

Australian Cotton Futures: Final forum report

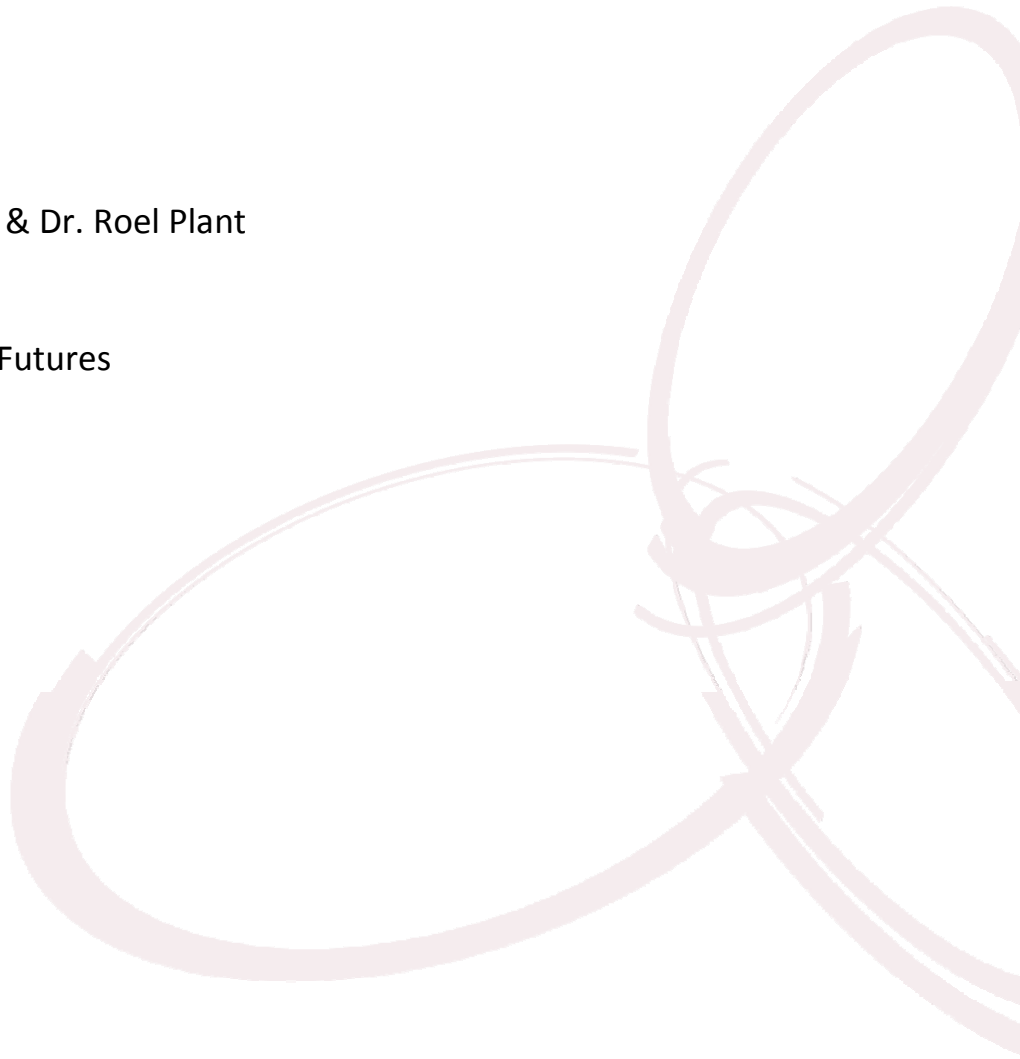
Cotton Catchment Communities
Cooperative Research Centre

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Disclaimer	i
1 Context	3
1.1 What is a ‘cotton community’?	3
1.2 Why a cotton community vision?	2
1.3 Changing rural communities	2
1.4 Vision 2029: destination or direction?.....	3
2 Key Drivers for coTTON COmmunity futures	4
2.1 Cropping variability	4
2.2 Regional economic conditions	5
2.3 Regional economic diversity	6
2.4 Agricultural/environmental uncertainty	7
2.5 Water security	7
2.6 Drought	8
2.7 Cotton corporatisation.....	9
2.8 Cotton mechanisation	10
2.9 Landuse competition	10
3 Cotton community Visions	12
3.1 What future do you see? Community Forum – St George, QLD	12
3.2 A personal high point you’ve experienced living in Balonne.....	13
3.3 What is a ‘healthy functioning community’?.....	14
3.4 Magic carpet – visions for Balonne in 2020-2030	20
3.5 What is the trend for cotton in your vision for 2020-2030?	20
4 Conclusion	23
5 References	25

1 CONTEXT

The Cotton Catchment Communities CRC (Cotton CRC) commissioned the Institute for Sustainable Futures at the University of Technology, Sydney to undertake research on community visions for Australian cotton. This research aims to explore a shared community and industry vision for the future of 'cotton communities', complementing industry visioning work that is currently being conducted and to determine the extent to which these visions are divergent or comparable.

The work was conducted in 2010 and 2011 with cotton growers and members of cotton communities in central northern New South Wales and south west Queensland. Many of these communities are changing rapidly as a result of a number of pressures; including increased mining activity, climatic variability, and shifting economic and regional development foci among others. At the same time, 'rural decline' in regional Australia is becoming a major demographic issue: for rural residents, for governments and for industries (McManus *et al.*, 2011).

For many of the focus communities of this research, the cotton industry has (since the 1960s) been the major economic driver of the region, and challenges like those aforementioned are influencing the shape of the industry, and its future. Cotton Australia and the Cotton Research and Development Corporation launched 'Vision 2029' in 2009 to help the industry address some of these strategic challenges facing the industry in Australia.

This research project has engaged community members to explore how the cotton industry is likely to change, and to understand what capacity communities have to evolve with these changes. This capacity will ultimately determine whether the industry remains productive, competitive and sustainable in the future, and whether it has the support of local community members. Community and industry capacity to cope with, and benefit from change requires a deep understanding of the future and its uncertainties in terms of demographics, the work force, new technologies, emerging rural industries, climate change impacts and water stress.

This report provides a final summary of the Australian Cotton Futures research project. It draws together background information from a scoping report, and data collected with community members through interviews about the future of their communities. It complements this information with data collected from a visioning forum conducted with a diverse collection of community members from the Balonne Shire in south western Queensland.

