

Bittersweet Impacts of a Sugar Mill's Closure: Partnerships and Processes in Using University Research to Inform Planning and Management Around a Complex Regional Issue – *Dr Anne Roiko, Bonita Hafey, Bill Allen, Susie Chapman, Sharon Hall*

Key individuals can make or break engagement initiatives. Even where formal mechanisms exist to facilitate engagement and collaboration across organisational boundaries, the desired outcomes are unlikely to be achieved without the critical and timely input of key individuals. This is one of the key findings of the reflective analysis reported on in this paper, built around a university-led research study that examined the impacts of a sugar mill closure on the health and well being of cane growing families. Rather than focussing solely on the outcomes of the research, it highlights informal and formal engagement mechanisms that both pre and post date it. Through the lens of social network theory, this paper discusses the ways in which such mechanisms were utilised and the lessons that can be learnt in the management of university-community engagement.

Keywords: university engagement, structural adjustment, sugar-cane, health and well-being, networks

Introduction

Building and maintaining relationships takes time. Relationships between universities and regional bodies built around issues of regional significance are no exception to this rule. A number of studies have been conducted into the involvement of universities in assessing and, where possible, ameliorating the impact of industry closures on regions. These include studies based on the Newcastle Steelworks Closure (Pond et al 2006), structural adjustment in Western Australian agriculture (Allison & Hobbs 2004) and the community response to an automobile plant closure (Beer & Cooper 2007). The study by Beer and Cooper (2007) highlights the fact that while studies into university-region relationships often report on 'success stories', their own experience suggests that there is often a 'less than perfect fit' between universities and regional institutions. They make particular mention of relationships with regional development bodies, speculating that 'poor working relationships between regional development bodies and universities are probably more common in Australia and some other developed nations than effective working relationships.' (Beer & Cooper 2007, 1081) They suggest two reasons for this: First, that the impact of universities is spread across regional, national and international communities of interest rather than concentrated at the local. Second, that there is no dedicated funding stream for regional engagement in Australia as there is for universities in the United Kingdom and Land Grant universities in the United States. Unlike Beer and Cooper's analysis, this paper emphasises the role of individuals in the engagement process rather than focussing on institutional and government policy dimensions.

Engagement in the lead up to the research study

In 2003, the Moreton sugar mill located at Nambour on Queensland's Sunshine Coast, closed, removing the primary market for cane growers in the region. The decision to close the sugar mill was made on the basis of an assessment of financial viability made by Finasucre, the new owners of the Mill's parent company, Bundaberg Sugar Limited. Those growers who had not already

diversified by that time operated relatively small farms, a factor that limited their alternatives in the face of the mill's closure. There were quite a number of engagement initiatives involving government agencies, industry lobby groups and emergent community organisations that followed the Mill's closure and these are outlined briefly below to present the context for the University's engagement with this issue.

Maroochy Shire Council (amalgamated to form Sunshine Coast Regional Council in 2008) responded by sponsoring the Cane Futures Project, which brought together cane growers, rural producers, representatives of the three tiers of government and the broader community to try to find a sustainable solution to the problems posed by the closure of Moreton Mill. At that point, approximately 13,000 hectares of land had been designated in the Maroochy Plan 2000 as a 'Sustainable Cane Lands' precinct, which represented the majority of the affected cane land. Subsequently, the Australian Government announced their revised Sugar Industry Reform Program (SIRP) in April 2004, a component of which was the Regional and Community Projects (RCP) fund of \$75M over three years for regional initiatives and industry adjustment projects to facilitate change in regional sugar industries.

