

Using Bayesian statistics to better inform the monitoring design of indigenous seacountry

Currently, much of Australia's northern inshore waters lacks baseline monitoring data to provide an understanding of the natural variability in ecological communities. Australian indigenous people have a cultural obligation to look after their seacountry, and indigenous-partnered science is beginning to drive socially just increases in conservation. The Australian Institute of Marine Science has been working in partnership with indigenous communities towards the systematic collection of monitoring data. In this presentation, I will discuss our partnership with the Bardi Jawi Rangers of the remote Kimberley region of Western Australia focussing on a shared 3-year monitoring data-set for fish and corals. In particular, I will focus on how we have been using Bayesian statistics to 1) analyse the effectiveness of the sampling design as currently implemented, and 2) break the barrier of communication between scientists and indigenous partners.