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Policy entrepreneurs searching for the open-minded skeptic: a new approach to engagement in difficult policy areas

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ABSTRACT

The necessity for reducing the run-off of nitrogen from the sugar industry into Queensland's Great Barrier Reef has been recognized by governments and scientists for decades. Governments have unsuccessfully attempted to address this problem through legislation, regulation, and educating stakeholders. Officials have also understood that farmers' resistance was a problem because reform involved asking them to change the farming methods of a lifetime. This paper examines an innovative program, the Burdekin nitrogen trial (RP20) that significantly changed industry practices in an important sugar cane growing region in Australia. One of the key challenges to achieving success was the public servants – the policy entrepreneurs – and their ability to convert a farmer – an open minded skeptic – into a policy champion. Through the adoption of a risky and previously untried collaboration strategy between public servants and this open-minded skeptic, an entrenched and formally opposing group of stakeholders began working with government to implement RP20, an innovative plan to overcome farmer resistance and reduce nitrogen runoff. As RP20 unfolded we gain insight into how the bureaucrats shed old ways of doing business, and became effective agents of policy change. These public servants grasped the window of opportunity that opened unexpectedly, reframed the policy problem and replaced the cane farmers' skepticism and resistance with high levels of trust and rapport.

ARTICLE HISTORY

Received 6 December 2017
Accepted 20 March 2018

KEYWORDS

Open-minded skeptic;
policy entrepreneur;
collaboration;
policy problems

1. The central message

This paper argues that public servants, dealing with difficult and long-lasting policy problems, should contemplate new ways of acting. It shows that implementing new ideas – some of which challenge long-standing work practices – can produce results previously thought impossible. The case study of the Burdekin Nitrogen Trial (RP20) aims to inspire other policy workers to consider different forms of engagement and to

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provide lessons on what to do and what not to do. RP20 is important because it provides an example of an innovative strategy with the potential for application and modification by other policy makers. By early 2018 public servants from the Western Australian Department of Water and Environmental Regulation had travelled to Queensland (QLD), met the OMS and visited farmers associated with the program. Our discussions with representatives from WA indicate the Qld experience has provided a way forward in their negotiations and approach with their stakeholders also.

RP20 has been widely acknowledged as innovative. In 2016, it won the best overall entrant in the 2016 Queensland Premier Awards for Public Sector Excellence. It was judged as outstanding for several reasons. First, by reframing the policy problem, it achieved its stated goals in demonstrating that lower nitrogen use could coincide with improved farm productivity and cost savings thus creating both private and public value. Second, it modeled good collaborative practice among government and nongovernment stakeholders. Third, it introduced a new variant of stakeholder – converting the open-minded skeptic into a policy champion. As the literature notes, governments frequently consult with “the usual suspects” crowding out dissenting voices (Sørensen and Torfing 2012, 8). While this approach might work for certain policy problems, for the really stubborn ones that require the cooperation of the dissenters this approach is futile. This was the situation confronting Queensland public servants in the Environment, Heritage, and Protection agency (EHP) before the RP20 trial.

The challenge from the beginning was to convince cane farmers about the importance of reducing nutrient runoff into the Great Barrier Reef. Previous efforts had emphasized the environmental consequences of their farming practice. RP20 – a program formulated between the OMS and government – began with the premise that good environmental practice was compatible with good business practice. But more importantly, the case highlights the position and role of two key parties; the “open-minded skeptic” who was crucial in driving the program, in this case from the science laboratory into the cane field, and the public officials who were willing to risk a new way of collaborating. These officials displayed many of the characteristics of policy entrepreneurs demonstrating high levels of social acuity that enabled them to reframe the policy problem (from one of environmental protection to one of improved farm efficiency); and in building teams within and outside of government. They were open to challenges from key stakeholders who were angry about the government’s intrusion into their business. As our case study shows, cane farmers believed that “nitrogen was ... the determining factor that ensured optimum crop size and yield” (Sugar Research Australia PTY LTD (SRA 2017, 7). Reducing the levels of nitrogen was equated with loss of income – many believing they were risking their livelihoods. As a third generation Burdekin grower, the original OMS later noted that “It is hard to change a practice you have done all your life” especially when the results have been positive (Defranciscis pers. communication 2017).

