

Appendix Q

Projects, Programs And Research Initiatives Relevant To The Haughton

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NATIONAL ACTION PLAN FOR SALINITY AND WATER QUALITY

Burdekin Dry Tropics Board - (Draft) Priority Actions Funding under the National Action Plan for Salinity and Water Quality

- A1. Development of a Framework for the Prioritisation and Delivery of Integrated Environmental, Social and Economic on-ground outcomes in the Burdekin Catchment (Pilot Bowen River sub-catchment)
- A2. Initiation of a Lower Burdekin Water Quality and Salinity Management Program
- A3. Addressing Dryland Salinity in the Belyando-Suttor sub-catchment of the Burdekin
- A4. Wetlands Assessment and Action Plan for the Burdekin Catchment
- A5. Development and Implementation of a Community and Stakeholder NRM InfoBase and Community Involvement Process for the Burdekin Dry Tropics Region
- A6. Engaging Aboriginal Traditional Owner Participation in NAPSWQ in the Burdekin Dry Tropics

BURDEKIN RANGELANDS REEF INITIATIVE

The Burdekin Rangelands Reef Initiative is a whole of government initiative to enhance community involvement in sustainability issues in the greater Burdekin Catchment and surrounds. Sustainability in the context of the Burdekin Rangelands Reef Initiative incorporates a triple bottom line perspective seeking to address whole of catchment Economic, Environmental and Social sustainability issues.

Projects that promote a collaborative approach to enhancing economic, social, environmental and cultural sustainability outcomes for the Burdekin region are being sought. Projects that have regional scale impacts or can be used as pilots for future regional scale strategies are also being sought.

A primary objective of the Burdekin Rangelands Reef Initiative is to link effectively with the Burdekin Dry Tropics - National Action Plan on Salinity and Water Quality to avoid duplication of effort.

The next round of funding will be announced in March 2003 (expressions of interest).

NATURAL HERITAGE TRUST II

The Natural Heritage Trust (NHT) provides funding for natural resource projects including the development of catchment management plans and implementation of their high priority components. One objective of the NHT was to unite the actions of the community, government agencies, and other natural resource managers with the aim of improving the way our natural resources are managed. The people and organisations already on the ground can best achieve this cooperative and coordinated approach to natural resource management at the local and regional levels. The NHT has been one of the main funding sources for natural resource management initiatives the since 1998.

Phase two of the Natural Heritage Trust has two distinct components;

1. EnviroFund-for more localised projects with funding up to \$30,000. The 2002 funding round has closed. Applications for the 2003 funding round are expected to be called in February 2003.
2. Regional funding for strategically identified natural resource management initiatives and devolved grant type projects. Funding arrangements have not been finalized between Commonwealth and State governments at this stage (November 2002).

LOWER BURDEKIN INITIATIVE

A collaboration of research providers to coordinate research activities in the lower Burdekin region with the objective of gaining better value for more through reduction of duplicated efforts and information sharing. CSIRO

WATERWATCH

Community based water monitoring guided by a qualified coordinator. A number of sampling points exist within the Haughton catchment with the earliest readings commencing October 2001. The program provides useful water quality information for consideration in natural resource planning and management while increasing the capacity of community members in the field of environmental monitoring. The program is supported by Conservation Volunteers Australia and other regional stakeholders. David Reid

NORTHERN BRIGALOW BELT PROJECT

An inventory of environmental values for the northern section of the Brigalow Belt bioregion carried out by the Environmental Protection Agency. The final publication will include the extent and description of wetland aggregations and other information for use in natural resource planning and management. EPA Townsville

GIRU FLOOD STUDY

The study is being undertaken by the Burdekin Shire Rivers Improvement Trust to provide a snapshot of the Haughton River and adjacent floodplain with the view to developing measures to reduce the impacts of floods. Aerial photography was flown for use in the study and would be useful for riparian zone assessment and other purposes. Gary Bowtell BSC 47

BURDEKIN WATER RESOURCE PLAN

The Haughton catchment is included in the area covered by the proposed draft Water Resource (Burdekin Basin) Plan (WRP). The purpose of a WRP is to provide a "framework for sustainably allocating water for domestic, agriculture, irrigation, industry, and recreational users, as well as providing flows necessary to sustain water dependent ecosystems" (Department of Natural Resources and Mines 2002a).

Technical reports are currently being prepared to provide the information necessary to enable the WRP to be drafted with the Phase 1 reports expected late this year or early in 2003. A draft WRP is expected to be available towards the end of 2003 with the final plan in place sometime in 2004. The technical reports will be useful for informing natural resource planning in the Haughton catchment.

