



Country to Coast - a healthy sustainable future

VOLUME 5B

Priority Action Plan 1 Social and Economic Theme

PAP 1.2 Landholders & NRM Information

Final Report



8/32 Wyllie Street
PO Box 501
BUNDABERG Q 4670

Ph: 07 4132 8333
Fax: 07 4132 8377

Email: admin@burnettmarynrm.org.au
Web: www.burnettmarynrm.org.au

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- **Paper B – What Landholders & NRM Managers need to know & how best to access it (PAP 1.2)**

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FINAL PROJECT REPORT

to

**BURNETT MARY REGIONAL GROUP FOR
NATURAL RESOURCE MANAGEMENT**

regarding

**SOCIAL & ECONOMIC PRIORITY ACTION
PLAN
ACTIVITY 1.2**

**Paper B - What Landholders And Natural
Resource Managers Need To Know And
How They Can Best Access It (PAP 1.2)**

from

Institute For Sustainable Regional
Development &
Centre For Social Science Research &
Faculty Of Education And Creative Arts
Central Queensland University

By



Teresa Moore, Darren Halpin & Stewart Lockie

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**Burnett Mary
Regional Group**

...for Natural Resource Management Inc



Australian Government

Bureau of Rural Sciences



**Central Queensland
UNIVERSITY**

Executive summary

Seven focus groups with a total of 40 participants were held across the following regions: Kingaroy, Monto, Tiaro, Gympie, Maleny and Bundaberg. There were two focus groups held in Bundaberg with people from Bundaberg, Childers and Gin Gin. A range of industry sectors were covered including dairy, cattle and pig farming, mixed crops, horticulture (fruit and vegetables), sugar cane, fisheries and forestry. While most participants were present in their capacity as private landholders, many had affiliations with producers groups, community groups and local shires. There were over half a dozen interviews conducted with various information providers including government agencies and industry organisations.

Key findings emerging from the focus groups

Sources of information

A diverse range of information sources were identified, these ranged from government agencies to local producer group publications such as 'Beef Talk'. One of the strongest themes to emerge was the gap left by the changing role of extension officers and the absence of a local person with local knowledge providing one-on-one advice through farm visits.

What information is wanted?

Two associated themes were present. The first theme related to what information is needed. Here there was an emphasis on authoritative knowledge, for example, an interpretation and dissemination of current legislation and any changes to legislation and also access to farm management information such as local maps, contour advice, weed management and soil maintenance. The second theme related to desired information. Here the type of information desired emphasised knowledge about the role of groups such as the BMRG and production related information that was packaged in an easily 'readable' format. So the kind of information wanted is also linked to how the information is given.

Delivery methods preferred

Similar to the diverse range of information sources, there was a diverse range of preferences regarding how information is delivered. While some landholders were happy to use technology such as the Internet, others were more comfortable with receiving packaged information in a form that was easily read, in plain English and relevant to their interests. Participants indicated that the important point was the 'trustworthiness' and reliability of the source / person giving out the information. Social networks and learning from what their neighbours had done were considered as important as 'formal' sources of information.

Many participants saw a role for local councils and local community groups in information sharing and delivery activities but again this depended on the individuals concerned and the social relationships developed over time. In some areas of the Burnett Mary region local women's groups acted as a collection point for information delivery and sharing. Many women remarked on how busy their husbands were and that they saw part of their role as collecting, reading and interpreting new information. This information is then passed onto their husbands over the dinner table. In the current economic downturn some primary producers were involved in off-farm employment to supplement income. Often it is the men who are seeking alternative employment while many wives remain working the property and maintaining family life.

Providers

There are multiple information providers including peak body organizations, chemical companies, media, government agencies and private consultants. Interviews conducted with

industry bodies and government agencies active in the Burnett Mary region suggested that much of the information desired was actually available in some form or another. Formal information and training activities tended to be delivered by group workshops supported by written materials. One-on-one visits or consultations were a rare exception. In terms of training, each organisation seems to provide a mix of ‘off the shelf’ training products and custom designed packages, some for the pursuit of formally recognised qualifications and others to satisfy industry needs.

Recommendations

Six recommendations were identified:

1. Re-defining the BMRG image – there appeared to be some ambiguity regarding the role of the BMRG and this needs attention. We do not feel it is possible to say much about what areas the BMRG should be active in, in the future, beyond the following general points; i) staff employed by BMRG should be ‘locals’ and BMRG should adopt a specific HR policy in this regard, ii) activities should be hands on and where possible have a large one-on-one component, iii) BMRG should focus in two broad areas a) filtering and sifting technical data already available and b) providing summary and updates of legislative and regulatory activities including on farm visits to clarify issues in an authoritative manner.
2. ‘One size fits all’ strategies will not work – it is unlikely in our view that a blanket delivery system will be effective because of the diversity within the broad geographic area.
3. Locals for locals: Insiders with knowledge – landholders value relationships with those people who understand local conditions and issues and that these relationships take time to develop.
4. Kick the dirt and talk – for most, the preferred method of communication was the face-to-face conversation with many people speaking of their pleasure in having someone to kick the dirt and talk with, on their property. Also personal knowledge held by community members needs to be acknowledged and valued.
5. The rules keep changing – we see a vital role for the BMRG in being able to communicate changes in legislation and regulations directly to local landholders. We see a role for the BMRG to be an interpreter of complex legislative information and then disseminator of this information in plain English to local landholders.
6. Roles of local groups – whether the groups are for example, the local Landcare, Catchment Care or Women in Sugar, these advocacy groups play a vital role in sharing and disseminating local and outside information within the local region. We would also recommend that a database of local groups be established so that as many local groups as possible are included such as those who use the local rivers and waterways for both recreational and industry purposes.
7. Packaging the product – three significant points need to be considered: They are relevance and reliability of the information, coupled with the level of prior knowledge of the person seeking the information. This means that information needs to be concise and expressed in plain English without either ambiguity or extra padding and answers the question posed.

Acknowledgements

This research could not have been conducted without the participation of both individual landholders and organisational representatives who took part in the focus groups. These people generously gave of their time and energy and added yet another meeting to their busy schedules. This highlighted to the researchers the level of commitment they have to their individual enterprises and to land management issues in their region. We thank also the industry group and government department representatives who were part of the interview process.

We would like to thank Tamara Boland and Bill Thompson for supplying various contact people within the Burnett Mary region who were able to supply phone numbers to contact potential participants. We also thank Mary Anne Secker for her support and assistance with organising participants for the focus groups, organising catering and doing literature searches. Mary Anne also provided support during the focus group meetings.

