

Associate Professor Alana Grech

ARC Centre of Excellence for Coral Reef Studies
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Current position

Assistant Director (Nov 2016 – present)

Australian Research Council Centre of Excellence for Coral Reef Studies, **James Cook University**, Townsville, Australia

Previous positions

Lecturer (July 2013 – Jan 2016) and Senior Lecturer (Jan 2016 – Nov 2016) in Spatial Information Science

Department of Environmental Sciences, **Macquarie University**, Sydney, Australia

Postdoctoral Research Fellow (May 2010 – July 2013)

Australian Research Council Centre of Excellence for Coral Reef Studies, **James Cook University**, Townsville, Australia

Qualifications

PhD (2010)

School of Earth and Environmental Sciences, **James Cook University**, Townsville, Australia

Bachelor of Environmental Science, 1st Class Honours (2003)

School of Earth and Environmental Sciences, **University of Adelaide**, Adelaide, Australia (Major: Soil Conservation)

Amount of time as an active researcher

I was awarded my PhD 11 years ago, in 2010, and in that period I have experienced 18 months (1.0 FTE) of academic interruptions due to two periods of parental leave and part-time work. **I have had the equivalent of 5.5 full-time years of postdoctoral research experience** due to parental leave, part-time work and teaching and service roles at two universities. My current work profile includes 0.6 FTE of research-related service and 0.4 FTE of research.

Awards

Award for Excellence in Graduate Research Leadership (2019)

Graduate Research School, James Cook University

Queensland Young Tall Poppy Scientist of the Year Award (2018)

Australian Institute of Policy and Science

Business Higher Education Round Table (BHERT), Award for Outstanding Collaboration for National Benefit (Non-Economic) (2017)

Awarded to members of the Biodiversity Node of the NSW Office of Environment and Heritage Adaptation Research Hub

Asem Duo Fellowship, Wallonie-Bruxelles International (2015)

Teaching and research collaboration, Macquarie University and Université catholique de Louvain, Belgium. A Grech and E Hanert €10K

Learning and Teaching Award, Macquarie University Department of Environment and Geography (2014)

Learning and Teaching Award for Undergraduate Teaching in Spatial Information Science. M Chang and A Grech \$2K

Early Career Researcher Award, National Environmental Research Program (2013)

Sponsorship to attend the Australian Academy of Science, *Science at the Shine Dome*

Winston Churchill Memorial Trust Fellowship (2012)

Fellowship at the International Centre for the Study of the Preservation and Restoration of Cultural Property in Rome, Italy. \$15K

Research grants > \$10,000

Australian Research Council Linkage Grant	Collaborative science for monitoring of Northern Territory marine megafauna. Chief investigators: S Banks, R Harcourt, A Grech, C Salgado Kent. \$535K (2020 – 2024)
Australian Department of Agriculture, Water and Environment	How effective are Australian Marine Parks at protecting EPBC listed species and what can be done to improve their efficacy? Our Marine Parks Round Two. Chief investigators: T Pisani, R Harcourt, A Grech, D Slip, V Tulloch \$151K (2020 – 2022)
Great Barrier Reef Marine Park Authority	An assessment of the distribution and abundance of dugong and in-water large marine turtles along the Queensland coast from Cape York to Hinchinbrook Island. Chief investigators: H Marsh, S Sobotzick, A Grech \$423K (2018 – 2020)
Australian Department of Agriculture, Water and Environment	Stranding's action plan for cetaceans. Chief investigators: R Harcourt, I Jonsen, A Grech \$155K (2016 – 2017)
The Ian Potter Foundation	Predicting dispersal and connectivity of seagrass meadows in the Great Barrier Reef and Torres Strait. Chief investigator: A Grech \$20K (2015 – 2016)
Australian Department of Agriculture, Water and Environment	Update Species Information and Threats Database (SPRAT) profiles. Chief investigators: R Harcourt, A Grech, V Pirotta \$41K (2015).
Great Barrier Reef Foundation	Measuring coral health, integrating cells to satellites. Chief investigators: B Leggat, T Ainsworth, B Gordon \$150K (2014 – 2015)
Macquarie University New Staff Scheme	Innovative models of seagrass connectivity to inform conservation planning. Chief investigator: A Grech \$20K (2014 – 2015)
New South Wales Adaptation Research Hub, Biodiversity Node	Evaluating the status of the NSW terrestrial reserve system under a changing climate. Chief investigators: A Grech, L Beaumont \$30K (2014 – 2015)
Australian Marine Mammal Centre	Improving the time series of estimates of dugong abundance and distribution by incorporating revised availability bias corrections. Chief investigators: H Marsh, A Grech \$85K (2014 - 2015)
National Environmental Research Program Tropical Ecosystems Hub	Abundance of turtle and dugong in western Torres Strait. Chief investigators: M Hamann, H Marsh \$260K (2011 - 2014)
Australian Marine Mammal Centre	Aerial survey of Torres Strait to evaluate the efficacy of an enforced and possibly extended Dugong Sanctuary as one of the tools for managing the dugong fishery. Chief investigators: H Marsh, A Grech \$106K (2010)
Australian Research Council Linkage Grant	Innovative systematic conservation planning for Indigenous Land and Sea Country: Torres Strait as a case study. Chief investigators: R Pressey, H Marsh \$350K (2010 - 2012). <i>I was primary author of the proposal but not listed as a chief investigator.</i>
Australian Marine Mammal Centre	Developing a decision process based on expert knowledge to inform the management of dugongs and coastal dolphins in Northern Australia: Phase 2. Chief investigators: H Marsh, G Parra \$73K (2010 - 2011)
Australian Marine Mammal Centre	Developing a decision process based on expert knowledge to inform the management of dugongs and coastal dolphins in Northern Australia. Chief investigators: H Marsh, J Bradley, S Whiting, G Parra, A Grech, S Johnson \$79K (2009 - 2010).

Marine and Tropical Sciences Research Facility	Risk assessment for coastal seagrass habitats: values, threats and vulnerabilities. Chief investigators: A Grech, R Coles \$60K (2007 - 2010)
Marine and Tropical Sciences Research Facility	Workshop on spatial closures for dugong and turtle management. Chief investigators: H Marsh, M Hamann, N Stoeckl \$20K (2008 - 2009)
Marine Species Recovery and Protection Grants Programme	Providing a knowledge base for implementing the National Partnership Approach to marine turtle and dugong management in the Gulf of Carpentaria by integrating Traditional Ecological Knowledge and western science. Chief investigators: H Marsh, A Grech \$48K (2008 - 2009)
Marine and Tropical Sciences Research Facility	Building the capacity of Torres Strait Islander communities in natural resource management through integration of Traditional Ecological Knowledge and Western Scientific Knowledge. Chief investigators: H Marsh, A Grech \$59K (2007 - 2008)
Australian Marine Mammal Centre	A spatially explicit population model to inform negotiations between Traditional Owners and the relevant management agencies about options to manage the dugong fishery in Torres Strait. Chief investigators: H Marsh, A Grech \$24K (2007 - 2008)
James Cook University Collaborative Research Grant	Spatial risk assessments as a tool to inform dugong management in the Great Barrier Reef World Heritage Area. Chief investigators: H Marsh, A Grech \$10K (2007)

Publications in peer-reviewed journals

Google Scholar h-index 30, citations > 2800; * indicates Grech's postgraduate students or research associates

*Jog, K., Sutaria, D., Diedrich, A., **Grech, A.** and Marsh, H. *in review*. Marine mammal interactions with fisheries: Review of research and management trends across commercial and small-scale fisheries. *Frontiers in Marine Science*.