1.1 What is a 'cotton community'?

In this research, cotton communities are defined as those places where cotton is, or has been, grown. This definition includes communities where cotton still provides the primary economic income for the people and businesses living and operating in a region. However, it also includes places where cotton has historically been the primary economic income, however economic development in the area has become more diversified in recent times. Stubbs and colleagues (2010; 2009; 2010) and Storer *et al.* (2009) have compiled the most detailed examination and analysis of the social and economic connection between cotton communities and the cotton industry.

Using this definition highlights a possible disjunction between ‘cotton communities’ and the cotton industry: while the industry is interested in remaining an integral part of these communities and the regions, the members of these communities may not necessarily consider cotton a viable (or desirable) component in their futures. Reconciling the industry desire for “a shared vision that inspires and unifies the Australian cotton industry” (Finney, 2010), with the wishes of the community, who are an imperative resource for the industry’s operation, will have significant implications for industry and community alike.

1.2 Why a cotton community vision?

Future studies and applied future research strategies have been utilised in an inter-disciplinary manner for several decades (Slaughter, 2007). Futures research methodologies present exciting opportunities for understanding and addressing significant environmental, social, political and technological problems. Foresighting methodologies allow researchers “to anticipate dangerous trends, identify desirable futures and respond appropriately” (Riedy, 2009 p 40). Importantly however, the value of futures approaches in addressing complex problems lies solely in the ability to turn the outcomes of these processes into decisions and action (Stevenson, 2001).

In its simplest form, visioning provides a mechanism to guide future planning decisions (Shipley, 2002). Understanding a community’s vision/s of the future enables industry to develop strategic plans and to efficiently allocate resources. This is particularly important for the cotton industry, and cotton communities, particularly because the direction industry foresees for cotton regions does not always align with the community members’ ideas, and may be contrary to regional development directions. The outputs of community visioning exercises enable effective decision-making regarding how the human and social capital of a community can best be used to achieve desired outcomes.

One of the key goals of this cotton community visioning project is to assess how closely the current cotton industry vision aligns with community members’ perceptions of their future, and the possible role cotton may or may not play in that future. In true ‘cotton communities’, where cotton still provides the main economic income for people and businesses, the alignment is likely to be close. In cotton communities whose economic livelihoods are or have diversifying away from cotton, alignment is likely to be more difficult.

1.3 Changing rural communities

Many regional communities are experiencing change, and rural decline has become a major issue for rural people, their communities, rural industries and governments. Onyx and Leonard (2010) define rural decline as a reduction of 30% or more in population over the last two decades. Despite dedicated policy attention (Hamblin, 2009), the issue of rural decline continues to plague regional Australia.

While agriculture still represents a culturally important component of the Australian society (Hamblin, 2009), the relative contribution of agriculture to the Australian economy has steadily fallen over the past 30 years (ABARE, 2009). During this time farming profitability, farm workers and employers, and the number of farms have all fallen (ABARE, 2009). Alongside these changes, environmental and social sustainability have become important factors affecting the operations of the farming sector, and the perceptions of the vast majority of Australians not associated with the farm sector.

Exploring how these issues affect rural decline and rural people is an important task. Part of that exploration must be an examination of the perceptions of rural people regarding their futures. These perceptions will have implications for the people themselves, their communities, and the industries that rely on the workforces these communities supply. This visioning research attempts to shed some light on the key future drivers community members identify, and the impact these drivers may have on their perceived futures.

1.4 Vision 2029: destination or direction?

In 2009 Australian cotton industry leaders recognised the potential for “improving industry performance, organisation collaboration and capacity through development of a shared view of the future” (Finney, 2010). The vision has been adopted to build awareness of future challenges and opportunities for the industry. A key goal of the vision is the “alignment of thinking, planning and progress” (Finney, 2010) within the industry, with particular aims associated with the community, particularly in relation to being valued by the wider cotton community, and providing attractive opportunities for community to contribute to the industry.

The visioning project, entitled Cotton Industry Vision 2029, took a long-term view of the industry to explore future strategic challenges and opportunities. Currently being communicated to cotton communities in New South Wales and Queensland, the ongoing project is a collaborative project between the Cotton Research and Development Corporation (CRDC), Cotton Australia and the Australian Cotton Industry Council (ACIC). The actual visioning process commenced in September 2009 and was concluded by March 2010.

2 KEY DRIVERS FOR COTTON COMMUNITY FUTURES

Members of cotton communities interviewed in this research had varying perceptions about the future of cotton and the extent to which it might contribute to their personal futures, and the future of their wider communities. For the most part, these perceptions were connected to current concerns about environmental uncertainty and water security, regional economic development (particularly in relation to the growing importance of the mining sector especially LNG exploration), and the adaptability of cotton growers to environmental and economic cues.

Community issues that interviewees discussed in relation to these drivers concerned the productivity of cotton farming, the impact of changes in cotton communities on future population, and the 'life' of the community. The following section uses direct quotes from interviewees to illustrate the diversity and key drivers community members identify with regarding cotton and the future of their communities, and how these drivers might impact on the lives and lifestyles of the people living in 'cotton communities' in New South Wales and Queensland. A summary of these drivers and the impacts they could bring to cotton communities is provided in the cotton community futures vision matrix (Prior *et al.*, 2011).

2.1 Cropping variability

Community members felt that the ability of cotton growers to switch between cotton and other crops (and to cattle farming in some cases) was an important factor that contributed to the flexibility and adaptability of the farmers and the community. Under seasonal environmental or economic variability, cotton growers are able to choose whether they grow cotton (when the price is high, or when water is available) or a less water intensive crop like wheat.

"I think probably what the biggest thing they do is that they are diversifying their cropping ability. So it is dependent on what the commodities markets are forecasting. If the price is low they may not plant cotton next year. They may plant wheat or something else". (Emerald)

"Dependent on whether or not there is irrigation [water] available, that might influence what they [cotton growers] are planting." (Dalby)

Cotton is the crop of choice under good conditions because it provides the farmer with the best return on investment. Ultimately, greater returns for growing cotton have economic flow-on effects in the community, especially places that are true 'cotton communities', which have few other economically viable industries. Without this ability to vary the crop, many farmers would not be able to remain on the land – even though other crops like wheat are not as profitable, the returns can cover farmers' living expense, and allow the farmer to maintain the rural lifestyle (though it is often quite a stretch for many).

"...the advent of GM cotton has really changed the management of both dry land and irrigated cotton and increased people's opportunities, allowed them to a degree to be, if you like, greater risk takers in that they don't have to spend anywhere near as much money upfront as getting country prepared. That's probably released them to be a little bit more flexible to adapt to seasons. So I think those things have all been positive changes." (Moree)

In turn, the ability to vary the crop has implications for cotton communities. With success in varying crops people perceive that cotton towns are more vibrant, and consequently people are more optimistic about their futures, and the quality of life that the rural lifestyle delivers can be maintained. Additionally, cropping variability ensures that farm workers have diverse skills, and that there are on-farm employment opportunities even when cotton is not grown.