B1 Introduction

The Burnett Mary Regional Group (BMRG) has commissioned the Institute for Sustainable Regional Development (ISRDR), along with the Centre for Social Science Research (C4SSR), and the Faculty of Education and Creative Arts, Central Queensland University, to identify options for communication with landholders about natural resource management (NRM) issues and to document the present providers of such information to land managers in the Burnett Mary region. Both these outcomes will contribute towards the implementation of the Burnett Mary regional plan and associated activities. As time was limited we have not specifically addressed an in depth analysis of the services provided by government departments such as DPIF and DNR beyond a preliminary discussion of information provision and training. We consider that this would involve a separate investigation. The project commenced in May 2004 and was completed in September 2004.

The research posed the following key questions:

- What are the existing sources of NRM information accessed and utilised by landholders?
- What value do landholders place on those sources? Are these sources relied upon or trusted?
- What NRM information do landholders require but have no access to?
- What communication strategies do landholders prefer?
- What information and training relevant to NRM is currently offered, and by whom?

B2 Background

Much of the land upon which agricultural production occurs in Queensland is in private ownership and management. Moreover, the evidence suggests that much of the land that has the largest impact on the status of water quality and associated ecological values in the Burnett Mary is privately owned land utilised for agricultural purposes. As such, there is broad recognition that any attempts to address the long term quality of ecological systems will require partnerships with land owners, predominantly primary producers. Considerable research has been undertaken in the past into how best to encourage farmers and other private landholders to adopt technological innovations or other changes in land management. One of the outcomes of these studies has been the finding that the adoption of environmental innovations generally requires different incentives and information packages than straightforward productivity innovations. Environmental innovations often require individual landholders, or small groups of landholders to bear the cost of implementation while benefits are often long-term, indefinite, and off-farm (Vanclay 1992). Environmental practices also may require major changes in land use and farm layout (Lockie and Rockloff 2004). Additionally, according to Saltiel et al. (1994), there may be a variety of ways in which landholders might approach the same environmental outcomes. Within such a complex decision-making environment, landholders often require assistance to optimise complex management systems rather than simply to receive information (Lockie et al., 1995). Vanclay (1992) summarises the characteristics of innovations that have been found to influence their adoption. These are:

- **Complexity:** complex innovations and programs require greater management skill and detailed understanding of processes. This increases resistance and the possibility that land managers will not accept the premises upon which practices and programs are based.

- **Congruence:** compatibility with farm and personal objectives reduces the likelihood of innovations conflicting with existing practices and increases commitment to making changes where this is the case.
- **Divisibility:** allows partial adoption in order to trial practices on a small scale or to adopt those components compatible with existing practices and objectives.
- **Economics:** while it is reasonable to expect that the more economic an innovation is, the greater will be its adoption, other factors come into play in relation to environmental innovations for which economic returns are long-term and indirect.
- **Risk and uncertainty:** all innovation involves an element of risk, the perception of which is amplified where uncertainty exists over the likelihood of particular costs and benefits over time, thus reducing adoption.
- **Conflicting information:** all practices and programs are subject to debate over applicability and effectiveness. Where debate is extensive, non-adoption or participation is often an appropriate response.
- **Capital implementation cost:** in addition to the overall economic costs and benefits it is necessary to consider capital outlay necessary to initiate adoption or participation and the opportunity cost of this capital.
- **Intellectual implementation cost:** many innovations and programs require land managers to invest considerable time learn new ways of doing things.
- **Flexibility:** maintaining flexibility is an important risk management strategy. Locking land managers into a particular land use may encounter resistance due to the perceived loss of flexibility.
- **Physical and social infrastructure:** in addition to infrastructure for marketing, transport and so on, land managers require appropriate sources of information and support. Due to the importance most land managers place on other land managers as sources of information, acceptance of practices and programs by peers facilitates adoption.
- **Environmental perception and media promotion:** adoption and participation is enhanced when land managers perceive themselves personally to be at risk from environmental degradation. Many media depictions of environmental degradation, however, are so extreme that landholders do not relate to them, either believing themselves not to have such a problem or becoming fatalistic about their ability to address it.

Communicating effectively with primary producers presents, therefore, a variety of challenges. In addition to those relating to the characteristics of innovations, there are issues of distance, educational background, literacy and access to be addressed. It is commonplace for social research addressing the design of communication and learning strategies for farming communities to ask questions about the importance of various sources of information (see for example Black and Reeve 1998; Kilpatrick 1999). A survey by Black and Reeve (1998) of primary producers in northern NSW during 1997 (n>1000) asked farmers to indicate the sources of information regarded as ‘extremely or fairly important to their farm business’. They found that accountants and rural newspapers were most cited as an important source of information (see Table B2.1 below). A similar question was asked by Kilpatrick et al (1999, 101) to a sample of over 500 Australian farmers. Again, farmer magazines and accountants emerged as the main sources of information on farm management issues. While the print media, such as farmer magazines, may be important as ‘a source of awareness about a particular topic’ it is ‘rarely a trigger for change’ (Kilpatrick et al 1999, 17).

While we have some idea of what acts as a ‘transmitter’ of information to the farming community, we do not know whether farm managers dismiss or trust these sources. This is an altogether different question. While research identifies the rural newspaper as an important source of information, for instance, it does not tell us what *content* in that paper is valued by the reader. For instance, farmers may read the *The Land*, but do they read and then disregard as ‘biased’ information the pages produced by the local Departmental Officer regarding vegetation management, but read and take on board information from an industry group? Scenarios such as this are important to identify in order to design effective communication strategies. The question of the level of trust individual farmers have of sources of information are all the more important given the politically-charged environment surrounding the nexus between the environment and farming in Queensland at present.

Table B2.1: Information sources considered important by farm operators

Information source	Proportion of respondents (%)
Accountant	72.4
Weekly rural newspapers	71.5
Retailers, merchandisers and stock and station agents	65.4
Agfacts and booklets from NSW Agriculture	64.9
Grower and industry newsletters and magazines	58.4
Radio	57.4
Books	56.1
Advisers employed by seed, fertiliser or chemical companies	55.6
NSW Agriculture staff members	55.2
Daily or local newspapers	54.2
Leaflets and booklets from retailers, merchandisers and stock and station agents	46.7
Television	46.3
Leaflets and booklets from the Soil Conservation Service	45.8
Soil Conservation Service staff members	42.5
Agricultural consultants	36.0
Computer software	18.2

Source: Black and Reeve, 1998, Table 3.9

Of course, farmers also learn ‘informally’ whether through word of mouth via social networks and family members (see discussion in Kilpatrick et al 1999, 15). They also learn experientially, such as via trial and error. These issues are not typically canvassed in social survey research of the kind reviewed above. In addressing the issue of communication in a learning context we confront the generic issue of adult education and lifelong learning, current thinking on which is summarised below.

B2.1 Theories around teaching, learning and communication

Current communication models can be categorised into following four main strands (Tyler, Kossen & Ryan, 2002). Firstly, there is the linear model, also called the transmission model, in which the notion of a sender and a receiver is emphasised (Tyler, Kossen and Ryan, 2002).