The SIRP established a series of Regional Advisory Groups (RAGs) to develop and implement regionally based initiatives. The RAG (South) commenced operation in August 2004 and developed a strategic plan for each of the three mill areas in the region – Rocky Point, Maryborough, and Moreton, which was released in August 2005. The Chair of the RAG was also the Chair of the Sunshine Coast Area Consultative Committee (SCACC), and included in its membership a representative of Natural Resource Management (NRM) SEQ, an organisation which later became SEQ Catchments. It is perhaps unfortunate that the RAG South and its plans post dated the closure of the Moreton Mill. Also in 2004, the Australian Government funded a number of positions of Sugar Executive Officer (SEO) to provide executive support to and work with the RAGs on their strategic plans, including applications for assistance under the Regional and Community Projects fund (RCP). The Committee of Management of the Sunshine Coast Area Consultative Committee (SCACC) administered the contract for the SEO for the Moreton Region. The membership of the Committee of Management of the SCACC included an individual who held subsequently the position of Director of Regional Engagement at the University of the Sunshine Coast.

The strategic plan for Moreton area was based on the premise that a sugar based industry in the region was not viable, and explored options around a small level of sugar production (some for stock feed developed in conjunction with BioCane Limited), combined with diversification strategies into alternative crops or livestock. In August 2006, CSIRO produced a report entitled Future use of Sunshine Coast Cane Landscapes, which was developed to inform land use planning by all stakeholders. This report was funded by a grant secured under the Natural Heritage Trust's Regional Competitive Grant Scheme secured by the NRM SEQ (now SEQ Catchments).

The CSIRO report did not address social aspects of the Mill closure. In particular, it did not address the impact of the Mill's closure on the health and wellbeing of the cane growers and their families, yet there was an expressed need by the Sunshine Coast Caneland Action Group (SCCAG) for this to be addressed explicitly. SCCAG emerged following the delivery of the CSIRO report in an attempt to put forward a case to the Queensland Government's Office of Urban Management (OUM) seeking a review of the SEQ Regional Plan's designation of the cane land. SCAGG included caneland owners,

developers, Maroochy Landcare members, and local land owners in other industries. It was this group that approached SEQ Catchments and the University of the Sunshine Coast to design and undertake a research study on the impacts of the Mill's closure on the health and wellbeing of the cane growers and their families. This study was funded jointly by the Sunshine Coast Area Consultative Committee (SCACC) and SEQ Catchments, and was undertaken in collaboration with the SCSAG. The research study was initiated in early 2007 and completed in November 2007(see next section). A copy of the research study was forwarded to the Sunshine Coast Regional Council in 2009, while they were compiling the Canelands Position Paper and the Sunshine Coast Rural Action Plan. Unfortunately, the research study was not acknowledged as informing these two key strategic documents.

Engagement around the research study and its findings

The initiation, design and conduct of the empirical research reported in this paper were built on the earlier collaboration and partnerships that had emerged both around and within the University. A key figure in engagement leading up to the conduct of the research (a staff member of SEQ Catchments) also became central to the planning of the research. It was this individual who sought out and invited a public health researcher from USC to the meeting where the CSIRO report on the future of the canelands was being released. The researcher had previously been drawn into informal discussions about the issue on several occasions over a period of approximately six months. During this time, the researcher had also identified a prospective honours student who was looking for a research topic. The student was also invited to the meeting above and it was through discussions held there that firmer plans were made for a research project to be carried out to characterise the impacts of the Mill's closure on the health and well-being of cane-growing families.

A highly participatory approach was adopted for the research. A series of meetings were held in the planning stage of the project with representatives from a number of regional stakeholder groups including the University of the Sunshine Coast (USC), SEQ Catchments, Sunshine Coast Area Consultative Committee (SCACC), Sunshine Coast Caneland Action Group (SCAGG), Biocane Limited, the RAG (South), Lifeline, the Sunshine Coast Cane Growers Association and Maroochy Landcare. At first, the group meeting was small and those attending agreed on the value of establishing a formal Project Reference Group. Additional members from the groups mentioned above were nominated in a 'snow-ball' fashion. With approval from the University's Human Research Ethics Committee, and with the informed consent of all participants, these planning meetings became a formal part of the data-gathering process and were tape recorded. The taped discussions were then analysed between meetings to inform each subsequent step in the research.