*Schlaefer, J., Carter, A., Choukroun, S., Coles, R., Critchell, K., Lambrechts, J., Rasheed, M., Tol, S. and **Grech, A.** *in review*. Marine plant dispersal and connectivity measures differ in their sensitivity to biophysical model parameters. *Environmental Modelling and Software*.

Tol, S., Carter, A., York, P., Jarvis, J., **Grech, A.**, Condon, B. and Coles, R. *in review*. Vegetative fragment production as a means of propagule dispersal for a tropical seagrass meadow. *Marine Environmental Research*.

1. *Graham, V., Geldmann, J., Adams, V.M., **Grech, A.**, Deinet, S. and Chang, H-C. 2021. Management resourcing and government transparency are key drivers of biodiversity outcomes in Southeast Asian protected areas. *Biological Conservation*. 253: 108875
2. *Cockerell, B., Pressey, R., **Grech, A.**, Alvarez-Romero, J., Ward, T. and Devillers, R. 2020. Representation does not necessarily reduce threats to biodiversity: Australia's Commonwealth marine protected area system, 2012-2018. *Biological Conservation*. 252: 108813
3. Devillers, R., Pressey, R., Ward, T., **Grech, A.**, Kittinger, J.N., Edgar, G.J., and Watson, R. 2020. Residual marine protected areas five years on: are we still favouring ease of establishment over need for protection? *Aquatic Conservation*. 30(9): 1758 - 1764
4. *Pirota, V., Reynolds, W., Ross, G., Jonsen, I., **Grech, A.**, Slip, D. and Harcourt, R. 2020. A citizen science approach to long-term monitoring of humpback whales (*Megaptera novaeangliae*) off Sydney, Australia. *Marine Mammal Science*. 36(2): 472-485.
5. *Tulloch, V., Pirota, V., **Grech, A.**, Alderman, R., Crocetti, S., Double, M., How, J., Kemper, C., Meager, J., Palmer, C., Peddemors, V., Waples, K., Watson, M. and Harcourt, R. 2020. Long-term trends and a gap analysis of cetacean entanglements and bycatch in fisheries gear in Australian waters. *Biodiversity and Conservation*. 29: 251-282.
6. *Tulloch, V., **Grech, A.**, Jonsen, I., Pirota, V. and Harcourt, R. 2020. Cost-effective mitigation strategies to reduce bycatch threats to cetaceans identified using return-on-investment analysis. *Conservation Biology*. 34(1): 168-179

7. *Critchell, K., Hamann, M., Wildermann, N. and **Grech A.** 2019. Predicting the exposure of coastal species to plastic pollution in a complex island archipelago. *Environmental Pollution*. 252: 982 – 991.
8. Bellwood, D.R., Pratchett, M., Morrison, T.H., Gurney, G.G., Hughes, T.P., Alvarez-Romero, A., Day, J.C., Grantham, R., **Grech, A.**, Hoey, A.S., Jones, G.P., Pandolfi, J., Tebbett, S.B., Techera, E., Weeks, R., and Cumming, G.S. 2019. Coral reef conservation in the Anthropocene: confronting spatial mismatches and prioritizing functions. *Biological Conservation*. 236: 604-615.
9. Lillywhite, H., Sandfoss, M., Crowe-Riddell, J., Sheehy, C. and **Grech, A.** 2019. Pelagic sea snakes rehydrate from freshwater lenses following seasonal drought. *PLoS ONE*. DOI: 10.1371/journal.pone.0212099
10. *Graham, V., Baumgartner, J.B., Beaumont, L.J., Esperón-Rodríguez, M. and **Grech, A.** 2019. Prioritising the protection of climate refugia: designing a climate-ready protected area network. *Journal of Environmental Planning and Management*. 62(14): 2588-2606.
11. *Pirota, V., **Grech, A.**, Jonsen, I., Laurance, W. and Harcourt, R. 2019. Consequences of global shipping traffic for marine megafauna. *Frontiers in Ecology and the Environment*. 17(1): 39-47.
12. Magris, R.A., **Grech, A.** and Pressey, R.L. 2018. Cumulative human impacts on coral reefs: assessing risk and management implications for Brazilian coral reefs. *Diversity*. 10: 26.
13. **Grech, A.**, Hanert, E., McKenzie, L., Rasheed, M., Thomas, C., Tol, S., Wang, M., Waycott, M., Wolter, J. and Coles, R. 2018. Predicting the cumulative effects of multiple disturbance events on seagrass connectivity. *Global Change Biology*. 24(7): 3093 – 3104.
14. *Pirota, V., Smith, A., Ostrowski, M., Russell, D., Jonsen, I.D., **Grech, A.** and Harcourt, R. 2017. An economical custom-built drone for assessing whale health. *Frontiers in Marine Science*. 4: 425.
15. Tol, S., Jarvis, J., York, P., **Grech, A.**, Congdon, B.C. and Coles, R. 2017. Long distance biotic dispersal of tropical seagrass seeds by marine mega-herbivores. *Scientific Reports*. 7: 4458.
16. *Graham, V., Laurance, S.G., **Grech, A.**, and Venter, O. 2017. Spatially explicit estimates of forest carbon emissions, mitigation costs and REDD+ opportunities in Indonesia. *Environmental Research Letters*. 12: 044017.
17. Hawkins, E., Harcourt, R., Bejder, L., Brooks, L. **Grech, A.**, Christiansen, F., Marsh, H. and Harrison, P. 2017. Best practice framework and principles for monitoring the effect of coastal development on marine mammals. *Frontiers in Marine Science*. 4: 59.
18. Heatwole, H., **Grech, A.** and Marsh, H. 2017. Paleoclimatology, paleogeography and the evolution and distribution of sea kraits (Serpentes; Elapidae; *Laticauda*). *Herpetological Monographs*. 31(1): 1 – 17.
19. *Graham, V., Laurance, S.G., **Grech, A.**, McGregor, A. and Venter, O. 2016. A comparative assessment of the financial costs and carbon benefits of REDD+ strategies in Southeast Asia. *Environmental Research Letters*. 1(11): 114022.
20. **Grech, A.**, Wolter, J., Coles, R., McKenzie, L., Rasheed, M., Thomas, C., Waycott, M. and Hanert, E. 2016. Spatial patterns of seagrass dispersal and settlement. *Diversity and Distributions*. 22: 1150-1162.
21. Heatwole, H., Lillywhite, H. and **Grech, A.** 2016. Physiological, ecological, and behavioral correlates of the geographic distributions of sea kraits (*Laticauda*; Elapidae, Serpentes): a critique. *Journal of Sea Research*. 115: 18-25.
22. Sheaves, M., Coles, R., Dales, P., **Grech, A.**, Pressey, R. and Waltham, N. 2016. Enhancing the value and validity of EIA: Serious science to protection Australia's Great Barrier Reef. *Conservation Letters*. 9(5): 377-383.
23. Ainsworth, T., Heron, S., Ortiz, J., Mumby, P., **Grech, A.**, Ogawa, D., Eakin, M. and Leggat, W. 2016. Climate change disables coral bleaching protection on the Great Barrier Reef. *Science*. 352(6283): 338 - 342.
24. McLean, J., Maalsen, S. and **Grech, A.** 2016. Learning about feminism in digital and paradoxical spaces: Online methodologies and participatory mapping. *Australian Geographer*. 47(2): 157 - 177.
25. **Grech, A.**, Pressey, R. and Day, J. 2016. Coal, cumulative impacts and the Great Barrier Reef. *Conservation Letters*. 9(3): 200 - 207.