A complex water resource model is also being prepared and will provide an indication of the relationship between the surface water and groundwater in the Haughton River catchment. Groundwater resources will not be included in the initial WRP however there are plans to include groundwater after the surface water plan is finalized. Adam West DNRM Townsville

ECOLOGY AND MANAGEMENT OF THE UPPER BURDEKIN RANGELANDS - THE GREEN BOOK

This work pulls together some of the research findings and experience of a number of natural research scientists in the region. The book is set out in two sections with the second section looking at management principles linked to some of the matters raised and discussed in the first section, which is primarily a compilation of research findings. Marnie McCullough DPI Townsville 47222519

REDUCING SEDIMENT AND NUTRIENT EXPORT FROM GRAZED LAND IN THE BURDEKIN CATCHMENT FOR SUSTAINABLE BEEF PRODUCTION

The overall objective of this project is to provide a better process understanding of grazing impacts on catchment response as the basis for refining guidelines and recommendations for improved grazing management to:

- Ensure the beef industry's long-term economic sustainability by retaining or improving the productive capacity of the soil resource base by reducing on-site water and nutrient loss
- Meet national and international standards of sustainable beef production by reducing detrimental off-site impacts due to sediment and nutrient delivery
- Enhance the beef industry's capability of modelling grazing management impacts on the soil and water resource base across a range of scales to respond to broader community concerns.

Grazing trials have been established in conjunction with runoff plots at Cardigan Station and Station Creek catchment near Mingela has been identified as being representative, in terms of land cover, grazing intensities, soil types and topography.

Station Creek has therefore been chosen as a study catchment, and detailed sediment and nutrient budget is being prepared for this catchment. When completed data will tell us the minimum cover levels required to reduce erosion from grazed paddocks, as well as the relative importance of gullying compared to hill slope erosion.

This work will help inform management practices for similar country in the upper Haughton catchment. Meat and Livestock Australia is funding and supporting this project.

WAMBIANA GRAZING TRIALS

Long term grazing trial (running for 5 years and anticipated to last for another 5-10) testing the ability of different grazing strategies to cope with rainfall variability experienced in the Burdekin catchment. Variables being recorded are; animal production, pasture condition, soil and nutrient loss, water quality, flora and fauna diversity, tree demography and overall economic performance. Outcomes will be used to improve grazing management practices in the rangelands. Peter O'Reagan DPI Charters Towers 47546114

RURAL WATER USE EFFICIENCY INITIATIVE

BSES is the principle proponent of this project in the area. Further information was not available at the time of printing.

FARM RUNOFF WATER QUALITY

BSES is the principle proponent of this project in the area. Further information was not available at the time of printing.