This model views communication in terms of information transfer and is not concerned with understanding. A second model concerns an interactive process where the notion of feedback and interpretation are included. This model also highlights intentional and unintentional information that is transferred during communication processes.

Both formal and informal learning takes place in a social context. Theories of teaching and learning used in science education emerge from a constructivist paradigm. Tobin, Briscoe and Holman (1990, p. 411) define learning within a constructivist framework as follows:

Learning is defined as the construction of knowledge by individuals as sensory data are given meaning in terms of prior knowledge. Learning is an interpretive process involving constructions of individual and social collaboration. It is clear that in this view, knowledge is created through social interaction as individuals test the fit or usefulness of their conceptual understandings in interactions with others and in contexts in which the knowledge is applied.

In other words, the way in which people interpret and receive new ideas and practices is influenced by their existing ideas and thoughts. This is closely aligned with a third model of communication put forward by Tyler, Kossen and Ryan (2002) called the transactional process model where communication is viewed as an ongoing and evolving process where prior knowledge and experience play a role in understanding and interpretation. Communication always takes place within a context that has both historical and temporal dimensions (Tyler, Kossen & Ryan, 2002, p 23).

Bell and Gilbert (1996) suggest two dimensions of learning that are significant for this study. First, much of the research over the past 15 years into learning strategies has focused on the nature of prior knowledge and the implications that this has for changing ideas and conceptions around science and science-based issues. Second, although learners have cultural and social differences they often have similar educational needs. For us, this suggests that while learners come from different social and cultural backgrounds, generational differences would suggest that some adult learners have specific needs regarding skill development with new technologies. With educational delivery, this suggests that for good communication to occur, the facilitator needs to know the characteristics of the learners in order to develop learning packages that cater for educational differences and different learning styles. While some learners prefer visual material other learners may prefer a ‘hands on’ approach, an option that could be more useful for landholders. However Bransford, Brown and Cocking (1999) suggest that because of the sheer magnitude of knowledge, rather than attempting to cover all that there is to know, the goal of current education strategies is better conceived as supporting people to develop specific intellectual skills and learning strategies in order to acquire knowledge that allows people to think critically about issues affecting society including history, science, technology and social phenomena. These skills and learning strategies include the ability to ask meaningful questions and problem-solve within specific areas (Bransford et al, 1999, p.5).

However, the constructivist perspective does not entirely address the dilemmas of conveying and understanding formal scientific knowledge. We believe engaging groups of people in inquiry and discourse about phenomena is a viable approach for teaching alternative scientific concepts. Within large and small groups, consensus-building discussion affords space for generating, refining and connecting ideas (Meyer & Woodruff, 1997). Closely associated with specific models of communication is the concept of discourse. Discourse can be defined as the systematic ways in which people, or groups within a society produce and communicate

information which then becomes areas of knowledge in that society (Tyler, Kossen & Ryan, 2002, p 24). Infused within discourse are the concepts of myths, power and ideology which form the foundation of belief systems held within particular societies.

To facilitate both change of ‘old’ knowledge and learning of new knowledge there needs to be awareness of what the learner already knows about the topic/issue and /or attempts made to find out prior knowledge. This prior knowledge is then used as a basis of further learning via multiple delivery methods. Ideally an opportunity to test out new ideas within local contexts would help in the change process along with an environment that fosters questions and discussion of ideas.

When taken together, this view of communication highlights the persistence of particular cultural norms and values and raises awareness of the strength of belief systems within communities. This means that when dealing with specific groups and individuals that particular issues need to be recognised and acknowledged. The issue of communication and learning with landholders has an important context and history that must be acknowledged. There has been, over the past 30 years, a decline in government service provision, a decline in the use of one-on-one technical advice to farmers, an increased reliance on private consultants and increased use of group facilitation methods to deliver information.

B3 Approach

Two major methods of social data collection were deployed in this project. First, focus groups were conducted with landholders and natural resource managers in the Burnett Mary region. Second, key informant interviews with industry and governmental representatives involved in the formulation and delivery of information, training and communication strategies with these landholders were conducted. Details of these approaches are outlined below.

B3.1 Focus groups

The initial part of the project involved identifying and exploring key issues relevant to designing natural resource management information used by landholders (farmers) when making land and water management decisions. This was investigated using focus group methods. A focus group is a structured or unstructured conversation between researchers and participants on an area of common or established interest. It is a conversation with a predetermined ‘focus’. These conversations are typically guided by a facilitator or a moderator. The relatively informal atmosphere of this form of research method encourages individual participants to speak freely about their opinions, views and attitudes. The role of the facilitator is to ensure this occurs, to guide discussion and to keep a focus on issues at hand (Berg 1998, p.100). It has been noted that a group size around 8-12 and a length of 1.5-2.5 hours is ideal for this method (Stewart and Shamdasani 1998, 505). As compared with one-on-one face-to-face interviewing, focus groups promote ‘brainstorming’ which means individuals can generate more ideas and discuss a broader range of issues because participants react to one another (Berg 1998 p.101).

Seven focus groups were conducted for this study. One group was conducted in each of following regions: Kingaroy, Monto, Tiaro, Gympie, and Maleny. Two focus groups were held in Bundaberg with participants from Childers, Gin, Gin and Bundaberg. Each location was selected to ensure a good coverage of industry sectors (sugar, horticulture and grazing industries) and with an adequate geographical coverage of the region. Focus group

participants were recruited in consultation with the Burnett Mary Regional Group (BMRG). While most participants were present in their capacity as private landholders, many had affiliations with producer groups (BESE, Growcom) and community groups (Landcare, MRCCC), some were also representatives/councillors of the local shires and some were members of the BMRG. Participants were sought on the initial basis that they were landholders in the region and that collectively they would be likely to present a representative cross-section of views and attitudes related to communication and/or information strategies related to NRM. As is usual for focus groups (see Stewart and Shamdasani 1998, 511), they were also individuals with some knowledge of the needs of landholders in the region.

B3.2 Selection of participants

The BMRG supplied a list of initial contacts from within the Burnett Mary region. This list included various members of the BMRG and indigenous communities. From that original list, we contacted one person from each regional area. From these people we were given entry into their own personal networks within their industry groups as well as geographical location. Because of the time constraints, we personally contacted 60% of the names from the list supplied, while some of the contact people kindly offered to contact potential participants. In total 162 phone contacts were made by project staff, but we are unsure how many phone or personal contacts were made by people locally. An information sheet was faxed to those requesting further information regarding the focus group topic.