26. Bridge, T., **Grech, A.** and Pressey, R. 2016. Planning with uncertainty: factors influencing incidental representation in the design of Marine Protected Areas. *Conservation Biology*. 30: 154 – 165.
27. *Critchell, K., **Grech, A.**, Andutta, F., Lambrechts, J., Wolanski, E., Hamann, H. 2015. Modelling the fate of marine debris along a complex shoreline: lessons from the Great Barrier Reef. *Estuarine, Coastal and Shelf Science*. 167(B): 414 – 426.
28. Marsh, H., Grayson, J., **Grech, A.**, Hagihara, R. and Sobotzick, S. 2015. Re-evaluation of the sustainability of an indigenous marine mammal harvest using several lines of evidence. *Biological Conservation*. 192: 324-330.
29. *Cleguer, C., **Grech, A.**, Garrigue, C. and Marsh, H. 2015. Spatial mismatch between marine protected areas and dugong in New Caledonia. *Biological Conservation*. 184: 154 – 162.
30. Coles, R., Rasheed, M., McKenzie, L., **Grech, A.**, York, P., Sheaves, M., McKenna, S. and Bryant, C. 2015. The Great Barrier Reef World Heritage Area seagrasses: managing this iconic Australian ecosystem resources for the future. *Estuarine, Coastal and Shelf Science*. 153: A1 - A12.
31. Devillers, R., Pressey, R., **Grech, A.**, Kittinger, J., Edgar, G., Ward, T. and Watson, R. 2015. Reinventing residual reserves in the sea: are we favouring ease of establishment over need for protection? *Aquatic Conservation*. 25(4): 480 – 504.
32. **Grech, A.**, Parra, G.J., Beasley, I., Bradley, J., Johnson, S., Whiting, S., li-Anthawirriyarra Sea Rangers, Yanyuwa Families and Marsh, H. 2014. Local assessments of marine mammals in cross-cultural environments. *Biodiversity and Conservation*. 23: 3319 – 3338.
33. Lillywhite, H., Sheehy, C., Brischoux, F. and **Grech, A.** 2014. Pelagic sea snakes dehydrate at sea. *Proceedings of the Royal Society B*. 281(1782): 20140119.
34. Hagihara, R., Jones, R., Sheppard, J., Lanyon, J., **Grech, A.** and Marsh, H. 2014. The importance of quantifying depth-use when correcting for availability bias. *Marine Mammal Science*. 30(1): 348 – 366.
35. **Grech, A.**, Bos, M., Brodie, J., Coles, R., Dale, A., Gilbert, R., Hamann, M., Marsh, H., Neil, K., Pressey, R.L., Rasheed, M.A., Sheaves, M. and Smith, A. 2013. Guiding principles for the improved governance of port and shipping impacts in the Great Barrier Reef. *Marine Pollution Bulletin*. 75: 8 – 20.
36. Heatwole, H., **Grech, A.**, Monahan, J., King, S. and Marsh, H. 2012. Thermal biology of Sea Kraits and other marine snakes. *Integrative and Comparative Biology*. 52(2): 257 - 273.
37. **Grech, A.**, Chartrand-Miller, K., Erftemeijer, P., Fonseca, M., McKenzie, L., Rasheed, M., Taylor, H. and Coles, R. 2012. A comparison of threats, vulnerabilities and management opportunities in global seagrass bioregions. *Environmental Research Letters*. 7(2): 024006.
38. **Grech, A.** and Coles, R. 2011. Interactions between a trawl fishery and spatial closures for biodiversity conservation in the Great Barrier Reef World Heritage Area, Queensland, Australia. *PLoS ONE*. 6(6): e21094.
39. **Grech, A.**, Coles, R. and Marsh, H. 2011. A broad-scale assessment of the risk to coastal seagrasses from cumulative threats. *Marine Policy*. 35(5): 560 - 567.
40. Hamann, M., **Grech, A.**, Wolanski, E. and Lambrechts, J. 2011. Modelling the fate of marine turtle hatchlings. *Ecological Modelling*. 222(8): 1515 - 1521.
41. **Grech, A.**, Sheppard, J. and Marsh, H. 2011. Informing species conservation at multiple scales using data collected for marine mammal stock assessments. *PLoS ONE*. 6(3): e17993.
42. **Grech, A.** and Coles, R. 2010. An ecosystem-scale predictive model of coastal seagrass distribution. *Aquatic Conservation*. 20(4): 437 – 444.
43. *Santana-Garcon, J., **Grech, A.**, Moloney, J. and Hamann, M. 2010. Relative Exposure Index: An important factor in sea turtle nesting distribution. *Aquatic Conservation*. 20(2): 140 - 149.
44. *Dryden, J., **Grech, A.**, Moloney, J., Hamann, M. 2008. Re-zoning of the Great Barrier Reef World Heritage Area: does it afford greater protection for marine turtles? *Wildlife Research*. 35: 477 - 485.

45. **Grech, A.**, Marsh, H. and Coles, R. 2008. A spatial assessment of the risk to a mobile marine mammal from bycatch. *Aquatic Conservation*. 18(7): 1127 - 1139.
46. **Grech, A.** and Marsh, H. 2008. Rapid assessment of risks to a mobile marine mammal in an ecosystem-scale marine protected area. *Conservation Biology*. 22(3): 711 - 720.
47. **Grech, A.** and Marsh, H. 2007. Prioritising areas for dugong conservation in a marine protected area using a spatially explicit population model. *Applied GIS*. 3(2): 1 - 14.
48. Lukoschek, V., Heatwole, H., **Grech, A.**, Burns, G. and Marsh, H. 2007. Distribution of two species of marine snakes, *Aipysurus laevis* and *Emydocephalus annulatus*, in the southern Great Barrier Reef: metapopulation dynamics, marine protected areas and conservation. *Coral Reefs*. 26: 291 - 307.

