PATHWAYS TO IMPACT PLAN

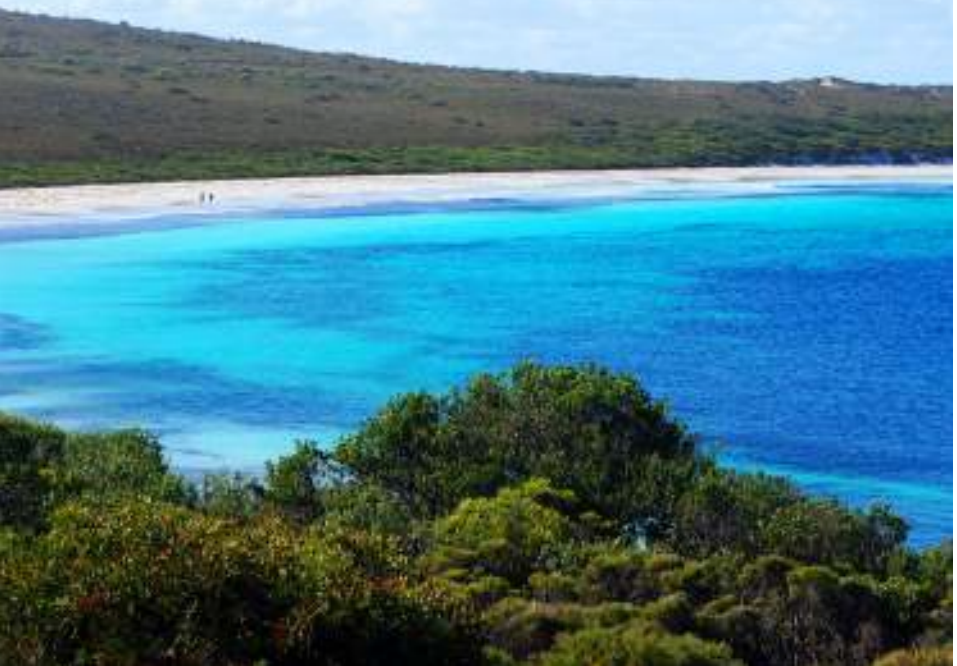
UNIVERSITY of TASMANIA | IMAS INSTITUTE FOR MARINE & ANTARCTIC STUDIES | CSIRO

CMS
CENTRE FOR MARINE SOCIOECOLOGY

WHO WE ARE

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.



VISION A WORLD-LEADING CENTRE TO SUPPORT INFORMED AND SUSTAINABLE MANAGEMENT OF MULTIPLE-USES IN MARINE AND COASTAL SYSTEMS

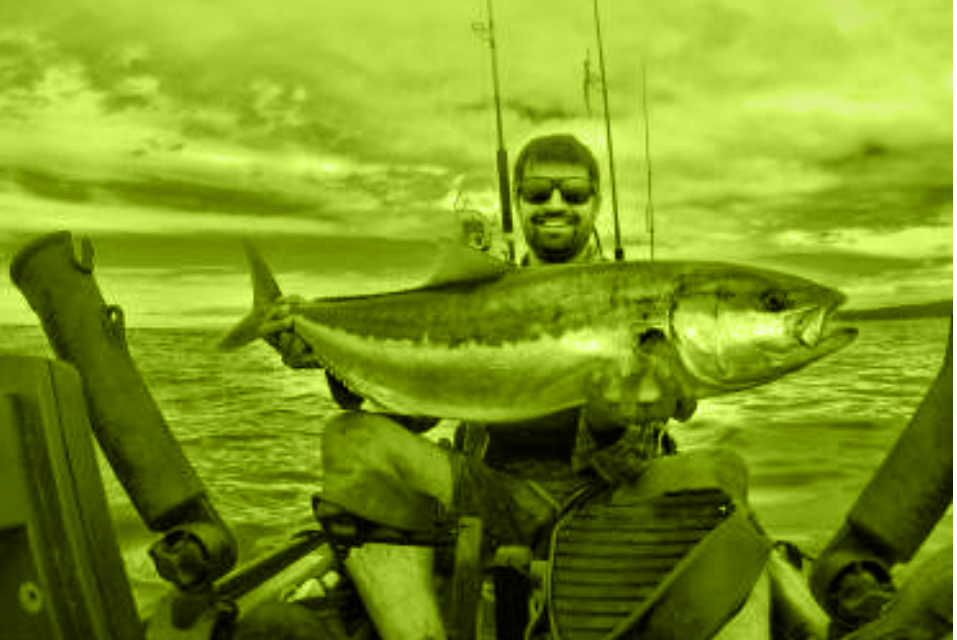
MISSION TO PROVIDE EXCELLENCE IN RESEARCH AND RESEARCH TRAINING THAT UNDERPINS THE SUSTAINABLE DEVELOPMENT OF THE MARINE DOMAIN FOR ALL USERS AND BUILDS THE NECESSARY CAPACITY TO PROVIDE SKILLS AND SOLUTIONS FOR INDUSTRY, GOVERNMENT AND THE COMMUNITY