RP20 grew out of a meeting between the OMS and government officials. When cane farmer David Defranciscis, concerned about the imposition of new regulations and the threat of further restrictions on nitrogen use, challenged the government, the policy entrepreneurs in the EHP seized the window of opportunity that had unexpectedly opened and worked closely with him instead of adopting the more traditional defensive approach. As the trial unfolded, Defranciscis took the lead in co-opting

fellow farmers who shared his initial resistance to government and persuaded them to open up significant sections of their farms for trial sites. Industry groups, such as Sugar Research Australia (SRA) provided support external to government and working with agronomists developed the trial sites on individual farmer's land. Through this collaborative process and with the OMS acting as a policy champion the problem was reframed to one that had at its core the importance of farm profitability. RP20 was a five-year investment in time and resources. The public servants risked reputations and ceded power to the OMS. Yet it was the beginning of a long-lasting partnership that for the bureaucrats had an ultimate objective of finding a solution to reduce nutrient run-off into the Great Barrier Reef. For them the end-goal was always about enhancing public value and protecting Queensland's premier environmental land-mark. Yet this aspect of RP20 was left off the agenda at meetings with the farmers, with energy instead of being spent on convincing them that they could increase their profits, or at least diminish their fertilizer costs, without hurting their bottom line.

In Part A ([Section 3.1](#)), we illustrate the policy environment leading up to the trial followed by Part B ([Section 3.2](#)) which details key elements of RP20. RP20 highlights how a chance meeting with an adversarial stakeholder resulted in policy change. The relationship that developed between EHP and a group of key stakeholders serves as a positive story of how difficult policy issues might be handled.

2. Source of our authority

The authors are public policy and intergovernmental scholars. They teach public servants in post-graduate courses, advise governments, and for this case interviewed farmers, public servants, and spoke to key industry representatives.¹ They were observers in forums in the Burdekin, toured a sugar mill, spoke to agronomists, and met with public servants from another jurisdiction who observed that RP20 has helped them refocus the way they do business (public servant WA, pers. communication, 2017).

3. Research

Our empirical research utilized a range of documentary sources: government reports, lobbyist publications and media accounts to understand what had been attempted before RP20. We read Hansard, political speeches, and reviews and recommendations. After the literature review, we conducted open-ended interviews with the OMS and the government officials who were responsible for enacting the first trial of RP20. We heard from key stakeholders – individual farmers and listened to industry representatives and scientists at a one-day forum in Townsville, North Queensland. This forum presented the outcomes of the trials, emphasizing the importance of good farm management which along with the science, can enhance the productivity of the farms while reducing run-off into the reef (Queensland Government 2017). Throughout this day-long forum, several speakers reinforced the importance of stakeholder engagement, iterative feedback, and being willing to make changes to old ways of working.

We have maintained contact with the OMS who provides us with regular updates of progress.

Our research builds on Kingdon's (1984) work on policy entrepreneurs. Kingdon's use of policy entrepreneurs is tied to his multiple streams analysis whereby three streams – politics, policy, and problems converge when a window of opportunity opens. As Kingdon notes policy entrepreneurs are active in the policy and problem stream and can be either inside or outside of government (Guldbrandsson and Fossum 2009, 435). For RP20 we were interested in how the public servants used their nous and exploited a “window of opportunity” to promote their policy goals. As we have already discussed, in the case of RP20, the window opened when the OMS approached government. The bureaucrats recognized this opportunity and responded quickly and with flexibility. The problem stream was obvious – but the policy solution rested on the challenge of persuading farmers to change lifetime patterns of nitrogen usage which had remained stubbornly difficult to address. The policy workers took the opportunity to test a new way of collaboration that to date has worked better than anyone expected. The third stream involving the politics – regarded by many as the most important stream – was assisted by the fact that despite three changes of government during the trial, RP20 received bipartisan support.

