

Participatory fore-sighting for irrigation R&D planning

In partnership with the OECD Studies on Water: Stakeholder Engagement for Inclusive Water Governance

An innovation provided by

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Organisation: Government of Tasmania

Country: Australia

Level of government: Regional/State government

Sector: Environmental protection

Type:

Launched in: 2014

Overall development time: 1 year(s)

Link to the innovation's website

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Description

In Tasmania, Australia, a participatory R&D planning project was initiated in 2014 to identify industry and community water needs and to develop a strategy that would support the expansion of irrigation while improving economic and social benefits from water resource utilisation and supporting a wider socio-economic policy agenda.

Under the leadership of the Tasmanian government and the Tasmanian Institute of Agriculture, stakeholder consultations took place across a broad range of local actors (business, service providers, farmers, civil society, etc.) to discuss foresighting methods. This resulted in the establishment of a R&D coalition to deliver the knowledge infrastructure needed to compliment hard investments in water resource infrastructure.

Three divergent scenarios for future Tasmanian agriculture were presented based on climate projections to stimulate discussion and generate debate around the dynamic relationship between R&D, public policy and economic development. In response, participants supported an R&D initiative focused on achieving broad goals related to sustainability, productivity and regional development, as well as the establishment of co-operative innovation networks to implement it. In its initial phase, the engagement process was managed by external consultants.

It is now the full responsibility of the Tasmanian government which will be responsible for implementing the initiative drawn from the engagement process. A formal stakeholder advisory group was also created to steer the work in the future.

Why the innovation was developed

- In the past decade, while attention in Australia has focused on water reforms in the Murray Darling, an estimated billion dollars has been invested in expanding irrigation in Australia's southern "water frontier" and wettest state, Tasmania.
 - The Tasmanian and Australian governments have invested over \$220 million in new infrastructure to expand irrigation. Farmers are committing a similar amount through the purchase of water entitlements and are also making multi-million dollar investments in on-farm irrigation infrastructure such as dams, pipes and application systems.
 - More than 150 Giga-litres of new irrigation water will be available when planned schemes are fully operational. This adds about 20% to the total amount of water used for irrigation in Tasmania, a state where irrigation already accounts for approximately 60% of the gross value of agricultural production.
 - This 21st century roll out of new irrigation schemes provides significant risks and opportunities. How to avoid the historic problems that have plagued irrigation like salinisation, water logging and the over exploitation of rivers? The twin challenges of productivity and sustainability need to be planned and managed together.
 - The project sought to engage stakeholders in jointly developing an agreed strategy for R&D to enhance the economic and social value of irrigation.
 - A foresighting and scenario-planning project funded by Tasmanian government used scenarios and foresighting methods as the basis of consultative planning and identified the need for R&D focused on achieving more sustainable and prosperous futures for Tasmania. It found that R&D is needed to enhance the productivity and sustainability of irrigation, in order to realise the benefits of improved productivity, employment and rural development, whilst minimising the significant environmental risks.
 - The project identified strong support for cooperative partnerships across the research, education, policy and private sectors. Stakeholders articulated the need for R&D focused on achieving ambitious societal goals – sustainability, productivity, and regional development – through dynamic partnerships and the establishment of innovation networks that span the public and private sectors.
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- Government
 - Science, academia and research centres
 - Water institutions
 - Civil society
 - Agricultural sector
 - Regulators
 - Business

Results

Efficiency

- Cost-saving: While it is still too early to tell, the innovation will likely lead to a more efficient use of natural resources and infrastructure.
 - Sustainability/resilience: It is still too early to tell, but it will likely lead to more efficient use of natural resources and infrastructure.
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Effectiveness