Some difficulty was experienced in our attempts to contact various landholders and many messages were left on voicemail with most people eventually responding to our calls. Unfortunately many potential participants were away at other meetings and were unable to respond until after the dates of arranged meetings in their district. Another difficulty encountered was negativity towards ‘yet more consultation’. In this respect we got a distinct impression that many people were finding too many meetings and too little feedback or notice taken of previous consultations, indicating some dissatisfaction with communication processes more generally. Informal feedback alerted us to issues related to feelings around over-consultation, meeting burnout and lack of time to attend all meetings that many landholders saw as important. The major reason for non-attendance was other commitments. Many of the people we contacted were heavily involved in producer groups and community organisations such as Landcare. There were also two significant community events occurring during the time we were arranging the focus groups, namely the EKKA in Brisbane and the Gympie Muster in Gympie. Both of these events form part of the social and cultural life of landholders and primary producers. Table B3.2a below lists the location of the focus groups and the number of participants.

Table B3.2a: Location of focus groups and number of participants

Location	Participants
Kingaroy	8
Monto	5
Tiaro	8
Gympie	5
Maleny	5
Bundaberg	4
	10

Despite ‘consultation fatigue’, many landholders who were unable to attend affirmed their commitment to the Burnett Mary catchments and interest in improving communication about natural resource management by generously supplying names of other potential respondents. There was, however, more resistance in the Bundaberg region than elsewhere. Our contact in this area was helpful in offering to contact various groups and asking them to respond directly to us. As none of the local groups responded, our contact suggested this was due to lack of interest. When we offered to piggyback the focus group the only available meeting time coincided with focus groups being held in the opposite part of the catchment area. This resistance was surprising considering the positive response from elsewhere in the Burnett Mary Catchment. While other contacts have since been used to generate focus groups in the Bundaberg and Childers region, this unfortunately added to the time constraints of short notice regarding meetings already felt by some of the participants. This highlights the need to have realistic timelines set out for advanced notification of meetings. We would suggest that in implementing various communication strategies to allow 2-3 weeks notice of meetings from the time of postage/fax with written communication, and possibly a follow-up phone call to remind people of the time, date and venue.

An explicit part of the brief was to obtain the input of Indigenous communities in the Burnett Mary region. Approaches were made to several representatives. While no such representatives attended our focus group meetings the precise reasons for their non-attendance are not clear even though practical assistance was provided to facilitate involvement.

Table B3.2b below lists the location, date and types of industry sectors represented at each group.

Table B3.2b: List of focus groups

Group/ date	Location	Industries / Interest groups represented
1: 17/8/04	Kingaroy	Beef cattle, crops, shire councillors, shire representative, BMRG, Burnett catchment community group representative, Landcare representative
2: 18/8/04	Monto	Grazing, mixed farming – dairy, beef, pigs, grain, sorghum, wheat, barley, BMRG, Grain co-op, AgForce representative
3: 30/8/04	Tiaro	Grazing, plant nursery, beef, councillors, riparian landholders representative, Landcare representatives, irrigators and grain, MRCCC representative, BMRG
4: 31/8/04	Gympie	Dairy farming, horticulture, small crops, irrigators, shire representative, Landcare representatives from different regional areas
5: 31/8/04	Maleny	Dairy farming, forestry, avocado farming
6: 2/9/04	Bundaberg	Horticulture, fisheries, eco-tourism and parks, BSES, shire representatives, DNR
7: 2/9/04	Bundaberg	Cane farming, shire representatives, shire councillor, fisheries, Landcare, cattle

Each focus group was intended to have between 8-10 people, which is considered an ideal size in order to ensure each participant has enough time to contribute (Stewart and Shamdasani 1998, 505). However, in some instances, the turnout was a little smaller due to last minute cancellations. The focus groups were each designed to run for around 2 hours. However, in some circumstances this was shortened in order to accommodate the need for participants to move on to subsequent meetings. While this was not ideal, it was accommodated given the need to reduce ‘burnout’ among those active in rural community activities.

The group process followed standard procedures for such methods. The moderator had a predetermined set of open-ended questions that served to guide discussion. The same set was used for all groups. A protocol for the focus groups is contained in Appendix BI. The moderator probed the answers to these in order to continue down particular pathways that the participants were eager to discuss. It also enabled the moderator to re-focus the discussion if it was felt it was moving away from themes of information and information delivery.

The results of focus groups were recorded in a number of ways. Firstly, groups were tape recorded and detailed notes taken by a recorder. After the conclusion of each group the facilitator and recorder debriefed on the group outcomes. These three sources were triangulated in order to generate an account of the groups in the form of a focus group summary. The group results were analysed in a thematic fashion, based on capturing the range of views or reaction to each of the themes introduced to the groups. In particular, any differences in the results between geographic region and industry type were noted (eg. livestock, horticulture, sugar production, etc).

B3.3 Provider Interviews

Interviews are particularly useful when one requires access to detailed and specific information. They are also useful in exploring in depth an individual's opinions, attitudes and values towards a set of topics or issues. This is precisely the type of data required in this phase of the research.

Key informant interviews were undertaken with those agencies and industry bodies involved in communicating NRM messages and delivering NRM related training/education to landholders in the Burnett Mary. Several key informants known to the BMRG were contacted and asked for an interview. Through snowball sampling additional interviewees were identified and approached for an interview. Each interviewee was speaking as a representative of their relevant agency or organisation. In total, 12 people were approached for semi-structured one-on-one interviews. Of these, over half a dozen were eventually interviewed. The questions posed to key informants covered both information gaps and information delivery systems. See Appendix BII for the interview schedule.

Interviews were conducted by telephone given the time and budget constraints on the project. Interview notes and transcripts of excerpts from the interviews constituted the data for analysis. Analysis of the interview data was initially focussed on recording the details of specific training and communication activities for each interviewee. Further analysis of interviews was, like that of the focus groups, thematic in nature. The responses to the structured questions were recorded and reported in terms of major points of convergence and divergence. Any additional remarks or points of note that would enhance our understanding of the capacity of these organisations to provide training and communication services were also noted.

B4 Results

We have categorised our results into four major sections. The first section refers to sources of information and this section addresses questions one, two and three of the focus group interview schedule (see Appendix BI). Section Two outlines the themes emerging from question five that dealt with what information is wanted. The third section focuses on information delivery preferences and presents themes from question four of the focus group interview schedule. The fourth and last section deals with themes within the departmental and industry interviews (see Appendix BII).

B4.1 Section one: sources of information

As one would expect, the sources of information accessed by participants in our focus groups were diverse. In terms of agencies approached for information, sources ranged from government agencies such as DPIF and NRE, to private companies (usually in the farm chemical and animal health areas) and industry representative organisations (e.g. Agforce or Canegrowers). The Local Government Association Queensland was also mentioned as a good source of town planning information. Leaflets and magazines from the Meat and Livestock Australia (MLA) and Agforce were regularly mentioned as useful sources of information. Some also mentioned the Kondinin Group magazine (but said it took too long to read).

Several participants mentioned attending events held by Research and Development Corporations, like the Grains Research and Development Corporation (GRDC) and the Pork Research and Development Corporation (PRDC), but were put off by the need to travel vast

distances to attend. One participant expressed the view that the CANEGROWERS organisation was better organised given that sugar cane farmers were closer together and, therefore, more willing to share information through shed meetings and similar events.