Our research links work on policy entrepreneurship with the concept of policy change – two theories which have not been “broadly integrated” to date (Mintrom and Norman 2009). The RP20 trial shows how an individual or small team can be a force for change, even though the motives of different participants and their actions may be idiosyncratic. The early focus on individuals as change agents in the policy entrepreneur literature, led to an impasse in understanding how policy entrepreneurs act (see Mintrom and Norman 2009). We argue RP20 contributes to bridging this gap. The RP20 case study outlines the contextual factors, and links with individual actions to build up a picture of how the context shaped actions. This fits with Mintrom and Norman's (2009, 651) assessment regarding the importance of examining the practices of “entrepreneurial actors” in different settings (see also Schneider, Teske, and Mintrom 1995). In summary, policy entrepreneurs play a particularly important role when the broader context is resistant to change.

To make sense of the RP20 trial we break the case into two parts. Part A highlights the various attempts by government between 2001 and 2009 to encourage farmers to apply less nitrogen and hence reduce run-off to the Great Barrier Reef. The initial stage saw governments attempting to reform farming practices through regulation, self-management, and education. It had minimal impact. Part B documents the events leading up to RP20, outlines how the trial progressed and finally summarizes the results to date.

3.1. Case study Part A: pre RP20

In the early 2000s, governments began to address the long-standing problem of nutrient runoff from activities on land primarily from agricultural activities into the Great Barrier Reef lagoon. The connection between farming practices and water was made crystal clear in a report to the intergovernmental Ministerial Council responsible for the reef by the Great Barrier Reef Management Authority in 2001 which stressed the

urgency of action (The State of Queensland and Commonwealth of Australia 2013, 8). While the problem was evident, the solution was less so. A Productivity Commission (2003) identified a number of barriers to effective action. These included complex governance arrangements; the multiplicity of overlapping land and water management plans; some perverse policy incentives; and the limitations of the established regulatory strategies for dealing with water pollution. These established strategies were designed to deal with “end of pipe” discharges and thus ill-equipped to address the diffuse run-off created by agricultural activities (Productivity Commission 2003, 52). A different approach was needed.

In 2003, the Queensland and Australian governments signed off on the Reef Water Quality Protection Plan after consultation with stakeholders. It identified a number of key strategies which went beyond standard command and control approaches such as the establishment of regulatory frameworks, the setting of priorities and targets and the imposition of monitoring and evaluation and the utilization of existing natural resource management and land use plans. The Plan also nominated self-management approaches, education, research and information provision, and the use of economic incentives (The State of Queensland and Commonwealth of Australia 2003, 7–8).

Self-management and education were of particular importance because the Plan did not envisage any expansion of existing regulatory frameworks specified in the various environmental protection and land and water management acts (The State of Queensland and Commonwealth of Australia 2003, 24).² These were largely concerned with preserving and restoring areas of remnant vegetation; protecting wetlands within a general duty of care provision and, as we shall see, ill-equipped to tackle the problem of nutrient runoff more generally. Similarly, the economic incentives contained little to directly tackle the problem beyond identifying and addressing any perverse incentives in existing industry plans.

Key elements in self-management and education encouraged and supported farmers to adopt best management practices. The Plan declared these as “the most cost-effective,” presumably for both government and land managers. Much was made of the value of environmental systems approach (Access-Plan-Do-Check-Review) and specific comprehensive industry-specific programs such as the COMPASS, a program and workbook designed for sugar farmers (Australian Government 2005, 160). The Plan recognized that take-up of such strategies was going to be a key to success and that education was going to be an integral component. The first step was getting land-owners to understand the threat their activities posed to the reef and then making them aware of the best practice to minimize their impact (The State of Queensland and Commonwealth of Australia 2003, 14). The limitations of this approach were soon evident.