We bring together disciplinary expertise in physics, law, economics, biology, sociology, psychology, human health, art, media, philosophy and governance from the UTAS's Institute for Marine and Antarctic Studies, the 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, the AAD, and from selected partners around the world. 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.

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.

WHAT WE DO

Marine socioecology is a challenging new area of research that combines multidisciplinary, interdisciplinary and transdisciplinary components to support integrated systems perspectives. The approach recognises that humans are part of marine systems, and that considering social and ecological components separately cannot deliver the knowledge needed to support healthy sustainable marine systems, and the human communities that depend on them.



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 sustainable development of individual sectors such as food production, energy generation, transport, recreational and cultural values. Our work is actively working towards solutions across five key themes:

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 in partnership with a range of stakeholders including practitioners, managers, policy makers and the public 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.

WAYS OF WORKING

We bring together an extraordinary diversity of disciplinary expertise, and consider multiple knowledge systems. We work together in active multi-disciplinary, inter-disciplinary and trans-disciplinary collaborations to directly address both the theoretical and applied aspects of marine socioecological systems, at local, regional and global scales.

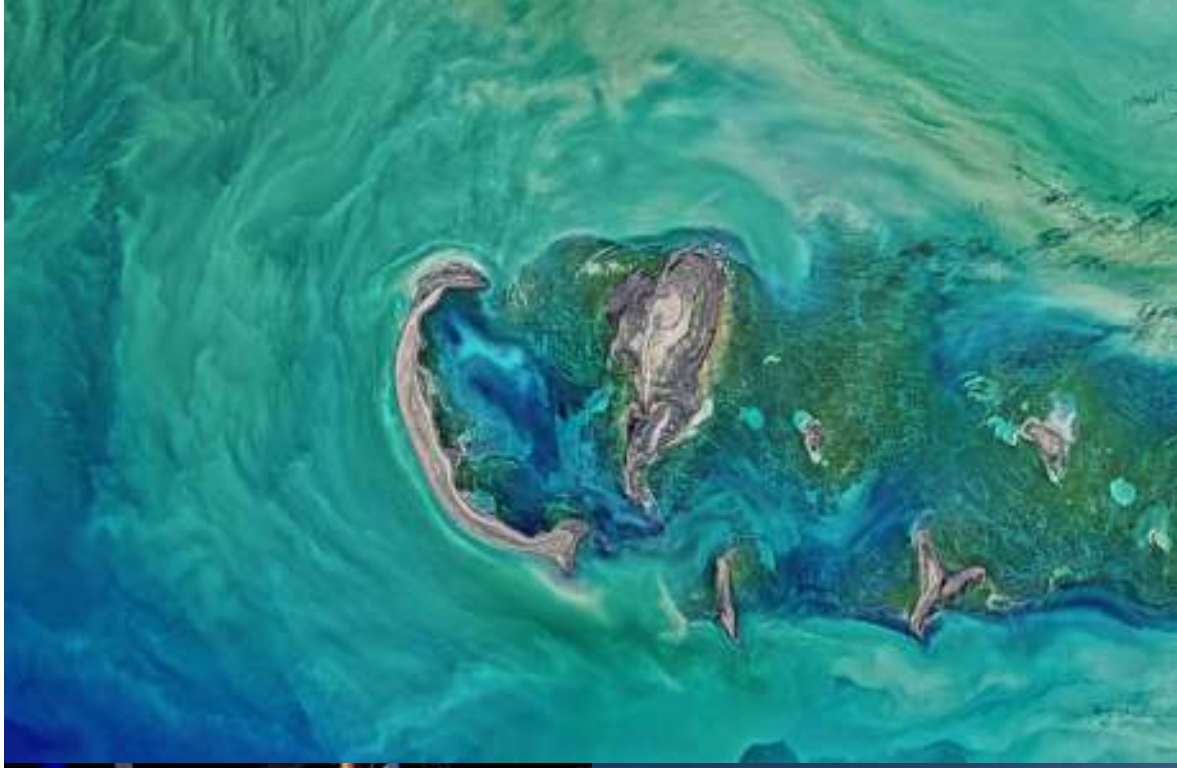
INTRA-DISCIPLINARY
– working within a single discipline

