18 July 2003

Productivity Commission
LB2, Collins Street East
Melbourne, Victoria 8003

Dear Sir/Madam

Re: Productivity Commission inquiry on the impacts of native vegetation and biodiversity regulations

Thank you for the opportunity to make a submission on the impacts of native vegetation and biodiversity regulations. This is an issue of great relevance and concern to CANEGROWERS and is likely to have serious consequences for the sugar industry.

CANEGROWERS is the peak representative body for cane growers in Queensland. We have around 6300 members that represents around 94 percent of all cane growers in Queensland.

Below, I have summarised the impact of regulation relating to native vegetation clearance and biodiversity conservation on the cane industry. However, much more detail and more information and concerns can be found in the attachments at the end of this submission.

The impact of regulation on cane farmers has been immense. Farming practices have been restricted and property values have been reduced. The impact has varied considerably between regions with some areas being marginally affected while others have been impacted upon significantly so that their livelihood as cane farmers has become marginal. Many growers have had been severely restricted in their ability to expand to remain viable or to sell off good quality agricultural land for reasonable prices.

CANEGROWERS believes that the costs of these regulations is being placed squarely on the shoulders of primary producers with little of the costs being borne by other parties including government. Details of some of the costs being borne by cane growers are included in the attachments. If adequate compensation was paid to growers to reflect the loss in farm value and income from regulatory changes the changes would be much more readily accepted.

Clearly, there has been significant disagreement between industry, state and commonwealth governments re the economic and social impacts from native vegetation and biodiversity regulations. Also, the degree of transparency and extent of stakeholder consultation has varied significantly over recent years. There has been a significant degree of consultation with the regional vegetation management plans being developed in Queensland. However, this appears to have been steamroled by the recently announced state and commonwealth government package which has had to date little meaningful consultation with stakeholders.

There is a strong need to clarify the economic and social impacts in an open and transparent way and obtain acceptance of the magnitude of impacts with key stakeholders as well as a suitable solution. Also, there is a need to adequately compensate stakeholders for these impacts for any solution to have credibility.

I have enclosed a copy of a recent CANEGROWERS paper presented at the recent "Property rights in paradise forum" in Cairns in April 2003. The presentation covers precisely the issues asked in this inquiry and articulates CANEGROWERS views on a range of issues and gives details about the cost burden on industry.

In addition, I have included details of the regional impacts as attachments to this letter. In particular, I have included information from the following cane growing regions of Queensland:

- Mackay
- Bundaberg
- Childers
- Maryborough
- Tully

Several of the documents I have received from our regional offices were not sent electronically. Thus, they will only be sent by post and will not be included in the CANEGROWERS submission emailed to the Productivity Commission.

If you have any questions or seek any further information, please contact me on the numbers provided.

Yours sincerely

Eric Danzi
Senior Manager Water

Attachment A: CANEGROWERS (2003), "Impacts on Queensland primary producers", Property rights in paradise forum, Cairns, in April 8-9.

Impacts on Queensland Primary Producers

Dr Jennifer Marohasy
Queensland Cane Growers Organisation Ltd

Introduction

State and federal government policies, legislation and regulation introduced over the last 10 years have significantly impacted on the capacity of Queensland's primary producers to grow their businesses. The increased regulation is almost exclusively in the area of natural resource management and environmental protection and comes at a time when governments are generally advocating deregulation.

Impacts are typically justified on the basis of environmental need and improved resource security. Improved resource security is a laudable objective, but can this be achieved through legislation? Environmental protection is important. However, the environmental benefits of current restriction are not always evident or justified.

In this paper I provide some examples of how impacts are being experienced by primary producers in Queensland. I group these impacts under four headings:
1. Increased administrative burden,
2. Increased cost of production,
3. Restricted use of resources, and
4. Increased uncertainty.

1. Increased administrative burden

The National Farmers Federation (NFF) is currently calling for a Productivity Commission enquiry into the economic impacts of Federal and State environmental legislation on farmers. In their media release of the 17th March, the Federation's President, Peter Corish, states that, "In recent years NFF has witnessed piles of legislation build into what is now an avalanche – in some states there are up to 60 separate pieces of complex and often overlapping environmental legislation which farmers must work within or face prosecution."

Since September 2000, Queensland landholders with native vegetation risk prosecution if they don't follow policies, protocols and procedures under the *Vegetation Management Act 1999* when clearing native vegetation including what many would consider to be regrowth. Landholders who successfully obtain a tree clearing permit are likely to be advised in the letter of acknowledgement from the Department of Natural Resources and Mines that,

"You should also check that your proposed clearing does not contravene other legislation including:

Nature Conservation Act 1992
Local laws made under the Local Government Act 1993
Environmental Protection Act 1994
Queensland Heritage Act 1992
Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987
Soil Conservation Act 1986
Water Resources Act 1989
Water Act 2000
Beach Protection Act 1968
Coastal Protection and Management Act 1995."

Missing from this list is the *Fisheries Act 1994* that potentially impacts on the on-farm management activities of the approximately 700 cane growers with farms adjacent to estuarine areas. Under the *Fisheries Act* all marine plants are protected and interestingly this includes all plants growing in, or adjacent to fish habitat. Human-constructed drains on cane farms are considered important fish habitat by the Queensland Department of Primary Industries' Fisheries Group (QDPI Fisheries). As a consequence a grower mowing a headland that contains salt couch or repairing an on-farm drain that contains native hibiscus risks prosecution.

A record of seeking to do-the-right-thing by the environment was of no assistance to a Mackay cane grower who was ordered last year to undertake 40 hours of community service when he disturbed a few marine plants while fixing an on-farm levy bank. A year earlier the grower had donated approximately 30 hectares of land to the community as nature reserve.

CANEGROWERS has negotiated an agreement with QDPI Fisheries whereby individual growers can become accredited in a *Fish Habitat Code of Practice* and avoid the need to apply for individual permits every time they undertake on-farm drainage maintenance works. As a consequence of that agreement our district offices hold permits on behalf of accredited growers on a mill area basis.

Government permits are even needed to control ground and climbing rats on cane farms. This is because all native animals are protected under the *Nature Conservation Act 1994* and these rodent pests are native. The sugar industry has negotiated arrangements with Queensland National Parks and Wildlife Service (QPWS) whereby Damage Mitigation Permits are held on a mill area basis, again reducing the administrative load on individual farm businesses.

While the complexity of State-based legislation is considerable, the Commonwealth Government effectively further increased the administrative burden on industries when it introduced the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC). This legislation administered from Canberra has as its first objective the protection of the environment, particularly those areas of national environmental significance. I have been advised by well meaning Canberra public servants that cane growers should consult the

EPBC website before they consider undertaking any new on-farm activity because of their geographical proximity to so many sites of national environmental significance.

One of the first groups of landholders in Queensland to be significantly impacted by the EPBC Act were landholders in the Brigalow Belt because of the high profile listing of blue grass (Dicanthium) as an endangered ecological community in April 2001. Like much of the environmental legislation, the administrative burden falls heaviest on those who have looked after their native pastures and maintained a relatively high level of biodiversity on their farm because under the EPBC legislation, "Bluegrass grasslands that are currently in poor condition do not form part of the listed community and activities affecting these grasslands are not subject to the Act".[1]

A unique feature of the EPBC legislation is the capacity it gives conservation interests to bring an action against primary producers. Since Carol Booth from the North Queensland Conservation Council successfully brought an action against the lychee farmer Rohan Bosworth for killing Spectacled Flying Foxes on his lychee orchard there has been significant confusion regarding what a farmer can and cannot do to protect his crop. The following relatively long direct citation from the Environment Australia website suggests even the Federal Environment Minister is finding the administrative burden significant:

"In November 2002, I announced the national approach to the management of Grey-headed Flying-fox and the Spectacled Flying-fox. Administrative Guidelines were released to assist orchardists to determine whether they needed to refer certain actions under the EPBC Act. The Guidelines provided information about the threats to both species; they expressed views about the sorts of actions that would be likely to have a significant impact on threatened flying-foxes; and they provided information about how to make a referral.

The recent Federal Court case Humane Society International Inc v Minister for the Environment and Heritage [2003] FCA 64 *(12 February 2003) does not curtail the ability of the Commonwealth Environment Minister, consistent with the EPBC Act, to adopt a national approach to the management of threatened species in co-operation with the States and issue guidelines expressing views on whether particular kinds of activities are likely to involve a "significant impact" on threatened species or areas of special value.*

The Court held, however, that the Administrative Guidelines should not purport to exempt individual orchardists from the need to consider whether they should refer their actions to the Minister under the EPBC Act. Such purported exemptions are not authorised by the Act and do not have any legal force. It is important and a requirement of the EPBC Act for individual orchardists to consider the particular facts and circumstances of their actions themselves in deciding whether they need to make a referral under the EPBC Act. A referral will need to be made if an action is likely to have a significant impact on the species.