The input of the Project Reference Group members into the design and implementation of research was both necessary and invaluable. In the first instance, they provided valuable data in their own right about the real or expected conditions that many of the cane-growers were facing. Several of the participants were cane-growers themselves who had experienced the dramatic downturn in the industry following the closure of the Moreton Mill in Nambour. Others had close connections to the affected cohort of farmers and had considerable knowledge about features of the group as a whole. As the meetings continued they became a forum where theoretical constructs of health and wellbeing were discussed and related to the issue at hand. This group guided the design and development of the primary data gathering instrument, a questionnaire, through agreeing on the

key themes to be canvassed, debating how various psychometric scales could be incorporated into the survey and significantly, contributing to the construction of a unique tool to gauge the 'highs and lows' of cane growers wellbeing across a decade. In addition, group members provided access to participants in the empirical research through the provision of mailing lists, and through informal advice as to how to approach the conduct of the questionnaire. The tenuous nature of the situation was illustrated by this good will being withdrawn for some time because of disputes within one of the main organisations, the representative of which was part of the Project Advisory Group.

The second, more quantitative phase of the research involved conducting an interviewer administered community survey targeting all adult members of families that were growing cane prior to the mill's closure. This survey aimed to measure levels of self reported health and well being, levels of stress, depression and anxiety (Antony et al. 1998), in addition to a range of constructs adapted from the Environmental Distress Scale and measures of individual and financial resilience (Conner et al. 2004). Through consultation with the Project Reference Group it was suggested that it would be better to administer the health and well being survey face-to face with the project participants. This was largely due to the nature of the issues at hand being very personal. The participants completed the survey in a comfortable environment of their own choice. This process, in turn, permitted the researcher to listen and observe the participants. The qualitative data from the surveys were analyzed within the NVIVO 7 software package whereas the quantitative data generated through the closed-ended response questions were summarised and analysed to explore associations between key variables using SPSS Version 14.0.

Results of Data Analysis

The Moreton Mill closure both directly and indirectly affected a cross section of the Sunshine Coast community, as well as the economy of the area (RAG South, 2005). Furthermore, without an income and with little financial assistance from the government, the majority of sugarcane farmers lacked the resources to conduct minimal maintenance on their properties. Therefore the cane lands in this region began to degrade and lose their visual appeal, as well as harboring weeds, dingoes, pigs, foxes, rats and other vermin (McDonald et al 2006). These factors combined with the loss of income have a significant effect on the growers' lifestyles. The Mill's closure is embedded within a hierarchy of broader contexts including the plans for regional development and growth on the Coast, population growth in South East Queensland, and industry restructuring both nationally and internationally including changing land uses and the ability to grow alternative crops in the area.

Out of a potential 130 cane farming families that were farming at the time of the closure, 30 individuals participated in the survey. Key findings from both the qualitative and quantitative sections of the study revealed that those surveyed had below average levels of self reported health along with high levels of felt impact and 'solastalgia'. Self reported health was measured using the SF 8, an international instrument that is used in over 30 countries to measure eight dimensions of self reported health (Ware et al. 2001). For the purpose of this study the Australian Normative values for the standardized scores were used. These data showed that more than half of the participants had significantly lower scores than they should have for their age and gender for four of the 8 scales (role emotional, social functioning, vitality, bodily pain), and the physical summary score. Many of these participants were still farming or working on a farm in the region. Factors such as lack of community consultation and depression exacerbated the impact of the Mill's closure and others

such as conferred resilience and family support mediated the impact. In turn, the experiences of the farmers appear to have impacted on their levels of place attachment. The key findings were as follows:

- 38% of participants registered 'solastalgia' (a profound sense of loss as their familiar surrounding landscape becomes degraded)
- 76.9% agreed that "family support at the time of the closure helped me to cope"
- 69% agreed that their "financial situation at the time of the closure helped them to cope"
- 76.9% strongly agreed that they felt distress over the exclusion from the sustainability grant
- 85% agreed that the community was divided over the mill's closure
- 70% disagreed that the 2005 SEQ regional plan would achieve sustainable rural land use.
- 50% agreed that there were positive future prospects for the cane lands
- 75% of those interviewed utilised four or more strategies to engage with the issue (eg submission of responses to proposed development applications, discussion with family, public meetings and forums, involvement with stakeholder groups).

