key fisheries commission meetings in Vanuatu and Papua New Guinea.

5. Julia Blanchard was awarded the Swedish Agricultural University (SLU) Visiting Scholar award.

6. Maree Fudge won the best presentation at the CMS showcase for her talk "Revisiting legitimacy of participation in marine governance and decision-making.

7. Kirsty Nash was recognised as a runner up for Nature journals Inspiring Scientist Award https://www.nature.com/collections/jcpghfmqlz/shortlist


ABOVE Sean Tracey receiving the 2019 Recreational Fishing Award for Excellence in Support for Recreational Fishing Research Outcomes.

Beth Fulton, recipient of the K. Radway Allen Award.

Bianca Haas, 2019 recipient of the prestigious Marine Stewardship Council Scholarship Research Program Award.

10. Rachel Kelly was recognised by the College of Science and Engineering, University of Tasmania Outstanding Performance by PhD Candidate Award.

11. Rachel Kelly won the best Elevator Pitch at the Green Talents 10th Anniversary Conference in Berlin for her pitch titled ‘Citizen science - linking and empowering people to protect nature’.


13. Maree Fudge won the CMS Showcase best presentation award for her presentation “Revisiting legitimacy of participation in marine governance and decision-making”.

14. Jess Melbourne-Thomas received the Alumni Achievement Award for distinguished service in the fields of ecosystem & climate change research, University of Tasmania.

15. Kathy Willis won the CMS Showcase best poster award for her poster titled ‘Can Installing water refill stations reduce single-use plastic bottle litter?’

The IMAS Tuna Champions project (led by CMS member Sean Tracey) took out the 2019 Recreational Fishing Award for Excellence in Support for Recreational Fishing Research Outcomes, in recognition of the project’s contribution to recreational fishing research.

Project leader, Associate Professor Sean Tracey said the idea for the Tuna Champions arose while working closely with recreational anglers on a Southern Bluefin Tuna post-release survival project.

Funded by the Australian Government through the Fisheries Research and Development Corporation, this communication and education project is inspiring behavioural change in the recreational fishing community.
OTHER OUTPUTS & ACHIEVEMENTS

- Gretta Pecl was nominated as an Honorary member of the Indigenous Peoples’ and Community Conserved Territories and Areas Consortium (ICCAs). This is a group that promotes the appropriate recognition of, and support to, the territories and areas conserved by Indigenous and local communities.

- Congratulations to our former CSIRO Research Director and current Honorary Fellow, David Smith, who has been appointed as a Commissioner with the Australian Fisheries Management Authority from 1 July 2019 for a period of four years. The AFMA Commission is responsible for advice around domestic fisheries research and management and David will bring a wealth of experience to that role.

- Research from Eva Plaganyi, Gretta Pecl and Alistair Hobday was cited in the UK Houses of Parliament report on climate change and fisheries. POSTNote - UK Gov briefing on Climate Change and Fisheries (https://researchbriefings.parliament.uk/ResearchBriefing/Summary/POST-PN-0604)

- Dr Chris Wilcox was invited as an expert for the project ‘Developing a global fishing index’ and ‘developing a fisheries governance indicator with the Minderoo Foundation.

- Dr Jess Melbourne-Thomas was invited to give the Occasional Address at the 2019 UTAS CoSE Science & Engineering Graduation (where a number of CMS students graduated). Jess used the platform to speak about action on climate change https://livestream.com/universityoftasmania/events/8909168/videos/199990209?fbclid=IwAR3RoIhTeKpPtcdsF_KZvVi1XALdtw6FGiR-i7vBTJ33VP7SjcRwrFiA

- Professor Jan McDonald and Dr Phillipa McCormack gave evidence at a Senate Committee Inquiry into Australia’s Faunal Extinction Crisis, appearing before the Committee at the Hobart hearing on 4 February 2019.

- Beth Fulton was invited to give the Occasional Address at the UNSW Science Graduation Ceremony May 14th, 2019.
Dr Rowan Trebilco co-authored a report from the EU-Australia leadership forum titled “Recommendations on the future of EU-Australia relations”. Produced by the representatives of the 2018 Eu-Australia Emerging Leaders. (https://www.europeaustraliaforum.eu/publications-and-reports)

Dr Jo Vince has been appointed to the Victorian Marine and Coastal Council’s Science Panel. The multi-disciplinary Panel is an advisory group to the Council for the scientific and technical aspects of coastal and marine management in Victoria. During 2019 and 2020, a major focus for the Council and the Science Panel will be contributing to the development of the Marine and Coastal Policy including the Marine Spatial Planning Framework and the Marine and Coastal Strategy.