The Administrative Guidelines have now been revised to take account of the Federal Court decision and to make it absolutely clear that farmers and orchardists must decide for themselves whether they need to make referrals under the EPBC Act. In particular, any

[1] Administrative Guidelines on Significance - Supplement for the Nationally Endangered Bluegrass Ecological Community. Environment Australia, August 2001.

statements to the effect that farmers complying with a valid State permit or licence to shoot a specific number of Spectacled or Grey-headed Flying-foxes do not need to make a referral under the EPBC Act have been retracted.

…To assist orchardists in considering whether a referral is necessary, the Guidelines continue to provide guidance on when an action is likely to have a significant impact on a matter protected by the EPBC Act. The Federal Court decision did not change the value of the scientific evidence I considered nor invalidate my view on the likely significance of the impacts of crop protection measures on threatened Flying-fox species. In my view, it continues to be unlikely that shooting of threatened Flying-foxes under a valid State permit for the 2002-03 fruit season would have a significant impact on the species. This is because I believe, on the weight of scientific evidence that has been available to me, that shooting in the numbers you are permitted to shoot under State permits issued in accordance with the national management approach would be unlikely to have a significant impact on the species as a whole.

Contrary to some media reports, the Federal Court did not decide that every individual orchardist needs to put in a referral or that the Commonwealth Environment Minister needs to examine every individual activity. Rather, each individual orchardist needs to consider whether a referral is required. If referrals are made, then I will examine those referrals on their merits".

If after reading the above page of advice you are still not sure what is expected of a lychee grower who has a flying fox problem, don't be too concerned because, the situation is about to change anyway,

"…As previously noted in the Guidelines, the national management approach and these Guidelines only apply to the 2002-03 fruit season and will be reviewed in June 2003. New information for orchardists will be provided prior to the 2003-04 fruit season.

DAVID KEMP
Federal Minister for the Environment and Heritage
20 March 2003".

2. Increased Cost of Production

An increased administration load will significantly add to a business's cost of production. Governments are also more directly increasing the cost of production by charging more for basic inputs, including water for irrigation.

In 1994, the Council of Australian Governments (CoAG) introduced a set of water reforms aimed at improving water management through:

1. Pricing reform - consumption based pricing and full cost recovery (including, where practical, a return on the written down replacement cost of assets); the reduction or elimination of cross-subsidies; and making remaining subsidies transparent.

2. Investment reform - investment in new rural water supply schemes to proceed only if economically viable and ecologically sustainable.
3. Institutional reform - the adoption of an integrated water catchment approach; separating the roles of water resource management, standard setting and regulatory enforcement by 1998; and further development of interagency performance comparisons.
4. Secure water property rights - secure rights are recognized as facilitating long-term planning certainty, interest in maintaining the productivity of a resource (rather than a short-term interest in exploitation), as a means of securing outcomes for conservation and also promote the possibility of trade in the assets and transfers among users to exploit comparative advantage.

Queensland rural industries initially supported these reforms and supported the concept of regional water resource plans under the *Water Act 2000* and in accordance with CoAG. Furthermore it was recognized that these plans needed to be based on an accurate assessment of the needs of the environment as well as industries.

However, there is now overwhelming concern that the regional plans are being underpinned by "environmental fundamentalism" rather than science or sound economics. And some of the assumptions about water being inherently scarce are simply not relevant to coastal north Queensland catchments.

I will use the draft water resource plan recently developed for the Pioneer Valley[2] in central coastal Queensland to illustrate the issues. This water plan will directly affect approximately eight small rural communities dependant on Mackay as the regional centre. Objectives of the plan include:

- Increased security for water entitlement holders,
- Establishment of permanently transferable water allocations, and
- Establishment of environmental flow objectives to maintain healthy waterways.

These may be laudable objectives for irrigators in the Murray-Darling basin, but in the Pioneer catchment their relevance is not obvious to local irrigators. The Pioneer catchment is generally considered well managed, water quality is generally good and potential salt-water intrusion and other issues are being managed through locally relevant research, development and extension programs. Indeed the Pioneer Valley plan states that the "current level of water development and use throughout the basin has resulted in relatively minor changes in the flow regime" and that "existing water entitlements … are under-utlised". Most irrigators grow sugarcane and there is thus limited potential for tradeability. So what, in reality, is the plan likely to deliver to local irrigators?

In 2000, new water prices were implemented for all State run irrigation schemes that would cover the period up until 2004. This resulted in substantially higher prices in most cane growing irrigation schemes. Some schemes, such as the Burdekin, are paying prices that are

[2] Queensland Department of Natural Resources and Mines, 2001. Pioneer Valley Draft Water Resource Plan.

in excess of CoAG pricing policy requirements (i.e. the cost of operating and maintaining the scheme).

It is being mooted that some growers in the Pioneer catchment could face increases of up to 300% in the price currently paid for their water as government seeks to recover its return on investment. Yet these irrigation schemes were developed with what were considered at the time to be appropriate government and industry contributions. It was never envisaged that irrigators would subsequently pay a return on the investment. In some areas growers paid for the infrastructure in the land sold to them by government.

Furthermore a cap on allocations is being proposed under the Pioneer Valley draft plan at a time when research is suggesting that vertical expansion within the Mackay sugar industry is achievable by increasing the level of irrigation.

It is unclear from the Pioneer Valley plan what objective criteria have been used to determine the environmental flow requirements except that there is a desire to maintain flow at its current estimated 90% of pre-development flows.

Until recently I assumed it was only our coastal river systems that were still healthy and had such high flow levels. For example, I understood that our inland rivers, particularly in the upper Murray-Darling system were stressed and polluted. Indeed there was much publicity in July last year when the Queensland Premier said his Government would buy the large cotton farm known as Cubbie Station to increase flows into the river system and save the Narran Lakes. I understood that the attempted acquisition of Cubbie followed the State Government's failure to implement the original water resource plan for the Condamine-Balonne when the Land Court ruled in favor of irrigators who disputed the scientific validity of the water resource plan in 2001.

The dispute between the Premier and Balonne irrigators that followed the failed acquisition of Cubbie was in part about the health of the Balonne River. So it was agreed that an independent scientific assessment should be commissioned to "Review of the Science Underpinning the Assessment of the Ecological Condition of the Lower Balonne System"[3]. Professor Peter Cullen was appointed to chair the panel.

When I read the final Cullen report I was surprised to learn that the Lower Balonne and the downstream Narran Lakes are actually in good condition. Aquatic invertebrates are generally considered the most sensitive of environmental indicators and the report concluded that, "The aquatic invertebrates in the rivers do not at present indicate evidence of human disturbance either moving downstream, or in comparison to adjacent catchments."

[3] Cullen, P., R. Marchant & R. Mein. Review of the Science Underpinning the Assessment of the Ecological Condition of the Lower Balonne System. Report to the Queensland Government. Independent Scientific Review Panel. January 2003.

Soon after the release of the Cullen report, a new $3 per megalitre water harvesting fee was introduced by the Queensland Government. I understand Cubbie Station is expected to be amongst the most impacted farm business in Queensland from a cost of production perspective. The charge was introduced without any consultation with rural industries and in the middle of a drought.

3. Restricted access to tools and resources

Queensland is 1.7 million square kilometers in area with extensive vegetation resources including 81 million hectares of woodland and forest ecosystem. About 80% of the land mass of Queensland is managed by primary producers.

In 1999 the Queensland Government introduced the *Vegetation Management Act* resulting in the protection of large areas of native vegetation on freehold land identified as "endangered" or "of concern" remnant ecosystem.

Just before proclamation of the legislation in 2000, there was a Commonwealth Government Inquiry into Public Good Conservation. The Agforce submission to this inquiry provides some insight into the impact the *Vegetation Management Act* was anticipated to have on individual grazing enterprises:

"The following information relates to the (expected) effect of the Queensland Vegetation Management Act on a grazing property. It was supplied by a national property valuation and property consultancy with expertise in rural valuation matters.

…The 8,960 hectares partly improved freehold grazing property is located in Central Queensland near the town of Dingo. It comprises a good balance of mixed scrub and forest country that currently carries 1050 head of mixed branded cattle on a breeding and limited fattening basis. Improvements comprise water, fencing and basic structures.