The results of a mapping exercise where participants rated their relative perceived well-being in relation to key events associated with the mill's closure are shown in Figure 1 below.



Figure 1 - Relative perceived well-being of participants in relation to key events associated with the Moreton Mill's closure

These results indicate clearly that most of these significant events left the participants feeling worse than they did normally. Of these twelve events, the mill's actual closure had the greatest impact on well-being, followed by the exclusion from the sustainability grant and release of the South East Queensland regional plan.

So how did the research benefit the community? In stakeholder discussions leading up to the commissioning of the research and as reflected in the ethics application, it was anticipated that the study might yield significant benefits to the region, including community empowerment and the opportunity to inform decision making both within the region and in other cane regions across the State. It was actually quite difficult to evaluate against such expectations. There were some clear benefits in that a number of participants reported that their direct involvement in the research project was cathartic. On the other hand, the outcomes did not appear to influence policy decisions around the cane lands following the research. Although a copy of the thesis was presented to the Sunshine Coast Regional Council in 2009 for their consideration in the development of their *Canelands Position Paper* and *Sunshine Coast Rural Action Plan*, the research findings were not referred to in either of these two strategic documents. The actual referral process was informal in nature and was made by the key individual from SEQ Catchments who sent a copy to the relevant Council Officer, who was highly supportive. Subsequently, a new staff member within Council took over the two strategic documents and there was a shift in emphasis.

Analysing processes of engagement

The research on which this paper is based is an interesting example of how regional policy issues are shepherded into the research domain. This cycle is, however, only completed effectively when the outcomes of research are brought forward to inform policy and decision making. Given that the research is relatively recent, the majority of the key players around regional development and sustainability are still working within the region and with each other, although some of them hold different positions. In looking at the mechanisms of engagement around the mill's closure, what becomes immediately obvious is the importance of key individuals in connecting people with issues across organisational boundaries. In this situation there was one key individual who was instrumental in building lasting relationships in support of collaboration around the issue over a period of many years, before and after the research was conducted. There was another individual too, who played a role in influencing the decision to approach USC to conduct this research and this is discussed. There are distinctive traits of researchers too, who choose to become actively engaged with regional issues. It is the traits of and mechanisms used by such individuals that are examined further here.

Network studies have been reported extensively in the management literature as a means of tracking the impact of relationships between actors, whether they are individuals, work units, or organisations. From a network perspective, each of these actors is embedded in a series of networks of interconnected relationships that either facilitate or impede particular behaviours and outcomes. A network is simply a set of nodes and ties, the nodes representing actors and the ties representing relationships or the lack thereof. This approach has been used to study strategic alliances, collaborative initiatives, flows of information and communication, friendship based alliances, and influence, as well as overlapping group memberships (eg boards of directors).

Over the last decade in particular, social network analysis has been applied to inter organisational responses to so called 'wicked' problems such as poverty, health and educational inequities, and climate change, which 'defy efforts to delineate their boundaries and to identify their causes' (Rittel and Webber 1973, 167) and which have therefore been targeted for multi disciplinary and multi agency responses. These studies have raised a number of key questions about how organisational structure, forms of governance, and ultimately individuals contribute to the sustainable resolution of complex problems. According to Bardach (1998), positive outcomes will be achieved and sustained as a result of the determination and creativity of practitioner and managers, otherwise known as 'purposive practitioners'. These purposive practitioners have been called by many, sometimes quite inventive, names – 'networker, broker, collaborator, cupid, civic entrepreneur, boundroid, sparkplug, collabronaut and boundary spanner' (Williams 2002, 107) – although it is the final term, boundary spanner, that seems to have gained the most traction.

Boundary spanners are individuals who manage across either intra or inter organisational boundaries. Some are employed in jobs that mandate participation in collaborative exchanges (eg engagement practitioners) and others adopt the role informally (and are not always acknowledged for their efforts). This particular case study highlights the importance of boundary spanners of both types. Even a cursory network analysis around the closure of the Moreton Mill identifies a staff member of SEQ Catchments as linking central connectors in several inter organisational stakeholder networks, thus making her a very effective boundary spanner. Indeed, it seems likely that, without this individual, the right links would not have been made to allow the USC research to take place.