Book chapters

1. Pratchett, M., Bridge, T., Brodie, J., Cameron, D., Day, J., Emslie, M., **Grech, A.**, Hamann, M., Heron, S., Hoey, A., Hoogenboom, M., Lough, J., Morrison, T., Osborne, K., Read, M., Schauble, C., Smithers, S., Sweatman, J., Waterhouse, J. 2019. Australia's Great Barrier Reef. In *Word Seas: an Environmental Evaluation*, eds. Sheppard, C. Elsevier.
2. Brodie, J., **Grech, A.**, Pressey, R., Day, J., Dale, A., Morrison, T. and Wenger, A. *accepted*. The future of the Great Barrier Reef: the water quality imperative. In *Coasts and Estuaries: The Future*, eds. Wolanski, E., Day, J., Elliott, M., Ramachandran, R.
3. Marsh, H., **Grech, A.** and McMahon, K. 2018 Dugongs: Seagrass community specialists. In *Seagrasses of Australia*, eds. Larkum, A, Kendrick, G., Ralph, P. Springer, Netherlands.
4. McLean, J., Maalsen, S. and **Grech, A.** 2017. Beyond the Binaries: Geographies of Gender-Technology Relations. In *Handbook on Geographies of Technology*, eds. Warf, B. Edward Elgar Publishing, Cheltenham, United Kingdom.
5. Coles, R., Rasheed, M., **Grech, A.** and McKenzie, L. 2017. Seagrass meadows of northeastern Australia. In *The Wetland Book II: Distribution, Description and Conservation*, eds. Finlayson, C.M., Milton, G.R., Prentice, R.C., Davidson, N.C. Springer, Heidelberg, New York, United States.
6. Craigie, I., **Grech, A.**, Pressey, R.L., Adams, V.M., Hockings, M., Taylor, M. and Barnes, M. 2014. Terrestrial protected areas of Australia. In *Austral Ark*, eds. Stow, A., Maclean, N. and Holwell, G. Cambridge University Press, Cambridge, United Kingdom.
7. **Grech, A.**, Edgar, G., Fairweather, P., Pressey, R.L. and Ward, T. 2014. Australian marine protected areas. In *Austral Ark*, eds. Stow, A., Maclean, N. and Holwell, G. Cambridge University Press, Cambridge, United Kingdom.
8. Marsh, H., Weiss, K. and **Grech, A.** 2012. Dugong. In *Queensland's Threatened Animals*, eds. Curtis, L., Dennis, A., McDonald, K., Kyne, P. and Debus, S. CSIRO Publishing, Melbourne, Australia.
9. Coles, R., **Grech, A.**, Rasheed, M., McKenzie, L., Unsworth, R. and Short, F. 2011. Seagrass ecology and threats in the Tropical Indo-Pacific bioregion. In *Seagrass: Ecology, Uses and Threats* eds. Pirog, R. Nova Publishers, New York, United States.
10. Waycott, M., Collier, C., McMahon, K., Ralph, P., McKenzie, L., Udy, J., and **Grech, A.** 2007. Chapter 8 Vulnerability of seagrasses in the Great Barrier Reef to climate change. In *Climate Change and the Great Barrier Reef*, eds. Johnson, J. and Marshal, P. Great Barrier Reef Marine Park Authority and Australian Greenhouse Office, Canberra, Australia.

Non-refereed publications/technical reports/conference proceedings

1. Marsh, H., Collins, K., **Grech, A.**, Miller, R. and Rankin, R. 2020. *An assessment of the distribution and abundance of dugongs and in-water, large marine turtles along the Queensland coast from Cape York to Hinchinbrook Island*. Final report to the Great Barrier Reef Marine Park Authority. (90 pp.)
2. Tulloch, V., Pirota, V., Jonsen, I., **Grech, A.** and Harcourt, R. 2016. *National assessment of cetacean entanglements in fishery gear in Australia*. Final report to the Australian Department of Environment and Energy. (126pp.).
3. Graham, V., **Grech, A.**, Beaumont, L., Baumgartner, J. and Robinson, M. 2016 *Evaluating the status of the NSW terrestrial reserve system under a changing climate*. Final report to the NSW Adaptation Research Hub. (61pp.).

4. Sobtzick, S., Hagihara, R., **Grech, A.**, Jones, R., Pollock, K., and Marsh, H. 2015. *Improving the time series of estimates of dugong abundance and distribution by incorporating revised availability bias corrections*. Final report to the Australian Marine Mammal Centre. (105pp.).
5. Sobtzick, S., Penrose, H., Hagihara, R., **Grech, A.**, Cleguer, C. and Marsh, H. 2014. *An assessment of the distribution and abundance of dugongs in the Northern Great Barrier Reef and Torres Strait*. Final report to the National Environmental Research Program Tropical Ecosystems Hub, Townsville, Australia (78pp.).
6. Sobtzick, S., Hagihara, R., **Grech, A.** and Marsh, H. 2012. *Aerial survey of the urban coast of Queensland to evaluate the response of the dugong population to the widespread effects of the January 2011 floods and Cyclone Yasi*. Final report to the Australian Marine Mammal Centre, Hobart, Australia (63pp.).
7. Coles, R., **Grech, A.**, Rasheed, M. and McKenzie, L. 2012. Evaluating risks to seagrasses in the Tropical Indo Pacific Region. *Proceedings of the 12th International Coral Reef Symposium*, Cairns, Australia.
8. Marsh, H., **Grech, A.** and Hagihara, R. 2011. *Aerial survey of Torres Strait to evaluate the efficacy of an enforced and possibly extended Dugong Sanctuary as one of the tools for managing the dugong fishery*. Final report to the Australian Marine Mammal Centre, Hobart, Australia (33pp.).
9. **Grech, A.** and Marsh, H. 2010. *Community engagement tools for sea country planning: technical manual*. Final report to the Australian Marine Mammal Centre, Hobart, Australia (41pp.).
10. **Grech, A.** and Marsh, H. 2010. *Condition, trends and predicted futures of dugong populations in the Great Barrier Reef World Heritage Area: including an evaluation of the potential and cost-effectiveness of indicators of the status of these populations*. Final report to the Marine and Tropical Research Facility. Reef and Rainforest Research Centre Limited, Cairns, Australia (42pp.).
11. **Grech, A.**, Coles, R., Waycott, M. and McKenzie, L. 2010. *Risk assessment for coastal seagrass habitats of the Great Barrier Reef World Heritage Area: outputs from the risk assessment working group*. Final report to the Marine and Tropical Research Facility. Reef and Rainforest Research Centre Limited, Cairns, Australia (24pp.).
12. Marsh, H., Bradley, J., Parra, G., **Grech, A.**, Whiting, S., et al. 2010. *Yarrbanthawu ki-Miriyiyu: Looking for dolphins*. Final report to the Australian Marine Mammal Centre, Hobart, Australia (46pp.).
13. **Grech, A.**, Marsh, H. and Hamann, M. 2009. *Providing a knowledge base for implementing the National Partnership Approach to marine turtle and dugong management in the Gulf of Carpentaria by integrating Traditional Knowledge and Western Science*. Report to the Department of the Environment, Water, Heritage and the Arts, Canberra, Australia (15pp.).
14. **Grech, A.**, Ambar, S., and Marsh, H. 2008 *Torres Strait Community geographical information systems (GIS): Building the capacity of Torres Strait Islander communities in natural resource management through integration of Traditional Ecological Knowledge and Western Scientific Knowledge*. Final report to the Marine and Tropical Research Facility. Reef and Rainforest Research Centre Limited, Cairns, Australia (20pp.).
15. **Grech, A.**, Coles, R., McKenzie, L. and Rasheed, M. 2008. *Spatial risk assessment for coastal seagrass habitats in the Great Barrier Reef World Heritage Area: A case study of the dry and wet tropics*. Final report to the Marine and Tropical Research Facility. Reef and Rainforest Research Centre Limited, Cairns, Australia (24pp.).
16. Marsh, H. **Grech, A.**, Hodgson, A. and Delean, S. 2008. *Distribution and abundance of the dugong in Gulf of Carpentaria waters: a basis for cross-jurisdictional conservation planning and management*. Final report to the Australian Marine Mammal Centre, Hobart, Australia (57pp.).
17. Coles, R., **Grech, A.**, Dew, K., Zeller, B. and McKenzie, L. 2007. *A preliminary report on the adequacy of protection provided to species and benthic habitats in the East Coast Otter Trawl Fishery by the current system of closures*. Queensland Department of Primary Industry and Fisheries, Brisbane, Australia (52pp.).
18. Coles, R., McKenzie, L., Rasheed, M., Mellors, J., Taylor, H., Dew, K. McKenna, S., Sankey, T., Carter A. and **Grech A.** 2007. *Status and trends of seagrass habitats in the Great Barrier Reef World Heritage Area*. Report to the Marine and Tropical Sciences Research Facility. Reef and Rainforest Research Centre Limited, Cairns, Australia (122pp.).
19. Marsh, H., Hodgson, A., Lawler, L., **Grech, A.** and Delean, S. 2007. *Condition, status and trends and projected futures of the dugong in the Northern Great Barrier Reef and Torres Strait; including identification and evaluation of the key*

threats and evaluation of available management options to improve its status. Final report to the Marine and Tropical Research Facility. Reef and Rainforest Research Centre Limited, Cairns, Australia (80pp.).