- *About 3,600 ha is underdeveloped virgin brigalow and softwood scrub. This country is all classified as "endangered" and under the provisions of Queensland's VMA clearing will be prohibited and no compensation will be payable.*
- *The current market valuation is 8,960 ha @ $150/ha total $1,344,000*
- *The market valuation after the commencement of the Vegetation Management Act is estimated to be 8,960 ha @ $110/ha total $985,600*
- *This $358,400 loss in market value is a direct result of public conservation measures, because the development potential of the remaining virgin scrub cannot be realised.*

AgForce argues that all of this loss in value is for public benefit and the landholder should be compensated accordingly[4].

[4] Allowance would need to be made for shade clumps and strips and riparian buffers.

This case illustrates the possible scale of the impact which landholders will have to bear, unless governments commit to funding this public good conservation. There are however, additional, social costs that emerge on closer examination of this case.

The property currently carries 1,050 head of cattle, which is less than a viable living area in this locality (2,000 head of cattle is a viable enterprise). Under long established land compensation principles it is clear that the entire property should be purchased because of the significant impact of the conservation measures. However, to pay the current market value ($1.344M) would only provide the landholders with the means to purchase another uneconomic unit in the same locality. It may be enough to acquire a viable enterprise elsewhere. But that would mean relocating. To uproot the family will have a social cost for the local community.

If this is an isolated case the subsequent effect on the local community (schools etc) will be minimal. However, if this is just one of many properties affected in the same way, the effect of people being forced to leave the area is likely to be significant. This issue – the social cost for rural communities - does not appear to have been studied in any comprehensive way."

Nearly three years after the proclamation of the *Vegetation Management Act* none of these issues have been resolved by government. The Federal Inquiry amongst other recommendations suggested the establishment of a revolving fund to purchase and manage land holdings where there has been a significant fall in the value of a landholding owing to the imposition of public good conservation requirements, and the property has become unviable. This recommendation also remains un-actioned.

CANEGROWERS Mackay has undertaken a study of the potential economic impact of the *Vegetation Management Act* on the local sugar industry[5]. The study estimated that 9,811 hectares of potential caneland can not be developed because it is identified as endangered or of concern regional ecosystems. Based on the average sugar price over the 5 years to 2001 the study estimated that this represented a direct potential lost turnover of $26.7 million. The impact on individual cane growers has been significant, in particular as a consequence of banks devaluing land classified as endangered ecosystem. The loss of equity in farm businesses, at a time when world sugar prices and crop production has been low, has sent some growers bankrupt.

4. Increased Uncertainty

In 1999 the Humane Society sought to have tree clearing for cane expansion listed as a threatening process under the *Endangered Species Protection Act 1992*. A copy of the nomination that was full of false allegations was distributed far and wide by Environment Australia as part of the process of community consultation. After Environment Australia

[5] Burn Ashburner, Economic Impact of the Vegetation Management Act 1999 on the Mackay Sugar Region, Unpublished Report. 2001

had effectively provided free distribution of the propaganda on behalf of the Humane Society International, the Commonwealth Environment Minister decided to hold the submission over until after the *Environment Protection and Biodiversity Conservation Act 1999* came into effect.

In response to my suggestion that the whole process was farcical, Environment Australia bureaucrats suggested I support the listing as it could result in more money for the industry through the provision of public funding for the implementation of CANEGROWERS' environmental program!

Today, considerable uncertainty is being generated through the development of the Reef Plan. Again government is offering funding to industry organisations - if only we would agree there is some damage to the Reef. The basis of the Reef Plan is that (i) there is a decline in water quality entering the lagoon, and (ii) that the decline is a damaging threat to the Reef. Yet despite the 3000 pages of Productivity Commission and Baker Committee reports, neither of these propositions has been substantiated. It is my proposition that given the significant improvements in on-farm practices over the past decade, water quality should have improved.

In the Courier Mail of 25th November 2002, an article titled *Fertilizer ban threat to save Reef* suggested that:

"FARMERS in the Great Barrier Reef catchment should be banned from buying fertiliser unless they controlled run-off from their properties, a panel of researchers has recommended."

While potential controls on fertilizer use may have made newspaper headlines, the real threat from the Reef Plan and associated Memorandum of Understanding may be continued use of the herbicide diuron.

The Great Barrier Reef Marine Park Authority (GBRMPA) and the Australian Institute of Marine Science (AIMS) have undertaken extensive surveys for traces of organochlorine and other pesticides[6]. While it was expected that these programs would find significant levels of pesticides, particularly from the past use of organochlorine insecticide, this has not been the case. Diuron is about the only chemical for which any residue can be found anywhere. While there have been various allegations of an impact from diuron on seagrass and mangroves these allegations have not been substantiated. The diuron residue is at the limit of detection and could not be considered herbicidal.

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[6] Cavanagh, J.E, Burns, K. A., Brunskill, G.J. & Coventry, R.J. (1999) 'Organochlorine pesticide residues in soils and sediments of the Herbert and Burdekin River regions, north Queensland – implications for contamination of the Great Barrier Reef.' *Marine Pollution Bulletin,* **39,** pages 367-375. & Haynes, D, Muller, J & Carter S. (2000) 'Pesticide and Herbicide Residue in Sediments and Seagrasses from the Great Barrier Reef World Heritage Area and Queensland Coast.' *Marine Pollution Bulletin,* **41,** pages 279-287.

In CANEGROWERS submission to the Commonwealth Government review of diuron we state that:

- Diuron is an important component of sugarcane agriculture in eastern Australia. No other herbicide offers similar efficacy at the same cost.
- Australian cane growers require a safe product with minimal toxic impurities.
- Australian cane growers have reduced the potential for off-site movement of soil containing diuron residues through the use of green-cane trash-retention and minimum tillage.
- CANEGROWERS is working with government to formalise a Sustainable Agricultural Systems Initiative that will provide incentives, extension and performance monitoring/evaluation to continually improve water quality in high-priority catchments.
- The hypothesis that mangrove dieback in some areas of coastal Queensland is the result of diuron application to canefields and subsequent accumulation in sediments is based on scant data and cannot be supported.
- The Australian cane industry recommends that labels for diuron products have the additional statement "Do NOT apply if heavy rains or storms that are likely to cause surface runoff are forecast within two days of application".
- Current trigger values for diuron are set at impossibly low levels and need to be reassessed using contemporary methodology that has a sound scientific basis.

I would like to be able to reassure delegates at this Forum that the decisions regarding the continued availability of this important herbicide will be made on the basis of science rather than emotion. We can perhaps take comfort from the recent decision by Justice Horton Williams in the South Australian Supreme Court where a Rann government decision to prohibit gill net fishing on the basis of a deal done with independent MP Peter Lewis was overturned on the basis there had been no scientific reasons to justify the restriction[7].

I can not conclude a paper on property rights without some reference to the regional coastal management planning process including the draft Cardwell-Hinchinbrook Regional Coastal Management Plan developed under the State Coastal Management Plan by the Queensland Environment Protection Agency all under the *Coastal Protection and Management Act 1995.* The plans will be implemented through the *Integrated Planning Act 1997.* Under this Act 'material change of use' is defined as development, and development triggers all sorts of restrictions and conditions including obligations to rehabilitate 'coastal resources'. As a consequence, a farmer changing cropping regimes could be forced to replant riparian buffers at a cost of $5 000 to $30 000 per hectare if the current drafts become government policy[8].

[7] South Australian River Fishery Association & Warrick v State of South Australia can be accessed at www.austlli.edu.au/au/cases/sa/SASC/2003/38.html

[8] Bobermein, J. & K. McGuire. Loss of 'as of right' rights on freehold land due to the Carwell Hinchinbrook Regional Coastal Management Plan. Submission to the Coastal Protection Advisory Council. July 2002.

5. In Conclusion

In this paper I have provided some insight into the way recent government policies, legislation and regulation has impacted on some aspects of Queensland agriculture.

There are many issues that I have not explored in enough detail and other issues that I have not mentioned at all including salinity hazard mapping, mahogany glider plans, vegetation offsets and water-weed management. The list of property rights issues that urgently need to be resolved is very long.

I have used a few examples to illustrate the different way some impacts are being experienced using four broad categories:

1. Increased administrative burden;
2. Increased cost of production;
3. Restricted use of resources; and
4. Increased uncertainty.

The EPBC Act is particularly confusing and appears to have created an administrative minefield for both bureaucrats and farmers. Farmers in Queensland are particularly disadvantaged because of their geographic proximity to so much that has been identified as of national environmental significance – rich and beautiful landscapes after 150 years of coexisting with modern agriculture.

Farmers who have actively retained native vegetation and waterways on their farms are expected to jump through significantly more administrative hoops than landholders who in the past may have run down their native pastures or adopted a policy of filling and levelling gullies and clearing all native vegetation. The hoop jumping represents a significant burden financially, administratively and in many instances emotionally on farming families. Nobody agrees that farm businesses should bear the full cost of protecting native vegetation under the *Vegetation Management Act* – yet three years after the proclamation of the Act this is the situation.

