



FUTURE SEAS

The United Nations has declared 2021-2030 as the **UN Decade of Ocean Science for Sustainable Development**.

The objective is to motivate international efforts aimed at improving ocean health by providing the science necessary for sustainable development of the oceans - to underpin **'The ocean we need for the future we want'**.

This coordinated effort is urgently needed as demands for natural resources continue to escalate, and society is faced with managing these demands in the face of unprecedented environmental changes.

The core emphasis of the UN Ocean Science Decade is to generate the knowledge and data to support sustainable development. However, major transformations are needed to create a sustainable future for our state, region, country and the planet. Such transformations are reliant on more than 'just' additional data and knowledge.

Moreover, public support for science is at an all-time low and the science-policy gap is growing. "The ocean we need for the future we want" requires scientists and decision-makers to identify how to facilitate the use of available science and encourage the uptake of behaviors at individual, local and global scales - that will leverage environmental benefit.

A SPECIAL ISSUE in *Reviews in Fish Biology and Fisheries* (impact factor 3.5), with 12 journal articles each addressing a key challenge for the UN Ocean Sciences Decade, and 3 summary papers exploring the lessons learnt across the key challenges.

The Future Seas initiative takes a fresh, people-centered approach to thinking about key ingrained sustainability challenges over the coming decades.



What is 'Future Seas'?

A UNIQUE COLLABORATION, spearheaded by the Centre for Marine Socioecology, of over 100 researchers from the University of Tasmania (UTAS), the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and other institutions. Within UTAS, members come from the Colleges of Arts, Law and Education, Health and Medicine, and Sciences & Engineering (specifically the Institute for Marine and Antarctic Studies and the School of Technology, Environments and Design). The collaboration includes psychologists, public health and education experts, philosophers, ecologists, oceanographers, climate modelers, economists, social scientists, engineers, information and communications technology researchers, as well as governance, law and policy experts.

Approximately 40% of the group are PhD students and Early Career Researchers, providing an excellent opportunity to train and mentor the next generation of interdisciplinary researchers. In addition to the Australian-based researchers we are collaborating with Indigenous representatives from around the world to define and lead the drafting of their own 'key challenge' for the oceans, as well as contribute much needed perspectives to the other challenges.

CREATION OF AN INTERDISCIPLINARY RESEARCH AGENDA focused on real-world challenges and providing a clear foundation for future research activities to facilitate desirable transformative change for each key challenge

MARINESOCIOECOLOGY.ORG



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. CONNECTED TO THE OCEANS: SUPPORTING OCEAN LITERACY AND PUBLIC ENGAGEMENT



5. CLEANER SEAS: REDUCING MARINE POLLUTION



6. OCEANS AND SOCIETY: FEEDBACKS BETWEEN HUMAN AND OCEAN 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. GOVERNING THE OCEANS: GOVERNANCE OF SOVEREIGN AND COMMON POOL RESOURCES



11. SHARING OUR OCEANS FAIRLY: IMPROVING INTERNATIONAL RELATIONS AROUND OCEAN ISSUES



12. INDIGENOUS PEOPLES: A FAIR OCEAN FUTURE FOR EARTH'S FIRST PEOPLE (PLACEHOLDER TITLE)

Summary Papers



S1. IMPACT FOR THE OCEANS: MAKING SCIENCE MORE MEANINGFUL FOR INDUSTRY, SOCIETY AND GOVERNMENT



S2. HOW DO WE ENSURE EQUITY IN THE FUTURE USE OF OUR OCEANS?



S3. DRIVING DESIRABLE CHANGE: HOW DO WE ACHIEVE 'THE OCEAN WE NEED FOR THE FUTURE WE WANT'?



Our Approach

Future Seas uses a strategic technique called 'foresighting' to develop interdisciplinary, evidence-informed plausible scenarios of the future by 2030, for each of the key challenges.

The scenarios include what the future would look like if current trends continue, and also what our future could look like if

we more effectively used the data and knowledge currently available to us, and pushed as far as possible towards achieving the Sustainable Development Goals (SDG's). We then use 'back-casting' (i.e. working backwards from the desirable future) to generate a tangible plan for possible actions to under take

at local, regional and global scales, if society chose to work towards the future more in line with the UNSDG's.



We take a broad and interdisciplinary look at what processes and approaches have been and could be effective for leveraging change. Uniquely, in addition to management, policy and governance actions, our collaboration is exploring what approaches have been used in Psychology, Information and Communications Technology (ICT) and Public Health for human behavior change across all levels of intervention.

The field of psychology has generated a body of evidence about the design and efficacy of behaviour change interventions for individuals, organisations and communities. This research has mainly been applied to health literacy and health behaviours, however, the principles and mechanisms inform models of change that can be applied to other real-world challenges, such as marine environmental issues. The field of ICT has informed measurement of human behaviour, cognition and environmental psychology perspectives that underpins technology enabled behaviour change. Psychology is also moving increasingly in synergy with the fields of computing and technology to maximise the reach, innovation and sustainability of change interventions, whether they be programs for individuals or whole communities.



Contact the Future Seas Leadership Team

Gretta.Pecl@utas.edu.au, Director, Centre for Marine Socioecology, University of Tasmania, Hobart, Australia
7001 kirsty.nash@utas.edu.au, karen.alexander@utas.edu.au, Jess.Melbourne-Thomas@csiro.au;
Camilla.Novaglio@csiro.au

MARINESOCIOECOLOGY.ORG • FUTURESEAS2030.ORG



@CMS_UTAS