



Graduate Profile

Georgina Gurney

Georgina discussing her research with a field assistant in Indonesia.

Why do people initiate and participate in the management of natural resources? How are people affected by and respond to such initiatives? How do we promote and design natural resource management to build natural and human capital?

"Answering these questions is critical to improving the management of ecosystems, such as coral reefs, because ultimately we manage people and their behaviour towards natural resources rather than the resource itself," says Centre of Excellence student Georgina Gurney.

It's these important questions that form the basis of Georgina's PhD research, supervised by Professors Bob Pressey and Josh Cinner, at the ARC Centre in Townsville.

Georgina's first foray into coral reef research was during the Honours year of her undergraduate degree in marine science at the University of Tasmania, Australia. Preferring warmer waters for diving, she headed north to the Philippines to undertake research on modelling futures of coral reef ecosystems under alternative climatic and management scenarios. A key focus of her work was developing ecological simulation models as decision-support tools for guiding local management of reef systems.

"My experience in the Philippines reinforced my understanding of the importance of a coupled social-ecological systems approach to resource management and policy," says Georgina. "I decided I needed to build my understanding of the human dimensions of marine resource management, and headed to Townsville to do so through a PhD at the Centre".

Poor understanding and limited incorporation of socio-economic considerations in natural resource management has been widely cited as an important factor contributing to the limited success of conservation initiatives. The aim of Georgina's PhD research is to contribute to addressing this gap, using marine protected areas (MPAs), a key tool employed in marine management globally, as a case study.

"The success of MPA management hinges on the support of local stakeholders" says Georgina. "I'm particularly interested in understanding why people initiate and participate in management, and how to promote and develop management strategies to meet local stakeholders' needs and aspirations".

Her thesis aims to investigate the impacts of MPAs on associated human communities, identify the relative role of multiple-scale social and institutional factors influencing stakeholders' involvement in MPA management, and explore alternatives for integrating socio-economic factors into MPA spatial planning. To do this, Georgina takes an interdisciplinary approach, drawing on theory and methods from a range of disciplines, including social psychology, ecology, behavioural economics and human geography.

Georgina is pursuing her research in the context of coral reef management in Indonesia and Fiji. "The importance of understanding the socio-economic dimensions of MPA management is particularly acute in developing countries because coastal people's livelihoods and identity are often intimately related to marine ecosystems" she says.

As part of her PhD research, Georgina works closely with non-government organisations and resource managers, and spent several months living in coastal villages in Indonesia. During her time in villages in north Sulawesi and Bali, Georgina and colleagues conducted surveys, and undertook experimental economic games designed to understand people's cooperative behavioural disposition.

A key aim of her research in north Sulawesi was to understand how people were affected by and responded to an MPA project that was designed to achieve the dual goals of conservation and poverty alleviation. The project was implemented by USAID over a five-year period during the late 1990s. Using 15-years' worth of social data from villages with and without MPAs, the research showed that the MPAs appeared to contribute to poverty alleviation during the implementation period, after which reductions in poverty did not continue to accrue.

"This finding questions the efficiency of the short-term approach taken in many international donor-assisted protected area projects, which are often designed with the expectation that project activities will be sustained and related benefits will continue to accumulate after external support is terminated," she says.

Georgina is continuing her work on the socio-economic impacts of resource management initiatives, and is working with the Wildlife Conservation Society to develop the socio-economic component of their global marine monitoring program.