- Capacity-development: The innovation has been useful in terms of staff development.
 - Broader economic development: Highly likely – the accelerated growth in agri-food industries and the commitment to an advanced innovation system to support irrigation is now a project of state significance.
 - Engaging Tasmania's irrigated agriculture industry, including active participation of 40 stakeholders in a workshop to identify RD&E priorities for Tasmanian irrigated agriculture.
 - Engaging potential Irrigation Program investors (Australian Government agencies, Tasmanian Government agencies, RDCs etc.) in the process to attract additional funding for the Irrigation Program.
 - Facilitating the development of an industry advisory group, comprised of leading industry representatives, to drive the RD&E agenda, provide strong linkages to industry and assist in securing support for the irrigation program.
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Service quality

Responsiveness:

- Acceptability/ownership of stakeholders involved: Strong support from stakeholders has led to commitments to follow through with implementation.
- Client satisfaction, stakeholder willingness to continue participation, and development of a sense of broad consensus re directions.

Development

Design

The consultants delivered the project according to budget and timelines and it was having an independent contracted party that ensured this irrigation operates at the intersection of the public sectors' responsibilities for water resources and the private sectors' responsibilities and aspirations for profitable enterprises.

Testing

- No methods were used to test the innovation.
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Implementation

Tools used:

- Preliminary consultations with stakeholders were used to identify critical issues and scope etc.
- A foresighting workshop was held with approximately 30 to 40 stakeholders. The workshop with stakeholders used foresighting to identify how to Research, Development and Extension (RD&E) can contribute to shaping preferred futures for agriculture in Tasmania.

Resources used:

- The Tasmanian Government recognises that there is potential to increase profitability, sustainability and global competitiveness of Tasmania's agricultural industries it had identified the need for more targeted R&D to support the prospects.
 - The project engaged with stakeholders to identify the role of RD&E in catalysing innovation and regional economic development, ensuring sustainability of industries & businesses, optimising the social and economic benefits of irrigation, minimising social and environmental costs.
 - TIA received the funding from the Tasmanian Government to develop a strategic program for irrigation RD&E. Consultants were used to deliver the project.
 - Further funding from governments and R&D partners has been received and TIA has committed to stakeholder engagement in the implementation phase, even looking to have farmers as R&D co-investigators.
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Challenges and solutions

- As an overarching principal, future RD&E should focus on ways to ensure that opportunities are realised, whilst the impacts of unacceptable risks are minimised. Indeed, one point worth emphasising is that Tasmania needs to create an operating environment supportive of an innovative, diverse and entrepreneurial private sector, whilst ensuring that the policy and regulatory settings are conducive to sustainable resource use. These two dimensions of irrigation development and RD&E should be seen as complementary and compatible, not antagonistic.
- Agri-food industries are operating in increasingly complex business environments spanning primary, secondary and tertiary industries sectors and the interactions between business, the community and the environment. Therefore it is useful to have an explicit focus on the food systems as an integration of the human and physical system – the interplay of the “natural” and cultural aspects of food systems – and not simply conceived of as supply chains, which are still principally conceiving of the systems as series of commercial relationships - but also as part of wider cultural systems, with histories, geographies and feedbacks, incorporating sense of peoples shaping their communities, their landscapes and their futures - so as to promote the synergies of working across many relevant domains.
- For example, there are growth opportunities and synergies in agricultural RD&E being linked to innovation and the people and businesses involved in Tasmania's food, wine and gourmet and nature tourism sectors. Tasmania has clear imperative to do this and to seize a range of opportunities for employment creation and economic diversification.

Lessons Learned

Lessons Learned

- Foresighting can be a useful tool for stakeholder engagement in R&D planning because it allows parties to articulate and make their assumptions about what will help shape preferred futures explicit. This helps to identify priorities and see how different aspects can be linked by the “future stories”
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Conditions for success

- Funds
 - Commitment to genuine engagement
 - Sound participatory methods
 - Willingness to listen and be open to taking advice
 - Willingness to use an exploratory process
 - Time
 - Good project design
 - Experienced consultants/facilitators independent from the critical decision parties
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