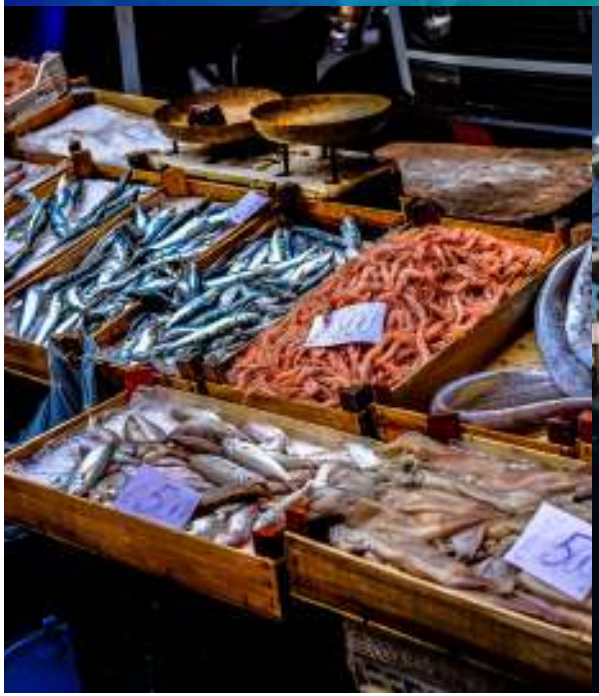
CROSS-DISCIPLINARY
– viewing one discipline from the perspective of another

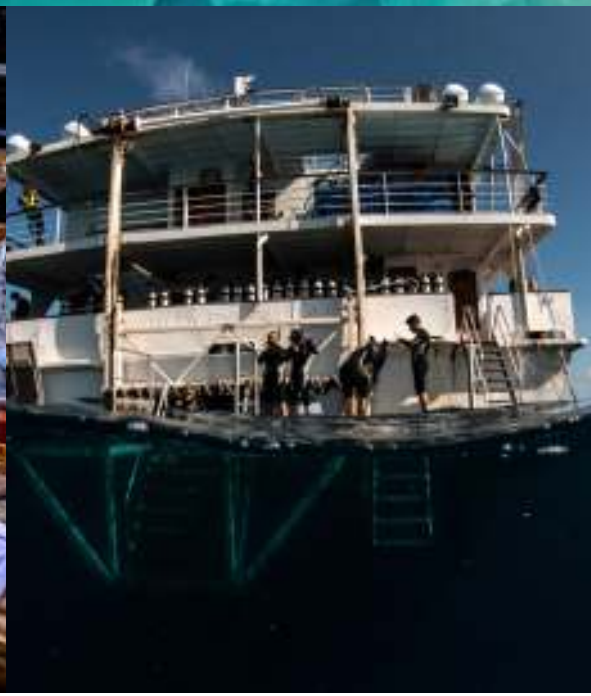
MULTI-DISCIPLINARY
– people from different disciplines working together, each drawing on their disciplinary knowledge

INTER-DISCIPLINARY
– integrating knowledge and methods from different disciplines, using a genuine synthesis of approaches

TRANS-DISCIPLINARY
– creating a unity of intellectual frameworks beyond the disciplinary perspectives, often including stakeholders, (i.e. a person or group that has an investment, share or interest in the outcome of the research)







HOW WE WORK

Values define and enable a positive work culture. Our Values Charter guides our work, inspires us, and makes us proud to be part of CMS.