“There's more money in town; there's more people down at the pub on a Friday night; there's more people down the street at the shops so you see those sorts of changes throughout the town.” (St. George)

“It's the little fellas - the contractors, it's the small businesses who are actually living on the number of people in town that they need to keep going. They are providing the diversity, the entertainment, all the other things that happen around here.” (Moree)

2.2 Regional economic conditions

Cotton contributes significantly to regional economic conditions when it is grown. However, because cotton is water intensive, during drought or when water security is low, other crops are preferable. As a consequence, cotton does not always provide for stable economic conditions, which community members realise, and seek to address by encouraging economic diversification. Poor regional economic conditions result in fewer jobs, and fewer business opportunities. This exacerbates local rural decline, as skilled workers and service providers migrate away.

“So if they [cotton growers] are having a bad season it actually affects the whole region and the economy of the region, so that's a major issue.” (Emerald)

“The problem for a community like Moree is it's almost singularly reliant on primary agriculture. Tourism, sort of light engineering - it is so focused on agriculture that, even in good seasons, proportionately there are less jobs available on farms.” (Moree)

“I think without the cotton industry here, the town wouldn't be the same. It's the lifeblood of the town. Everyone seems to know that and when the cotton's good, the town's good.” (St. George)

Community members recognise that good cotton seasons have attracted new people into their towns. Particularly for small rural centres, population size is a very important issue for their futures – increasing population is associated with the provision of better services (healthcare, business and agricultural support for instance), while falling population is associated with a reduction in services (like health or education), because these services are provided based on threshold population sizes.

When research interviews were conducted, most interviewees perceived that recent rainfall would bring several good seasons to the cotton industry. Interviewees pointed out that this would be particularly important for local businesses. However, the rain after the interviews gave rise to some of the worst flooding in recent memory, with short-term adverse impacts, but ultimately longer-term benefits.

“I think the next few years will see the industry bounce back very strongly. I think we will see a boost to the community in terms of the business and the turnover.” (Moree)

2.3 Regional economic diversity

This driver is associated with interviewee discussions about the contribution of other industries or sectors to the future viability of their communities. The issue of economic diversity was one that elicited varying levels of confirmation and concern. Members from communities where cotton was a significant economic contributor were conscious of the need for diversity (in the form of tourism or reduced reliance on cropping with some moving to horticulture), but recognised that cotton would likely remain of primary importance to the community. Communities where cotton production had declined in recent times were less attached to the industry, having seen the economic opportunities and benefits that other sectors (mining primarily and also horticulture in QLD) could provide for the community.

“So for a community like Moree to look to its future as it intends to grow, it has to look outside of primary agriculture. In particular, outside irrigated cotton.” (Moree)

“The problem for a community like Moree is it’s almost singularly reliant on primary agriculture. Tourism, sort of light engineering - it is so focused on agriculture that, even in good seasons, proportionately there are less jobs available on farms.” (Moree)

“I think now the town is a mining town involved in industry or in agriculture, you wouldn’t consider it a rural town.” (Dalby)

The varying perceptions about the value of regional economic diversity for communities was underpinned by the notion that diversity could strengthen local economic conditions, and attract people to regional areas. However, this also has implications for the community in terms of service provision, and for the existing community residents.

“... if the town does become an area where people tend to live, the rent that the miners are able to pay then affects your local business people and their staff. So the people working at the bakery aren’t able to sustain those of rents and the town struggles in that respect.” (St. George)

Economic diversity could also have implications in relation to the relationships and sense of community in cotton growing areas. Interviewees identified that small cotton communities like Moree (NSW) and St. George (QLD) were built on relationships that had been established through historical closeness, which could be affected by a large influx of new residents (e.g. an increase in fly-in fly-out mining contractors).

New industry is also likely to draw workers away from cotton. This is likely to influence cotton productivity and the increasing mechanisation of cotton farming. While this will impact on cotton, economic diversity will strengthen cotton communities in the long run, and so most interviewees saw diversity as an important goal for the future. In Dalby diversification into mining was important as it’s already a reality, whereas in other towns included in the research (E.g. St George) the

resources are further below the ground, harder to access and as such explorations are not as progressed as in Dalby.

“The (other) impact of mining is the labour. A lot of agriculture in general is finding it very difficult to find employees because we can't compete, we can't pay the wages that mines can pay.”
(Dalby)

2.4 Agricultural/environmental uncertainty

Success in Australian agriculture is largely about managing boom and bust cycles. Cotton farmers are no exception, and have found ingenious ways to adapt to this variability via water efficiency, cropping variation, and seeking ways to diversify the local economy are three important adaptive mechanisms identified in this research. Environmental uncertainty, and the associated agricultural uncertainty this brings, cause community members to contemplate the viability of life on the land, but also to seek ways to ensure that life can continue.

“You certainly enjoy the boom years and the drought years are hard and - I mean that's the thing you do - you do question whether you should stay or go.” (St George)

“People's view is that they know that's it's the good and the bad and as you say the cyclical nature of it all, but I think people just adapt to it out here...” (St. George)

2.5 Water security

All interviewees identified that water security would be one of the most important factors that would affect their communities in the future. While many took the view that water restrictions would be bad for cotton, they acknowledged that this would not necessarily be the killer blow for their communities – particularly where cotton was not the sole economic contributor.

“I know if you took a quarter of the water away out of this community... If you took a quarter of that away perhaps then there's less agronomists needed and if I go - my wife is the local physio... So it would have an impact on that sort of thing, and to get practitioners into rural areas is quite a hard one.” (St. George)

“A serious concern is being expressed in this community about the ability of the community to continue to survive. Primarily that's on top of the level of [water] cuts they've seen through drought and other reasons that have been going on. There was obviously going to be a tipping point where you're just not going to make it in the way they're doing it [producing cotton].”
(Moree)

Water restrictions are also likely to have consequences for sense of community in cotton communities. Interviewees felt that the Murray Darling Basin water buy-back scheme would have unequal effects on the community – growers would be rewarded (to a degree) on the sale of their water entitlements, but the consequences of decreased cotton production in a region would have flow-on effects for the community, who receive no compensation for the loss of business that would result from reduced economic contribution from cotton. (The recently released Murray Darling Water Plan was not in the public domain at the time the research was conducted).

