

# The impacts of 'next generation' citizen science programs

Project E1:  
Volunteers

This project will assist in improving the recruitment, participation, training and retention of volunteers in environmental monitoring programs, and identifying outcomes from volunteer environmental monitoring programs and their impact on waterways management.

Volunteers are increasingly important to biodiversity and environmental monitoring in Australia, given the urgent need for extensive data sets to inform the management of sites and species. In the last couple of years, a key trend has been the development and use of smartphones and internet technologies as the interface for organising volunteer citizen scientists and managing their data.

The value of these technologies includes: mobilization of large groups of volunteers at relatively little cost; standardisation of data and quality assurance and facilitation of community education and community empowerment for environmental stewardship.

Melbourne Water is currently increasing its commitment to such 'next generation' digitally-mediated citizen science programs (e.g. the Frog Census app).

This social science research project will investigate the impacts of these 'next generation' approaches to volunteer environmental monitoring programs. It will consider the composition of the volunteer cohort, the kinds of activities that volunteers engage in, and the nature of their volunteer experience.

Of particular interest will be the ways in which these 'next generation' approaches deliver outcomes related to community networking, empowerment, stewardship, education and data generation.

Given that connection to place and social interaction are important motivations for

many environmental volunteers, the study will consider the new forms of 'community' that might be supported by these technologies, and the relationship with face-to-face and place-based volunteer experiences.

### Methods

This social science research project will be developed by the PhD student, and may include qualitative and quantitative components. It will most likely take a case study approach, identifying and studying in depth several 'next generation' citizen science programs. This may include citizen science programs that are coordinated by Melbourne Water and other environmental agencies.

Data collection may include semi-structured interviews with volunteers and program coordinators (with transcripts analysed using nVivo software), ethnographic or structured observation of volunteer activities, and quantitative analysis of meta-data about users generated by smart apps.

### Outcomes

- Improved the recruitment, participation, training and retention of volunteers in environmental monitoring programs
- identifying and evidencing outcomes from volunteer environmental monitoring programs and their impact on waterways management.

#### Project Team:

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