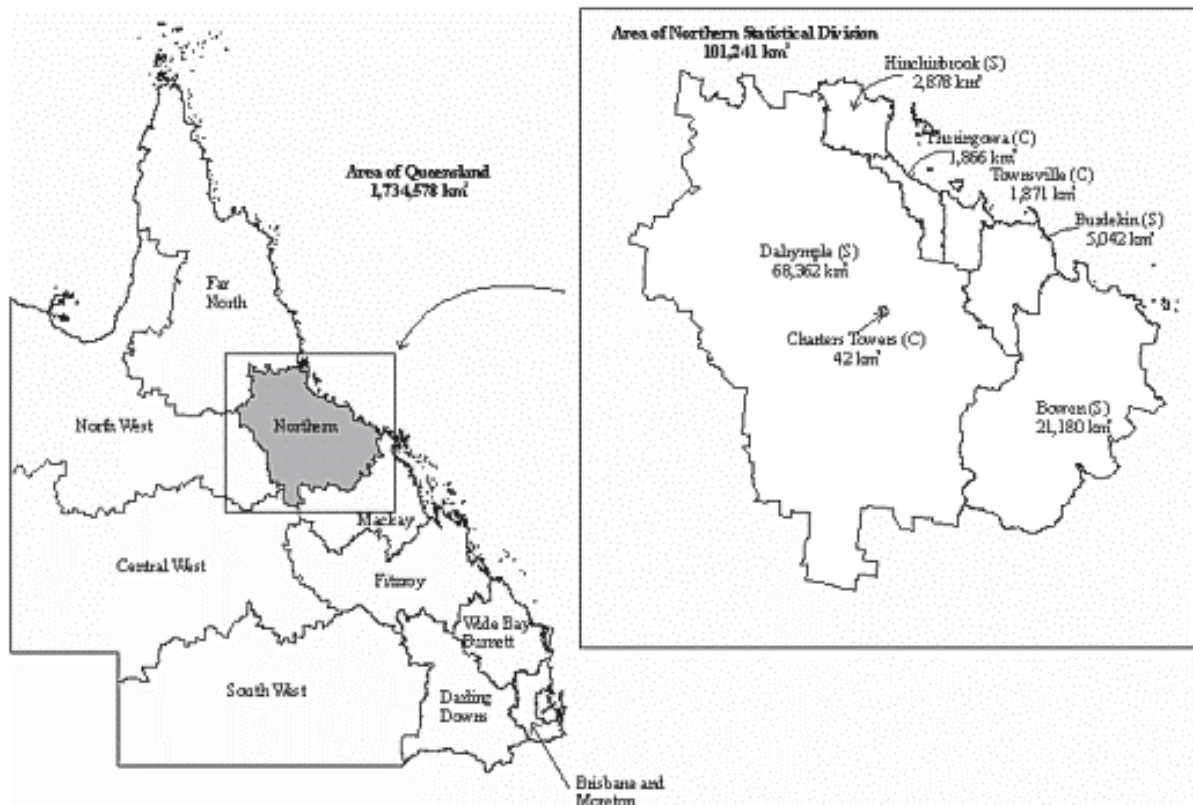
Appendix R

Statistical Information Relevant To The Haughton River Catchment

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POPULATION AND AREA

The Northern Statistical Division is a region comprising seven local government areas (Figure 1) with a total area of 101,241 square kilometres, 5.8 per cent of the total area of the State. The region's estimated resident population at 30 June 2000 was 200,174 persons, or 5.6 per cent of the total Queensland population (3,566,357 persons). (Source: ABS)



C = City S = Shire

Figure R-1 Northern Statistical Division

Source: ABS, *Regional Population Growth, Australia (3218.0)*, regions based on Australian Standard Geographical Classification (ASGC) 2000

