

Attention: Yvette Goss
Inquiry into Rural Research and Development Corporations
Productivity Commission
Locked Bag 2, Collins St. East, Melbourne,
VIC 8003 Australia

Dear Commissioners,

Thank you for the opportunity to make an individual submission to the Productivity Commission's Inquiry into the Australian Government Research and Development Corporations Model.

Background

I am an academic experience in teaching and research long-term changes in Australian environments. I have also worked for four years in a Research & Development Corporation (Land & Water Australia) in 3 roles that give me some perspectives relevant to your inquiry:

1. In my role as a **senior knowledge broker** I saw the challenges of research communication and adoption of new innovations. Particularly my experience with agribusiness in communicating the combination of public and private good information (about soil, water, biodiversity management in agricultural environments) made me appreciate the role of RDCs in being an "honest broker" in a complex environment.
2. Then in my role as a **research investor and research program manager** I saw the challenges of investing "over the horizon" to ensure the research outputs would be appropriate to future land management when the results became available.
3. Finally, in my role as an **evaluator** in gathering evidence of research impact, stakeholder feedback and then reporting the impact of research investments to the Corporation's Board and other rural RDCs I became aware that this was a major challenge.

So I have moved between research – government – private sector and academia. My submission is informed by that experience and is my own view. It doesn't represent those of my current employer or my coauthors. I have tried to make some useful observations below.

Return on Investment

Since leaving Land & Water Australia, to return to my preferred academic habitat, I have drawn on my experience to gather together evidence of research impact to inform future efforts.

That includes drawing on the substantial body of work done by Nick Schofield (SKM Consulting) and Peter Chudleigh (Agtrans). We were able to compile a large scale analysis of the research performance of Land & Water Australia over a period of 2 decades. That report was funded by Land & Water Australia and will be made available on the web site soon (it has been reviewed and approved for publication). I will attach a copy.

I will also mention the excellent review work done by [Campbell and Schofield \(2006\)](#).

Observation there are some key grey publications worthy of close scrutiny.

Most recently I have submitted (with coauthors) a paper to the International peer-reviewed journal *Research Policy* to ensure this method is more widely recognised.

I think much of the evaluation work done in the RDCs, that doesn't see light of day, is of publishable quality. This became clearest to me when the Caring for our Country program established a Monitoring Evaluation Reporting and Improvement framework without sufficient reference to the proven methods used in RDCs yet they were working with the same

communities. There are opportunities for better collaboration that could make investments more sustainable.

Observation RDCs have capacity, skills and experience in Monitoring Evaluation Reporting and Improvement and in business.

The details and methods are all freely available on the web methodology (<http://lwa.gov.au/products/er071255>) and the 3rd edition of casestudies (<http://lwa.gov.au/products/ec071442>). They formed an important foundation for the methods used by the rural RDCs (2007) to measure and report their triple bottom line performance since the early 2000s. Those methods were discussed with Treasury, Finance and DAFF and were adopted by the thirteen RDCs in an amazing display of co-ordination.

The capacity of Land & Water Australia, one of the smallest RDCs and working on the most difficult benefits to value was able to gather evaluation information and present it in forms that were accessible.

I am much less able to say how it was used. The use of evaluation continues to be a challenge. It requires some stability of people involved, understanding of assumptions, confidence in the use of quantitative and qualitative evidence and an expectation of a learning culture.

This is not a crisis of information or even knowledge but one of leadership and action. It is counter-productive to gather more evidence than is fit for the purpose to which it is put. Nevertheless the 20 year collection of Land & Water Australia can speak to another generation of RDC managers because it is public and published.

Observation Evaluation capacity is greater than the capacity of Government, investors or RDC Boards to take-on the evaluation information and make subsequent decisions. Investments in public information has a stronger legacy than private information.

I have seen, and the return on investment data shows that leverage of Rural Development Corporations (RDCs), State and Territory governments, CSIRO, the tertiary education sector, cooperative research centres and private sector businesses achieves behavioural change that leads to resource conditions changing. Massive problems with soil, deteriorating water quality and biodiversity loss are being addressed through these investments. But not with the outcomes expected – however unreasonable those might have been.

Matching levy and government dollars are applied efficiently - there is no evidence for marginal declines from additional investments – yet the problems at a national scale are overwhelming the resources. Expectations about the health of food products, environmental sustainability, ethical concerns and improved detection have raised the standards expected by the community. This is not a problem of the RDC model and is reported internationally by Alston et al (2010) in their book titled *Persistence Pays; U.S. Agricultural Productivity Growth and the Benefits from Public R&D Spending*.

Observation The task (sustainable agriculture) is bigger than the RDC's model and resource allocation – the scale of the problem has grown.

From my experience the public good outcomes are most precarious in on-ground work. Private and economic benefits are readily reported in evaluation of RDC investments but social and environmental benefits, even where they are substantial and justified the ability to invest, are rarely reported. There is a need for new research in applied social sciences. There is also a need to address a critical shortage of social researchers willing to work on applied problems. This is always acknowledged by RDCs and agricultural researchers but little has changed.