The first independent audit of the Reef Plan was completed in 2005. It was found that the implementation was broadly on track. While not all milestones had been achieved, progress was broadly “consistent with ... expectations for such a complex engagement-focused initiative.” Its recommendations reflected this by focusing on improving consultation and communication with stakeholders; developing more effective partnerships; and extending monitoring of the uptake of sustainable practices (Australian Government 2005, 3–4).

The Audit also highlighted the economic benefits to farmers by detailing the success of the 1999 Rural Water Use Efficiency Initiative which combined education and financial incentives. Over four years, 85% of growers improved their water usage, generating considerable savings (Australian Government 2005, 162). While implementation of the Plan may have been “consistent with expectations,” progress was painfully slow. A 2007 Water Quality Report found “current management interventions were not effectively solving the problem” (Queensland Government 2008). Minutes of a meeting of the Water Quality and Coastal Development Reef Advisory Committee in late 2008 noted that targets still needed to be clarified and that monitoring and reporting mechanisms were underdeveloped (Australian Government Great Barrier Reef Marine Park Authority 2008, 2).

3.2. Case Study Part B: RP20

The RP20 process began after new government regulations for reef protection were introduced in 2009. The policy intent was unchanged from earlier attempts to minimize damage to the Great Barrier Reef through reducing the amount of nitrogen run-off from surrounding cane farms. Policy makers understood that farmers’ management of their fertilizer usage was a key factor in the success of any policy attempt to reduce nitrogen run-off. Until RP20 though, despite multiple attempts to engage with these stakeholders, there had been only limited success in getting traction with them – and this had occurred when cost savings could be demonstrated. The challenge remained: how to involve farmers and convince them of reducing their nitrogen application when they could only see risk involved through diminished yield?

Cane farms, like many agricultural enterprises, are different from factories because there is no easy way to record pollutants. There is no “end of pipe” measurement that can be recorded against individual farms and no effective way to monitor which farmers might be “doing the right thing” and which farmers were ignoring the new nitrogen guidelines.³ Moreover there was no economic incentive for farmers to comply with new industry regulations desired by the government. The concept of “free riders” (Stigler 1974, 359) applies here – and highlights how intractable a problem the policy makers faced in turning around entrenched beliefs about how to grow cane to produce the most yield.

Numerous stakeholders were involved in RP20 including three state government departments, SRA, and cane farmers. All were essential for a successful trial in a project that required significant collaboration across government and non-government sectors. The Queensland Government through EHP provided the funding, becoming the project managers, the environmental regulator, and the environmental standards leader. The Department of Science, Information Technology, and Innovation (DESTI) were instrumental in supporting the project through soil science and analysis, while the Department of Agriculture and Fisheries (DAF) provided economic support and were brought on board at the insistence of the OMS to ensure accuracy of reporting. SRA was the key industry organization that developed the science of SIX EASY STEPS and RP20.⁴ SRA and DSITI were the lead agencies, responsible for ensuring that the work was conducted in a scientifically sound manner (SRA 2017, 3). The farmers provided the commercial scale trial blocks to enable the science to be tested.

So how did it begin? Coinciding with the government's commitment to enforce the SIX EASY STEPS management tool, as part of the new regulations in 2009, one farmer contacted the EHP challenging them "to put their money" where their regulations were. Offering some land on his cane farm for a trial of SIX EASY STEPS this farmer did not really care what the science said about the reef, he was challenging "what the government was making us do on our farms" (Defranciscis pers. communication 2017). For him the issue was whether or not SIX EASY STEPS would still allow him to grow cane profitably. At the outset, he, along with the farmers co-opted during the trial, remained skeptical that it would. For the policy workers in EHP this was an opportunity to engage with a key stakeholder and demonstrate the science behind the methodology which had yet to be tested outside the laboratory. In their initial contact with Defranciscis they took a policy risk by allowing him to select other skeptical participants.