While the CoAG objectives were generally supported by Queensland rural industries, implementation has not resulted in the realisation of the original agreed objectives. Instead increased uncertainty and increases in the cost of water have significantly impacted on the cost of production for irrigators.

Coastal management planning is likely to limit the potential for diversification and innovation. Further restrictions are envisaged as a consequence of ambit claims of environmental damage to the Great Barrier Reef. The most significant property rights loss in this context could be continued use of the herbicide diuron.

A southwest Queensland grazier recently emailed me,

"The trouble with trying to be reasonable with people who have a one track mind is that the giving gets one sided. I have a Queensland Conservation Council press release 1996 that demands protection of all endangered regional ecosystems on all tenure. We (producer reps) agreed to the protection of endangered on leasehold and in no time at all they wanted of concern regional ecosystems protected. Now we have ambit claims for all sorts of restrictions way in excess of the not of concern threshold."

It has also been my experience that the more rural industries have given over the last few years, the more government and conservation groups have demanded. Property rights continue to be eroded, primary producers continue to be impacted – and the benefits to the broader community and environment remain elusive.

A new approach is needed. Using the property rights umbrella it might be possible to progress sensible policies on water, vegetation and coastal management planning. If we are to make headway rural industries will need to lift their game and create more leverage for more effective negotiations. My assessment of the recent past is that where individuals or organisations have been resolute, have diligently gathered the evidence and clearly understood their legal rights – government's have struggled to impose additional regulations or remove existing rights. The bottom line is that to be more effective, we will need to have clear objectives and strategies, be united and get more technical. There is no alternative.

Thank you.

Attachment B: Paper from CANEGROWERS Mackay

Economic Impact of the *Vegetation Management Act 1999* on the Mackay Sugar Region

Executive Summary

The most severe economic impact of the *Vegetation Management Act* (VMA) on the Mackay Sugar Industry is considered to be on individual growers. There are an estimated 9 811 ha of suitable cane land with endangered or of concern vegetation on freehold land which cannot be cleared. The direct economic impact on the grower is the loss of the potential marginal profit from area of $6.6 million per annum. The capitalised growers marginal profit for this area reflects an estimated value of $80.4 million ($8 195 per ha).

This total figure disguises the economic impact on the individual growers. Case study 1 shows that the impact of the VMA has caused individual growers to become financially unviable. Case study 2 and 3 show that growers who had invested in suitable cane land with longer term intentions to develop have had the value of the investment effectively reduced to zero with no demonstrated economic value of the land to the individual and with no ability to generate an economic return. Further to this the individual growers have been left with land stewardship obligations for which there is no apparent economic return.

The economic impact on the region as a whole is not expected to be dramatic. The potential loss of turnover from the area of suitable cane land that cannot be cleared is estimated at $26.7 million per annum, which represents an increase in the ten year average turnover of 8%. The regional sugar industry is not in an expansion phase at present and there is suitable cane land available, which can be cleared and developed to cane. Therefore, this loss will occur over time. However it does represent the opportunity cost over the long term, which the community is forgoing for the benefits of retaining vegetation.

The sugar millers marginal profit loss on cane from the area, which cannot be cleared, is estimated at $5.1 million per annum. Again this will only impact in the long term when all other suitable cane land within the traditional area has been developed.

The regional sugar industry is mature and the overall conclusion is that there will be an economic impact on the regional industry and community but it will not be immediate or dramatic. This however is not true of the individual grower who is impacted on directly and severely. The individual growers effectively carry this loss for the benefit of the community.

Economic Impact of the *Vegetation Management Act 1999* on the Mackay Sugar Region

Introduction

The *Vegetation Management Act 1999* (VMA) classifies regional ecosystems status as either "endangered", "of concern" or "not of concern" based on their percentage of pre clearing area. The "endangered" is protected and it is assumed that permission to clear for commercial purposes will not be given. The 'of concern' is currently not protected and a certain amount of clearing may take place however there is pressure to protect this area and within the study area it is assumed that this area will also not obtain permission to be cleared. The effect is that areas suitable for cane cannot be cleared and are thus lost to the sugar industry.

The objective of this document is to establish the economic impact that the *Vegetation Management Act 1999* (VMA) has on the local Mackay sugar industry and region. Estimates of the economic impacts will be made on the various parties affected from the individual who owns suitable land and cannot develop sugar cane through to the sugar miller and the local community.

The Mackay Sugar Industry in Perspective

The Mackay sugar industry covered in this study consists of five sugar mills which have crushed an average of 7.7 million tonnes of cane producing 1.8 million tonnes of sugar and generating an average turnover of $353 million per annum for the ten year period from 1992 to 2001 as shown in Table 1 with further details in Appendix 1. As at April 2002 there were 1,379 growers with a cane supply area (CPA) of 120,610 ha. The contribution to the local economy when considering the multiplier effects is significant. Added to this the number of family owned farms contributes to a stable and economic rural society.

Table 1
Mackay Sugar Industry Area Production and Turnover

	Units	Total
Number of farming units as at April 2002	No.	1,379
Cane Production Area (CPA) as at April 2002	ha	120,610
Average Cane Production 1992 - 2001	t	7,701,025
Average Sugar Production 1992 - 2001	t	1,081,465
Average Turnover 1992 - 2001	$	352,879,849

Source: CANEGROWERS Mackay

The industry operates without any significant form of subsidy in a distorted world market with a volatile world price. At present the industry economics do not appear to be favourable for development with low world prices and a series of below average crops (Appendix 1). However it cannot be assumed that this will always be the case and development of cane land will continue as individual growers and mills strive for economies of scale and low cost production. Thus the areas suitable for cane affected by the VMA will with time reflect a loss to the industry.

The Areas Involved

A mapping exercise has been conducted where the areas from the Sugar Cane Land Suitability Study of classes 1 to 4 for Mackay Sugar and Plane Creek area (Appendix 6) have be overlaid with the "endangered" and "of concern" vegetation areas. This only covers the traditional cane supply area of the existing sugar mills, which is essentially a fit to the present rail system for cane transport.

Table 2 shows the results with 5,763 ha of suitable cane land within the traditional area with "endangered" vegetation, which cannot be developed due to the VMA. Of this 1,499 ha relates to the Mackay Sugar area and 4,264 ha to the Plane Creek area. The area of "of concern" vegetation on suitable cane land is 4,048 ha with 1,753 ha in the Mackay Sugar area and 2,295 in the Plane creek area. This area does have a limited amount, which could be cleared, but generally it will not be available for clearing. Further to this there may be restrictions through the Regional Vegetation Management Plans on a property. Thus the total extent of the suitable cane land not to be cleared in reality is expected to be the "endangered" area and most of the "of concern" areas. The total "endangered" area and of concern area is 9,811 ha with 3,252 in the Mackay Sugar area and 6,559 ha in the Plane Creek area.

Table 2
Suitable Cane Land Lost due to the Vegetation Management Act

	Mackay Sugar	Plane Creek	Total
Suitable cane land on "endangered" area (ha)	1,499	4,264	5,763
Suitable cane land on "of concern" area (ha)	1,753	2,295	4,048
Suitable cane land lost due to VMA (ha)	3,252	6,559	9,811

Source:VMA Regional Ecosystem status of "endangered" and "of concern" as available from Queensland Herbarium

: Mackay Sugar Cane Land Suitability Study GK Hob & PG Shields Dept of Primary Industries 1985

:Plane Creek Sugar Cane Land Suitability Study AK Willis & DE Baker Dept of Primary Industries 1988

In any mapping exercise there will be areas that are shown as suitable but for a variety of reasons will never be developed. The suitable cane areas have been adjusted to exclude as many of these areas as possible. The areas of "endangered" and "of concern" vegetation have been and are in the process of being changed as actual circumstances on the ground

have shown the original map to be incorrect. The areas as determined are considered to be as accurate as possible within these constraints.

Local Economic Impact

The overall economic impact to the region is measured as the average loss of turnover that would have been generated and mostly spent within the community from the area of suitable cane land that cannot be cleared.

Table 3 shows the lost cane production from the endangered and of concern areas based on a yield of 65 tonnes per ha of CPA per annum that is slightly lower than the ten year average of 67 tonnes per ha per annum (Appendix 1).

This is converted to sugar at 13.7% which is again below the ten year average Commercial Cane Sugar (CCS) percentage of 13.84% (Appendix 1).

The average sugar price over the last five years has been $306 and this is used to calculate the turnover lost which is $15.7 million for the endangered area and $11.0 million for the of concern area. Thus the total potential loss in turnover is $26.7 million.