For the most part, participants did not think the current levels of information from DNR or DPIF were particularly useful. Most considered the absence of one-on-one advice a major gap that has not been well filled by consultants or by salespeople from farm input supply companies. They believed that a lot of research is being done but not getting to them; either because they have to pay consultants for it or because research is now done by private input supply companies.

More diffuse information sources, such as ABC radio and television (Landline and ABC Rural Hour were mentioned very frequently) were cited as additional sources of information. Some valued Landline because it is practical and offers visual representations and demonstration of new techniques and approaches.

Word of mouth, neighbour's experience, and trial and error often were stated as important sources of information. There was an oft expressed view that the experiences of landholders were not valued in planning, legislative or extension contexts. In terms of learning styles, 'learn by mistakes', 'learn from neighbours' 'learn from history' are all common responses from focus group participants.

One of the strongest themes to emerge from these focus groups is the gap left by the changing role of government agricultural extension officers. Almost without exception, each group lamented the absence of the local officer with local knowledge providing on-to-one advice through farm visits.

So what was so valuable about these individuals?

As a means of communication and information delivery, the most significant features of these extension officers was that they were able to visit the farm, they had local knowledge to offer and they sifted through the wealth of information available to find the crucial and important pieces of value (in addition to contextualising that for local conditions). On the latter point, one participant noted that landholders have now 'got to go hunting for [information] and sort through the information and work out if it's relevant'. According to the participants in our focus groups, extension agents were also valuable because they offered a sounding board for ideas. In that sense, one could say they acted as agents for change and for innovation. Practical issues were also pertinent. These individuals were free of charge, and typically farmers now have to pay for advice, even if it is from Government agencies.

Ultimately, individuals indicated that the type of information they desired was authoritative. That is, rather than ring around and get several divergent answers to the same question they wanted answers that were reliable. An additional issue was the independence of information. Many noted they were forced to rely on research from salespeople who had a vested interest in pushing particular products. They indicated apprehension at this state of affairs.

In terms of thinking about the role of the BMRG we can identify a gap left by the removal of the extension officer model by DPIF and therefore there needs to be an alternative model for the dissemination and delivery of personalised information on a one-on-one basis at farm level. While there appears to be ample information available on all manner of NRM topics, what people indicated they really wanted was specific information, locally based, and

delivered by a trusted and authoritative source akin to the former governmental extension officer.

B4.2 Section two: what information is wanted?

The kind of information wanted could be classified into two main categories:

- *Land and water management practices* such as soil maintenance, contours advice, and crop production, grass management for cattle production, weed management, undeclared pests, animal health and disease problems, river bank stability, vegetation management, impact of run-off in the waterways, irrigation, river flows, property boundaries and fencing enquiries; and,
- *Legislative and policy issues* including current interpretation of government policy and legislation (stock protection, water, lands protection, etc) and how responsibility is distributed to deal with individual issues of resource, land and environmental management.

There was a strong desire for information regarding legislation to be available in clear concise language at a central point. One participant remarked that the rules kept changing and that what was correct one week was incorrect the following week. Access to databases and socio-economic data would be helpful for some community groups.

Participants had clear preferences for the forms in which information should be presented. Most indicated a preference for ‘plain English’ material. If it was printed material, nothing more than two pages was preferred. Print-based information was preferred by and large over Internet or CD based material. The latter has to be read on screen and notes cannot be written on them. Almost universally, people indicated they did not and would not print electronic content out.

A particular source of frustration was information pertaining to native vegetation management. Given the existence of guidelines and penalties, land holders were keen to get accurate and definitive information promptly. One individual stated that they needed ‘good accurate information within an hours drive of your place. Get a definite answer, yes or no, rather than a free call number’.

Overall, individuals preferred to have direct contact with a person on their property or elsewhere. The second choice was for visual media (like video or television). If material has to be text based, they preferred paper-based written material over web or CD-based.

There was a general level of criticism of the DPIF call centre which, it was claimed, did not reply to requests in the time indicated. One person cited being promised answers in three weeks and still waiting after three months.

More generally, one good way of understanding the type of reaction obtained to this question from participants is to contrast information with advice. Many participants were of the view that there was often plenty of information around, but that often it was overwhelming and contradictory. They wanted a competent and trusted individual to assist them to make sense of this material, distil options and act as a sounding board in formulating responses. In some ways, they are articulating a need for business or NRM ‘coaches’ and not pamphlets. In term BMRG we could not see any need for more information per se. There may be small

information niches unfilled (for example, individuals reported an absence of independent technical information which is currently supplied by input supply companies) however this was the exception. In some instances there was relevant information available, however it was inaccessible due to the relocation of key extension staff from local government offices (without replacement) and material had been ‘archived’. Coupled with this, there was reluctance on the part of some individuals to seek out this information themselves. This may be due to the sheer volume of information which can be overwhelming and time consuming to contextualise to their specific farm operation.

B4.3 Section three: what delivery mechanism is preferred?

In this section we have divided the themes into ‘new technologies’ and ‘old ways’ reflecting the dominant preferences with respect to information delivery. New technologies include new generation phones, the Internet and related information communication technologies and innovations such as the DPI call centre. Old ways include discussion around reading plain English publications, using social networks, workshops, plus roles of local shire councils, community advocacy groups and local women’s organisations.

B4.3.1 ‘New’ technologies

The idea of using the Internet and web-based mechanisms of communication was largely criticised because many people did not have access or used it too infrequently. Among some of the younger stakeholders, the use of new technologies presented an innovative way of disseminating information and asking for advice. One example related to the use of video phones where an image of a bug could be photographed and sent to the relevant agency for identification. The use of many of the new communication and information technologies depends on a reliable service by Telstra. The use of email was not greatly valued because of the sheer volume of ‘spam’ and unnecessary material sent. Text messaging could be an alternative to email.

While landholders were relatively equipped with skills for using the Internet, one daunting element of this information-delivery system was the sheer amount of information and the need to sift through mountains of irrelevant material, an action that took up valuable time. For this kind of delivery to work effectively, landholders would need to be guided to ‘trustworthy’ sites with the minimum of ‘padding’. These sites would need to be uncomplicated in order to be navigated easily and quickly and follow a uniform pattern. One participant remarked that ‘people have difficulty in navigating the government information’ indicating the need for clear, concise, unambiguous instructions within web sites.

The DPI call centre was discussed and this option was generally viewed as unsatisfactory. Often, landholders who had used this option indicated they were still waiting for their information 2-3 months after the first inquiry. Because the clients were unsure of who they were talking to and that often the person they were speaking to did not know the answer, this was seen as not a good source or first line option when seeking out specific information. While there was a general feeling that much of today’s new information and research findings needed to be bought, many landholders felt that the government should inform landholders about research funded through research-levies and other industry sources.