20. Marsh, H., Lawler, I., Hodgson, A. and **Grech, A.** 2006. *Is dugong management in the coastal waters of urban Queensland effective species conservation?* Final report to the Marine and Tropical Research Facility. Reef and Rainforest Research Centre Limited, Cairns, Australia (85pp.).

Popular articles

- Grech, A.** and Brodie, J. 2019. *'This situation brings me to despair': two reef scientists share their climate grief.* The Conversation, September 19.
- Grech, A.,** Tol, S. and Coles, R. 2018. *Seagrasses in the Great Barrier Reef can bounce back with good stewardship of our coastal environments.* Coral CoE Blog, June 7.
- Tol, S., **Grech, A.,** York, P. and Coles, R. 2018. *Dugong and sea turtle poo sheds new light on the Great Barrier Reef's seagrass meadows.* The Conversation, May 25.
- Ens, E. and **Grech, A.** 2018. *Indigenous ranger programs are working in Queensland – they should be expanded.* The Conversation, January 15.
- Brodie, J., **Grech, A.** and McCook, L. 2017. *The new Great Barrier Reef pollution plan is better, but still not good enough.* The Conversation, September 1.
- Day, J., **Grech, A.** and Brodie, J. 2016. *Great Barrier Reef needs far more help than Australia claims in its latest report to UNESCO.* The Conversation, December 6. Republished in The Guardian, December 6.
- Pressey, R., **Grech, A.** and Ward, T. 2016. *The Coral Sea: an ocean jewel that needs more protection.* The Conversation, October 6.
- Pressey, R., **Grech, A.,** Day, J. and Sheaves, M. 2015. *Development and the Reef: the rules have been lax for too long.* The Conversation, May 29.
- Grech, A.,** McCook, L. and Smith, A. 2015. *Shipping in the Great Barrier Reef: the miners' highway.* The Conversation, May 25.
- Pressey, B., Brodie, J., Day, J. and **Grech, A.** 2015. *Six things Queensland's next government must do to save the Great Barrier Reef.* The Conversation, January 19.
- Grech, A.,** Pressey, B. and Coles, R. 2013. *It all adds up: port developments on the Great Barrier Reef.* The Conversation, November 1. Republished in The Age, Sydney Morning Herald and Brisbane Times, November 4.
- Coles, R., **Grech, A.** and McKenzie, L. 2013. *Seagrass under pressure.* Seagrass-Watch, March 47: 2 - 6.
- Coles, R., McKenzie, L. and **Grech, A.** 2011. *Can we learn from severe climate events?* Seagrass-Watch, April 43: 8 - 10.
- McKenzie, L., Yoshida, R., **Grech, A.** and Coles, R. 2010. *Queensland Seagrasses: Status 2010 - Torres Strait and East Coast.* Fisheries Queensland, Cairns (6pp.).

Conference presentations (lead only)

International conferences

- Grech, A.** 2018. *Seagrass in the Anthropocene: Predicting cumulative human impact and its effect on functional connectivity in tropical seascapes.* World Seagrass Conference, Singapore, Singapore. ***Invited Plenary Address**
- Grech, A.,** Coles, R., Rasheed, M., McKenzie, L., Wolter, J. and Hanert, E. 2015. *Predictive models of seagrass connectivity to inform conservation planning.* International Congress for Conservation Biology / 4th European Congress for Conservation Biology, Montpellier, France.
- Grech, A.** and Pressey, R. 2014. *Planning for cumulative impacts in Torres Strait.* 51st Annual Meeting of the Association of Tropical Biology and Conservation, Cairns, Australia. ***Invited**

Grech, A. 2013. Methods for measuring the cumulative impact of coastal development on marine mammals. Society for Marine Mammalogy Biennial Conference, Dunedin, New Zealand. ***Invited**

Grech, A., Marsh, H. and Pressey, B. 2012. Indigenous knowledge integration and Land and Sea Country management in northern Australia. Society of Conservation Biology Oceania Meeting, Darwin, Australia.

Grech, A., Coles, R., Marsh, H. and Pressey, B. 2012. Incorporating the knowledge of traditional peoples in qualitative risk assessments. 12th International Coral Reef Symposium, Cairns, Australia.

Grech, A. and Coles, R. 2010. Assessing the risk of cumulative anthropogenic threats to coastal seagrass habitats at ecosystem-scales. World Seagrass Conference, Phuket, Thailand.

Grech, A. and Marsh, H. 2009. An overview of the protection afforded to dugongs from Marine Protected Areas. International Marine Conservation Congress, Washington DC, United States. ***Invited**

Grech, A. and Coles, R*. 2008. A predictive seagrass habitat model for ecosystem-scale marine planning in the Great Barrier Reef World Heritage Area. International Seagrass Biology Workshop, Bamfield, Canada. *Presentation by Coles.

Grech, A. and Marsh, H. 2008. Rapid assessment of risks to a mobile marine mammal in an ecosystem-scale marine protected area network. Society for Conservation Biology Annual Meeting, Chattanooga, United States. ***Selected for Student Competition**

National conferences

Grech, A. 2019. The Great Barrier Reef's changing coast. Australian Coral Reef Society Annual Conference, Moreton Island, Australia. ***Invited Plenary Address**

Grech, A., Hanert, E., McKenzie, L., Rasheed, M., Thomas, C., Wang, M., Waycott, M., Wolter, J., Tol, S. and Coles, R. 2017. Cumulative effect of multiple impacts on seagrass connectivity in the Great Barrier Reef. Australian Coral Reef Society Annual Conference, Townsville, Australia.

Grech, A., Bos, M., Brodie, J., Coles, R., Dale, A., Gilbert, R., Hamann, M., Marsh, H., Neil, K., Pressey, R.L., Rasheed, M.A., Sheaves, M. and Smith, A. 2013. Cumulative impact assessments and guiding principles for the improved governance of port and shipping impacts in the Great Barrier Reef. Great Barrier Reef Marine Park Authority seminar series, Townsville, Australia. ***Invited**

Grech, A., Bos, M., Brodie, J., Coles, R., Dale, A., Gilbert, R., Hamann, M., Marsh, H., Neil, K., Pressey, R.L., Rasheed, M.A., Sheaves, M. and Smith, A. 2013. Guiding principles for the improved governance of port and shipping impacts in the Great Barrier Reef. Queensland Coastal Conference, Townsville, Australia.

Grech, A. and Pressey, B. 2013. Cumulative impacts of human activities on the Great Barrier Reef Coast. National Climate Change Adaptation Research Facility Conference, Sydney, Australia. ***Invited**

Grech, A., Coles, R., Marsh, H. and Pressey, R. 2012. Qualitative risk assessments to inform conservation prioritization in Torres Strait. Island Arks Symposium 2, Canberra, Australia.

Grech, A. and Fuentes, M. 2011. Working with Indigenous Australians to monitor and manage marine megafauna in northern Australia. Coral Reefs: Coast to Coast, Fremantle, Australia.