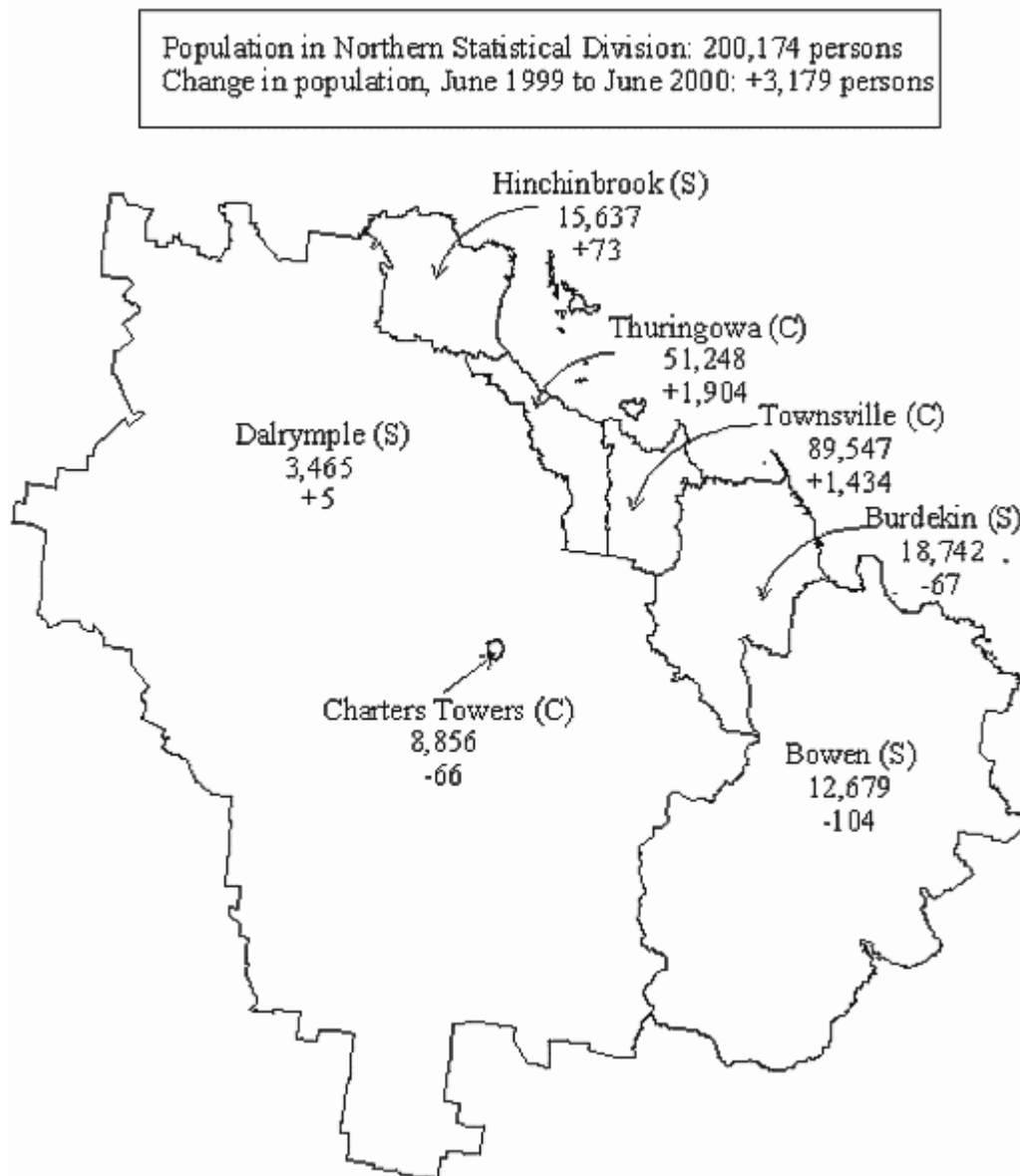


Figure R-2. Population (June 2000) and population change (June 1999 to June 2000) by local government area, Northern Statistical Division

The Northern region recorded an annual population growth rate of 1.6 per cent between June 1999 and June 2000 (Queensland 1.7 per cent), compared with average annual growth of 1.0 per cent for the five years between June 1995 and June 2000.

Table R-1 Population Data for Local Government Areas

	Population	%	Change	%
Burdekin (S)	18,742	11.50	-67	0.36
Dalrymple (S)	3,465	2.13	5	0.14
Thuringowa (C)	51,248	31.44	1,904	3.72
Townsville (C)	89,547	54.94	1,434	1.60
	163,002			

North East Wet/Dry Tropics region (from National Land and Water Resource Audit)

The horticulture industry's North-east wet/dry tropics production region includes the following growing areas: Bowen, Qld; Burdekin, Qld; Atherton Tablelands, Qld; Thuringowa, Qld.

In this region, horticulture occupies 17,589 hectares of land. This production is comprised of 9,461 hectares of annual and 8,128 hectares of perennial. There are approximately 6 882 hectares of irrigated vegetable crops (annual) and 4,805 hectares of irrigated fruit crops (perennial) in this region.

Horticulture production in this region in 1998 included:

- 193,890 tonnes of horticultural product comprising
- 159,559 tonnes of annual crops and
- 34,331 tonnes of perennial crops
- an average of 10.4 tonnes of horticulture product/hectare; and
- \$204 million dollars worth of horticultural product, 70% from annual crops and 30% from perennial crops

Production from the major crop types grown in the region is presented in the table below with average assumed values for the remainder of the region's horticultural production.

Table R-2 Horticulture in the Region

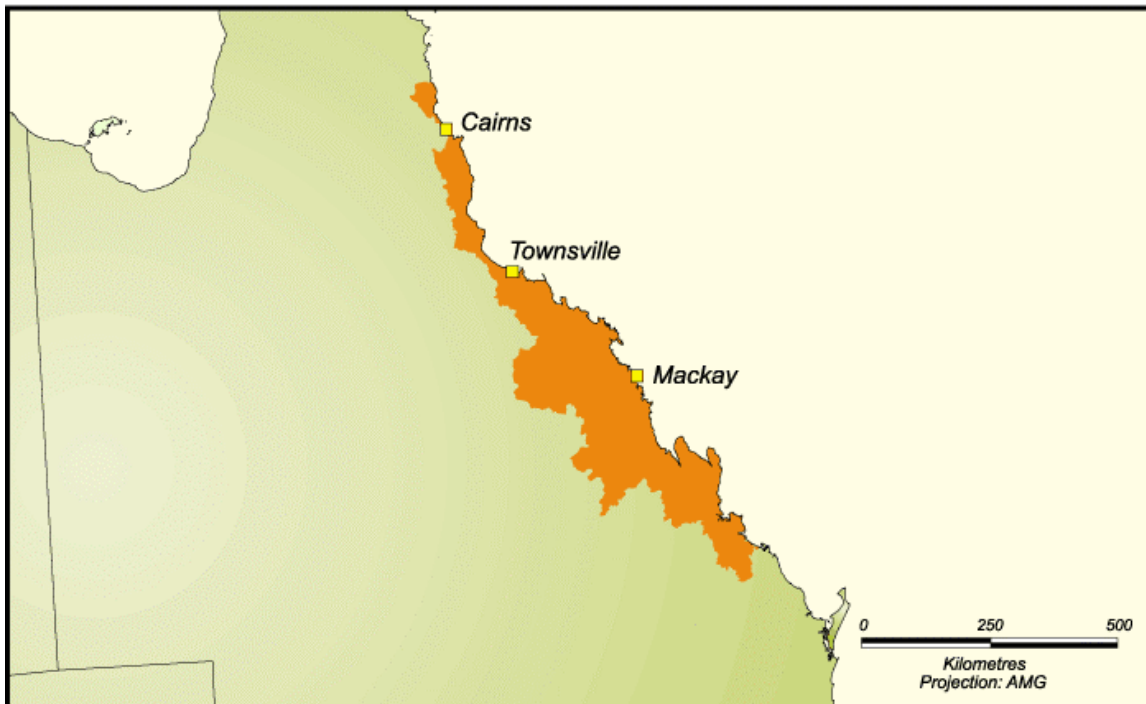
Crop	Area (ha)	Production (tonnes)	Value (\$M)	Production (tonnes)(ha)	Value \$ per tonne	\$ per hectare
Beans and Peas	2,200	9,300	15.3	4.23	1,645	6,954
Cucurbits	895	12,270	7.8	13.71	636	8,715
Melons	1,130	26,420	15.8	23.38	598	13,982
Peppers	700	14,480	17.0	20.69	1,174	24,285
Sweet Corn	740	3,740	1.7	5.05	455	2,297
Tomatoes	2,180	62,790	65.3	28.80	1,040	28,199
Other annuals	1,616	30,559	20.1	18.91	658	12,439
Tropical Fruit	-	22,985	38.7		1,684	
Other perennial		11,346	22.3		1,965	
All perennial	8,128	34,331	61.0	4.22	1,777	7,505