There is a role for the introduction and use of many new technologies among stakeholders. While generational differences may influence the level of comfort and ease of use, there is room for specific workshops to address how to use these new technologies, video phones in particular. The success of this is also dependant on having a reliable telephone service to regional and rural areas of the catchment. By far the most negative aspect relating to new

technologies is the overwhelming amount of information that is out there, but the individual needs to be able to sift through this information. While this action facilitates individual empowerment and capacity building, this means time away from their primary business enterprise that many landholders are reluctant to do. The obstacle here is limited time and the trade off between time, productivity and efficiency.

B4.3.2 ‘Old’ ways

Reading plain English

Information provided should be in a condensed form. Meeting notices should be sent via fax or email to ensure sufficient time is given. Fax back sheets were an option that some participants found useful. ‘Plain English, readable and usable format’ was the succinct response of one participant, and this sums up the general view. Some individuals nominated the MLA ‘Feedback’ and the DPIF ‘Beef talk’ magazines as good examples of brief and to the point forms of communication. This indicates the important role of tapping into what different stakeholders see as their ‘industry Bibles’. In some catchment areas, community organisations such as Landcare were seen as a trusted source of written information that was provided through easily accessible sites such as, for example, in booklet form at the office of the local real estate agent.

Social networks

Many stated that other farmers were good sources, and often preferred sources, of information. Learning from their mistakes and trials was noted as particularly useful. That being said, there was a general feeling that this form of communication among rural communities was at low-levels—perhaps historically low. Farm sales, arrivals of new farmers, and the decline in overall farm numbers were all cited as contributing to eroding social networks. This meant that valued local information sharing was not occurring to the extent it once did. However, some avenues for interaction did remain including CB radio chatter, talking with neighbours as they are passed in cars, at cattle sales, while shopping in town, and so on.

There was a sense that many valuable networks were well established but were under-utilised by the BMRG and some participants suggested that these networks were in danger of disappearing. It is possible that some of these networks will remain in place but that they will not be included at a regional level. Feedback from some participants indicated that they felt there were attempts to re-produce existing grass roots networks at a regional level and that this was a waste of valuable resources and goodwill.

Many of the focus groups felt a level of strong dissatisfaction and disillusionment with the consultation process as it related to the development of the BMRG regional plan and many participants felt that their contributions had been ignored. Some participants spoke of the need to converse with a range of people when new groups to the area, such as the BMRG, arrive in the local area. It was stressed that there were other people besides those associated with key public institutions and organizations who held valuable local knowledge and information. Consultation should be broad brush was the general sentiment expressed in focus groups.

In some discussion, a degree of resistance to information sharing at the grass roots level emerged. As one participant stated ‘if something is working people are more closed about it now and this has happened over the past 15 years. The little people aren’t going to share in case the big people get hold of it’ (commercial information that affects business). This suggests that the small producer is wary because large companies could steal their edge. Many farmers expressed the concept of niche marketing and the need to keep ahead of the

competition in an arena where innovation and working smarter often meant economic sustainability; as another respondent declared ‘ it wasn’t like this years ago, now what you’ve got you want to keep protected’.

Workshops

Where issues pertained to specific groups or commodities, shed meetings seemed to work well (eg cited is dairy farmers). Discussion groups were also cited as useful as long as we ‘do not send the philosopher with the white board’. Discussion groups were also a way of providing support to primary producers when they felt that the big companies or large industry groups were no longer hearing what the grass roots farmers had to say. In these groups, the farmers would share what they knew, talk over issues happening within the industry in general and decide on options that would influence their business and land management decisions.

Workshops were universally seen as an effective and efficient means of information delivery. One such program delivered this way was ‘Water for Profit’ where interested landholders came together around a specific topic area. Often the number of people turning up to these workshops or meetings depended on who was running them. As one participant stated, ‘we like to see runs on the board by the groups doing these’ with this often a criteria for evaluating whether people would turn up. Comments from one focus group illustrated how ‘people were eager for information, we had 80 people turn up to a weeds night, Landcare provided it’. Also stated was that Landcare often got their information from commercial interests such as chemical companies and these representatives could not be personally invited en masse because companies preferred to be sole providers at meetings. This means that Landcare groups in some regions were acting as information brokers after sourcing information directly from companies concerned in the field of interest.

The role of local shire councils

While one councillor remarked in ‘my observation as a new councillor is that councils are very responsible about how we carry out our operations and about how we advise people’ another councillor voiced concern over potential litigation issues with giving out advice and how this influenced what they felt could be said to landholders. Many councillors and staff were also landholders and/or members of various community groups such as catchment care organisations and information from these meetings was being fed back through to councils via the formal tabling of reports. There was certainly strong interest from the councils contacted prior to the focus groups and all were keen to send a representative to the focus groups in each of the areas we visited.

The role of community advocacy groups

Many participants saw a role for community advocacy groups such as Landcare and various catchment care groups in the dissemination of information. Many of these groups have been established for some time in the different districts and local landholders tended to trust the networks that had been built up over time. These groups were promoted widely within respective regions and it was felt that new people to the district would recognise specific logos like that of Landcare and ‘know that organisation would have relevant information and networks relating to land issues’. For some people, smaller advocacy groups offered the opportunity to share information. As one person put it, ‘it’s the grass roots people who have the info. The interest groups are really selective regarding info ... when they get to the organisational level – there’s an agenda’. This highlights the significant impact that respective industry politics can have on information and knowledge delivery.

The role of women’s groups

The role of women in farming enterprises is often underrated and undervalued. In talking with many of our focus group participants, it became very clear that many women acted as a kind of conduit when it came to receiving information. Many women, particularly in the fishing and sugar industries, have formed networks such as Women in Sugar and Women in Fishing. As one woman stated, ‘women are working more and more, there are rotational crops so there’s no slack season. Women do the books and the learning’. Another woman agreed and stated ‘our men can be away from 10 to 30 days during which the wives read and condense the new information’.

Part of this women’s networking involves going to meetings while their partners are away at sea or are busy on their properties and also the consumption, interpretation, production and delivery of new knowledge. This is particularly so with much of the legislation. These women are actively reading or seeking out information and then sorting, interpreting and passing on this information to their partners. This is a mechanism used by both partners to sift the perceived unnecessary information that arrives on the farmer’s office desk or computer screen. Tapping into this network has been a way for some providers to get new messages across to stakeholders because they know that the women will listen and then evaluate the information. In other words, if it gets past the women the men are more likely to implement the new knowledge. In the current economic downturn, some primary producers were involved in off-farm employment to supplement the household income. Participants believed that often it was the men who were turning to other jobs while the women remained working the property and maintaining the family.