Grech, A. et al. 2010. Developing a decision process based on Indigenous Knowledge and Science to inform the management of dugongs and coastal dolphins in Northern Australia. Australian Institute of Aboriginal and Torres Strait Islander Studies: Information Technologies and Indigenous Communities, Canberra, Australia.

Grech, A. and Marsh, H. 2010. Dugong monitoring and performance indicators in the Great Barrier Reef region. Marine and Tropical Sciences Research Facility Annual Conference, Cairns, Australia.

Grech, A. and Coles, R. 2009. Assessing the risk to coastal seagrass habitats from multiple anthropogenic threats. Australian National Network in Marine Science Postgraduate Conference, Hobart, Tasmania.

Grech, A. and Coles, R. 2008. Can global assessments of human impacts on marine ecosystems inform local management? School of Earth and Environmental Sciences Postgraduate Conference, Townsville, Queensland.

Grech, A., Hamann, M. and Marsh, H. 2008. Marine species and communities of conservation concern. Marine and Tropical Sciences Research Facility Annual Conference, Townsville, Australia.

Workshops that I have co-convened

International workshops

Best practice principles for the planning and implementation of conservation actions in Indigenous and Traditional communities. 25th International Congress for Conservation Biology, Auckland, New Zealand, 9th December 2011.

Approaches to monitoring and managing seagrasses and risk in the tropical Asia-Pacific region. World Seagrass Congress, Trang, Thailand, 27th November 2010.

National workshops

Workshop on *How effective are Australian Marine Parks at protecting EPBC listed species*, in collaboration with Parks Australia. Zoom, Australia, 27th May 2021.

Workshop on predicting the dispersal and connectivity of seagrass in the Torres Strait. Townsville, Australia, 14th – 16th September 2016.

Workshop on evidence base for Marine Protected Areas in Australian waters. Stradbroke Island, Australia, 21st – 23rd May 2015.

Workshop on the past, present and future of Marine Protected Areas in Australian waters. Stradbroke Island, Australia, 4th - 6th April 2013.

Workshop on cumulative impact assessments to inform the strategic assessment of the Great Barrier Reef World Heritage Area and coast. Townsville, Australia, 24th May 2012.

Workshop on outcomes of a risk assessment for coastal seagrass habitats in the Great Barrier Reef region. Cairns, Australia, 20th May 2010.

Workshop on dugong monitoring and performance indicators in the Great Barrier Reef region. Townsville, Australia, 12th May 2010.

Cape York dugong and turtle management workshop with Traditional Owners. Cairns, Australia, 3rd - 4th June 2009.

Workshop on spatial closures as one of the possible management tools for community-based management of dugongs and turtles in Torres Strait. Thursday Island, Australia, 14th - 16th October 2008.

Torres Strait community global positioning systems (GPS) and geographic information systems (GIS) capacity building workshops. Torres Strait Islands, February - March 2008.

Workshop on risk assessments for seagrasses in the Burdekin Dry Tropics and Wet Tropics Natural Resource Management regions. Townsville, Australia, 23rd May 2008.

Invited technical advisor/observer

International workshops and working groups

FISH CRP Management Committee Meeting no. 3, WorldFish. Representative of ARC Centre of Excellence for Coral Reef Studies. Penang, Malaysia, 12 – 14th September 2017.

French-Australian Workshop on the protection of coral reefs. Representative of ARC Centre of Excellence for Coral Reef Studies. Sydney, Australia, 22nd August 2017.

Best practice principles for monitoring the effect of coastal development on marine mammals. Technical advisor. Dunedin, New Zealand, 7th December 2013.

United Nations Environment Programme/Convention of Migratory Species Dugong Technical Workshop. Technical advisor. Cairns, Australia, 12th - 13th July 2012.

Wildlife Conservation Society and The Nature Conservancy Marine Think Tank: Improving the Effectiveness of Community-managed Marine Protected Areas for Biodiversity Conservation, Fisheries Management and Climate Change Adaptation. Technical advisor. Auckland, New Zealand, 2nd - 4th December 2011.

United Nations Environment Programme/Convention of Migratory Species First Official Signatory State Meeting for the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their range. Technical advisor. Abu Dhabi, United Area Emirates, 4th - 6th October 2010.

Workshop on Improving the Contribution of Marine Protected Areas to the Conservation of Sirenians (manatees and dugongs). Guest speaker. International Marine Conservation Congress, Washington DC, United States, 19th - 24th May 2009.

United Nations Environment Programme/Convention of Migratory Species Dugong Technical Workshop. Technical advisor. Brisbane, Australia, 30th - 31st August 2010.

United Nations Environment Programme/Convention of Migratory Species/South Pacific Regional Environment Programme/Marine Research Foundation Dugong workshop for the Pacific Islands Range States. Technical advisor. Brisbane, Australia, 11th - 12th April 2010.

National workshops and working groups

Deakin University. Best practice for informing marine management decisions with biophysical models. Technical advisor. On Zoom. 3-4th November, 2020.

Queensland Government Department of Agriculture and Fisheries. East Coast Inshore Fishery Working Group, Bycatch/SOCI Workshop. Technical advisor. Townsville, Australia 14-15th May 2019.

Australian Department of Environment and Energy. Australian Government Cetacean Roundtable Meeting. Technical advisor. 19-20th March 2019.

Great Barrier Reef Marine Park Authority, Great Barrier Reef Outlook Report Science Consensus Workshop. Technical advisor. Townsville, Australia 28th – 31st May 2018.

SEWPaC workshop on developing the EPBC Act referral guidelines for dugongs and three migratory tropical inshore dolphin species. Technical advisor. Canberra, Australia, 5th September 2013.

SEWPaC and James Cook University's workshop on developing the EPBC Act referral guidelines for dugongs and three migratory tropical inshore dolphin species. Technical advisor. Townsville, Australia, 14 - 15th February 2013.

AIMS and Great Barrier Reef Marine Park Authority's Bayes Net Seagrass Modelling for the Strategic Assessment. Technical advisor. Townsville, Australia, 10th October 2012.

NERP and James Cook University Island Prioritisation Workshop. Technical advisor. Magnetic Island, Australia, 8th - 9th October 2012.

Great Barrier Reef Marine Park Authority's Strategic Assessment Stakeholder Workshop. Technical advisor. Townsville, Australia, 21st August 2012.

National Environmental Research Program and Great Barrier Reef Marine Park Authority's Great Barrier Reef World Heritage Area Integrated Monitoring Framework. Technical advisor. Townsville, Australia, 13 - 14th August 2012.

National Environmental Research Program and CSIRO's Design and Implementation of Management Strategy Evaluation for the Great Barrier Reef inshore. Technical advisor. Townsville, Australia, 7th August 2012.

National Environmental Research Program and James Cook University's Conservation Planning for a Changing Coastal Zone. Technical advisor. Townsville, Australia, 19th - 20th April 2012.

James Cook University and Torres Strait Regional Authority's Torres Strait Dugong and Turtle Research Workshop. Observer. Thursday Island, Australia, 29th February - 1st March 2012.

Great Barrier Reef Marine Park Authority, Great Barrier Reef Seagrass Workshop. Technical advisor. Townsville, Australia, 11th October 2011.

Australian/Queensland Intergovernmental Dugong Taskforce: Research and Monitoring Workshop. Technical advisor. Brisbane, Australia, 13th April 2011.