“So the cotton – the [water] buyback scheme, basically people will get their reward and they'll go and invest somewhere else and not look back. The community's then left with the problem.”
(Moree)

“The town itself relies on it and you can see when we've had had a lot of rain that there's a good cotton season coming on. The town itself is a lot busier that what it was say 12 months ago when it wasn't as good a season. I think it does make a difference.” (St. George)

Additionally, water insecurity was perceived to have an impact on the stability of cotton communities, as falling cotton production would push farmers (those who remained on the land) to other crops, or agriculture that is less profitable, though more resilient to environmental variability. Lack of water security also influences quality of life in cotton communities, making people more pessimistic about the future.

“I think water variability's a problem anyway... Yeah it's always there. What the challenge, I think, in terms of managing communities like this is that you've got to balance that challenge with enough diversity so the peaks and troughs are not so great in terms of how it's affecting the overall community”. (Moree)

2.6 Drought

Water security and drought are obviously closely linked. When in drought, cotton cropping is less viable, only irrigated cotton is grown (and only if drought does not continue for too many seasons), and farmers rely heavily on their water allocation. For communities that rely heavily on cotton, drought brings significant implications for population, employment, sense of community and quality of life.

“... in the areas where cotton requires irrigation there's been 10 years of drought. The business of cotton has certainly been decimated by that to some degree.” (Emerald)

“I reckon the mood of the town is completely different this year compared to what it was last year, being or looking like a better season at the moment from what I hear. Everyone's very optimistic and just the general feel you get around town is that things are looking good.”(St. George)

“During the last eight years we had one of the biggest declines in population from our shire and we lost up to 60 families out at St George and because - In 2001 there was around 3200 in town and now it's back to about 2500.” (St. George)

“So if you've only got 20 per cent of your water you're only going to get 20 per cent of your area and you get rid of staff, you get rid of tractors and your farm to that basis I guess.” (St. George)

As drought persists and families directly associated with the cotton industry diversify their interests, or simply leave, the importance of cotton to the community declines. The attraction of alternative industries, like tourism or mining increases significantly during drought, because these industries can increase the stability of the community by relieving some of the economic uncertainty that drought

brings. If drought persists long enough it is less likely that these communities will identify themselves as cotton communities. While not directly caused by drought, communities in south-west Queensland (that were once major cotton growing areas), no longer identify themselves as 'cotton communities'.

"... over the years, less successful farmers have been bought out and those who really know how to grow the crop continue to grow and largely prosper. I think people - there's no doubt that they've really struggled during the drought." (Moree)

2.7 Cotton corporatisation

Increasing costs of cotton production (water, chemicals, labour etc) have largely driven cotton corporatisation in Australia because of the need to increase the economies of scale in cotton production. Additionally, drought impacts and water security have put pressure on smaller family farms, which have either sold the properties to more successful families, or to large organisations.

"... look the industry at the moment has, I guess, really got to consolidate - well it's been through some pretty lean years and it's a matter of the - a lot of the cotton growers here and the businesses that support them are consolidating and paying off a lot of debts that've been built over the years of drought." (St. George)

"Then there's been fairly strong contraction over a period of years particularly with the way it's managed in the valley and the major cotton companies moving their headquarters and things out of the area back to Brisbane and places like that." (Moree)

"The figures, I can't be sure on, but I think there used to be something like 300 cotton growers in and around Moree district. There's probably only 50 or 60 today. Some of them are quite large." (Moree)

"I think there have been some very savvy business decisions made by a number of the people off the land." (Emerald)

Corporatisation has consequences for the connection that community members have to the cotton industry. Large, non-local operations often source labour from outside the community, affecting local labour demand, and the likelihood that workers will remain in a region. It also affects the downstream economic stimulation that cotton production can provide to a cotton community. With corporatisation, cotton becomes less of a rural industry than other local agriculture, and so there's somewhat less support for the industry in many of the communities, because the farms are becoming faceless corporate entities, or owned by foreign investors.

"I think the level of [investment], it has been more corporate in its focus than the traditional maybe grain growing and sheep farming and other stuff that's been going on for some time. So it's been a higher corporate practice and necessarily the dollars that have been made in the area have not necessarily been reinvested back in the area in comparison to what you do get with a family operation, grain growing things. So that's certainly seen as had a fairly negative effect by some people." (Moree)

2.8 Cotton mechanisation

Interviewees' discussions regarding the increasing mechanisation of cotton production ultimately related to concerns about falling population in cotton communities. People felt that increasing mechanisation lead to reductions in the on-farm labour force, and the likelihood that this would flow through to population decline because of a lack of local employment opportunities. The key issue that interviewees associated with population decline was the chance that government-provided services (particularly healthcare) would be cut. People were also worried that falling population would reduce the quality of life in cotton communities.

"But what is happening in particular with the mechanisation of farming production, is there's a significant drop in population". (Moree)

"They'll continue to adopt a whole range of technology. One of the outcomes of that will be less people employed." (Moree)

"I know even from our own perspective with the local rugby club that I'm president of, the last four years we've really struggled with numbers. But in the last 12 months since we had the flood and there's been so many young blokes being employed on the properties now... This year we're back to full production for the first time since then and the number of young blokes we had on the rugby team we actually filled two teams, whereas traditionally we've only had one and we struggled to stay in the Downs because if we didn't have enough numbers they were going to kick us out. That's a big part of community..." (St. George)

2.9 Landuse competition

In many cotton communities, particularly in Queensland, landuse competition, primarily from mining, is having an impact on cotton production and life in cotton communities. Competition from mining companies for agricultural land is having an impact on communities, with some land holders happy to allow mining infrastructure on their properties and others more skeptical. The advent of one landholder accepting mining appears to put pressure on their neighbours to do the same, resulting in a new kind of rural conflict and at times competitive secrecy.

"I think it is splitting some of the communities and even to the point where mines and gas pipelines are being put through properties, there are a lot of confidential agreements being made with mining companies and the requirement is that it is confidential. So, it is actually alienating neighbours to some degree which is not the traditional way that people on the land work." (Dalby)

Increases in mining activity also have implications for cotton growing, with land use competition causing declines in cotton production when land is otherwise utilised, or water is distributed to mining operations.

“Threat on agriculture in general in this area is - the mining industry, the uncertainty associated with mining leases and exploration and the fact that landholders have no rights. If a company wants to do exploration or they find a deposit and they want to mine it properly through a seam, people have limited rights. I mean there is a little bit around, I think mining lease wise, they're getting close to some of the cotton areas.” (Dalby)

“If you had a mining lease over your property then you would be reluctant - you wouldn't know where your future was I guess. So you'd be reluctant to put money into that property. Or it would be unsettling I guess if that was somewhere you thought you'd want to be for a long time.”