B4.4 Section four: departmental and industry/provider

Telephone interviews were conducted with representatives of organisations, departments, agencies and consultants involved in information dissemination and training activities pertaining to NRM in the Burnett Mary region. The principal aim of these interviews was to find out for each provider/organisation:

- What information or training is provided?
- How do they provide it?
- Who does the provision? Is it in-house or involving use of consultants?

In undertaking this work, a principal aim was to identify any local providers who may have been working in the Burnett Mary Region and that were favoured and trusted by landholders. It was assumed that the results of the focus groups would aid this process. However, the focus groups did not surface any new or hitherto unknown providers. Instead, we received some endorsement and some criticism of those providers already well known to us. As such, the focus of the interviews was on well known providers.

Efforts were made to contact a dozen or so providers, but given the time pressures and limits, we were able to contact around half a dozen representatives of providers. These included Bureau of Sugar Experimentation Stations (BSES), Growcom, Agforce, Canegrowers and QLD Department of Primary Industries and Fisheries (DPIF). It is also pertinent to note that many participants in the focus groups were also representatives of government agencies and departments. The comments they made in these groups were also used to inform the observations and conclusions drawn in this section of the report.

B4.4.1 What information or training is provided?

Upon commencing these interviews it became clear that training and information messages on NRM were hard to single out and discuss. Many interviewees emphasised the fact that much communication on NRM themes was couched in terms of profitability and economic factors. Indeed, the consensus was that promoting the environment was best achieved through training and information events that were aimed at, and presented as, efforts to increase the financial position of businesses. This point underscores recognition by providers that they need to alter the NRM messages in an industry where many participants are struggling economically. The BMRG are similarly going to confront issues of reconciling NRM and efficiency/productivity messages and imperatives. In order to begin a change in attitudes towards facets of NRM we would suggest that the BMRG couch or link messages regarding NRM with issues relating to farm productivity and economic viability of farming enterprises.

On the basis of this link between profitability and environmental outcomes, most providers would not appear at face value to offer many programs targeted at NRM themes. Instead, they provided courses aimed at productivity but that also include environmental messages. A good example appears to be Water for Profit. It was targeted and marketed as a course about water management aimed at reducing usage to increase profitability. However, as one interviewee explained, in talking about more efficient water use it also covered the issue of fertiliser use which does have an environmental outcome. Indeed, this is at least part of the basis on which it is believed DNR provided funding for the program.

Interviewees indicated that training activities were occurring in areas of water management, chemical and pesticide use, pest and disease management, developing sustainable farming systems, property management or farm planning. Some of these were dedicated to particular industries, specifically horticulture and sugar production. The QLD DPI web site provides an overview of the training it provides (<http://www.dpi.qld.gov.au/services/11777.html>). The only program that explicitly covers the environment is the Future Profit program which includes modules on natural resource management.

More general information is provided on all conceivable topics. Most of it is via industry magazines or organisational web sites. A perusal of a number of organisational and government websites¹ supports the conclusion that NRM messages are intermittently carried on these web sites, but often under the guise of sustainable farming or farming for profit. Industry organisations seem to have a section on NRM, but this typically covers their policy positions and statements rather than practical information for landholders. The DPI and DNRM web site was an exception, carrying a dedicated section on NRM issues. A range of easy to read fact sheets is available on a range of NRM topics. As indicated earlier, stand alone NRM messages seem not to be the preferred means of communication. Under regional planning processes a combination of delivery processes that include, industry groups, community and local government should be considered as there is limited in-house institutionalised capacity within any one sector to support information delivery at the farm level.

Given the not insignificant level of Commonwealth and State regulatory and legislative activity related to NRM issues, many organisations (industry and governmental) provide

¹ www.growcom.com.au; www.canegrowers.com.au; <http://www.dpi.qld.gov.au/home/>; <http://www.nrm.qld.gov.au/>

regular information dissemination activities largely aimed at explaining new and existing legislative and regulatory changes to landholders. These activities are not strictly training or education activities and constantly change as legislative and regulatory frameworks change.

Clearly, shifting views and promoting adoption of NRM practices are a difficult task. In recognition of this, training providers have tried to link NRM practices more closely to profitability. However, focus group results suggest that more information or standard training approaches are unlikely to contribute in a significant way to catalyse these shifts in attitudes and practices. The same goes for information and communication activities. Simply providing more information is unlikely to shift producers who are not actively looking or those who decide to dismiss existing sources of information as either too confusing or biased and unauthoritative. Finding a body or group that can address these underlying issues with message delivery is a difficult task, and we could not identify any single person/body that could readily fit that role.

B4.4.2 How is information/training provided?

Most interviewees mentioned that they provided training via intensive workshop formats, with courses typically ranging from one to several days in duration. In many cases organisations (industry and governmental) worked together in delivering training events. There was certainly no sense that industry and government operated in a deliberately separate manner. Additional work was conducted at field days, where a broad cross section of growers could be reached in a more diffuse information dissemination context. Activities such as these are supported by written training materials like management or best practice manuals. In some rare cases, one-on-one visits are made to farm businesses to provide demonstrations of management techniques or to take samples or measurements as part of an industry wide monitoring process. The DPIF, for instance, mentioned conducting follow up visits for workshop participants in response to requests from landholders to have someone monitor their property management planning processes. This type of approach seems to better reflect what focus groups participants were wanting.

More general messages about the environment and natural resource management were, of course, disseminated through industry newsletters and websites. For example, industry organisations like Canegrowers and Growcom had regular newsletters for members which contained, among other things, information of this nature. Similar information was available via websites of such organisations (see section above). As indicated above, messages about regulatory and legislative changes were often supported by information days, workshops and seminars delivered both by industry groups and governmental agencies. In some cases, individuals funded by governments but operating under the umbrella of community groups, such as the BMRG or Landcare, may have been responsible for offering this interpretive function.

B4.4.3 Who does the provision?

In the case of groups like Growcom and BSES, and government agencies, there was dedicated local staff that ran training courses in areas where there is a demand. Interviewees from these organisations emphasised the importance of local individuals conducting training and that this led to ownership of the ‘content’. Moreover, most industry groups interviewed emphasised the importance of their groups in connecting with landholders and producers. It was their view that producers identify with their organisations and trusted them above say governmental providers. One noted that government funding industry groups to deliver courses was a good model (similar to approach in Water for Profit programs).

It is interesting to note that training activities seemed better organised and more common in the intensive industries like sugar and horticulture. This may have stemmed from the fact that these industries were regionally concentrated making logistics for training activities easier. The coastal location of these industries suggests easier access to training opportunities with a reduced impact on the running of the farm enterprise and at a lower financial cost for producers in more extensive industries (predominantly grain and beef production). Courses for beef producers, for example, seemed to be delivered by groups like Meat and Livestock Australia, who employed local consultants to deliver regional variations of national schemes (eg. Edge suite of courses). NRM issues were part of this suite of programs. But again, the productivity aspects were always used in promoting the courses.