\$14,667 average weighted (by area) value per hectare for annuals.

(Percentages of total area (9,461 hectares) by annual crop - 23%, 9.5%, 11.9%, 7.4%, 7.8%, 23% and 17.1%).
Unweighted average value \$10,239 per hectare

\$7,505 average value per hectare for perennials.**Northern High Rainfall Zone (from National Land and Water Resource Audit)**

The beef industry's Northern High Rainfall zone stretches from Cairns to near Rockhampton. Beef cattle are grazed over 6,634,626 hectares of land, with a relatively limited number of feedlots in this region. 30% of the pasture in this region are sown or introduced, and 70% of the pasture is native or naturalised. The following maps represent the distribution of cattle within this region.



06023-13

Figure R-3 Beef Area in the Northern High Rainfall Zone

In 1999, the statistics on beef production in this region were:

- 1,203,760 head of grazing cattle in specialist enterprises
- 6,542,842 head of cattle in mixed or feedlot enterprises
- an average specialist producer stocking rate of 0.6 hectares/head or 1.8 head/hectare

The Northern High Rainfall zone experiences a tropical and subtropical climate, where pasture growth depends upon conservation of soil moisture from variable rainfall. The climate is described as hot humid with dominant summer rainfall.

Enterprises in this region average approximately 9,076 hectares in size and produce beef for domestic markets. In 1999, grazed land in the Northern High Rainfall Zone included:

- 1,827,295 hectares of native pastures
- 1,016,984 hectares of sown pastures
- 780 hectares of lucerne pastures.
- Beef cattle typically graze sown pastures in this region.

Table R-3 Northern High Rainfall Zone Characteristics

Region - Key characteristic	Industry average	Region Average
Age of owner/manager	58 years	53 years
Owner/manager education and skill:		
- Completed university/tertiary or trade	30%	23%
- Completed 5-6 years high school	22%	15%
- Completed 1-4 years high school	34%	42%

- Primary or no schooling	15%	20%
Family members working on farm	71 hr/wk	104 hr/wk
Owner manager work on farm	45 hr/wk	54 hr/wk
Number of dependent children	0.6	1.0
Farm cash income (\$)	43,954	57,198
Total farm debt - June 30 (\$)	120,487	250,237
Farm business profit (\$)	- 9 033	7 662
Total off farm income (\$)	29,858	38,527
Owner work off farm	6 hr/wk	1 hr/wk
Area operated - June 30	11,688 ha	9,076 ha
Farm ownership/ tenure:		
- Freehold	12%	59%
- Long term crown lease	85%	41%
Employment of non-family labour	9 hr/wk	20 hr/wk
Landcare membership	33%	42%
Length of group involvement	6 years	6 years

Producers in this zone work longer hours than the industry average, have a higher cash income, larger farm debt than the industry average, positive business profit, higher off-farm income, operate on more freehold land and have a higher than industry average landcare group membership levels. These combination of attributes suggest that the industry in this region has a capacity to implement change, but financial considerations will need to be taken into account due to high debt levels.

The proportion of beef farms with significant degradation problems is shown in the chart below. Weeds have been identified as the most significant of the nine ABARE (2000) surveyed degradation forms. Other main challenges identified were soil structure decline and water erosion.