There is a need for RDCs (and others) to be as accountable for social and environmental benefits as they are to their levy payers, their Board and the Government. There are some off-the-shelf methods that should be immediately applied. The Productivity Commission should be skeptical of claims it cannot be done or hasn't been done. Land & Water Australia was able to

make inroads into triple bottom line reporting of the impact of investments and provided that method to the RDC community. It is important that the RDCs continue to develop their capacity to do return on investment for the public and private benefits in terms of the environment, social (including indigenous and equity outcomes) and economic domains.

The Australian Government should also practice this and expect the RDCs to demonstrate what they do differently as a result of the previous cycle of monitoring. The government has not provided leadership in valuing equity and other non commercial outcomes. The political process, even when mediated by RDC Boards, rewards larger stakeholders and those with a short-term vision.

Observation People involved in RDCs and research have been slow to engage the social sciences and environmental long-term view.

I found doing stakeholder surveys for Land & Water Australia (of thousands of people across the sector) that there is a lack of learning demonstrated in Government, RDCs and research agencies (in that order). Land managers and agribusiness advisors particularly want to see actionable knowledge and see evidence of improvement in those procuring the knowledge and then getting it into use.

Trust is critical for good outcomes in agriculture. Distrust and lack of respect is less between RDCs and levy payers than I observed between Canberra's line agencies and farmers. The RDCs provide a useful clutch-plate for these critically important relationships and a fire wall between individual investments and political power. That is a real beauty of the RDC design – it achieved so many good outcomes from a subtle design and is a good example of choice architecture (in the sense of Richard Thaler and Cass Sunstein 2008, authors of *Nudge*) because each stakeholder has to operate with checks and trade-offs that otherwise would not exist.

Observation People trust the RDCs but not too much. So they are creative.

Finally, I will make some responses to the specific Terms of Reference:

- ToR1** The rationale for the RDCs is I think a piece of genius – it places into shared financial and governance arrangement the stakeholders, the problem and the resources available (not sufficient as I said before). The arrangement is slightly outside the comfort zones of the scientists, politicians, bureaucrats and private sector – that is a creative tension that doesn't exist elsewhere. It keeps in the 'open' the research and innovations while engaging private people in applying innovation with their own capital.
The model is the envy of the world and allows governments to invest in a smart sector without offending GATT ([Michael Lester 2006](#) & [Ben White 2008](#), short [summary](#) of both).
- ToR2** In my experience the investment balance is right but the performance balance has been too private. It has not for example recognise the inter-generational aspects of benefit as being both public and private. There is more to do in this idea of inter-generational values.
In the Fisheries and other natural resources there is a critical under-investment. Evidence continues to mount that shows current management is not protecting these resources even in the short-term. A fundamental rethink about natural resource management is needed – the making of markets is not the panacea.
- ToR4** The use of ROI will continue to improve the understanding of appropriateness of current funding levels and arrangements. In my opinion there is no good evidence that the private investors understand the Ecosystem Goods and Services better than the government, farmers or researchers. The nascent markets have failed to deliver sufficient improvement to justify the faith placed in them. They have undervalued the costs of establishing them.

5. **ToR5** I think the government member of the Board at Land & Water Australia was a good inclusion (removed in the last few years by government decree)– I think it provided better buy-in and contact with DAFF. Government bureaucrats don't pay much attention if they don't have some presence in the decisions. RDCs should also be knowledgeable about major line agency policy directions etc. Equally the line agencies need some outside contact - I think the churn within agencies makes this very important.

The use of consistent software for procurement, contracting and reporting could be a real boon but it requires quality data entry and management. This can be achieved only with leadership within the RDCs to make data management a part of their duty of care.

Institutions learn from the conversations they have and evidence they keep. Sharing the project and program management software could make the administration more efficient but (more importantly) it can improve researcher and stakeholder engagement, improve tracking of impact and allow better evaluation and reporting. It may also enable RDCs to keep and attract skilled staff between themselves.

8. **ToR8** This is often speculated about but I've never detected private investment being crowded out of investing in public good natural resource management. The provision of an open market or honest broker for information is a highly efficient way of improving the adoption and return on investment of research.

In addition the existence of these knowledge pathways, extension and research provision has pre-adapted Australian agriculture to be able to adopt other information and technology – for example climate change information and broadband technology – and has covered (to some extent) the collapse in public agricultural advisors. It is likely that RDC spillovers are hard to put a unit value on but likely to be important.

The diffuse benefits of R&D have been discussed by Alston et al (2010) and the fundamental need for public investment even in the US where traditionally private investment moves more quickly. It is realistic to expect that the private sector will not supply natural resource management research and extension without the RDC model.

In summary, the RDC model needs to be invigorated, adequately resourced and gently nudged to provide the evidence of public benefits in social and environmental terms. The Commission's ToR are certainly appropriate ones. I believe that the Returns on Investment, measured across the triple bottom line using methods developed by the industry and applied across the sector are worthy of emulation. The challenge is to learn from this wealth of experience and from the Commission's Inquiry without losing the forward momentum.

There is a reasonable expectation that, given a track record of excellent returns to RDC investments, that the future investments will not repeat the mistake of not investing enough to reach past targets let alone satisfy higher expectations. Investing enough just to hold ground is no longer a sustainable position. The RDC model is part of the enhanced response to this challenge.

Yours Sincerely,

Stuart Pearson
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