With strong backward and forward linkages in the sugar industry and a multiplier effect of 3 to 3.5 this would have a significant impact on the local economy.

Table 3
Estimated Loss in Cane, Sugar and Turnover

	Assumptions	Units	Mackay Sugar	Plane Creek	Total
"Endangered" Area					
Lost Area of suitable cane land		ha	1,499	4,264	5,763
Lost Cane	65 t/ha CPA	t/annum	97,435	277,160	374,595
Lost Sugar	13.7 %sugar	t/annum	13,349	37,971	51,320
Lost Turnover	$306/t sugar	$/annum	4,084,670	11,619,102	15,703,772
"Of Concern" Area					
Lost Area of suitable cane land		ha	1,753	2,295	4,048
Lost Cane	65 t/ha CPA	t/annum	113,945	149,175	263,120
Lost Sugar	13.7 %sugar	t/annum	15,610	20,437	36,047
Lost Turnover	$306/t sugar	$/annum	4,776,802	6,253,714	11,030,517
"Endangered" and "Of Concern" Area					
Lost Area of suitable cane land		ha	3,252	6,559	9,811
Lost Cane	65 t/ha CPA	t/annum	211,380	426,335	637,715
Lost Sugar	13.7 %sugar	t/annum	28,959	58,408	87,367

Lost Turnover	$306/t sugar	$/annum	8,861,472	17,872,816	26,734,288

Impact on the Miller

An agreement between millers and growers effectively determines the balance between milling capacity (tonnes per hour) and the cane production area (CPA) and hence the milling season length. Any change in the CPA is by agreement with the consequent increase in milling capacity or milling season length or both. The miller would generally prefer to increase cane production area without additional capital investment in milling capacity or transport systems. It is assumed that ultimately the areas that cannot be developed for cane production due to the VMA will prevent the miller obtaining the marginal benefit from that lost cane supply. This assumption will only hold true in the long term. In the short term there is still area available in the traditional supply region that can be developed.

At the Mackay Sugar Mills, 4,000 ha of cane production area have just been issued without an increase in milling capacity. Most of this area is still to be developed.

Table 4
Millers Marginal Loss

	Assumptions	Units	Mackay Sugar	Plane Creek	Total
"Endangered" Area					
Lost Area of suitable cane land		ha	1,499	4,264	5,763
Lost Cane	t/ha 65CPA	t/annum	97,435	277,160	374,595
Millers marginal loss	$8.00/t cane	$/annum	779,480	2,217,280	2,996,760
"Of Concern" Area					
Lost Area of suitable cane land		ha	1,753	2,295	4,048
Lost Cane	t/ha 65CPA	t/annum	113,945	149,175	263,120
Millers marginal loss	$8.00/t cane	$/annum	911,560	1,193,400	2,104,960
"Endangered" and "Of Concern" Area					
Lost Area of suitable cane land		ha	3,252	6,559	9,811
Lost Cane	t/ha 65CPA	t/annum	211,380	426,335	637,715
Millers marginal loss	$8.00/t cane	$/annum	1,691,040	3,410,680	5,101,720

The miller's marginal profit is the income from the last tonne of cane crushed less the direct costs of milling that cane. Thus the fixed costs are not taken into account. The marginal profit would vary from mill to mill and on the distance the cane has to be transported. Table 4 shows the estimated lost area and tonnage and the miller's marginal loss. The marginal loss is based on an estimate of $8 per tonne cane or a total of $5.1 million per annum.

Individual Grower Impact

Individuals have acquired undeveloped land suitable for growing cane in a variety of ways and for a number of reasons. The common fact is that if they no longer have the option of clearing the land due to the VMA, there will be an economic impact on each individual. To illustrate the affect on the individual three case studies have been examined.

Case Study 1

Table 5 reflects the present land holding and land use for case study 1. There are two contiguous properties totaling 271.3 ha with 122 ha of cane land, 81 ha suitable cane land with endangered vegetation and approximately 10 ha of suitable land which could be developed but is peripheral to the endangered vegetation and resultant field sizes and shapes are considered to be uneconomic to develop on their own. Thus there are considered to be 91 ha directly affected by the VMA.

The grower had another cane property some distance away, which was sold at the end of 1999 with the advent of less favourable economic circumstances. The plan was to relieve immediate financial pressure and then develop the uncleared area to benefit from the economies of scale and having a consolidated block of land. Without this additional 91 ha, the remaining 122 ha is not considered viable into the future. The grower has been reluctant to have the property re-valued by the bank for fear that it may jeopardise his borrowing capacity.

Table 5
Areas Involved

	ha
Property 1	244.3
Property 2	27.0
Total	271.3

Land use	ha
Existing cane land	122.0
Cleared suitable land	0.0
Not to be cleared suitable land	81.0
Can be cleared suitable land	10.0
Other	58.3
Total	271.3

The major loss to the grower is the marginal profit that could have been generated by developing the 91 ha of land to sugar cane. The marginal profit is based on future expected yields, prices and costs. The assumptions on these take a long term view, which is more optimistic that the actual present situation.

The details of the assumptions and calculations to obtain the average annualised marginal profit over a full crop cycle are shown in Appendix 2. This accounts only for the additional income and costs associated with the 91 ha. Table 6 shows that the annualised area

harvested over the cycle to be 76 ha the total cane production to be 7,053 tonnes at 93 t/ha harvested with a CCS of 13.7%.

Table 6 Average Annual Lost Yield and Area

Area cane land	91 ha
Area Harvested	76 ha
Tons cane	7,053 t
Tonnes cane/ha harvest	93 t/ha
CCS%	13.70%

This would give an annual additional income of $192,687 ($2,117 per ha) and additional costs of $114,239 ($1,255 per ha) giving and annual marginal profit of $78,448 ($862 per ha) as shown in Table 7. This is the annualised financial loss to the grower because the area cannot be cleared and developed to sugar cane.

Table 7
Average Annual Lost Marginal Profit ($)

	Total	Per ha	Per ton
Gross income	192,687	2,117	27.32
Total Costs	114,239	1,255	16.20
Lost Marginal Profit	78,448	862	11.12

The capital value of this lost marginal profit is calculated using various methods in Table 8. The objective is to determine the capital sum required to achieve a return equal to the value of the lost margin. By capitalising the $862 marginal profit at a rate of 6% the gross value would be $14,368 per ha. From this, the $3,000 per ha capital costs for clearing is deducted which gives a capital value to the grower of $11,368 per ha. Thus a lump sum of $1,034,467 would be the value of the land in the grower's hands if developed to sugar cane.

An alternative method would be the terminal value of an annuity based on the $862 marginal profit at 6% over a period of time between 10 and 20 years. The value to the grower after deducting the capital cost would be $8,363 per ha ($761,007 total) over 10 years and $28,712 per ha ($2,612,756 total) over 20 years.

Table 8
Capital Value of Lost Marginal Profit

	Period	Rate	Avg. annual Marginal Profit $/ha	Gross Value $/ha	Capital $/ha	Value to grower $/ha	Value to grower Total $
Capitalised value	-	6%	862	14,368	3,000	11,368	1,034,467
Terminal value of annuity	10 years	6%	862	11,363	3,000	8,363	761,007
Terminal value of annuity	20 years	6%	862	31,712	3,000	28,712	2,612,756

However the grower believes that the balance of the land would be an uneconomic unit and as such would have also decreased in value. Added to this the grower does not want the responsibility or cost of the land stewardship obligations for land, which has no apparent direct economic benefit to him.

The impact of the VMA has been to leave the grower with a property that is no longer viable and his livelihood at stake. The grower believes that to offset the impact of the VMA he would require the full value based on the outright sale of the whole farm at the full market value of the land before the effects of the VMA.

As a guideline to the land market values Table 9 shows the market value of the cane land at $10,031 per ha and undeveloped land at $2,930 per ha based on the land sales summary in Appendix 5. The total value would be $1.49 million.

Table 9
Market Value of Land

	Area ha	Value $/ha	Gross payment $
Existing Area Cane	122.0	10,031	1,223,834
Potential cane land lost	91	2,930	266,674
Total			1,490,508

Case Study 2

Case Study 2 reflects the situation where the grower made an investment in land with the intention of developing it to cane over a number of years. Two contiguous properties were purchased one of 82 ha which has been developed with 65 ha of cane land and is not affected by the VMA. The second property is 442 ha and the present land use is shown in Table 10. Clearing has started with 32 ha having been cleared before the advent of the VMA but not planted to cane and there are a further 99 ha of suitable cane land with endangered vegetation and 60 ha of suitable land with of concern vegetation. There are 182 ha of land not suitable for cane.