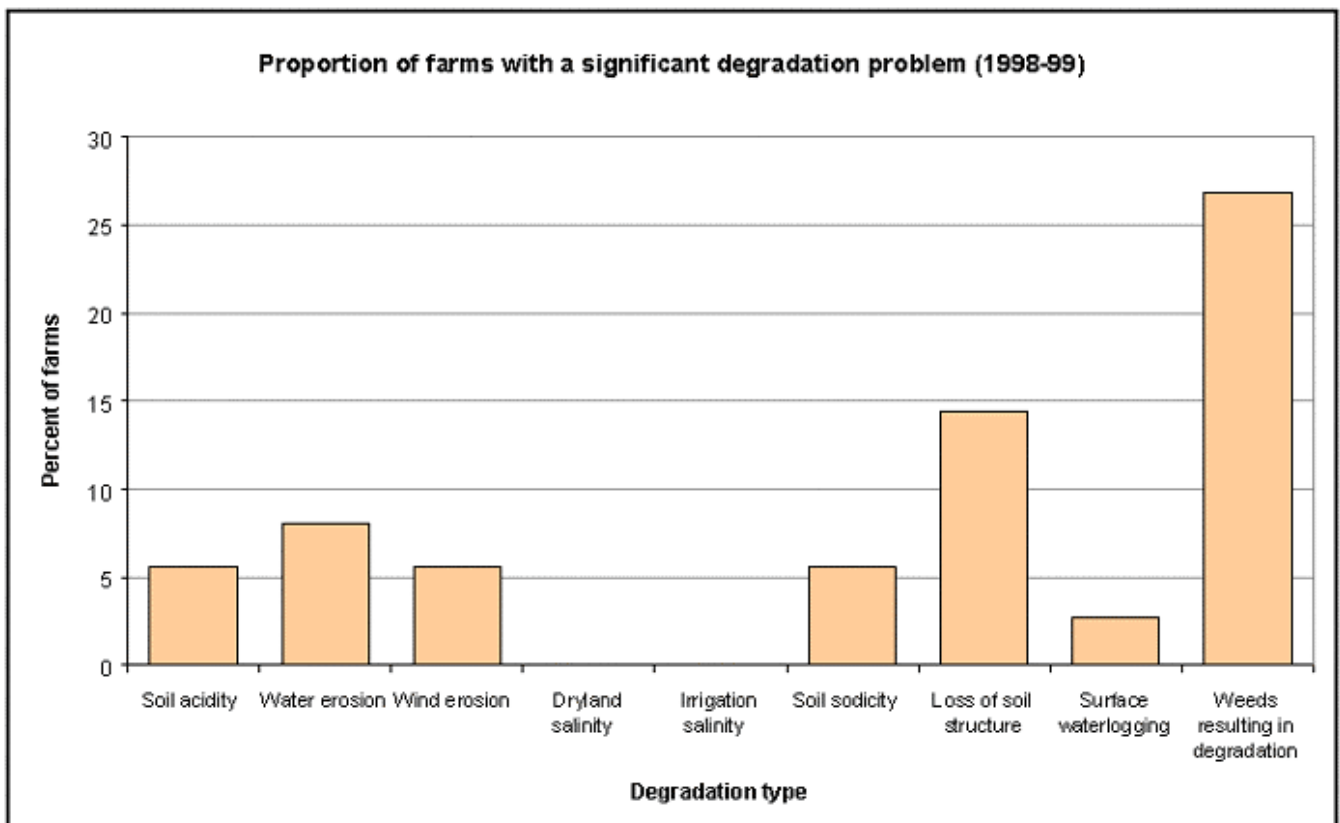


Figure R-4 Proportion of Farms with Significant Degradation

The industry is implementing management practices to meet these regional challenges. The regional adoption and the industry's assessment of the applicability of the various management practices being implemented by the beef industry are illustrated in the chart below. Numbers indicate national averages.