Quality of life in cotton/mining towns is affected by unequal wages and the flow-on consequences for the cost of living in these places.

I don't see the community changing that much, the biggest impact could be mining. Just with what we've seen in other areas where if the town does become an area where people tend to live, the rent that the miners are able to pay then affects your local business people and their staff. So the people working at the bakery aren't able to sustain those of rents and the town struggles in that respect.” (St. George)

“I guess in general from a, I guess a community, which the cotton industry and agriculture fit into, Emerald's become a very expensive town as well. Because of the fact of wages, the majority of people employed in the mines and wages are so high, so obviously the cost of living is high as well.” (Dalby)

3 COTTON COMMUNITY VISIONS

While this research identifies and supports well-known and widely publicised drivers, it has also brought to light several previously less prominent drivers. Water security and drought have clearly been important, and well-known drivers of life in the cotton communities of Australia, where water availability determines cotton production. The research has shown that issues like falling cotton production and changes in water policy have tangible flow-on effects for the community – like falling population, and mobilisation of skilled labour. However other impacts associated with water security and drought have been examined to a lesser degree, like falling quality of life in the community (Stubbs *et al.*, 2009), and the degradation of a sense of community among cotton community members. In good seasons, cotton is the most profitable agricultural activity in cotton regions and the economic benefits that its production yields can be felt by businesses and non-cotton members of the community alike. Without cotton, farmers' lifestyles are characterised by uncertainty, which extends to the wider community, as cash flows are constrained.

The Cotton Community Futures Vision matrix (Prior *et al.*, 2011) identified a range of possible consequences that might result from the drivers detailed in section 2. These consequences are detailed in section 3.1, and highlight interesting aspects of community members' beliefs about the future of their cotton communities. In order to explore these beliefs, and validate the importance of them in shaping the future of a representative cotton community, a community visioning process was conducted with participants from cotton communities in the Balonne Shire of south-western Queensland (section 3.1).

This section draws on the descriptions of drivers and their consequences from the section 2, and correlates these results with information obtained with a community visioning forum conducted with community members from the Balonne Shire. The forum was organised in collaboration with community planning staff from the Balonne Shire Council, and has been used to partly inform the Shire's strategic planning process.

3.1 What future do you see? Community Forum – St George, QLD

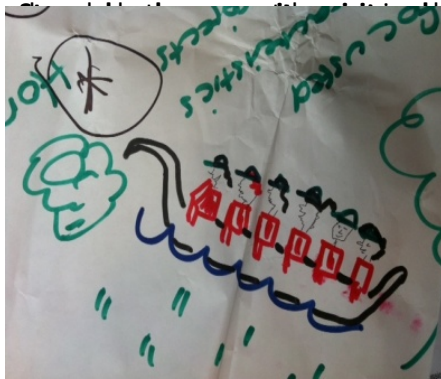
On 14 October 2011, 17 community members of the Balonne Shire joined the Institute for Sustainable Futures (ISF), University of Technology, Sydney, and the Balonne Shire Council community planning staff and consultants to share their perspectives and experiences on the past, present and desired futures for Balonne.

Beside members of the Balonne Shire Council, representatives from the grazing and cotton growing communities joined the forum, along with real estate representatives, retailers, local government representatives, community planners, social services providers, indigenous youth outreach representatives, and land managers.

The forum was a capstone activity, extending and validating the research conducted in the 'Visions for Australian Cotton' research project. Unlike other research conducted as part of this project, the forum was intended to focus on 'the community', not on explicitly on cotton-related issues *per se*. The forum took a broader approach, aiming to reveal what cotton community members valued, and sought to explore possible futures from the community' perspective.

An applied visioning approach was used to gain insight into how best to build and strengthen the resilience of Balonne 'cotton communities'. This approach used a variety of techniques, each of

which are described in the following sections where the results of the forum are presented.



Participants shared stories about a range of community including:

... and the genuine concern about one another, particularly by community members to one another during the recent

... where the participants knew other community members very interested in the lives, family and issues of their neighbours having people around who were happy to, and took care of one another.

... each other in the street, and for pioneering families, parks is also a high point.

which is described in the following sections where the results of the forum are presented.

3.2 A personal high point you've experienced living in Balonne

The first activity in the visioning exercise asked participants to identify and describe positive personal experiences associated with living in the Shire in order to gain a baseline understanding of the various values community members attribute to living in the Balonne Shire. These positive experiences were assumed to reflect peoples' positive connections to the community, and the particular features of the community that help to generate these experiences.

Participants shared their personal 'high points' or positive experiences of living in Balonne. Among those values the participants felt was important, social and environmental values were the most prominent. The participants identified the following as being important:

"Community spirit really helps when the chips are down"

"I put value on the fact when I walk down the street I know 50-60 people"

Once the participants contributed their experiences, the facilitators initiated a discussion about how people felt about living in Balonne Shire at the time of the workshop. This exercise intended to capture participants' feelings about whether the positive experiences they reflected upon were being perpetuated in the community at present, or whether these might have existed in the past. Based on the discussion that ensued, it was evident that the participants at the forum were in a resilient frame of mind:

"The floods bought opportunity in chaos, as a flow-on there was a buoyant crop season linked to an economic boom"

"Our seasons have become so good recently because of water and weather, as a result people feel more resilient"

"There is a lot of apathy in St George however in small communities 9/10 people will rally and come together"

3.3 What is a 'healthy functioning community'?

Participants then explored what a 'healthy functioning community' might comprise of based on their own perceptions and experiences of life in the Balonne Shire. The definition of a 'healthy functioning community' is based on the idealised perceptions of the participants, and likely determined by their positive experiences living the community – exploring what factors can make a community function properly based on the perceptions of the community members.

As a first step individuals brainstormed the possible characteristics of a HFC. The participants were then asked to share their ideas with others in groups of six. As a group they built on the individual activity by grouping their characteristics (*via* affinity mapping) into clusters of characteristics that were alike. Results of this process are summarised in Table 1.