B5 Recommendations

In this section we outline various recommendations in regard to information delivery and communication strategies.

B5.1 ONE: ‘Re-defining the BMRG image’

There appeared to be some ambiguity regarding the role of the BMRG among many of the participants. This suggests that the organisation may benefit from re-defining and communicating any mission statements and designated roles to interested stakeholders and landholders within the catchment area. Clarification of the BMRG’s role would also assist landholders to understand where they fit in the overall plan and management for the catchment region. Some participants felt there was repetition or attempts to reproduce existing grass roots networks at the regional level that caused ambiguity regarding the role of the BMRG. Many felt the role was to devolve natural resource management from being organised through government to organisation at a regional level. However, they did not believe that this had satisfactorily been demonstrated at the grassroots landholder level. There is an opportunity here to hold a conference at the regional level, for the regional level, by the regional people to re-establish links between all interested stakeholders.

B5.2 TWO: ‘One size fits all strategies will not work’

It is unlikely in our view that a blanket delivery system is going to be effective in communicating NRM messages to landholders in the Mary Burnett. For example, some geographic areas contain farms that are multi-enterprise in nature. In such a case, relying on commodity specific producer bodies would lead to overlapping efforts and duplication. These strategies may be more suitable where growers are concentrated in particular areas (i.e. Cane growers and horticulture).

B5.3 THREE: ‘Locals for locals: Insiders with knowledge’

A strong conclusion is that any attempt to engender change in NRM practices will involve developing trust with landholders. There is sufficient evidence from our focus group discussions that this is even an issue for voluntary associations like the BMRG. Landholders seek to form relationships over time with people who understand local conditions and can operationalise problems and solutions with local conditions in mind. As such, communication strategies should seriously consider suitable human resource policies such as utilising and employing people with local knowledge and a history of working directly with landholders. Ideally you want ‘insiders with knowledge’.

B5.4 FOUR: ‘Kick the dirt and talk’

By far the most preferred method of communication was the face-to-face conversation. Many participants spoke of their enjoyment and pleasure in having someone come and ‘kick the dirt and talk’. This action could be as a group or individual meeting where people come together at a specific site, usually someone’s property in order to look at something of interest. This includes shed meetings, property walks and similar group activities where people look at part of a crop, a piece of machinery, research being done at the site or an issue affecting the local community. Having discussed the issue at hand, over cups of tea the local people have an opportunity to catch up with others in the community. ‘Kicking the dirt’ is also an analogy that could apply to meetings held indoors where fruit or vegetables, fishing/river charts, sugar products are displayed and discussed (see Women in Sugar below). A significant part of this process is the rapport and trust building negotiation that occurs as people partake in conversation around farming or social issues within the local region. This process allows producers, industry and local government and community members to establish credibility, understanding and communication channels. Information is accessed, disseminated, assessed, internalised or rejected. Another significant source of information is the producer and this needs to be acknowledged. Often personal and historical knowledge held by community members is devalued because it is perceived as informal and anecdotal knowledge rather than as scientifically-based research data.

As is evident in the report, the desire for someone to meet face-to-face with is often expressed amidst recollections of the value of many local department advisors who visited farms and gave tailored advice, at not cost. The loss of these staff is often identified as a catalyst for growing sense of separation from policy processes and decisions and for a growing feeling of confusion when confronted by escalating volumes of (often contradictory) production advice and information.

B5.5 FIVE: ‘The rules keep changing’

An important issue that kept emerging related to legislation and government regulations. Interpretation of, as well as changes in, laws and regulations need to be passed onto landholders so that they, in turn, can make land management decisions. We would see a major role of regional groups such as the BMRG to be an interpreter of complex legislative information and then disseminating of this information in plain English to local landholders. Through various delivery strategies, this kind of information could be sent out in the form of an ‘ALERT’ especially when it impacts on local primary production, quarantine requirements and export standards.

B5.6 SIX: ‘Women in Sugar: But we are not sugar coated’

Women in the various industry groups contacted were very active in consuming, digesting and disseminating information in a complementary role to their partners. These women are the key to facilitating attitude change and information delivery in respective industries. Women farmers are more likely to be the ‘book keepers’ and to be aware of paperwork in all forms included in mail delivery. Therefore, it is recommended that links be made with many of the women’s organisations currently established within the catchment region and that these interest groups be part of the overall information delivery system. This information delivery system can be in the form of speaking at their meetings, posting written material, providing electronic links to relevant sites, inviting local representation at the BMRG board level. It should also be noted that there are local industry groups within the catchment region that have

not been included prior to the focus groups. These groups can be accessed through the women's groups.

B5.7 SEVEN: Packaging the product

Another consideration when delivering information is the way in which information is packaged. As highlighted elsewhere in this report, landholders draw on reminders of particular people such as the 'extension officer' who visited the property and the information translated from this person. The key concept here is the 'packaging' of the information and there are three significant points to be made. First, the information was being transmitted from a reliable source. Second, the information was spoken in plain English with the target audience in mind – that is the local producer involved in the conversation. Third, the kind of information being given out was relevant to the context and person and devoid of unnecessary clutter. The sifting mechanism took place via the extension officer who knew the target audience (the local producer), the context (property, area of production and district) and the level of prior knowledge of the local producer. Prior knowledge is an important feature when considering the construction and incorporation of new knowledge and changing attitudes, beliefs and norms.

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Appendix BI: Protocol for Focus Groups

Format of focus groups

- 1) Introduction of issue and format of focus group,
 - a. background to focus group
 - b. what information we want
 - c. what we will do with information
 - d. how we will do this focus group
- 2) Consent forms and information sheets
- 3) Introduction of CQU staff
- 4) Introduction of participants (each person to give name, group affiliation etc)
- 5) Structured questions 1 – 5
- 6) Comments
- 7) Thanking people for their participation

Focus group theme: (Length 60 – 90 mins)

Theme one:

When it comes to information on farm management which agencies or sources do you use?
Why?

Theme two:

When it comes to information on natural resource management which agencies and/or sources do you use? Why?

Theme three:

How useful is that information / how do you evaluate that information?

Theme four:

Which delivery mode are you comfortable with? How would you prefer to have information delivered?

Theme five:

What do you want to know but can't access?

Appendix BII: List of questions for Departmental and Industry Interviews

Interviews were conducted in a semi-structured format. The list below is a set of questions that were used to guide the interviews. The order and exact phrasing may have varied from interview to interview.

1. What types of information do you provide to landholders and other natural resource managers in order to enhance their capacity to make effective land and water decisions?
2. In your view are there any gaps in the types of information being provided? If so, what are they?
3. What communication models and/or delivery systems do you employ in relation to the above?
4. In your view what are the strengths of these models?
5. In your view what are the weaknesses of these models?
6. What other communications strategies could be deployed to better engage landholders and natural resource managers on these issues?
7. Did you have anything else to add on the issue that I have not asked about but that you think is important?