Table 10
Areas Involved

Land use	ha
Cleared suitable land	32
Endangered suitable land	99
Of concern suitable land	60
Unsuitable cane land	182
Total area	442

Land considered affected	ha
Cleared suitable land	32
Not to be cleared suitable land	99
Of concern suitable land	60
Total	191

The grower has 191 ha of suitable land that was to be developed giving a unit of 256 ha. The 32 ha already cleared is situated at the furthest point from the existing cane and on it own would be difficult to manage if planted to cane. The remaining 60 ha is (as with Case Study 1) around the periphery of the endangered vegetation and are affected in terms of the resultant field sizes and shapes that would eventuate. The grower has not just lost the 99 ha but has been left with a difficult development situation and a farm, which will be more costly to operate if developed. Thus the direct loss to the grower is the endangered land, the higher cost of farming the balance of the land and the lost economies of scale.

As with Case Study 1 the grower does not want the land stewardship obligations for land, which has no apparent direct economic benefit to him. At the same time the grower does not want to have a piece of land in the middle of his operation over which he had no control.

The development potential of the property has been reduced to the point where it is questionable as whether it would be viable. To find properties with the same potential in the same locality is not considered an option thus the market value of the undeveloped land

would not be a true assessment of the impact. The economic impact is considered to be the full potential marginal value of the 191 ha of suitable cane land.

Table 11
Average Annual Yield and Area Lost

Area cane land	191ha
Area Harvested	159ha
Tons cane	14007t
Tonnes cane/ha harvest	88t/ha
CCS%	13.70%

The details of the assumptions and calculations to obtain the annualised yield and marginal profit are shown in Appendix 3. Table 11 shows the annualised cane yield that would be expected from the 191 ha of 14007 at 88 tonnes per ha harvested.

Table 12
Average Annual Lost Margin Profit ($)

	Total	Per ha	Per ton
Gross income	382687	2004	27.32
Total Costs	254396	1598	18.16
Lost Marginal Profit	128292	672	9.16

Table 12 shows the lost annual marginal profit of $128,292 or $672 per ha. This is lower than Case Study 1 because the relative extent of the area would require the employment of a full time person and additional machinery, which is shown in depreciation.

Table 13
Capital Value of Lost Marginal Profit

	Period	Rate	Avg. annual NFI lost $/ha	Gross Value $/ha	Capital outflow $/ha	Value to grower $/ha	Value to grower Total $
Capitalised value	-	6%	672	11,195	3,000	8,195	1,565,195
Terminal value of annuity	10 years	6%	672	8,853	3,000	5,853	1,117,986
Terminal value of annuity	20 years	6%	672	24,708	3,000	21,708	4,146,285

When capitalised at 6% and the once off development costs deducted (Table 13) the value of the lost marginal profit of $672 to the grower is $8,195 per ha or with a terminal value of

annuity over ten years of $5,853/ha ($21,708/ha over 20 years). The total capitalised value is $1.56 million.

The larger property also contains a possible dam site for irrigation of both the developed area and a portion of the potential new area. This has not been taken into account.

Case Study 3

In this Case Study the grower has six properties totalling 1,283 ha with 467 ha of cane land as shown in Table 14. The 78 ha which is suitable cane land with endangered vegetation is a relatively square block and does not have an affect on the development of any other suitable land on the properties.

Table 14
Areas Involved

	ha
Property 1	272.0
Properties 2 - 6	1011.7
Total	1283.7

Land use	ha
Existing cane land	467.0
Not to be cleared suitable land	78.0
Other	738.7
Total	1283.7

The 78 ha are relatively small compared to the whole cane area and is in a physical location on the properties that makes it accessible only through some of the other properties. Due to this the grower definitely wants to maintain control of the area. However the costs and responsibility of his land stewardship obligations would be for land that had no direct economic benefit to him and the cost of this would be an additional impact of the VMA.

Table 15
Average Annual Yield and Area Lost

Area cane land	78ha
Area Harvested	65ha
Tons cane	6,045t
Tonnes cane/ha harvest	93t/ha
CCS%	13.70%

Table 16
Average Annual Margin Lost ($)

	Total	$/ha	$/t
Gross income	165,160	2,117	27.32
Total Costs	97,362	1,248	16.11
Lost Marginal Profit	67,798	869	11.22

The area was part of a planned development and the lost value to the grower is at the margin with no increase in labour numbers or machinery. Appendix 4 Tables 4.1 and 4.2 reflect the full cycle with the assumed income and costs. The annualised summary of the yields is shown in Table 15 with the expected yield loss of 93 tonnes cane per ha per annum and in Table 16 the lost marginal profit of $869 per ha per annum or $67,798 per annum in total. When this lost marginal profit is capitalised at 6% and the clearing costs deducted the value to the grower is $11,487 per ha or $896,000 for the whole area as seen in Table17. The value to the grower using the terminal value of annuity over 10 years is $8,457 per ha and over 20 years is $28,974 per ha. This excludes any cost of management and responsibility for the land stewardship obligations.

Table 17
Capital Value of Lost Income

	Period	Rate	Avg. annual income $/ha	Gross Value $/ha	Capital $/ha	Value to grower $/ha	Value to grower Total $
Capitalised value	-	6%	869	14,487	3,000	11,487	895,971
Terminal value of annuity	10 years	6%	869	11,457	3,000	8,457	659,635
Terminal value of annuity	20 years	6%	869	31,974	3,000	28,974	2,260,000

Impact on Growers Overall

Marginal Profit and Land Market Value Loss

It is believed that the majority of the land that cannot be cleared within the traditional cane growing area would have been developed as additions to existing cane operations. Thus the value of the majority of the area to the growers would be the capitalised marginal profit. The range of marginal profit in the case studies is from $869/ha to $672/ha. Table 18 shows the calculation of the total value to the growers of the suitable land lost using the lower marginal profit of $672 per ha from Case Study 2 (Table 13) with the capitalised value to the grower of $8,195 per ha. This is then multiplied by the total suitable cane areas that cannot be cleared (Table 2). The estimated loss in marginal profit to growers as a whole due to the VMA is $6.6 million with $3.87 million from "endangered" area and $2.72 million from "of concern" area. When capitalised this reflects a value to growers of $80.4 million with endangered area $47.23 and "of concern" area $33.17 million.

Table 18
Growers Marginal Loss and Capital Loss

	Assumptions	Units	Mackay Sugar	Plane Creek	Total
"Endangered" Area					
Lost Area of suitable cane land			1,499	4,264	5,763
Lost tonnes cane	t/ha 65CPA	t/annum	97,435	277,160	374,595
Growers' lost marginal profit	$672/ha	$/annum	1,006,855	2,864,061	3,870,916

Capitalised marginal profit value	$8,195/ha	$	12,283,910	34,942,356	47,226,266
Undeveloped land value	$2,930/ha	$	4,392,802	12,495,602	16,888,403
"Of Concern" Area					
Lost Area of suitable cane land			1,753	2,295	4,048
Lost tonnes cane	t/ha 65CPA	t/annum	113,945	149,175	263,120
Growers' lost marginal profit	$672/ha	$/annum	1,177,462	1,541,515	2,718,978
Capitalised marginal profit value	$8,195/ha	$	14,365,373	18,806,920	33,172,293
Undeveloped land value	$2,930/ha	$	5,137,146	6,725,470	11,862,616
"Endangered" and "Of Concern" Area					
Lost Area of suitable cane land			3,252	6,559	9,811
Lost tonnes cane	t/ha 65CPA	t/annum	211,380	426,335	637,715
Growers' lost marginal profit	$672/ha	$/annum	2,184,317	4,405,577	6,589,894
Capitalised marginal profit value	$8,195/ha	$	26,649,283	53,749,276	80,398,558
Undeveloped land value	$2,930/ha	$	9,529,947	19,221,072	28,751,019

If the area were not an addition to an existing cane operation the loss in value of the suitable cane land because it can no longer be cleared for cane would be the loss in market value. There is no demonstrated commercial value, on any significant scale, for land, which cannot be cleared, and it is the assumed to have a zero commercial value. The market value lost to the owner of the land would thus be the unimproved value before the introduction of the VMA. Table 19 shows the total value of the lost suitable cane land if it was valued at the unimproved value of $2,930/ha (Appendix 5). The total value would be $28.75 million with endangered area at $16.89 million and the "of concern" area at $11.86 million.

Land Stewardship Obligation

In most cases within the traditional cane areas the area that cannot be cleared has no alternative direct economic use as in all the case studies. The VMA has the effect of forcing on the grower the acceptance of the costs and risks that are part of land stewardship obligations for this area with no direct economic return and therefore constitute an economic impact on the growers.

The grower's option is if possible outright sale of the land to avoid stewardship obligations (as with Case Study 1 and 2) or accept the obligations as a cost and risk for no potential economic gain to maintain control of land within their existing boundaries as in Case Study 3.