Table 1. Infinity mapping summary

Key themes derived from infinity mapping: Characteristics of a healthy functioning community (intentionally not summarised so as to reveal 'raw' data)

	Key themes derived from infinity mapping	Characteristics of a healthy functioning community (intentionally not summarised so as to reveal 'raw' data)
Group 1	Safety and peace of mind	Low crime rate, positive community self-identity, policing for a safer community, state and federal government coordination re. Flood irrigation, maintenance of river health, river as a sanctuary
	Community values/family	Sustainable family lives, good interpersonal connections, a well informed community (communications), friendly people, good customer service, access to cultural and self expression activities, community events, (sports, festivals etc), access to fresh air, water, recreation, partnerships between TAFE and USQ
	Employment	Financially secure, access to worthwhile employment, low unemployment, an active community with employment opportunities
Group 2	The voice	Proactive, employed, wealthy enough for benefits to flow to all people
	Values	Caring, friendly, open, happy, diverse, relaxed
	Resources	Health resources (hospital, fly in specialists etc), generally well resourced town to meet everyone's needs locally
	Collaboration and information	Opportunity for adequate employment, adequate availability and affordable housing, sustainable industries (e.g. cotton/grapes), cohesive increased availability of training (youth, govt, community orgs)
Group 3	Social	Adequate social services, safe places, accepting of others, community spirit, urban areas that make residents feel good, local awareness and support, engaged and participating, school as a key pillar with good quality education from primary to leaving and engagement with the community
	Economic	Economic stability, expansion of town and economic growth and connectivity, rural areas that are productive for the long term, adequate and available employment, solid services, well functioning community facilities, good staff retention
	Environmental	Environmentally sustainable (further) development, fresh air, enhanced environmental values practiced by all

Key themes varied between the three groups of participants, yet for some of the themes the characteristics of those themes overlapped with other groups. For example, group 1 identified

How would you rate Balonne Shire's current performance against this characteristic? (using a scale of 1-10, with 1 being the lowest)

Describe what Balonne is currently like against this characteristic

What factors contribute to how you have just described Balonne?

What will enable the characteristic to exist in the future?

'Community values and family' as an important component of a HFC. This theme dealt with community and family relationships and the development and maintenance of social capital within the community. Groups 1 and 2 also noted that these characteristics were very important, but placed them within the themes for 'Values' and 'Social' respectively. As such, while the theme names assigned by each of the groups differ, the characteristics of a 'healthy functioning community' are generally shared.

Following this initial task, groups were asked to identify and prioritise their top four or five characteristics of a Healthy Functioning Community (or write new ones based on their discussions with the wider group of participants). Groups then considered the following questions for each characteristic identified:

Following discussion to unpack the questions above, the themes and characteristics of a HFC from each group were attached to whiteboards where they could be viewed by all participants and discussed further informally over morning tea. During this time the participants were allocated three stationery 'sticky dots' each. They were asked to vote for the theme/s from the HFC group work they considered to be the most important using the dots.

The results of the work of three groups addressing the questions above, together with the results of individual sticky-dot-voting yielded a hierarchy of priority 'healthy functioning community' characteristics, which are represented in Table 2 below.

Table 2: Hierarchy of priority 'healthy functioning community' characteristics and their status in Balonne Shire communities

Priority HFC characteristic	Current rating	Description of current situation	Contributing factors to current situation	Enablers for the characteristic to be a reality
HFC Priority 1 Provision of quality education	5/10 (primary school) 2-5/10 (high school)	Lack of focus on basic education Poor approach by Ed Dept. Kids leave Shire for high school Poor engagement with indigenous youth Single parents struggling	Lack of leadership and response from Qld Dept. of Education Single parent and family dysfunction	An able Principal with sound leadership and community engagement <i>(In the late 1990s-early 2000s strong leadership, good music program, better assessment and school health services)</i>
HFC Priority 2 (equal) The community has focus (is engaged and takes an active role)	9/10 (small communities) 2/10 (St George)	For small communities: self sufficiency commitment ownership For St George: people busy a 'someone else will do it' mentality apathy	For small communities: account-ability and ownership For St George: population size and expectation that someone else or structures in place will 'deal with it'	For small communities performing in this area eg: Dirranbandi via Rail to River project And Bollon via employment For St George: look to smaller communities
HFC Priority 2 (equal) Safety & peace of mind	7/10	High break-in rate Low Police action in community Drugs as a major issue Started Safer Communities Committee and Retail Committee to prevent & lower crime	People in larger communities are less connected than they used to be high number of youth are not engaged drugs use an issue	Up until last few years the situation was good Need police with a stronger presence Improved community partnerships and police engagement (e.g. with Council)
HFC Priority 2 (equal) Increased housing choice	7/10 (for sale)	Situation poor across the Shire	Lack of rental housing due to high demand from mining and fly in fly out	Seasonal housing demand dependant on contract workers (e.g. picking seasons)
HFC Priority 3 Employment	6/10	Aboriginal employment Scheme is positive Skills centre providing	Green Army Work for the dole Aboriginal employment scheme	Need better weather Need to stimulate job creation Open international markets for kangaroo

		linkages	Drought has hampered some employment	trade Constant flows of workers Increase opportunities for school leavers
HFC Priority 4 Community values, friendliness and social interaction	8/10 (small communities) 5/10 (St George)	Strong community groups Strong service clubs Strong churches Allied health good Lots of events Teaching of basic values in schools/families	Higher level of volunteers than average Many people with strong family connections to the area Higher indigenous population than average (stay close to home)	Greater involvement of people as organisers and participants across all communities
HFC Priority 5 Collaboration and information	5/10	Small communities feel left out (ad hoc services)	Distance between communities Current technology limitations Funding models are a casual agent	Collaboration and information was at a high during the natural disasters Increased info via Council website Increased use of radio
HFC Priority 6 Productive industry	9/10	Primary production at a high level Diversified Industry Input high \$ (buying local)	Ability to access qualified staff Plentiful seasonal work Affected by favourable weather and water Maintained by the resilience of people	Uptake of sustainable best management practices Continuation of good seasons

This voting exercise raised a number of interesting issues that stimulated a significant period of discussion. In particular, the group raised the issue of quality education in declining rural areas as a key issue facing the community. This issue had not been previously identified in this research project, nor in concurrent Council community plan consultation development, yet participants felt that the availability of quality schooling, particularly at the high school level, had far-reaching implications for the community.

Participants recognised a need for the relationship between the quality of education, family cohesiveness and employment opportunities in the Shire to be acknowledged and addressed. Participants noted that in St. George for example, the quality of the local high school education had fallen in recent years, and as a result families were choosing to send their older children out of the Shire for their high schooling. In addition, the children were often accompanied by one parent (generally the mother) who could provide care for the child or children while studying – also allowing the child to stay out of a boarding situation (to save money). This sometimes left the father on the farm to live and work alone. Participants provided several examples of how local families had split as a result of these difficult arrangements. It was perceived that a good local education would prevent people leaving the community, and would ensure children stayed on the land, continuing in the family's farming tradition, and reducing the flow of people off the land.