By 2012 fourteen farmers had agreed to host RP20 on their farms. By 2015 this had expanded to 23 farmers due to positive trial results. At all times, productivity and cost savings were the key messages from the project. Despite government promotions and banners that indicated that the ultimate goal of the project was reef protection – "catchment to Reef" – at no time was the Great Barrier Reef mentioned by the policy entrepreneurs driving the project. This was a deliberate strategy as they recognized that reef protection was in and of itself not a motivator for stakeholders who were concerned with the continued viability of their sugar cane farms. As the results of the trial started to be disseminated by the farmers who were participating, others shifted their thinking (SRA 2017, 26).

All farmers reported a reduction in fertilizer usage, with one farmer reporting a 15 ton nitrogen fertilizer reduction in one year. As the leader of the policy team in EHP noted, finding their "open-minded skeptic" (Robinson, pers. communication 2017) provided the change agent they needed. The science did the rest. According to the economic assessment undertaken by DAF, profitability of farms involved in the initial trial had increased by up to AU\$30,000 over 100 hectares over a crop cycle. In total, across 12,000 hectares and 23 farms that participated in RP20, it is estimated that AU\$700,000 has been saved in fertilizer expenditure. As well as reducing run-off into the reef, these savings have a flow on effect for local businesses in the Burdekin (Defranciscis, pers. com 2017). At a Townville forum in late May 2017 a group of stakeholders were informed that most of the SIX EASY STEPS trial sites had higher commercial cane sugar (CCS)⁵ than those trial sites that had applied higher nitrogen rates. There was no statistically significant difference in sugar yield between SIX EASY STEPS sites and others that applied higher nitrogen rates. SIX EASY STEPS trial sites also had "higher profitability over crop cycle." This is because above the optimum SIX EASY STEPS nitrogen rate, nitrogen accumulates in the stalk with no increase in yield. The results showed the financial waste of excessive nitrogen. Defranciscis reinforced this point to us, estimating he had lost a considerable amount of money in the course of his farming life. From skeptic to converted policy champion, Defranciscis told the Townville forum that "the data is the data, go out and get it" and that the scientists and bureaucrats who worked on RP20 "have got the facts, so listen to them" (Queensland Government 2017). Other speakers at the forum emphasized the importance of a whole management plan, so that all farming

practices – such as crop establishment, weed control, and irrigation management – are considered in a holistic approach because nitrogen is just one part of the input in a balanced system.

The science of SIX EASY STEPs was available long before RP20 began. However, it took a reframing of the problem, and an innovative collaborative strategy – that involved both cost and risk – before those results started to be believed by crucial stakeholders whose cooperation was essential if success was to be transplanted out of the laboratory to real-life situations.

4. Applying our findings to policy-making

4.1. Policy entrepreneurs

Mintrom and Norman's (2009, 650–652) criteria for policy entrepreneurs who wish to promote significant policy change can be applied to our case study. They include social acuity, the willingness to re-define problems, to build teams and to lead by example (Mintrom and Norman 2009, 651). Policy entrepreneurs should display some of these elements, at least to some extent. They need to be willing to take actions intended to reduce risks – both real and perceived. In RP20 the motivations of the various actors were different but the bureaucrats who were engaged with the trials displayed key traits mentioned above. For the task of reducing the use of nitrogen in sugar cane farming, previous experience suggested that policy entrepreneurs were not enough. Evans and Pratchett (2013, 541) state the inability of government officials to affect significant progress in rural policy often stems “from a failure to understand the importance of localism.” In this case, it was the social acuity and *collaboration* between policy entrepreneurs, scientists, and the open-minded skeptic that led to successful policy change: the diverse policy actors responded effectively as ideas and concerns within the local policy context surfaced and were dealt with.