The CMS family expanded with some non-academic but very precious outputs with high impact factors – congratulations to Cecilia Villanueva, Rich Cottrell, Rowan Trebilco and Julia Blanchard for beautiful new additions to their respective families!
Kelly, R. Social licence in the marine realm. Presented to the ‘School for Seniors’ in Hobart, April


Melbourne-Thomas, J. COOL JOBS: Antarctica (TedX style presentation to an audience of 1500 high school students). World Science Festival Brisbane, Queensland, March 2019.

Pecl, G, invited speaker at the March for Science, Hobart, May 4th, 2019

Richardson, K. Invited Speaker at Sustainability in the Pub, Hobart with the topic ‘Hot Fish’: Kelsey was a part of a panel discussing current efforts combating the impacts of global warming on the fishing industry.


Willis K. Participated in the CSIRO ‘STEM in Schools’ event, local Tasmanian primary school, 30 October

CMS World Oceans Day video: https://www.youtube.com/watch?v=wzT_u5dI4LU&feature=emb_logo
Curious Climate was a major outreach activity led by CMS, involving around 30 scientists in presentations, media interviews or production of presentation materials over July and August. Over 300 questions were submitted by the public and we answered the most popular 8 questions in each region of Tasmania. Videos from the events are available at www.curiousclimate.org.au

CMS in collaboration with Redmap Australia (www.redmap.org.au) and many organisations throughout Tasmania developed and released packs of playing cards to help connect and educate Australians with marine wildlife. The playing cards, developed by Cayne Layton, Gretta Pecl and John Keane, featured species known to be shifting their geographical range due to the effects of climate change. The cards have been a very popular and successful tool to connect with the general public and highlight local impacts from climate change.

MEDIA


Bax, N. ‘In Antarctica, the #MeToo Movement Faces Unique Hurdles’. Buzzfeed: In Antarctica, The #MeToo Movement Faces Unique Hurdles

Bax, N. ‘We need to protect Antarctic Blue Carbon’. Wired opinion: we need to protect Antarctic Blue Carbon

Bax, N. “What’s up down deep?” Hobart Magazine science interview March edition
Blanchard, J. ABC Radio Breakfast, Interview about AquaKulture Performance, and role of aquaculture for food security


Hobday, A. Marine heatwaves threatening oyster industry and affecting Great Barrier Reef, scientists warn. ABC interview https://www.abc.net.au/news/2019-11-25/marine-heatwaves-threaten-oyster-industry-great-barrier-reef/11726630?utm_source=sfmc&utm_medium=email&utm_content&utm_campaign=%5Bspecialist_sfmc_27_11_19_science%5D%3A125&user_id=0fa5f1562c5e48a18c5f2b30b8c28d8b46e5817e6bd57b9b62ca7dd4f607d15&WT.tsrc=email&WT.mc_id=Email%5Bspecialist_sfmc_27_11_19_science%5D%7C125an+increase+in+the+number+2C+duration+and+severity+of+marine+heatwaves&fbclid=IwAR177wv-zT7jP5gOSYFu72Ek07H6dUug_cptck0x2Wt3YjB3evFLFQ7s


Kelly, R. Blog for ‘i2insights’ (10 tips for next generation interdisciplinary research) - https://i2insights.org/2019/10/01/10-tips-for-interdisciplinary-research/


McDonald, J. Our nature laws are being overhauled. Here are 7 things we must fix. https://theconversation.com/our-nature-laws-are-being-overhauled-here-are-7-things-we-must-fix-126021

McCormack, P. Interviewed on ABC local radio on 6 February 2019 with Ryk Goddard about the Australian Senate Inquiry into Australia’s Faunal Extinction Crisis


Nash, K. Interviews in The Mercury and The Examiner about the launch of aKIDemic Life in March.