Collaboration: we are stronger & more innovative through the power of partnerships

- We work in teams, taking and sharing responsibility to achieve common goals and overcome challenges
- We are collegial, combining our strengths to support one another
- We value diversity, actively seeking out and respecting the contributions of a range of people and perspectives

Excellence and Impact: we strive for quality and meaning

- We aim to use innovative, multi-disciplinary, interdisciplinary and transdisciplinary approaches to yield new insights
- We take a holistic view of the problem-solving and knowledge-system seascape
- We strive to make a difference to the oceans and the well-being of the people that depend on them

Learning and sharing:

- We use knowledge and research to achieve better outcomes & continuously improve and learn from our experience
- We communicate our research, and engage with communities in understanding the world and addressing challenges, as a core part of our job or training

We are committed to projects, partnerships and ways of working that seek to achieve the best outcomes for our people as well as our projects

- We acknowledge with deep respect the traditional owners of the lands, waterways, seas and skies in which we work and live
- We respect each other's values, cultures and world-views
- We recognise that innovation involves taking risks, and we aim to create a safe space for learning and exploration to encourage members to push their boundaries (and support each other in learning when this doesn't work out)
- We share information, knowledge and skills, with a 'coaching culture' to provide support and encouragement to others
- We acknowledge and give credit to colleagues – we strive to amplify others' successes
- We treat people equally, without prejudice, and focus on achieving equity
- We commit to making science family-friendly
- We have a culture of honesty and integrity. We speak up when we see our values being challenged

WHAT WE SEEK TO ACHIEVE

1 CMS is a world leader in interdisciplinary marine research

GOALS	MEASURES OF SUCCESS	REQUIRED RESOURCES
✔ High impact interdisciplinary marine research (focus on quality not quantity). ✔ Championing and exemplifying research processes that are inclusive, transparent and respectful (of disciplines and career stages). ✔ A strong research culture that promotes, supports and rewards diverse collaboration, whilst acknowledging the additional challenges posed through interdisciplinary research.	✔ CMS research outputs are highly regarded and used by industry, government and research partners. ✔ Number of publications in top tier journals (relative to discipline). ✔ Range of disciplinary journals and representation in cross-disciplinary journals. ✔ Number of other high-impact research outputs (web resources, policy documents, reports, books etc.) ✔ Number of invited keynote presentations from CMS members. ✔ Number of external research awards given to CMS members. ✔ CMS members recognised on annual list of 'highly cited researchers'. ✔ Altimetric scores of CMS papers places them in top 10% of comparable papers. ✔ Number of invited presentations by CMS members outside of academia. ✔ Non-CMS members (both domestically and internationally) requesting to join CMS. ✔ Long-term retainment of CMS researcher and student members (i.e. creating a 'CMS culture' members want to remain part of). ✔ CMS members invited to author perspective/opinions pieces in top tier journals such as those belonging to Science, Nature or Cell.	✔ CMS Senior Management Team to provide a clear articulation/definition for what interdisciplinary research is (i.e. what are CMS members working towards in practice). ✔ Clear policy on affiliation 'badging' for CMS peer-reviewed publications and outputs. This should deal with tensions with partner co-badging (e.g. IMAS, CSIRO, etc). ✔ Clear guidance as to what constitutes a 'top tier journal' for different disciplines. ✔ Mechanisms to recognise CMS influence and impact outside the conventional peer review process. ✔ Strategic communication strategy focused on sharing CMS publications and outputs to external audiences. ✔ Establishment of Research Themes, each with an active leader/s. ✔ Recruitment of students focused on established research themes (i.e. building capacity within each theme). ✔ Established mechanism for annual internal review of research excellence.

2 The CMS brand is internationally recognised and highly regarded

GOALS	MEASURES OF SUCCESS	REQUIRED RESOURCES
✔ To be globally recognised as a world leading interdisciplinary marine research centre. ✔ To be unique and identifiable from other interdisciplinary marine research organisations. ✔ To attract collaboration and participation from the highest quality researchers and students. ✔ To establish a vibrant program of hosting international visitors. ✔ For the CMS logo to be synonymous globally with research excellence. ✔ To be the provider of choice for interdisciplinary marine research activity in Australia.	✔ Increased involvement in international events and funding proposals (particularly via direct approach as opposed to applying via a competitive process). ✔ World leading experts choose to visit CMS (e.g. on sabbatical). ✔ CMS members invited to other institutions on visits. ✔ CMS approached by event organisers to co-badge. ✔ Increased requests from external researchers to become CMS members, and in particular, from the international research community. ✔ Continual growth in the number of people that subscribe to CMS newsletters/blogs. ✔ Growth in the yearly number of visits to the website	✔ Clear and shared value proposition (what differentiates CMS from other groups). ✔ A physical presence (somewhere visitors can go and talk to a CMS contact where CMS logos are present, like a 'shopfront'). ✔ Dynamic and informative website. ✔ CMS badged merchandise (e.g. polo shirts, fleece jackets, etc.). ✔ Development of a strategic marketing campaign, and associated funding to implement. ✔ Active presence on social media promoting CMS activities and achievements. ✔ Opportunities for outside parties (researchers, institutes and stakeholders) to actively approach and engage with the CMS – e.g. Annual Showcase event, Twitter Conference, etc. ✔ Dedicated communications and business development position to develop strategy, manage website & social media, write press briefings, employed at least at 0.5FTE.