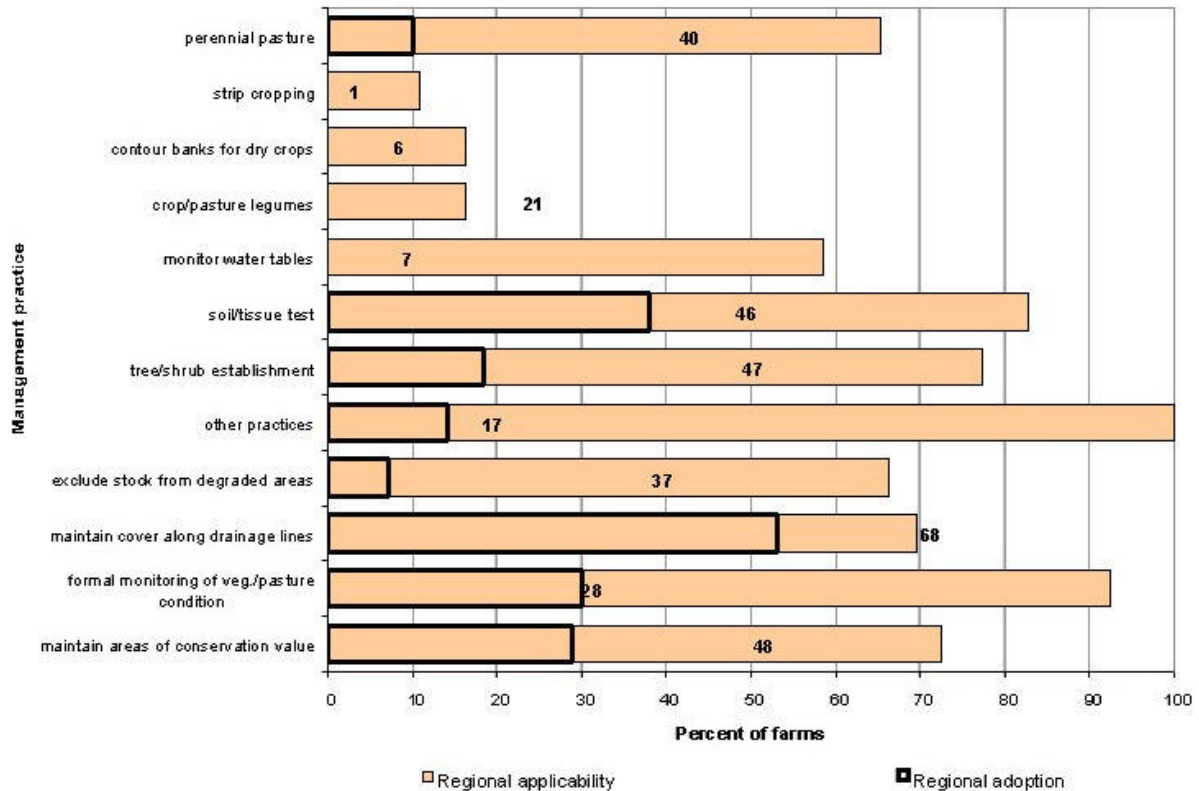


Figure R-5 Management Practice Adoption and Applicability (1998/99)

The beef grazing industry does not currently have a specific code of practice, however, some guidance is provided to farmers through codes of practice for general agriculture such as that developed by the Queensland Farmer's Federation or through the PROGRAZE program.

Sugar Industry Data

Some relevant sugar industry figures³ for 2000-2001 include:

- Australia was the eight largest producer of sugar in the world;
- The top eight sugar producers accounted for around 66% of production;
- Australia produced around 3.7% of the worlds sugar;
- Australia produced approximately 4,900,000 tonnes of sugar for the year; and
- The Australian domestic market accounted for about 800,000 tonne of the sugar produced.

In general terms⁴:

- Queensland produces around 94-95% of Australia's sugar output;
- Australia exports 80-85% of its raw sugar production;
- Queensland accounts for about 98% of Australia's sugar exports;
- Approximately 66% of Queensland cane farms use some form of irrigation water;
- The Queensland cane industry accounts for 45-55% of Queensland 's irrigation water;
- Around 95% of Queensland cane farms are operated by sole proprietors or family partnerships; and

³ Source: Hildebrand 2002

⁴ Sources: www.canegrowers.com.au/overview.htm and Hildebrand 2002

- Approximately 94% of cane in Queensland is transported to mills via cane railways.

As can be seen from the information above Queensland is heavily exposed to the export market and the industry is therefore susceptible to fluctuations in the world price of raw sugar as well as currency exchange rates. The Burdekin region is insulated from climatic variations to a certain degree through its capacity to irrigate. Damage and production loss from cyclones, waterlogging, pests, disease, floods and soil degradation are all still real threats.

The dependency of the Burdekin on the sugar industry can be seen from the following figures:

- Approximate population of the Burdekin region is 18,900;
- Approximate dependency 50-60% ie. between 6,600 and 7,087 people under 15 and over 64 years of age;
- Between 12,300 and 11,813 people in the potential 'labour force' ie. 15 to 64 years old;
- Approximately 25% of the work force was employed in the agricultural sector;
- The sugar industry accounted for around 67% of the agricultural work force;
- Around 80% of farmers and farm managers were involved in sugar cane growing;
- Around 49% of agricultural workers and labourers were employed in sugar cane growing;
- The sugar manufacturing industry employed 932 people (total manufacturing around 1,243);
- The sugar manufacturing industry accounted for 74% of all manufacturing industry employment;
- Employment in the sugar industry was 2,328 people (total workforce around 8,400); and
- Unemployment was around 8% in 2000 (labour force participation not known).

This information was extracted from a social profile of the region based on 1996 Census data for the Burdekin Shire (Haberhorn, Kelson and Charalambou 2002).

