Connecting Science to Practice & Policy

Developing and Implementing Participatory Action Research in TIA

Purpose

The goal of the Tasmanian Institute of Agriculture’s (TIA’s) Program 2 – Science for Society and Policy – is to ensure our research supports decision-making in agribusiness, government and UTAS through the provision of useful and useable science and expertise.

Increasing the value of agricultural R,D&E requires strengthening connections between these components and the communities they aim to serve. Such work can increase social, economic and environmental returns on investment.

To increase the value, Program 2 is supports participatory action research (PAR, see box) within TIA. Such projects not only do R,D&E but draw on theories of change and frameworks for action. Through these theories and frameworks we can better understand what works and why in creating outcomes from integrated R,D&E. PAR approaches help projects teams learn what works and why and so build ongoing improvement in project design.

Program 2 will help projects adopt PAR approaches to work with scientists and other stakeholders. This work will identify and address key barriers and stumbling blocks on these pathways between data, information, knowledge, decisions and action.

Our activities will help make TIA’s science base and research capacity accessible and useful in public and private sector innovation, specifically by:

- Supporting innovation in agricultural systems – enabling decision makers who manage farming systems, food processing, and other agribusinesses to collaborate in defining alternative management strategies, and;
- Policy support – supporting agricultural policy advisers to develop and implement agricultural policy with communities and industries, and to collect evidence of impact.

These two implementation objectives are strongly consistent with Program 2 objectives under TIA’s 2012-16 Strategic Plan:

- Achieve the status of a key authority on agricultural issues with particular relevance to Tasmania;
- Influence rural policy by making science visible in community, and;
- Foster dialogue about the everyday value and benefit of agricultural science.

Participatory Action Research (PAR)

PAR aims to achieve outcomes beyond generating new knowledge. It achieves this by working collaboratively to action through partnerships and practice change. PAR research design is targeted to the needs of all groups involved. Iterative cycles of reflection and action are employed to ensure appropriate approaches and results are well utilised, and lessons from successes and failures are learnt.

PAR can incorporate diverse quantitative and qualitative analytical methods, as needed, and may be used to address a wide variety of action situations where there is a recognised problem or concern.
PAR also meshes with state, national and international agendas to improve the linkages between agricultural research and outcomes by systematically developing and iteratively improving the bridging capacity between science policy and society, thereby facilitating improved agricultural innovation systems.

**Rationale**

Agricultural and food systems need to innovate rapidly to meet growing demands for nutritious food in the context of resource, climate and other challenges. Generating science & technology is not enough.

International organisations such as the World Bank (2011) acknowledge a common disjunct between the production of technical information and our collective ability to innovate. They highlight the need for effective assessment, bridging mechanisms and processes to facilitate equitable and efficient innovation in agricultural and food systems.

The practice problem is often that there are social and economic constraints to adoption. The policy problem is often appropriately integrating science into the social processes through which contended values are resolved.

Methods for overcoming these constraints are available. They integrate qualitative social science approaches with quantitative approaches from science and economics.

A feature of practice oriented methods is that they empower decision makers and broader groups of interested and knowledgeable people through exploration of scenarios and information relevant to them. These processes enable groups and individuals to develop agreed action pathways.

A feature of policy-oriented methods is that they incorporate scientific results, social scientific methods and good facilitation to create forums in which contending values surrounding agricultural issues can be clarified and potentially resolved.

In both cases, PAR methods integrate various forms of knowledge and values to facilitate deliberation and innovative decision-making. They bring science into the practice of decision-making and innovation.

**Approaches: methods and technologies**

The proposed PAR portfolio integrates methods and technologies to support public and private sector innovation, and to evaluate these approaches using robust frameworks that can encourage broader learning, both within and outside of TIA.

The methods allow for researchers to more effectively and explicitly deal with issues that are usually considered outside the scope of projects. Issues such as the level of stakeholder engagement, the politics of an issue and the different ways a problem is conceptualised by different groups are often key social drivers of project success. Explicitly engaging with these issues and managing them in some form is central to our research program objectives.

The program will collate usefulness of international methods that can be applied in the Australian context, drawing on strong links between TIA and the [Consortium for Science, Policy and Outcomes](https://www.azstate.edu/consortium/) at Arizona State University, and the [Science into Society Group within CSIRO](https://www.csiro.au/en/Science-into-Society-Group). These links provide TIA with an opportunity to develop and apply emerging tools, techniques and methodologies to support innovation in the public and private sector and thereby build capacity for our R,D&E create substantial outcomes.

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