3 Build and maintain active and meaningful stakeholder connections at the CMS-level across policy and industry

GOALS	MEASURES OF SUCCESS	REQUIRED RESOURCES
✔ To strategically identify the core stakeholder groups of interest to CMS members, and develop a tailored engagement strategy for each group. ✔ To align stakeholder research needs with CMS research activity (i.e. policy-driven science). ✔ To be recognised as a trusted provider of marine research among external stakeholders. ✔ To be the partner of choice among external stakeholders for joint research proposals and activities.	✔ Annual stakeholder mapping shows growth and changes in external CMS affiliate networks (focused on new relationships, trust building, cohesion, etc.). ✔ Stakeholder testimonials reflect positive experiences of stakeholders that have worked with CMS. ✔ The number and diversity of direct approaches from external stakeholder requesting to work with CMS members. ✔ The number and diversity of direct approaches from external stakeholder requesting information from CMS members. ✔ CMS research is reflected in outputs of stakeholder agencies (e.g. cited in policy briefs, referred to in stakeholder meetings by end-users, etc.). ✔ ARC Linkage grants developed with broad range of stakeholders. ✔ Increased number of CMS members (in particular ECRs) engaging with external stakeholders ✔ Annual increase in number of new non-academic collaborators involved in CMS funding proposals, projects and outputs. ✔ External stakeholders request to be affiliated with CMS (i.e. as formal CMS members or visitors). ✔ Inclusion of stakeholders within faculty for CMS training courses, (e.g. summer schools)	✔ Dedicated 'knowledge broker' type role (opposed to communications role) focused on two-way knowledge exchange and relationship building, employed at least at 0.5FTE. ✔ Development of a clear 'value proposition' for external stakeholder that highlights what CMS can offer (this should also be developed into a 'glossy' brochure that members can send stakeholders as part of early interactions). ✔ Dedicated funding to hold events (formal and informal) focused on external stakeholder engagement and relationship building. These events must be focused on two-way engagement, not things like 'come see a science presentation'. ✔ Training in science engagement for public, policy and industry. ✔ Administrative support to obtain stakeholder testimonials and feedback. ✔ Stakeholder engagement is valued as a core component of researcher activity for CMS members.

4 Secure appropriate and sustained funding for the CMS that offers longevity

GOALS	MEASURES OF SUCCESS	REQUIRED RESOURCES
✔ To focus on larger and longer termed funding streams (e.g. ARC Linkages, CoE, etc.) as opposed to short term project funding. ✔ To diversify funding sources (e.g. through new partnerships, from philanthropic organisations, etc.) ✔ To have sufficient external funding to reduce ongoing CSIRO/UTas investment, and/or provide increased return on existing level of investment. ✔ To increase funding for dedicated CMS support staff in operations, communications, and knowledge-brokering, and dedicated CMS post-doctoral researchers. ✔ Develop and deliver 'products' that can supplement short term funding challenges, e.g. online coursework units.	✔ The proportion of funding acquired from new streams (e.g. philanthropic organisations). ✔ Sufficient funding for a director (e.g. 0.5FTE plus loading as per IMAS Centre heads for example), administrative support role (1.0FTE), knowledge broker (>0.5FTE) and communications officer (>0.5FTE). ✔ CMS products (e.g. summer school) generating short term funding on a regular basis to supplement CMS activity.	✔ Access to Business Development expertise (potentially drawing on CSIRO and UTas Business Development personnel) to help identify and apply for strategic funding opportunities. ✔ Additional time to write large scale funding proposals (or mechanisms to reduce burden on members, such as greater administrative support).