Nash, K. Interview on Radio ABC Hobart March 2019 about launch of aKIDemic Life


Pecl, G. ‘Species on the Move’. Interview with Gothenburg news. https://goteborg.etc.se/inrikes/forskaren-dykt-upp-mycket-snabbare-nagon-forutspatt


Pecl, G. Warming waters are increasing costs for fisherman along India's Malabar Coast, World Economic Forum, https://www.weforum.org/agenda/2019/02/warming-waters-heat-up-fishing-costs-along-indias-malabar-coast


In addition, the CMS-led Curious Climate project led to extensive media coverage of climate change issues, for example:

- ‘Hasn’t climate change always happened?’ Scientists address the big questions https://www.abc.net.au/news/2019-07-12/scientists-respond-to-climate-sceptics/11299064
- Climate change: We haven’t experienced anything like this in the past 2,000 years https://www.abc.net.au/news/2019-07-25/climate-change-nothing-like-this-over-past-2000-years-scientists/11345022
- Eating meat or going vegan: Which diet is best for the planet? https://www.abc.net.au/radio/hobart/programs/mornings/curious-climate-1/11277472
- Curious Climate: Scientists respond to climate change sceptics, https://www.abc.net.au/radio/hobart/programs/mornings/curious-climate-sceptics/11299646
- Curious Climate: will rising seas change our coastline? https://www.abc.net.au/radio/hobart/programs/saturdays/curious-climate-coastlines/11381976
CMS EVENTS

CMS VISITING SCIENTIST SEMINARS

- Ahjond Garmestani, US Environmental Protection Agency, United States, Transdisciplinary research in practice – what, when, why?, 28th Oct
- Clara Obregón, Murdoch University, Australia, The social-ecological dimensions of a small-scale crab fishery in Western Australia, 12th Dec
- Jason Link, NOAA, United States, Advancing Ecosystem Based Fisheries Management in the United States, 13th Nov
- Max Boycoff, University of Colorado, United States, Creative (Climate) Communications, 28th Nov
- Libby Liggins, Massey University New Zealand, Citizen science and taking stock of biodiversity, April
- Steven Lade, Stockholm University Sweden, Interactions between the planetary boundaries, 10th Jul
- Sally Carson, Otago University New Zealand, Can citizen science drive more than student learning? Perspectives from Southern New Zealand, 23rd Aug
- Tatiana van Steveninck, Leiden University, Interdisciplinary Research: Motivations, success and organizational support, 11th Jul
- Nick Graham, Murdoch University, Australia, Lessons from coral reef devastation reorganisation, 25th Nov
- Tiffany Morrison, James Cook University, Australia, A new governance paradigm for coral reefs under climate change, 3rd Dec

OTHER EVENTS

Aquakulture – sci-art performance and collaboration with jazz musician Ryan Taylor
Aquakulture is a multimedia performance and album (available on spotify.com) by British composer and performer Ryan Taylor that was developed in collaboration with researchers A/Prof Julia Blanchard and Prof Duncan Cameron at the Institute for Sustainable Food at the University of Sheffield, UK. The performance held at IMAS on Nov 8th, 2019 was two years in the making and explored the rapidly changing nature of aquaculture, its connection to land and sea food systems, single issue environmentalism, and deeply rooted attitudes,
perceptions and beliefs in our post-truth era of misinformation. It also featured a lively Q & A session with Ryan Taylor and researchers Julia Blanchard, Duncan Cameron, Catriona Macleod and facilitated by CMS Director Greta Pecl. There is also a mini documentary here: https://vimeo.com/372819451.

Size Spectrum Modelling Training Course and Symposium, Swedish Agricultural University, Lysekil, Sweden, Sept 6-8, 2019 (organisers: Julia Blanchard, Ken Andersen, Gustav Delius, Asta Audzijonyte, Anna Gardmark)

This course and workshop was an official side event of the ICES Annual Science Conference. The course provided an introduction to ‘mizer’ modelling package to a range of researchers from government including NOAA, Cefas, IRD, NIWA, CSIRO, IMR Norway and international academic institutes spanning all career stages. Recent research advances were also presented including climate change applications, eco-evolutionary components, and human components such as fisheries fleet dynamics and bioeconomics.

Launch of aKIDemic Life on 5th March 2019 at Government House
aKIDemic Life is a new website developed to help parents cope with the twin pressures of parenthood and academia. The website was designed and built by CMS researcher Dr Kirsty Nash who, having experienced the challenges of returning to work after maternity leave, wanted to empower and connect thousands of carers and parents around the world working in academic settings. In celebration of International Women’s Day, https://akidemiclife.com/ was launched in Hobart in March by the Governor of Tasmania, Professor Kate Warner, who raised a family while a senior academic in the University’s Faculty of Law.