In the period during which the research was undertaken, only one job designated boundary spanner existed in any of the stakeholder agencies. That individual was employed by USC and held the position of inaugural Director of Regional Engagement. She also held a position on the Committee of Management of the Sunshine Coast Area Consultative Committee, an appointment which, interestingly enough was not *ex officio*. Although her job role was identified expressly as a boundary spanner, her appointment to an advantage in that role was her lengthy service as the senior officer in the Office of the Vice-Chancellor. This advantage was further heightened by the clearly articulated vision of the University's CEO of an engaged institution. This vision was and continues to be made clear in the University's Mission, which is currently: *"To be the major catalyst for the innovative and sustainable economic, cultural and educational advancement of the region, through the pursuit of international standards in teaching, research and engagement"*.

Not everyone in an organization is able or willing to take on such a role and, according to Williams (2002), the literature is neither definitive nor extensive as to why. A range of analyses has been conducted, which can be largely categorised as personality based or cognitive in nature. Given that trait theories in general have been found to be poor predictors of behaviour, this has given rise to an alternative approach that stresses cognitive styles and processes (Brunas-Wagstaff 1998). This approach includes theories that postulate that, in the current environment of increasing resource scarcity within organisations, boundary spanners are quick to recognise and capitalise on the advantages of effective collaboration. From this perspective, the development of particular skill sets (eg reticulist, networking, and communication skills) coupled with a clear understanding of the values, perspectives and power relationships of other individuals and their organisations facilitate and maybe even encourage boundary spanning activity. Thus we see descriptions of boundary

spanners as 'entrepreneurs of power' (Degeling 1995), 'civic entrepreneurs' (Leadbeater & Goss 1998), and 'cultural brokers' (Trevillion 1991).

The creation of job designated boundary spanning positions (eg the position of Director of Regional Engagement at the University of the Sunshine Coast) lends support to the notion that organizations are prepared to facilitate and recognise the potential inherent to harnessing boundary spanning activity. Logic would also suggest and the literature has borne out the supposition that trust is a key factor that influences the nature and outcomes of inter organisational relationships, and is thus critical to the success of boundary spanning activity. Vangen and Huxham (1998) have found that positive outcomes reinforce trust and increase the chance that partners will re engage and have positive expectations about future joint actions. In this instance, feedback from members of the Executive Committee of the Sunshine Coast Area Consultative Committee revealed that their past experience in dealing with USC (through their member employed by the University) had made them comfortable in approaching the University to commission the research.

As Cross and Prusak (2002), organisational life is not always kind to boundary spanners, who tend to spend a lot of time developing their external networks. If this activity is not valued by their organisation, it may well be detrimental to their career prospects. In this particular case, both the job tasked and informal boundary spanners agreed that their work is rarely recognised when successful outcomes are celebrated and that this was a source of dissatisfaction and stress. In a similar vein, where their role was recognised, they reported that it was difficult to quantify (prove) the degree to which a successful outcome was dependent on their boundary spanning activities. This then became an issue in performance appraisal and promotion.

As outlined by Meadows et al. (2004), designated boundary spanners are exposed to levels of stress and tension beyond that experienced by other positions within an organisation (Sumrall & Sebastianelli 1999). This includes task characteristics and job demands, role characteristics, interpersonal conditions and relationships, organisational structure, climate and information flow and career development (Liou 1994). There is ,however, another category of stress specific to boundary spanners that is relevant to this particular case and this relates to stressors arising from the representative duties undertaken by boundary spanners (including the necessity to communicate effectively under pressure) and the consequences of the actions or philosophies of external parties (eg ignoring requests for information) that inhibit role performance. These two issues – job satisfaction and stress – might therefore warrant special consideration when applied to boundary spanners, assuming of course that this activity is valued within an organization. When managing a boundary spanner, a number of factors arise in the literature that might help create a supportive environment:

1. Making clear that the activity is valued, both inside and outside the organisation
2. Recognising that trust is built up over time and supporting the boundary spanner in facilitating a positive outcome for external stakeholders (this includes supporting them in co opting other members of staff)
3. Being willing to recognise that creating and maintaining networks takes time and that it will always be difficult to quantify the degree to which the boundary spanner's activities contributed to a successful engagement outcome

4. Facilitating work arrangements that allow boundary spanners to deal more effectively with stressors (e.g. flexible working hours that recognise often extensive out of hours networking).