5 CMS is a world leader in delivering training in interdisciplinarity in marine socioecology

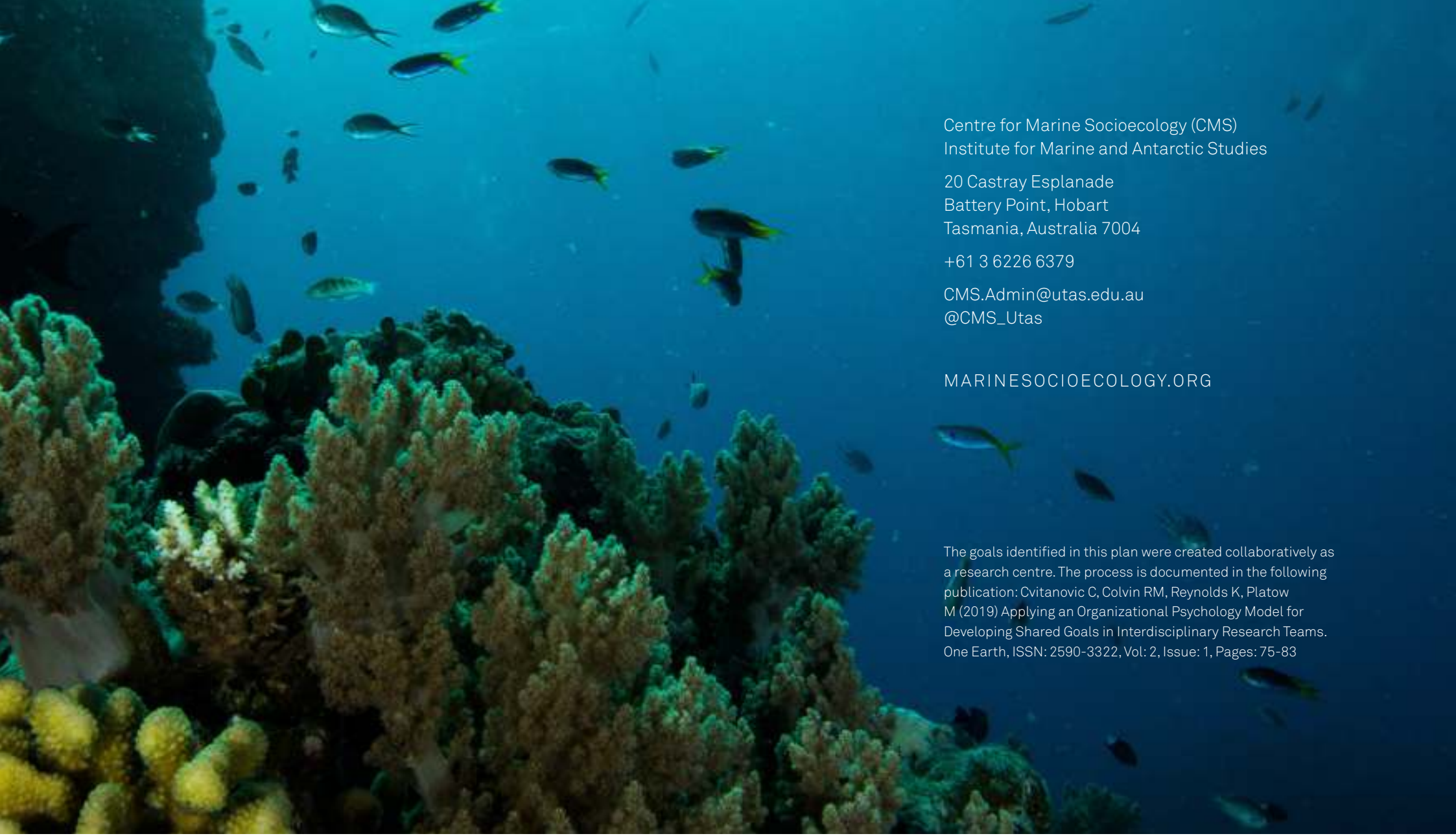
GOALS	MEASURES OF SUCCESS	REQUIRED RESOURCES
✔ CMS PhD students recognised as rising stars in their fields (academia, industry, policy, NGOs, science engagement, etc.). ✔ CMS PhD program recognised internationally as world's best interdisciplinary marine training program. ✔ Development of CMS short courses and programs (e.g. summer schools) that are recognised nationally and internationally as best practice training for interdisciplinary marine science.	✔ Increased number of student-led peer-reviewed papers. ✔ Student-led peer reviewed papers published in high impact journals. ✔ Proportion of CMS PhD graduates secure employment following degree, and in a diverse range of organisation e.g. universities, government, industry and NGOs. ✔ External/international ECRs (students and post-docs) have been attracted to join the CMS. ✔ Increased demand nationally and internationally for CMS courses (e.g. summer schools). ✔ Increased proportion of CMS graduates securing DECRAs (or equivalent overseas).	✔ Horizon scan of existing interdisciplinary marine summer schools to identify a unique niche that CMS can cater towards. ✔ Funding for FTE for CMS members to lecture & develop units/courses. ✔ Increased administrative support to coordinate training and summer schools. ✔ CMS short courses/summer schools are accredited to give student participants class credits. ✔ A formal CMS student network, that for example will provide regular and ongoing support, interdisciplinary training, skill development and mentoring for students.