Great Barrier Reef Marine Park Authority Expert Advisory Panel: Ecosystem Services of the Coastal Regions Adjacent to the Great Barrier Reef. Technical advisor, Townsville, Australia, 23rd - 24th June 2010.

Torres Strait Regional Authority Indigenous Protected Area Road Show. Guest speaker. Torres Strait Islands, Australia, 13th - 18th April 2010.

Great Barrier Reef Marine Park Authority Lockhart River "Sea Summit". Guest speaker. Lockhart River, Australia, 10th - 11th March 2010.

Department of Environment, Water, Heritage and the Arts Workshop on Australia's Dugong Wildlife Conservation Plan. Technical advisor. Cairns, Australia, 12th - 13th August 2009.

Fisheries Queensland Inshore Finfish Ministerial Advisory Committee Dugong Protection Area Working Group. Technical advisor. Brisbane, Australia, 19th March 2007.

Fisheries Queensland Coastal Seagrass Habitats at Risk from Human Activity in the Great Barrier Reef World Heritage Area Working Group. Technical advisor. Townsville, Australia, 5th March 2007.

Service

<i>Memberships</i>	Society of Conservation Biology World Seagrass Association Australian Coral Reef Society International Coral Reef Society Australian Marine Sciences Association
<i>Program Leader</i>	Research Program 2: Ecosystem Dynamics: Past, Present and Future ARC Centre of Excellence for Coral Reef Studies
<i>Associate Editor</i>	Diversity and Distributions
<i>International service</i>	IUCN SSC Sirenia Specialist Group 2021-24 United Nations Environment Programme/Convention of Migratory Species Secretariat to the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range (2010 – Present).
<i>Professional reviews</i>	Animal Conservation Botanica Marina Canadian Journal of Fisheries and Aquatic Sciences Conservation Biology Conservation Letters Diversity and Distributions Ecological Applications Endangered Species Research Environmental Modelling and Software Environmental Pollution Estuarine, Coastal and Shelf Science Frontiers in Marine Science Global Change Biology Global Ecology and Biogeography International Journal of Geographical Information Systems Marine Ecology Progress Series Marine Environmental Research Marine Mammal Science Marine Pollution Bulletin PLOS ONE Science of the Total Environment
<i>Grant assessor</i>	Australian Research Council Discovery, DECRA, Future Fellow and Linkage (2015 - present) Macquarie University Research Fellowships (2015) Macquarie University Vice-Chancellors Innovation Fellowships Renewal Process (2015) UNEP-GEF/UNEP-CMS Project: GEF Dugongs and Seagrasses Project (2014, 2015)

Conference symposia 'Management of coral reefs in regions of high biocultural diversity' with Stacy Jupiter and Bob Pressey. 12th International Coral Reef Symposium, Cairns, Australia, July 2012.

'Seagrasses and seagrass ecosystems' with Robert Coles, Michelle Waycott and Len McKenzie. 12th International Coral Reef Symposium, Cairns, Australia, July 2012.

'Indigenous knowledge integration and Land and Sea Country management: lessons learned from northern Australia'. Society of Conservation Biology Oceania Meeting, Darwin, Australia, September 2012.

Service to the University

Selection committee for Vice Chancellor of James Cook University (2021)

Associate Dean, Research Education, ARC Centre of Excellence for Coral Reef Studies, James Cook University (2016 -)

Member of the James Cook University Gender Equity Action Research team (2020 – 2021)

Member of the Justice, Equity, Diversity and Inclusion Committee, ARC Centre of Excellence for Coral Reef Studies (2020 -)

Equity Contact Officer, James Cook University (2021 -)

Representative of the ARC Centre of Excellence for Coral Reef Studies, Research Committee, James Cook University (2016 - 2018)

Member of the Research Education Sub Committee-Executive and Research Education Sub Committee, James Cook University (2016 -)

MC of James Cook University's "Three Minute Thesis (3MT)" (September 2018 and 2020).

Research Director, Department of Environmental Sciences, Macquarie University (2014-15).

Member of the Faculty of Science and Engineering Research Committee, Macquarie University (2014-15).

Member of the Department Project User Group to inform the redevelopment of Building E7A, Macquarie University (2014-15).

Member of the Department of Environment and Geography Working Group to inform the split of the Department into two separate groups, Macquarie University (2014).

Selection committee for 12 academic/research and 5 technical positions at Macquarie University and James Cook University (2012 - present).

Organizer of the Australian Research Council Centre of Excellence for Coral Reef Studies seminar series (2011).

Member of the James Cook University Research Data Management Working Group (2012).

Mentoring and professional development activities

Co-founder of the *Women of the Reef* network www.womenofthereef.org with Dr Maxine Newlands

Appraiser of > 20 early and mid-career researcher's Performance Management Plans, ARC Centre of Excellence for Coral Reef Studies, James Cook University (2016 -)

Presentations on the importance of social media for research, teaching and engagement: ARC Centre of Excellence for Coral Reef Studies (2017); Cohort Doctoral Studies Program, Division of Tropical Health and Medicine, James Cook University (2017); ARC Centre of Excellence in Cognition and its Disorders, Department of Health Professions, Macquarie University (2015); Macquarie University's Social Media Special Interest Group (2014); Departments of Biology and Environment and Geography, Macquarie University, Sydney (2014). Panel member at Macquarie Faculty Seminar Series on Social Media, Sydney (2015).

Convenor of speed-networking event for >40 staff and students of the ARC Centre of Excellence for Coral Reef Studies, JCU and the Great Barrier Reef Marine Park Authority, JCU City Campus, Townsville (August 2019).

Invited speaker on developing academic CVs, ARC Centre of Excellence for Coral Reef Studies, Townsville (2017).

Invited speaker on ARC ROPE for early career researchers, ARC Centre of Excellence for Coral Reef Studies, Townsville (2018, 2020).

Organiser, ARC Centre of Excellence for Coral Reef Studies National Student Mentoring Day (2017-19).

Invited speaker, Macquarie University Women in Science and Engineering event, Macquarie University (2013).

Invited speaker on careers in science, Graduate Network Tropical Research foundation event, James Cook University, Cairns (2012).