The second set out conclusions deriving from this research project concerns the degree to which intra and inter organisational mechanisms assist in taking forward the outcomes of research into the decision making and policy domains. In this particular case, there was no clear regional mechanism for achieving this. The researchers presented the research report in the form of an honour's thesis and distributed it to several key stakeholders directly involved in the research. The graduating honours student then went on to take up employment. It was the boundary spanner from SEQ Catchments who maintained engagement with the issue and took it upon herself to share the research report with colleagues throughout her various networks.

From the University's point of view, there were at that time no clear means of bringing forward research findings for discussion either at an institutional or at a regional level. This may be explained in part by the emphasis within academe on certain types of research outputs such as peer-reviewed publications rather than policy outcomes of research. In the case of USC, it is significant to note, however, that the University's academic promotion policy was the first in Australia to include engagement as a criterion for promotion. At this point, there is limited evidence on how this decision has impacted on the motivations of academic staff.

Garlick and Langworthy (2002, 19) point out that, for universities, 'developing meaningful regional relationships and embedding engagement activities into the core business of the university is a challenging task'. Building and maintaining relationships takes time and is often not rewarded or recognised (eg through academic promotion), and even where a university has a strategic focus on engagement, the way this is put into practice is often project by project, which approach may appear fragmented to external stakeholders.

Since the research was completed, a number of mechanisms have been put in place by regional stakeholders and the University with a view to fostering increased utilisation of research in regional planning and decision making. From a regional point of view, the most important formal mechanism is the Compact. After many unsuccessful attempts, the Compact provides a mechanism through which key stakeholders work together to identify and coordinate a whole of region approach to strategy and projects in economic development and employment. The Compact group, which is a high level group led by the CEO of Sunshine Coast Regional Council, provides a regular opportunity for the University to:

- Bring forward research in support of decision making and policy development
- Identify new projects on the basis of the outcomes of research and
- Identify during the conduct of Projects where research can and should be commissioned.

Within the University, a number of mechanisms have been established to strengthen the link between research and the region. First and foremost, the Office of Regional Engagement has been expanded and placed under the stewardship of a Pro Vice-Chancellor (Regional Engagement). This has provided a strong message to academic staff that regional engagement is valued within the institution, and that it is viewed as an academic discipline in its own right. Another internal mechanism has been the establishment of the Coast Research Database, which is accessible from

the University's corporate website, and which provides open access to the research output of the University. In addition, a database of all research projects and consultancies with regional partners and/or regional outcomes is maintained within the Office of Teaching and Research Services and shared with the Office of Regional Engagement. A third initiative has been the establishment of USC Link, which provides a single point of access to link regional stakeholders seeking research or consultancy support with the appropriate USC staff. This service is run by the Office of Regional Engagement and supported by a network of senior academics from each faculty.

This process of formalising elements of engagement at USC by no means assumes that informal networks will cease to exist and be useful. Indeed, one of the explicit roles of staff in the Office of Regional Engagement is to make links with these informal networks and especially with boundary spanners in those networks with a view to linking them to external networks.

In summary, this reflective analysis of a small-scale research project based around a regional issue led to a much deeper analysis of both the formal and informal mechanisms of communication and collaboration between various types of stakeholder groups. It became clear that key individuals, boundary spanners, can make or break engagement initiatives. Two other points arose from an examination of the engagement processes around this particular research project. First, unpredictable or sub-optimal outcomes can result where there is a vacuum (by virtue of the lack of formal engagement processes) and informal networks are relied on completely. Second, in the same way that key individuals are critical to effective engagement, others with their own agenda can hijack and compromise the effectiveness of both informal and formal networks.

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