4.2. Collaboration and engagement

Collaboration has become a frequently heard catch cry of political leaders and at times can appear rhetorical, even faddish. Nevertheless, collaboration is regarded as an essential aspect of new governance models and allows for trade-offs and necessary compromises that are part and parcel of policy change (see Wanna 2008, 3). First-hand accounts by public servants we teach suggest consultation is a regular aspect of contemporary practice. However, this consultation is frequently restricted to those actors who are in broad agreement with the policy proposals. Dissenting voices are crowded out in favor of consultation with the “usual suspects” (Sørensen and Torfing 2012, 8). The literature provides scant advice on how to gain the trust of the dissenters. As Hartley et al. (2017, 672) note there is currently a rather limited literature on how trust and legitimacy (or its absence) when dealing with stakeholders can assist or harm public value objectives – of which the limiting of run-off into the Great Barrier Reef surely can be counted.

RP20 exemplified good collaborative practice through its engagement with local growers from the start. While this began as an accident of circumstance when

Defranciscis sought to demonstrate the government's mistakes, the public servants at the EHP were able to use this opportunity. Included in the collaborative practice was the decision to fund, support, and embed SRA agronomists who worked intensively with each farmer from RP20's inception. Working with individual farmers who had responded to the persuasive calls from Defranciscis, the agronomist was able to provide practical help and one-on-one advice. While agronomists work in the field as part of normal practice, RP20 was unusual because the scientists established the trials in a scientific way, which farmers could observe in their daily work. Data were collected and delivered as scientific results came in from each trial site. This immediate communication to growers was important in building trust. It also allowed for the farmers to draw on the scientist's reflective thinking. Thus, RP20 was an iterative process that enabled flexible practices to evolve according to the science.

5. Why these reforms worked well in the sugar cane industry?

RP20 is an interesting case study of how to tackle "difficult problems" through innovative strategies. The success of the trials which cost the public purse nearly AU\$3 million can be explained by four significant factors.

First, the rigor of the science backed by experts was demonstrated in the trials. Farmers decided the parts of the land which would serve as policy laboratories to confirm the value of the "SIX EASY STEPS" with the objective of improving the productivity and profitability of their sugar cane crop. The EHP was able to demonstrate that farmers could save money and produce a better or at least the same value crop. Reef protection was a driving factor in supporting the trials, yet this was not raised during the early phases of the trial. The public servants were adaptable enough to take a longer term view. The focus on profitability, rather than environmental protection, helped convince farmers about the value and credibility of the project and become more open to the trial. This strategy indicates that governments must be prepared to allow time for results to become obvious and understand the motivations of the stakeholders concerned. RP20 was fortunate in receiving bipartisan support from successive governments of different political ideologies.⁶

Second, the development of the "open-minded skeptic" into a policy champion was a crucial part of the success of RP20. The project began around Defranciscis' kitchen table with two other members of the farming community. If the initial challenge of a trial had not been supported by government, attempts to improve the water quality of the reef might have continued without much progress. Mintrom and Norman's (2009) criteria assist in explaining the trial's achievements. The farmer was acutely aware of government attempts to introduce new ways of working in the Burdekin. He was aware of the policy problem but was unconvinced that government's methods would be helpful to farmers. Nevertheless, once he observed the evidence about the trial's usefulness, he became an enthusiastic champion, influencing others to also join the trial. Furthermore, due to his work the policy champion assisted the public servants in broadening their network and helped create impetus for an ongoing larger program called RP161.

Third, effective partnerships contributed to the overall success of the trials, breaking down the barriers between the government and the sugar cane growing community. Farmers remained involved because the Department gave them direct feedback and personal attention. Policy entrepreneurs understood how the farmers perceived the problem and came to appreciate their concerns. They developed their commitment to work from peer to peer and tailor the approach to suit the particular situation, for example by providing scientific information in a less technical format. The long-term results indicate that government has forged a more productive relationship with valuable stakeholders – a benefit that seems to be continuing. Future research will utilize Paul Sabatier's (1988) advocacy coalition framework to further draw out how the policy subsystem brought together by RP20 has become increasingly influential in assisting policy change.