With no direct economic benefit to the landowners there is limited motivation to manage the areas. If management of the endangered areas is not maintained at an acceptable level there could be a loss incurred by neighbouring growers due to fire hazards and weed or pest infestations. This would possibly not be a large overall effect but for an individual may be a significant impact of the VMA.

Employment Lost

Table 20 reflects an estimate of the employment that could be created with the additional area and tonnage. As a broad estimate a harvesting/haulout unit typically employs 3.5 people with the potential for between 50,000 tonnes and 80,000 tonnes cane and the average family farm of 87 ha or approximately 6,000 tonnes takes 1.5 people to operate (typically the grower and his wife). With the use of the marginal concept these have been reduced to 3.5 people per 100,000 tonnes cane and 1.5 people per 20,000 tonnes cane. This would be approximately 22 harvesting jobs and 48 farming jobs.

Table 20
Possible Direct Employment Lost

	Assumptions	Tonnes cane	Units	Mackay Sugar	Plane Creek	Total
"Endangered" Area						
Lost Area of suitable cane land				1,499	4,264	5,763
Lost tonnes cane	65 t/ha CPA		t/annum	97,435	277,160	374,595
Direct Harvest employment	3.5 units /	100000	Lab Units	3	10	13
Direct Farm employment	1.5 units /	20000	Lab Units	7	21	28
"Of Concern" Area						
Lost Area of suitable cane land				1,753	2,295	4,048
Lost tonnes cane	65 t/ha CPA		t/annum	113,945	149,175	263,120
Direct Harvest employment	3.5 units /	100000	Lab Units	4	5	9
Direct Farm employment	1.5 units /	20000	Lab Units	9	11	20
"Endangered" and "Of Concern" Area						
Lost Area of suitable cane land				3,252	6,559	9,811
Lost tonnes cane	65 t/ha CPA		t/annum	211,380	426,335	637,715
Direct Harvest employment	3.5 units /	100000	Lab Units	7	15	22
Direct Farm employment	1.5 units /	20000	Lab Units	16	32	48

Conclusion

The economic effect of the VMA is based on the 9,811 ha of land, which is suitable for growing cane but can no longer be cleared. This leads to a direct loss of turnover to the region of $26.7 million, which represents an increase in the ten-year average turnover of 8%. The regional sugar industry is not in an expansion phase at present and there is suitable cane land available, which can be cleared and developed to cane. Therefore this loss will occur over time with no dramatic impact. However it does represent the opportunity cost over the long term, which the community is forgoing for the benefits of retaining vegetation.

The sugar miller's marginal profit loss on cane from the area, which cannot be cleared, is estimated at $5.1 million per annum. Again this will not be a dramatic impact and will only impact in the long term when all other suitable cane land within the traditional area has been developed.

There is however a dramatic economic impact on individual growers. Each individual circumstance is different and as the case studies reflect the impact can be short term and severe. The approach when looking at individual impacts has been to look at what is required to leave the individual no worse off than he was before the VMA.

Case Study 1 demonstrates the individual whose business is considered to be not viable into the future due to the VMA and would require the full pre VMA market value to be able to buy an equivalent property and be no worse off than before the VMA.

Case Study 2 shows the situation where a property was purchased with longer term plans to develop it to sugar cane but the VMA has reduced this potential substantially. The impact on the grower is the loss of the marginal profit that would be generated by adding this area to existing cane land.
The grower does not want the land stewardship obligations and the sale of the whole property based on the value of the land in his hands appears to be the preferred option.

In Case Study 3 the grower considers that the land has no economic value unless cleared but it is physically located such that the sale of the land to a third party (if possible) is not considered an option. Thus the impact to the grower is the capital value of the lost marginal profit. Added to this would be the cost of the land stewardship obligations.

In all cases the individual does not have the ability to exchange suitable cane land, which cannot be cleared for suitable cane land, which can be cleared. The potential development area is effectively lost to the individual resulting in the loss of the marginal profit and economies of scale. With no demonstrated value to the suitable cane land, which cannot be cleared, the economic impact is the capitalised value of the marginal profit.

The capitalised value for the full 9,811 ha is calculated at $80.4 million or $8,195 per ha. The individual growers for the benefit of the community effectively carry this loss in value. The guideline direct cost of re-establishment of vegetation, according to DNRM is in the region of $7,500 per ha based on $5 per plant at a plant population of up to 1,500 per ha. This again gives an indication of the value of the land with endangered and of concern vegetation to the community.

Appendix 1
Mackay Sugar Industry Production, Turnover and Price Trends

Year	Sugar million t	Cane million t	Turnover $ million	Sugar price $/tonne	Cane Yield t/ha/annum	CCS %
1992	0.87	5.66	264.68	301	54	14.93
1993	0.99	6.88	341.73	345	64	13.88
1994	1.27	8.41	482.56	382	76	14.58
1995	1.14	8.33	423.56	371	75	13.48
1996	1.27	8.96	426.03	335	79	13.87
1997	1.30	9.09	396.09	335	76	14.45
1998	1.16	9.32	412.41	352	77	12.13
1999	1.15	8.40	293.68	255	70	13.54
2000	0.76	5.79	191.53	253	48	12.70
Est 2001	0.90	6.18	301.01	335	51	14.86
Average 92-01	1.08	7.70	353.33	326	67	13.84

Source: CANEGROWERS Mackay

Appendix 2
Case Study 1

Table A2.1 shows the direct costs used for Case Study 1. These are the costs that would be incurred per ha planted and per ha ratooned and per tonne of cane harvested. There would also be additional annual costs due to the development and these are shown as indirect costs. The once off or capital costs for the initial clearing of the land are shown at $3,000 per ha.

Table A2.1
Case Study 1 - Cost Assumptions

DIRECT PLANTING COSTS	$/ha
Seed cane	75
Fertilizer	474
Weedicide/chemicals	180
Contract	325
FORM	180
Sub-total	1234

DIRECT RATOON COSTS	$/ha
Fertilizer	340
Weedicide/chemicals	80
FORM	35
Sub-total	455

DIRECT HARVESTING	$/tonne
Harvesting	7.50
Levies/crop ins.	0.50
Sub-total	8.00

INDIRECT COSTS (Per farm costs)	$/year
Consumables	200
Accounting	1000
Phone b/charges postage etc	600
Depreciation	2500
Labour	7200
Sub-total	11,500

CAPITAL (once off costs)	$/ha
Bush clearing	3000

Table A2.2
Case Study 1 - Sugar Cane Development Partial Budget

Assumptions

Prices	Units	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Average
Sugar price	$	$306.00	$306.00	$306.00	$306.00	$306.00	$306.00	$306.00
Cane price	$		**$27.32**	**$27.32**	**$27.32**	**$27.32**	**$27.32**	**$27.32**

Planed areas and yields		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Average
Total area under cane	ha	-	91	91	91	91	91	-
Harvest area	ha	-	91	91	91	91	91	76
New cleared area	ha	91	-	-	-	-	-	-
Plough out/fallow	ha	-	-	-	-	-	91	15
Plant area	ha	91	-	-	-	-	-	15
Ratoon area	ha	-	91	91	91	91	-	
Cane yield / ha	tonnes	-	105	100	95	85	80	93
Total cane	tonnes	-	9,555	9,100	8,645	7,735	7,280	7,053
Average CCS %	tonnes	0.00%	13.70%	13.70%	13.70%	13.70%	13.70%	13.70%

Marginal Income and Costs ($)

Income		-	261,060	248,628	236,197	211,334	198,903	192,687
Less								
Costs/ha planted	$1,234	112,294	-	-	-	-	-	18,716
Costs/ha ratooned	$455	-	41,405	41,405	41,405	41,405	-	27,603
Costs/tonne cut	$8.00	-	76,440	72,800	69,160	61,880	58,240	56,420
Costs/year		11,500	11,500	11,500	11,500	11,500	11,500	11,500
Marginal profit		-123,794	131,715	122,923	114,132	96,549	129,163	78,448
Costs/ha cleared	$3,000	273,000	-	-	-	-	-	-

Table A2.2 shows the last five year's average sugar price of $306 per tonne which at the estimated Commercial Cane Sugar content (CCS) of 13.7% gives a cane price to the grower of $27.32.

The planned areas and yields are shown with the new cleared area of 91 ha being planted in Year 1 giving a total annual planting cost of $112,294 at $1,234 per ha (from Table A2.1). There would be no ratooning costs or harvesting costs in Year 1. There would be the indirect cost of $11,500 and in Year 1 and the capital or clearing costs of $273,000 at $3,000 per ha.