“Lots of families are running two households e.g. mum and the kids are in Toowoomba (for access to quality education), and dad stays on the farm”

Local business people also felt that the separation of families as a result of education-seeking behaviours had an impact on local goods and service providers. Those people with children going to school outside of the community were more likely to shop while away from the Balonne Shire, meaning locally earned money was not likely to be reinvested into the community.

“When families have their kids go away to school then they're more likely to start doing their shopping in Toowoomba or elsewhere when they visit their kids”

A declining population, partly as a result of these changes in demographics, has been shown to influence local service provision (McManus *et al.*, 2011). Participants noted that being serviced by 'fly in-fly out' health service providers was one example of how community spirit, which was strengthened by strong local services, could become slowly eroded. The importance of retaining a 'population critical mass' also influences services like the provision of a post office and daycare for young families. In particular, the lack of day care services in St. George was cited as a reason why not more local women were able to join the workforce, compounding labour supply issues in the community.

“We have a lot of women who would like to work more, but can't because there is no day care”

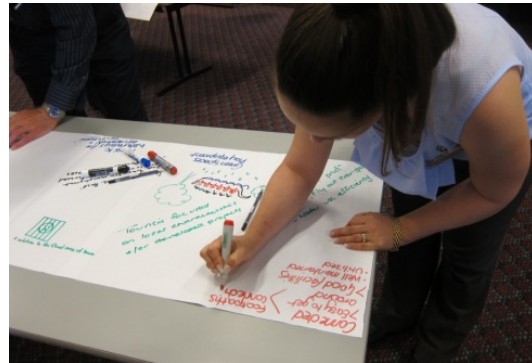
Participants felt that some of these issues might be addressed through the delivery of youth and community training/education. Participants highlighted that such programs should be supported by government, but led by local service groups to ensure community ownership, and the delivery of results that the community directly require. There was also a strong desire to encourage greater indigenous involvement in training, education and economic opportunities across the Shire, because indigenous kids are more likely to stay in town (in part due to spirituality and connection to place)

and could therefore partly address some aspects of the issue of rural decline and falling labour

- Water use efficiency in towns and on farms
- A strong agricultural base for the community
- Protection of agricultural land for food production
- Increased horticultural production
- More regionalised industry (especially those that do not rely on freight, e.g. IT)
- Having one community moving forward together
- An increased population base in the smallest communities
- Increased local tourism
- An increased value of place
- Pleasant green urban spaces
- A “sustainable-focused” community supply.

“We’ll always continue to fight for employment opportunities but we need to fight for the kids to have something when they leave school”

Lastly, participants highlighted the need to maintain access to water, because without it the cotton industry in the Balonne Shire would fail. Unlike other cotton growing regions nearby (for example in the Dalby area) where other industries like mining or tourism have begun to diversify the local economy, the Balonne Shire is still largely dependent on the cotton industry, and is strongly connected to the industry. Participants felt that in their case, loss of water due to regulation or drought in the future would lead to further declines in their communities.



“If the town were to lose water, people will move away and people are the critical mass for sustaining service provision”

3.4 Magic carpet – visions for Balonne in 2020-2030

As a way to encourage participants to think about their ‘ideal’ visions for the future of the Balonne Shire, they undertook a ‘magic carpet’ visioning exercise. This exercise involved people (without too much time to dwell) writing or drawing visions for the Shire in 2020-2030 based on their own perceptions and hopes. Images and words contribute to the carpet by covering not only ideas that were previously raised during the forum, but also with the addition of a range of other ideas, concerns and issues, including:

3.5 What is the trend for cotton in your vision for 2020-2030?

The magic carpet exercise opened the space to hold a short whole-of-group discussion about whether cotton, or other types of agriculture or indeed other industries altogether, might be viewed as contributing to the community members’ vision of the Balonne Shire in a vision to 2020-30. Some of these issues mirror drivers discussed in section 2 including economic and agricultural diversification, cotton mechanisation, and water security.

Several participants commented that more agricultural diversification is likely to be prevalent in the future. These comments began some discussion about the flexibility of cotton growers in relation to their ability to adapt to changing economic and environmental conditions with different cropping strategies. This adaptability was also recognised as a key factor that influences the relationship that exists between the communities of the Balonne Shire and the weather and water.

“I think diversification is what it will look like; horticulture and cotton”

“Cotton will dominate going forward but horticulture will grow with demand for veggies”

“Community functioning is totally reliant on rains/crops and related economic boom (or bust)”

“Water’s going to become a lot more expensive and value of production output will determine what’s grown”

“If you’ve got the water and got the weather it (cotton) will pay off”

One possible alternative agriculture the participants foresaw was an expansion of horticulture in the Balonne Shire. This possibility raised some discussion, particularly in relation to labour and the continued mechanisation of cotton growing. While some participants felt horticulture would be a viable future agriculture, others felt that the mechanisation of cotton, and the falling labour requirement of cotton would create problems for horticulture: they felt that attracting labour in the picking season would be different, or take some time, given that pickers were not used to looking for this type of work in the Balonne, where cotton chippers and pickers were a thing of the past.

“In the last 5 years mechanical progress means less (cotton) workers”

“For horticulture there needs to be lots more infrastructure – Qantas jets need to be landing here every day of picking season”

Mining is an alternative industry that affects many agricultural areas in southern QLD and Northern NSW. This industry raised varied responses from the forum participants, and distinct differences exist within the community, in attitudes and opinions toward growth in the mining sector, were evident from the discussion on this topic. While some participants felt mining could divide or fragment the community. There was some concern that if some farmers were to allow mining on their properties, this would place pressure on their neighbours to do the same. People also felt that mining would provide only a short-term economic boost to the region, but come with long-term, or unknown consequences for the future of agriculture in the Shire.

“The temporary mentality that comes with mining could divide the community”

“It (mining) will fragment the community”

“It’ll come whether or not we want it or not, as long as resources remain important mining here is inevitable”

“The depth of the resource is currently harder to get to so we have slower mining growth than Roma”

“There’s angst around mining, there was the same thing around cotton when it commenced in the [Balonne Shire] then it settled down as [mining] may do in Dalby”

“Housing shortages and labour shortages will be a major issue for non-gas industry in the future”

The community forum was seen as a useful and insightful means to cross reference and build on previous research findings and phone interviews by facilitating and eliciting sharing of current and future visions and opinions about cotton communities ‘in situ’.