Interdisciplinary marine research – communication and climate change.
Presentations and workshop for PhD students as part of the European Molecular Biology Laboratory PhD course in Hobart

Editorial Processes Demystified workshop sessions – Tromsø, Hobart and Launceston.
The process of submitting your manuscripts, particularly the first few of your career, can seem like a pretty daunting challenge. Additionally, the whole review process can appear quite mysterious – who do they invite to review and why, why does it take so long to hear a decision, how do the editors balance divergent views and why oh why did they send it back out to review AGAIN? How much effort should you put into a cover letter and when is it ok to challenge an editor’s decision (and how do you do that politely?). Is it bad manners to email and ask why your paper is taking so long? Questions like this and many more were answered for PhD students and early career researchers by panels of experienced editors at several two-hour workshops, led by Professor Greta Pecl.

Goal setting and measuring impact for CMS
Internal CMS Impact workshop led by Dr Chris Cvitanovic, Tuesday, 21st May.

Understanding China’s aspirations in the Southern Ocean, workshop organised by Goldsworthy L., Haward M and McGee J, 5th December, Institute for Marine and Antarctic Studies, UTAS. This workshop was designed to bring a broad range of stakeholders together to better understand China’s policy aspirations for engagement in the Southern Ocean, to explore ways to build and strengthen collaboration with
CMS is thrilled to announce the graduations of the first crop of amazing CMS PhD students in 2019:

• Mary Mackay (Scotland),
• Rachel Kelly (Ireland),
• Rich Cottrell (UK),
• Joseph Wenta (Australia)
• Yannick Rousseau (France)
• Larell Bossi (Australia) and
• Maree Fudge (Australia).

China around CCAMLR policy, and to consider opportunities for Australia to work with China to progress shared goals. The workshop therefore sought to clarify China’s interests and aspirations in the Southern Ocean, gain understanding of areas of shared and differing interests between China and other CCAMLR countries, and generate ideas on improving cooperation between China and other states in the Southern Ocean. There were 69 registered participants, including staff from Lapland University (Finland), the Swedish Diplomatic service, Shanghai University, University of Canterbury (NZ), CCAMLR Secretariat, Australian Antarctic Division, CSIRO, Tasmanian government, Australian Strategic Policy Institute (ASPI), Australian Border Force, Commonwealth Department of Agriculture, Commonwealth Department of Foreign Affairs, Defense, Geoscience Australia, University of Tasmania, La Trobe University, Adelaide University, University of NSW (Australian Defense Force Academy).

Indigenous and Traditional Knowledge Film Event.

As part of the Future Seas Workshop in November 2019, the Traditional and Indigenous Working Group participants were invited to present short films about their research or from their communities. We were treated to an amazing diversity of educational and beautiful films throughout the evening. Films included:

• On the wings of the raven – film on the life and career of Future Seas participant Eero Murtomäki
• An unbroken string - Film from the Tasmanian Indigenous community, introduced by Dean Greeno
• Indigenous management of fisheries in Senegal
• Edge of the knife, film from the Haida community, introduced by Chief Russ Jones

Some of the Centre’s first graduates: Dr Mary Mackay, left and Dr Rachel Kelly, right, together with Professor Greta Pecl, centre.
FUTURE EVENTS
FOR 2020

- CMS Summer School: 30 participants from 10 countries have enrolled in our “Interdisciplinary Skills for Equitable Climate Adaptation in Socioecological Systems” week long summer school, coordinated by Dr Rachel Kelly, and facilitated by Professor Eddie Allison (University of Washington). The summer school will draw on the wealth of expertise existing within the CMS, and aims to connect and inspire young researchers to develop the interdisciplinary thinking and skills needed to address the social and environmental issues of climate change.

- Cecilia Villanueva from CMS and Alejandro Gatto from CESIMAR (Argentina) will be teaching the workshop “Open-source spatial conservation of seabirds: an introduction to using open-data, open-source GIS software and basic spatial analysis tools” at the 3rd World Seabird Conference to be held in Hobart in October 2020.