Appendix S

Indigenous Involvement Facilitation

Haughton River Integrated Catchment Management Plan

Indigenous Stakeholder Involvement Facilitation

August – Dec. 2002

The following is a list of actions and activities relating to consultation with indigenous stakeholders in the context of the development of the Haughton River ICMP:

- 31 July 2002-Engaged by the Burdekin Shire Rivers Improvement Trust (BSRIT) to develop a draft Integrated Catchment Management Plan for the Haughton River catchment area (map attached). Given the Gudjuda Reference Group as the indigenous stakeholder contact
- 6 August 2002-Spoke to Joe Henaway and advised about the draft plan development and advised of the stakeholders meeting to be held later in the month. He indicated he would attend with elder/s. (Invitations were sent to all stakeholders prior to the meeting)
- 26 August 2002-Francesca Serraro from the Gudjuda Reference Group rang and said that they did not have enough advance notice and they would not be able to have representation at the meeting
- 27 August 2002-stakeholders meeting at Giru
- 17 and 18 September-public meetings at Giru and Woodstock
- 7 October-talked to Francesca about the input of the Gudjuda Reference Group and emailed information
- 12 October 2002-Gudjuda Board meeting
- 16 and 17 October-no phone answer. Email to ask about the outcome of the meeting previous Saturday
- 21 October-Advised that the Board had agreed to a meeting on 17 or 18 November if costs were covered
- 22 October 2002-Met with Eddie Smallwood and Francesca – quote on meeting costs. The Gudjuda Reference Group covers the costal plains area from Townsville to Proserpine and includes four clan groups with the Bindal and Juru being relevant for the Haughton River catchment. The Major Creek catchment is also covered but may be subject to another Bindal group from Townsville as well. To convene a meeting of the Gudjuda Board requires meeting expenses to be covered which includes transport of the 14 members from the as far as Proserpine and Bowen. Cost is approximately \$1,900 a day. Advised that the costs would have to be authorised by the BSRIT and that the budget probably wouldn't stretch to that. Advised that we would be having another stakeholder meeting in early December and hopefully representative/s would be able to attend. Advised of my intention of speaking to Melissa George
- 22 October 2002-Melissa George advised that if I sent her the relevant information she would forward it on to the appropriate Traditional Owner groups
- 23 October 2002-public meeting at Mingela
- 25 October 2002-advised Francesca that we would not be asking for a special meeting of the Gudjuda as the costs were not budgeted for and it would not be inclusive of all the Traditional Owners
- 25 October 2002-Emailed information to Melissa George
- 5 November 2002-Melissa George rang to advise she was about to send a letter to TOs and advise them that travel costs to attend the stakeholders meeting would be reimbursed. Asked if she could email me a copy of the information and list of TOs she had contacted
- 7 November 2002-letter and map to Central Queensland Land Council Aboriginal Corporation asking for contacts for Traditional Owners for the Haughton catchment
- 11 November 2002-notice of stakeholders meeting issued to all stakeholders via email and fax
- 14 November 2002-contacted by Len Johnson (Wugurukaba Aboriginal Corporation) about the stakeholders meeting and reimbursement of costs. He advised he would be attending with other members of the WAC
- 15 November 2002-advised by Greg Bruce of Townsville CC that there was some discontent with process for indigenous involvement and he would send an email with details from the TCC Indigenous Liaison Officer in that regard. Asked to contact Gail Duell at ATSIC to ensure the proper process was being followed
- 19 November 2002-contacted Gail Duell and advised her of the situation. She suggested we try and find out who Melissa George contacted. Melissa was out of the country and details could not be obtained

- 22 November-Gail forwarded a list of five groups to check on their interests in the catchment, Gudjuda Reference Group, Wugurukaba Aboriginal Corporation, Bindal Elders and Reference Group, Birria and Gudjal
- 3 December 2002-2nd stakeholders meeting at Giru. Indigenous involvement flagged as an issue
- 9 December 2002-contacted Melissa George and obtained a list of the groups she contacted prior to the 2nd stakeholders meeting (Gudjuda Reference Group, Wugurukaba Aboriginal Corporation and Bindal Elders and Reference Group)
- 9 December 2002-contacted Reggie Santo (Gudjal- Inland Land Council) and advised about the HRICMP and asked about Gudjal interests in the area. He advised that the ILC was about to meet and appoint a coordinator and I should ring back in a week or so for details on the person to contact
- 9 and 11 December 2002-Patrcik Walsh (Birria) not contactable on the number provided by ATSIC
- 11 December 2002-A hard copy of the first draft HRICM Plan posted to Gudjuda Reference Group, Wugurukaba Aboriginal Corporation and Bindal Elders and Reference Group with a letter expressing the desire to talk to representatives of each group about the HRICM planning process and their future involvement
- 16 December 2002-contacted Reggie Santo (Gudjal- Inland Land Council). They still haven't sorted out their affairs yet. Best to contact him again in the New Year. He expressed some interest as the top of the catchment is close to their land