4 CONCLUSION

This research has shown that community perceptions about the future role of cotton in traditional ‘cotton communities’ vary considerably. This will certainly have implications for the cotton industry in realising its vision for the next 20 years (Finney, 2010), particularly in the contexts of remaining resilient to future challenges, and as a respected part of the communities where the industry operates. Undoubtedly, cotton will remain part of the economic future of these communities, however the drivers and associated consequences identified here will influence the relative contribution cotton makes to the lives and lifestyles of the members of these ‘cotton communities’.

Perhaps the most telling finding of this research has been the recognition that regional economic diversification can help regional ‘cotton communities’ to become more resilient – that is, to better weather the environmental, demographic and economic variability and uncertainty that is a constant companion of the Australian farmer. Importantly, farming and non-farming members of cotton communities may have different perceptions of the need for economic diversification (though the distinction is a complex one that can only be partially understood with the limited data obtained in this research). Cotton farmers have historically adapted to environmental variability and water uncertainty by adopting a flexible farming approach – growing crops as a response to water availability and market price. Members of cotton communities (who aren’t directly involved with the cotton industry) have traditionally relied on the economic success of the farmers in their communities as the primary source of local economic contribution and suffer when agricultural suffers. The physical detachment of the non-farming cotton community from the land (the opposite of which often encourages the cotton grower to continue in difficult times) means they are more open to new opportunities that economic diversification prospects like mining and tourism might offer.

Importantly, the consequences of environmental, demographic and economic drivers on cotton communities are all closely connected, with the reliance on local agriculture playing a key role in the ‘life’ and functioning of those cotton communities included in this research project (see for example, McManus *et al.*, 2011). For example, agricultural efficiency in cotton mechanisation (and also falling water allocations and drought), have reduced the labour intensity of cotton growing in Australia. This in turn reduces the population base of cotton communities, and subsequently the quality of central services (like health and education) provided. These changes further reduce the attractiveness of regional areas, and the likelihood that people choose to settle in there.

Community members who took part in this research generally hold strongly positive attitudes to the future of their communities, and felt that cotton would play a central role in the future. This highlights the fact that most rural and regional areas in Australia continue to be dependent on agriculture, which contributes to the social and economic vitality of these communities (McManus *et al.*, 2011). As such, visions of the future, particularly of those communities where cotton, and agriculture in general predominate, will closely revolve around the contributions of agriculture and farming people to those communities.

At the time this research was being conducted, Cotton Australia and the Cotton Rural Development Corporation engaged in the delivery of Vision 2029. This industry vision aims to “facilitate greater

awareness of possible future challenges and opportunities for the cotton industry and most importantly enable alignment of thinking, planning and progress” (Finney, 2010). This vision is focussed closely on cotton industry issues like productivity, market differentiation and social and environmental responsibility. The vision notes that “to have impact the vision will need to be owned by all participants in the industry” (Finney, 2010), which presumably includes cotton community members. However, no cotton community members interviewed during this research, or involved in the community forum, mentioned the cotton industry’s Vision 2029. Nor does the Vision recognise the important role of community in the industry’s future, apart from the need for the cotton industry to “retain, attract and develop highly capable people”.

Based on the research conducted within this project, it is uncertain how closely people associate themselves with the cotton industry, or simply with cotton as a central part of their rural community. Given the adaptability and flexibility of cotton farmers in this study, particularly in relation to water uncertainty, it’s likely that for the members of the ‘cotton communities’ included in this research, that cotton is a means to an end, and that while the communities may change gradually without cotton, they would still remain largely agricultural.

By contrast, given the drivers and challenges identified by community members in this work, for the cotton industry to meet its Vision 2029 objectives (see Finney, 2010) it must focus more directly on building (or rebuilding) communities around cotton. Helping to build cotton employment opportunities that attract people back to traditional cotton communities, that build the population base, and that contribute to ensuring service provision in cotton communities to further cement their attractiveness to locals and prospective residents alike.

5 REFERENCES

- ABARE, (2009). Australian Commodity Statistics 2009. Canberra. Australian Bureau of Agricultural and Resource Economics.
- Finney, B. (2010) Vision 2029: What is the future of the Australian cotton industry? *Spotlight on Cotton R&D*, 2010(Winter): 3-5.
- Hamblin, A. (2009) Policy directions for agricultural land use in Australia and other post-industrial economies. *Land Use Policy*, 26(4): 1195-1204.
- McManus, P., Walmsley, J., Argent, N., Baum, S., Bourke, L., Martin, J., Pritchard, B., Sorensen, T., (In Press). Rural Community and Rural Resilience: What is important to farmers in keeping their country towns alive? *Journal of Rural Studies*, doi:10.1016/j.jrurstud.2011.09.003.
- Onyx, J. & Leonard, R. (2010) The Conversion of Social Capital into Community Development: an Intervention in Australia's Outback. *International Journal of Urban and Regional Research*, 34(2): 381-397.
- Riedy, C. (2009) The influence of futures work on public policy and sustainability. *Foresight*, 11(5): 40-56.
- Shiple, R. (2002) Visioning in planning: is the practice based on sound theory? *Environment and Planning A*, 34(1): 7-22.
- Slaughter, R. (2007) State of play in the futures field (SOPIFF). Report to the Foundation for the Future. Seattle, WA.
- Stevenson, T. (2001) The futures of futures studies. *Futures*, 33(7): 665-669.
- Storer, J., Lux, C. & Watts, S. (2009) Report 2 - Quantifying the impacts of cotton production on employment within cotton growing areas in the MDB and in Southern Queensland. Exploring the relationship between community wellbeing and cotton production in the Murray Darling Basin (MDB).
- Stubbs, J. (2010) Report 1: Scoping Paper: Exploring the Relationship Between Community Wellbeing, Resilience & Cotton Production in the MDB.
- Stubbs, J., Lux, C., Storer, J. & Flinn, J. (2009) Measuring Community Wellbeing in 'Cotton Communities'. The Socio-Economic Impact of the Australian Cotton Industry on Selected Regional Communities.
- Stubbs, J., Storer, J., Lux, C. & Watts, S. (2010) Report 3: Quantifying the impacts of cotton production on community wellbeing and resilience across the MDB. Exploring the relationship between community wellbeing and cotton production in the Murray Darling Basin (MDB).
- Prior T., C. Cooper, D.D. Moore & R. Plant (2011) Australian Cotton Futures: Qualitative Coding Report. Institute for Sustainable Futures, University of Technology, Sydney, for the Cotton Catchment Communities CRC. October, 2011.