- Prof Gretta Pecl has been invited to participate in the National Center for Ecological Analysis and Synthesis (NCEAS) 2020 working group on Operationalizing climate resilience in marine fisheries management. https://www.nceas.ucsb.edu/workinggroups/snapp-operationalizing-climate-resilience-marine-fisheries-management

- In April 2020, CMS will be running an intersectionality workshop for its members: Walking in the Shoes of Others, designed by Thomas et al 2020:

VISITING SCIENTISTS & COLLABORATORS

CLOCKWISE FROM TOP LEFT

AHJOND GARMESTANI, US EPA, United States
CRAIG ALLEN, University of Nebraska, United States
CLARA OBREGÓN, Murdoch University, Australia
DUNCAN CAMERON, University of Sheffield, UK
EERO MURTOMÄKI, Elder, Finland
HALFDAN PEDERSEN, Translator, Greenland
JANET NYE, Stonybrook, United States
JASON LINK, NOAA, United States
KAISU MUSTONEN, Snowchange, Finland
LIBBY LIGGINS, Massey University, New Zealand
MAX BOYCOFF, University of Colorado, United States
MIBU FISCHER, CSIRO Brisbane, Australia
NICK GRAHAM, Lancaster University, Australia
NUUNOQ FREDERIKSEN, Greenland
RITA LUUKARINEN, Snowchange, Finland
CHIEF RUSS JONES, Council of the Haida Nation, Canada
RYAN TAYLOR, Jazz Musician, UK
SALLY CARSON, Ontago University, New Zealand
STEVEN LADE, Stokholm University, Sweden
SUTEJI HUGU, TAO Foundation, Lanyu Island, Taiwan
TATIANA VAN STEVENINCK, Leiden University, Netherlands
TIFFANY MORRISON, James Cook University, Australia
ROB STEPHENSON, DFO, St Andrews Biological Station, New Brunswick Canada
TERO MUSTONEN, Head of Selkie village in North Karelia, Finland
# STEERING COMMITTEE

Beth Fulton, CSIRO  
Alistair Hobday, CSIRO  
Richard Coleman, UTAS IMAS  
Terry Bailey, UTAS IMAS  
Ingrid van Putten, CSIRO  
Jan McDonald, UTAS  
Joanna Vince, UTAS  
Jenn Scott, UTAS  
Dugald Tinch, UTAS  
Ian Dutton, DPIPWE  
Jonny Stark, AAD  
Martin Excel, Austral Fisheries

# STUDENT REPRESENTATIVES

Sierra Ison  
Bianca Haas

# EXECUTIVE SUPPORT

Cecilia Villanueva  
David Mossop  
Madeline Green

# SOCIAL MEDIA TEAM

Mary Mackay  
Rachel Kelly  
Liam Fullbrook

# THEME LEADERS

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

# CMS MEMBERS & COLLABORATORS

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# CMS STUDENTS

| Angela Abolhassani   | Dimuthu Jayakody  |
| Bianca Haas         | Elisavet Spanou   |
| Carla Sbrocchi      | Florence Briton   |
| Clara Obregón       | Giarrn Carroll    |
| Caterina Goncalves  | Hannah Fogarty    |
| Cloe Cummings       | Joseph Wenta      |
| Coco Cullen-Knox    | Kathy Willis      |
| Clare Pitt           | Katie Marx        |
| Danielle Smith      | Kelsey Richardson |
| Dean Greeno         | Larelle Bossi     |
| Lauchlin Wilkinson  |                       |
| Liam Fullbrook      |                       |
| Linda Hunt          |                       |
| Lisa Uffman-Kirsch  |                       |
| Lynda Goldsworthy   |                       |
| Lynna Cortes Rueda  |                       |
| Lynnee Chikudza     |                       |
| Mary Mackay         |                       |
| Michael Murunga     |                       |
| Mohammad Khodajouei |
| Niyomi Pethiyagoda  |                       |
| Peter Puskic        |                       |
| Rachel Kelly        |                       |
| Richard Cottrell    |                       |
| Sierra Ison         |                       |
| Sheryl Hamilton     |                       |
| Theresa Stol        |                       |
| Tormey Reimer       |                       |
| Yannick Rousseau    |                       |
Centre for Marine Socioecology (CMS)
Institute for Marine and Antarctic Studies
20 Castray Esplanade
Battery Point, Hobart
Tasmania, Australia 7004
+61 3 6226 6379
Gretta.Pecl@utas.edu.au (Director)
Cecilia.Villanueva@utas.edu.au (Executive Support)

MARINESOCIOECOLOGY.ORG