Fourth, collaboration and goodwill is fundamental to the success of any project. Collaboration began by convincing a cranky skeptic through the science that the trial was valuable. Once Defranciscis was committed to the project and its worth, he involved other stakeholders, and along with government officials built solid networks. His cooperation made the Department's job easier as he became a convert in informing other skeptics. Despite the closed community of growers who historically had always farmed in a particular way, he was able to sell the message and gain their support. History shows this was difficult if not impossible before the trust so implicit in RP20 developed. As the project expanded it received additional support when the main industry group came on board, despite initial reservations.

Overall, the trials have delivered better outcomes for the Queensland sugar industry and the Great Barrier Reef. The farmers involved in the early stages became active in spreading the word and were not only helpful in communicating the need for change into their communities, but in providing the project with legitimacy at the grassroots level. In terms of policy transfer, it seems that many of the lessons could be applied to other agricultural areas where change is hard to enact.

6. Conclusions

Reducing the run-off of nitrogen from the sugar industry into Queensland's Great Barrier Reef has been recognized by governments and scientists as a long standing, difficult problem. Since the 1990s successive governments have tried to make headway via legislation, regulation, and the education of key stakeholders – the farmers. Public servants understood that their resistance to any kind of change in farming practices was a key block to reform. This paper examined an innovative program, the Burdekin nitrogen trial (RP20) that managed to change this mindset in a significant way. We argue that the public servants involved in RP20 were policy entrepreneurs because they recognized a window of opportunity and acted with acuity when challenged by one vocal and influential farmer to test how science could break the impasse on what had been an intractable problem. We label this farmer an "open-minded skeptic" because he didn't believe governments understood the plight of the farmers and was determined to stand his ground with them. He was "open-minded" because he ultimately changed his mind due to the strength of the science and then used his influence with other key stakeholders to encourage them to change their

farming methods also. RP20 highlights the importance of collaboration and stresses why public servants need to walk in the shoes of the stakeholder. Over several years public servants co-designed a program with the OMS who insisted and was allowed to choose participants for the trial. This core group then assisted the public servants to convince other farmers of the value of participating in a nitrogen reducing program. Recognizing the window of opportunity was the first step.

Relationships and trust ultimately drove the program and saw public servants reframe the policy problem to the one articulated by the OMS who overtime became the program's champion. What began as a fragmented and fraught policy environment now more closely resembles an advocacy coalition. Future research will explore this development in detail. Importantly for the purposes of this paper, six years on, the RP20 program has been extended to include a still larger group of farmers in a new trial (RP161). Working together, the public servants and participating farmers have become advocates of policy change. The open-minded skeptic continues to help government sell its message to these new participants.

Notes

1. Due to the requirements of the journal, we have neither included names of individuals interviewed nor gone into the methodology in great length. These can be supplied upon request.
2. *Water Act 2000; Vegetation Management Act 1999; EPA 1994; Land Act 1994.*
3. While cane farms can have tail water dams which are used to ensure water run-off after irrigation can be captured and reused, any measurement of nutrient content could be challenged as not definitive readings of nitrogen losses flowing to the reef from each farm due to the diffuse nature of nutrient movement in the environment.
4. SIX EASY STEPS is established, evidence based, science led management tool designed to provide best practice nutrient management on individual farms. It works in conjunction with education and assistance to improve farm practices which include reference to efficient and measured use of water throughout the crop cycle.
5. CCS represents the sugar content of cane as it is purchased by sugar mills. CCS is conventionally determined from the analysis for pol and brix of the first expressed juice at the first pair of rolls and the measurement of fiber in the variety of the cane. The CCS determines the payment made to the grower (<http://www.sri.org.au/glossary-of-terms/>).
6. Three governments presided over the trials. The Bligh Labor government introduced the new regulations in 2009. The LNP (Conservative) government ruled from 2012 and toward the end of the trial, a Labor government was re-elected in 2015.

Acknowledgements

The authors thank the public servants in the Department of Environment, Heritage, and Protection for their time during the research phase and David Defranciscis for his generosity in sharing his story and introducing us to other farmers in the Burdekin.

Disclosure statement

No potential conflict of interest was reported by the authors.

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