6 Within the CMS, the culture is one of trust, integrity, cohesion, support and diversity

GOALS	MEASURES OF SUCCESS	REQUIRED RESOURCES
✔ To establish a tailored mentoring program for CMS students and post-docs (separate to those offered by IMAS and CSIRO) that is focused on the additional challenges posed by working in an interdisciplinary research setting. ✔ To hold regular face-to-face interactions focused on knowledge sharing and 'community building', including an annual retreat off-site. ✔ For CMS members to respect and value trial an error, and the opportunity failure provides for learning. ✔ For CMS members to actively participate in CMS activities.	✔ Levels of satisfaction among CMS members in relation to CMS activities. ✔ CMS annual retreat attended by more than 65% of Tasmanian members across all career stages. ✔ CMS meetings and other activities attended by more than 65% of CMS members across all career stages. ✔ All CMS ECRs provided with opportunity to participate in a dedicated CMS mentoring program. ✔ Increased number of ECRs/students playing leadership roles in CMS events. ✔ Long term engagement and retainment of CMS members.	✔ Development of survey to measure attitudes of CMS members (whilst ensuring their privacy and anonymity is protected). ✔ Increased frequency of informal social interactions. ✔ A 'physical space' for CMS members to meet and talk informally (e.g. CMS lunch room). ✔ Training for all CMS members (across all career stages) in 'soft skills' (e.g. team work, collaboration, communication, etc.). ✔ CMS meetings include agenda item focused on collectively discussing and learning from successes, failures and roadblocks experienced by members in the group ✔ Reward structures that promote participation (e.g. access to CMS funds only through active participation in diversity of CMS activities). ✔ Participation within CMS valued as a core component of research activity by each researchers co-affiliation. ✔ Greater administrative support to organise team events. ✔ Improved mechanisms for sharing CMS achievements throughout the CMS community.

7 The CMS is a leader in effective science communication and engagement

GOALS	MEASURES OF SUCCESS	REQUIRED RESOURCES
✔ CMS research and researchers are profiled in diverse media sources. ✔ To expand the richness and depth of engagement with Indigenous collaborations, such that these relationships are mutually meaningful and beneficial. ✔ CMS members are approached by outside parties to lead or engage in science communication events and training activities. ✔ CMS undertakes innovative engagement activities, informed and improved by our research.	✔ Positive testimonials and feedback from partners, particularly Indigenous partners. ✔ Each year, hold at least two workshops focused on building the capacity of CMS members in science communication and engagement (e.g. blog writing, effective use of social media, innovative approaches to engagement, etc.). ✔ CMS news/blog page (as part of existing website) with regular posts (at least monthly) with contributions from all CMS members. ✔ Growth in number of followers on CMS social media channels. ✔ Wider recognition of CMS science communication efforts (e.g. Eureka awards, media uptake). ✔ Growth in the range and nature of engagement activities of CMS members. ✔ Formal evaluation of effectiveness of engagement projects, and publication of results where appropriate. ✔ Production/participation in policy briefs and industry communications.	✔ Funding for tailored training programs relating to science communication and engagement. ✔ Employment of a (i) professional communications officer and a (ii) knowledge broker. ✔ Development of a research-informed communication strategy, and associated funding to implement.



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The goals identified in this plan were created collaboratively as a research centre. The process is documented in the following publication: Cvitanovic C, Colvin RM, Reynolds K, Platow M (2019) Applying an Organizational Psychology Model for Developing Shared Goals in Interdisciplinary Research Teams. One Earth, ISSN: 2590-3322, Vol: 2, Issue: 1, Pages: 75-83

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