Service to the community

Briefings to Government	<p>Cumulative impact assessments to inform the strategic assessment of the Great Barrier Reef World Heritage Area and coast (~5,000 words). Great Barrier Reef Marine Park Authority, Australian Department of Environment, Queensland Department of Environment and Heritage Protection. Townsville, Australia, 24th May 2012.</p> <p>Working together to reduce controversy about Traditional hunting in the Great Barrier Reef. Indigenous Reef Advisory Committee, Great Barrier Reef Marine Park Authority. Burnett Heads, Australia, 16th May 2017.</p> <p>The ARC Centre of Excellence for Coral Reef Studies, International Year of the Reef, and the state of the Great Barrier Reef World Heritage Area. Governor-General of Australia, the Honourable Sir Peter Cosgrove and Lady Cosgrove. Townsville, Australia, 16th May 2018.</p> <p>Conserving seagrass in Singapore waters. Ministry of National Development, Government of Singapore. 11th June 2018.</p> <p>State of the Great Barrier Reef World Heritage Area. Senator Larissa Waters. James Cook University, Townsville. 15th January 2019.</p> <p>Briefing to Australian High Commissioner in Mauritius on research connections between James Cook University and the Indian Ocean. 18th April 2019.</p> <p>Author of White Paper on improving the reporting of marine wildlife bycatch in Australian fisheries, Australian Department of Environment and Energy. July 2019.</p>
Submission and witness	<p>Submission to Environmental Protection (Great Barrier Reef Protection Measures) and Other Legislation Amendment Bill 2019. Witness to Queensland Government Tourism Development and Environment Committee public hearing: inquiry into the Environmental Protection (Great Barrier Reef Protection Measures) and Other Legislation Amendment Bill 2019</p>
Expert brief to the Federal Court	<p>Acted as an independent expert witness in the Federal Court proceedings: Humane Society International Inc v Kyodo Senpaku Kaisha Ltd (November 2015). My role was to conduct analysis in GIS on the overlap between the Australian Whale Sanctuary and the harvest of whales by Kyodo Senpaku Kaisha Ltd, and to present the results in a report (~3,500 words).</p>
International technical advisor	<p>United Nations Environment Programme/Convention of Migratory Species Secretariat to the Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range (2010 – Present). My role is to review funding applications and provide technical advice on the implementation of global dugong and seagrass management initiatives.</p>
Media	<p>I have been interviewed by: ABC Local Radio (Cairns) (2012), The Australian (2013), ABC Fact Check (2014), Torres Strait Radio '4 Meriba Wakai' (2008 and 2010), the Torres Strait News (2010), the International Press Service (IPS) (2012), Science Magazine (2016), The Quarterly Essay (2017), Channel 9 Brisbane (2018), Sydney Morning Herald (2020 and 2021) and ABC Breakfast (2019)..</p>

National school's competition	Developed a series of tasks to challenge and stimulate students' learning in cartography and spatial science for the da Vinci Decathlon, a national academic high school competition (2015).
Public talks	<p>"Translating Science into Action, enhancing engagement using your digital brand". Public Forum of the World Seagrass Conference. National University of Singapore, Singapore, 13th June 2018.</p> <p>Participated in a roundtable discussion with Rt Hon Helen Clark, former Administrator of the United Nations Development Programme and Prime Minister of New Zealand, hosted by JCU Vice Chancellor Sandra Harding. James Cook University, Townsville, 3rd July 2018.</p> <p>"The special relationship between seagrass and the number 2". Public Forum of the ARC Centre of Excellence for Coral Reef Studies Annual Symposium, hosted by Adam Spencer. Gallery of Modern Art, Brisbane, 19th July 2018.</p>

Consultancies

Port of Townsville.	Dugong aerial survey of Cleveland and Bowling Green Bays. Chief investigators: H Marsh, A Grech \$50: (2020-2021)
URS Australia	Spatial models of dugong distribution and relative abundance. \$25K (2012 - 15).
Department of Environment	Updating of SPRAT profiles for 12 species of marine mammals. Co-investigators: R Harcourt, V Pirota \$11K (2015)
GHD	Aerial surveys and models of dugong distribution and relative abundance. \$10K (2008 - 2012).
URS Australia	Ecological character description for the Bowling Green Bay Ramsar Site: Dolphins, dugongs and turtles. \$2.5K (2009).
Department of Environment	Discussion paper to provide background information to the dugong wildlife conservation plan. Co-investigators: K Weiss, H Marsh \$10K (2009).

Teaching

Convenor	<p><i>Applied GIS (2013 - 2014)</i> Department of Environmental Sciences, Macquarie University</p> <p><i>Introduction to Geographic Information Science (2014 - 2016)</i> Department of Environmental Sciences, Macquarie University</p> <p><i>Introduction to Geographic Information Science for Postgraduates (2015)</i> Department of Environmental Sciences, Macquarie University</p>
Lecturer	<p><i>Environmental Applications of GIS and Remote Sensing (2013 - 2015)</i> Department of Environmental Sciences, Macquarie University</p> <p><i>Applied GIS (2013 - 2015)</i> Department of Environmental Sciences, Macquarie University</p> <p><i>Introduction to Geographic Information Science for Postgraduates (2014 - 2016)</i> Department of Environmental Sciences, Macquarie University</p>
Guest lecturer	<p><i>Conserving Marine Wildlife (2005, 2009 – 2013)</i> School of Earth and Environmental Sciences, James Cook University</p> <p><i>Introduction to GIS (2007, 2009 – 2010, 2017, 2018, 2020)</i> College of Science and Engineering, James Cook University</p> <p><i>Advanced GIS (2005 - 2006)</i> School of Earth and Environmental Sciences, James Cook University</p>

Postgraduate supervision

PhD current	<p>Lieh, C. (2021 -) Primary Advisor. Thesis: Understanding Recovery Processes of Tropical Seagrasses of the Great Barrier Reef. James Cook University</p> <p>Thompson Saud, G. (2021 -) Primary Advisor. Thesis: Integrating Vegetative Coastal Ecosystems in coastal planning of the Great Barrier Reef. James Cook University.</p> <p>Remmers, T. (2021 -) Thesis: 3D mapping and Monitoring Coral Reefs Population and Community Dynamic. James Cook University.</p> <p>Jog, K. (2020 -) Thesis: The Impact of Fisheries Interactions on the Foraging Behaviour of Indian Ocean Humpback Dolphins (<i>Sousa plumbea</i>) along the Sindhudurg Coast of Maharashtra, India. James Cook University</p> <p>Fraser, T. (2020 -) Thesis: Species and threat distributions in Australia's national marine reserve system. Department of Biological Sciences, Macquarie University.</p>
PhD complete	<p>Graham, V. (2021) Thesis: A comprehensive analysis of REDD+ in South East Asia. Department of Environmental Sciences, Macquarie University.</p> <p>Pirotta, V. (2019) Thesis: Informing the management of marine megafauna in Australian waters. Department of Biological Sciences, Macquarie University.</p> <p>Critchell, K. (2018) Thesis: Impacts and risk of the microplastic portion of marine debris to marine organisms. College of Science and Engineering, James Cook University.</p> <p>Cleguer, C. (2016) Thesis: Distribution, relative abundance and habitat use of the dugong: a basis for marine conservation and management planning in New Caledonia. University of Pierre and Marie Curie and James Cook University.</p> <p>Kim, Y. (2015) Thesis: <i>Foraging ecology of threatened Gould's Petrel, Pterodroma leucoptera</i>. Department of Biological Sciences, Macquarie University.</p>
Honours	<p>Critchell, K. (2013). Thesis: Predicting the movement of marine rubbish in the Great Barrier Reef. School of Earth and Environmental Sciences, James Cook University.</p> <p>Dryden, J. (2005) Thesis: Re-zoning of the Great Barrier Reef World Heritage Area: does it afford greater protection for marine turtles? School of Earth and Environmental Sciences, James Cook University.</p>
Masters of Philosophy	<p>Graham, V. (2017) Thesis: A comprehensive cost analysis of REDD+ in South East Asia. James Cook University.</p>
Masters of Research	<p>Neupane, N. (2015) Thesis: Optimising enterprise waste management via GIS. Department of Environmental Sciences, Macquarie University.</p>
Masters of Science	<p>Santana-Garcon, J. (2008) Thesis: Relative Exposure Index: An important factor in sea turtle nesting distribution. School of Earth and Environmental Sciences, James Cook University.</p> <p>Cockerell, B. (2018): Thesis: Effectiveness of Australia's Commonwealth marine protected area network, 2012 – 2018. College of Science and Engineering, James Cook University.</p>
Graduate Certificate	<p>Nagombi, E. (2018). Thesis: Cumulative impact assessment of inshore dolphins in Cleveland Bay, Queensland. College of Science and Engineering, James Cook University.</p>