



Community insights into the marine ecosystem

The Research Program

Careful, well documented, original research is core to the operation of the Foundation.

The Foundation Research Program is designed to develop public access resources that will assist the community to better understanding the complex, evolving marine ecosystem of the Recherche Archipelago, and particularly how it is shaped by human interaction. The outcomes are likely to be of interest to teachers, researchers, and community leaders in Western Australia and beyond, who are interested in establishing and sustaining a healthy and balanced marine ecosystem.

The Program takes a methodological approach to research sometimes described as coastal human ecology¹. This approach develops a fine-grained understanding of human interaction with a particular environment, integrating understandings from the natural sciences, the social sciences, and the humanities. It requires commitment, over time, using intense fieldwork at local level, along with integration of other, more generalisable findings derived from other research. It encompasses themes are diverse as the history of and projections for economic activity such as tourism, farming, and fisheries. It integrates perspectives from community governance and marine policy and law, from indigenous and local knowledge systems, and from the biological and marine sciences. The approach seeks to establish a better, integrated knowledge base for designing and implementing successful local coastal management and conservation plans.

Core to the research program is the long-term ambition to build a dynamic digital representation of the unique ecosystem of the Recherche Archipelago, documenting how humans have related to it over time, charting the changes they have wrought, and modelling likely future impact.

Current research: Community Environment of the Recherche Archipelago

The first research project will capitalise on the intense community interest in the marine environment sparked by a spate of fatal and near fatal shark attacks in the region. It aims to document community interaction with the ecosystem in the period 1970-2020, and their perceptions of changes. It will record the voices of the community, complementing the range of existing studies, most of which are based in the biological sciences. It will record local knowledge about the Recherche Archipelago, the wisdom, experience and understanding, of community members, especially those who have had long and sustained experience working and recreating in and around the waters in the Esperance region.

People of the Gary Johnson Foundation respectfully acknowledge the traditional custodians of the land as being the first peoples of this country. We embrace the vast Aboriginal cultural diversity throughout Western Australia and recognise their continuing connection to country, water and sky. We pay our respects to Elders past, present and emerging.

The stories of up to 50 respondents will be documented describing their interaction with this ecosystem over the last 50 years, capturing the changes they have noticed. Discussion will explore their attitudes to the changes and catalogue the factors they regard as shaping the ecosystem. It will document their perceptions of the health of the ecosystem and record any sustaining practices, if any, they have adopted to maintain its health.

The Research Lead for the Project is the Foundation Chair, Karen Milligan, and the research is designed and directed by Enterprise Professor Sandra Milligan, Gary's sister-in-law, and keen supporter and sponsor of the Foundation since its inception. Professor Milligan will chair a Research Review Panel to formally connect this project with other relevant research activities in the region.

The Foundation is currently raising funds of up to \$28k to employ research assistants, and to purchase recording equipment for the Program.

The expected outcomes of this project include:

- A database recording the pattern of human interactions with the marine archipelago aiming to deepen understanding about the interaction between humans and the ecosystem over time. This will be designed to support development of a public access searchable resource of use to other researchers and teachers.
- A report exploring implication of the findings for local coastal management and conservation plans.
- A series of community workshops around community attitudes and values to sustainable practice.

ⁱ <https://www.sciencedirect.com/science/article/pii/S0006320719303623>