In Year 2 there would be the full 91 ha under cane and this full area would be harvested and ratooned. The yield assumed for the plant crop is 105 tonnes per ha giving a total of 9,550 tonnes. At the price of $27.32 per tonne this gives an income of $261,060. At the $8.00 per tonne harvesting costs the total is $76,440 for the year and there will be ratooning costs of $41,405 at $455 per ha.

Year 3 to 5 would reflect the same situation but at a declining yield and in Year 6 the fourth ratoon is taken off and the area ploughed out and left fallow for planting in the next year. Thus there would be no ratooning costs in this year. From Year 7 the cycle would repeat itself (except for the clearing costs).

In practice this area will be incorporated into the whole farming enterprise and the average of the complete cycle reflects the expected marginal profitability of the area on an annualised basis. Whether development is spread over a number of years or not the annualised marginal profit is still assumed to be the same. This average is shown in the last column.

Appendix 3 - Case Study 2

As with Case Study 1 the cost assumptions are shown in Table A3.1 for the direct planting, ratooning and harvesting and the additional indirect costs and clearing costs. The costs are essentially very similar except for the indirect costs that reflect that the magnitude of the area leads to additional labour costs and depreciation that indicated the additional equipment required.

Table A3.1
Case Study 2 - Cost Assumptions

DIRECT PLANTING COSTS	$/ha
Seed cane	75
Fertilizer	474
Weedicide/chemicals	180
Contract	325
FORM	180
Sub-total	1234

DIRECT RATOON COSTS	$/ha
Fertilizer	340
Weedicide/chemicals	80
FORM	45
Sub-total	465

DIRECT HARVESTING	$/tonne
Harvesting	7.50
Levies/crop ins.	0.50
Sub-total	8.00

INDIRECT COSTS (Per farm costs)	$/year
Consumables	250
Fuel	1000
Maint m/veh	1000
Depreciation	10000
Accounting	1000
Phone b/charges postage etc	600
Labour	30000
Sub-total	43,850

CAPITAL (once off costs)	$/ha
Bush clearing	3000

Table A3.2 shows the areas cleared, planted and ratooned each year and the assumed yield from this area. These are used in conjunction with the costs in Table A3.1 to shown the marginal income and costs. The average of the complete cycle is shown and represents the annualised marginal profit for this case study.

Table A3.2
Case Study 2 - Sugar Cane Development Partial Budget

Assumptions

Prices	Units	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Average
Sugar price	$	$306.00	$306.00	$306.00	$306.00	$306.00	$306.00	$306.00
Cane price	$		**$27.32**	**$27.32**	**$27.32**	**$27.32**	**$27.32**	**$27.32**

Planed areas and yields		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Average
Total area under cane	ha	-	191	191	191	191	191	-
Harvest area	ha	-	191	191	191	191	191	159
New cleared area	ha	191	-	-	-	-	-	-
Plough out/fallow	ha	-	-	-	-	-	191	32
Plant area	ha	191	-	-	-	-	-	32
Ratoon area	ha	-	191	191	191	191	-	-
Cane yield / ha	tonnes	-	100	95	90	80	75	88
Total cane	tonnes	-	19,100	18,145	17,190	15,280	14,325	14,007
Average CCS %	tonnes	0.00%	13.70%	13.70%	13.70%	13.70%	13.70%	13.70%

Marginal Income and Costs ($)

Income		-	521,846	495,754	469,662	417,477	391,385	382,687
Less								
Costs/ha planted	$1,234	235,694	-	-	-	-	-	39,282
Costs/ha ratooned	$465	-	88,815	88,815	88,815	88,815	-	59,210
Costs/tonne cut	$8.00	-	152,800	145,160	137,520	122,240	114,600	112,053
Costs/year		43,850	43,850	43,850	43,850	43,850	43,850	43,850
Marginal profit		-279,544	236,381	217,929	199,477	162,572	232,935	128,292
Costs/ha cleared	$3,000	573,000	-	-	-	-	-	-

Appendix 4. Case Study 3

The cost assumptions for Case Study 3 are shown in Table A4.1 and as with the other case studies these are applied to the area and yield assumptions in Table A4.2 to calculate the marginal profit. The average marginal profit represents the annualised situation for Case Study 3.

Table A4.1
Case Study 3 - Cost Assumptions

DIRECT PLANTING COSTS	$/ha
Seed cane	75
Fertilizer	474
Weedicide/chemicals	180
Contract	325
FORM	180
Sub-total	1234

DIRECT RATOON COSTS	$/ha
Fertilizer	340
Weedicide/chemicals	80
FORM	35
Sub-total	455

DIRECT HARVESTING	$/tonne
Harvesting	7.50
Levies/crop ins.	0.50
Sub-total	8.00

INDIRECT COSTS (Per farm costs)	$/year
Consumables	200
Accounting/administration	1,000
Phone b/charges postage etc	600
Depreciation	2,500
Labour	5,000
Sub-total	9,300

CAPITAL (once off costs)	$/ha
Bush clearing	3000

Table 4.2
Case Study 3 - Sugar Cane Development Partial Budget

Assumptions

Prices	Units	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Average
Sugar price	$	$306.00	$306.00	$306.00	$306.00	$306.00	$306.00	$306.00
Cane price	$		**$27.32**	**$27.32**	**$27.32**	**$27.32**	**$27.32**	**$27.32**

Planed areas and yields		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Average
Total area under cane	ha	-	78	78	78	78	78	-
Harvest area	ha	-	78	78	78	78	78	65
New cleared area	ha	78	-	-	-	-	-	-
Plough out/fallow	ha	-	-	-	-	-	78	78
Plant area	ha	78	-	-	-	-	-	13
Ratoon area	ha	-	78	78	78	78	-	52
Cane yield / ha	tonnes	-	105	100	95	85	80	93
Total cane	tonnes	-	8,190	7,800	7,410	6,630	6,240	6,045
Average CCS %	tonnes	0.00%	13.70%	13.70%	13.70%	13.70%	13.70%	13.70%

Marginal Income and Costs ($)

Income		-	223,766	213,110	202,455	181,144	170,488	165,160
Less								
Costs/ha planted	$1,234	96,252	-	-	-	-	-	16,042
Costs/ha ratooned	$455	-	35,490	35,490	35,490	35,490	-	23,660
Costs/tonne cut	$8.00	-	65,520	62,400	59,280	53,040	49,920	48,360
Costs/year		9,300	9,300	9,300	9,300	9,300	9,300	9,300
Marginal profit		-105,552	113,456	105,920	98,385	83,314	111,268	67,798
Costs/ha cleared	$3,000	234,000	-	-	-	-	-	-

Appendix 5
Summary of Cane farm Sales 1999 to 2001

	Sale Area (ha)	Area CPA (ha)	Sale Value $/ha Cane land	Improv'ts Value $/ha Cane land	Land Value $/ha Cane land
Mirani	641.3	409.9	10,235	5,481	4,754
Sarina	257.9	203.7	9,919	7,290	2,629
Mackay Kinchant Dress Circle	385.8	341.8	12,843	9,662	3,182
Mackay North of Pioneer River	491.2	357.8	7,176	3,243	774
Overall total	1776.2	1313.1	10,031	6,240	2,930

Source : DNRM 26 recorded sales 1999 to 2001

: Mackay Sugar Areas Maps

Appendix 6
Sugar Cane Suitability Study

The Department of Primary Industries has carried out sugar cane land suitability studies for the Mackay and the Plane Creek areas. These studies are:-

Plane Creek Sugar Cane Land Suitability Study AK Willis & DE Baker Dept of Primary Industries 1988

Mackay Sugar Cane Land Suitability Study GK Hob & PG Shields Dept of Primary Industries 1985

Land is placed into five classes after considering relevant limitations to production. These limitations are:-

Erosion, Flooding, Salinity, Water Holding Capacity, Nutrient Status, Soil Workability, Stone, Topography, Wetness and Soil Depth.

The classes are as follows

Class 1 – Land suitable with no limitations
Class 2 – Land suitable with slight limitations
Class 3 – Land suitable with moderate limitations
Class 4 – Land marginally suitable with severe limitations
Class 5 – Unsuitable land

The Class 4 limitations are mostly economic whereby it takes additional capital to become suitable to grow sugar cane. Thus it is sensitive to the economics of the sugar industry. The present cane land is on the Classes 1 to 4.

Attachment C: Paper from CANEGROWERS Bundaberg

Productivity Commission Inquiry into the Impacts of Native Vegetation and Biodiversity Regulations

INTRODUCTION

Canegrowers in the Bundaberg Mill area are suffering vast economic change caused by drought, poor world prices, competition and legislation. Most family owned farms are struggling.

Both the Hildebrand and CIE reports have raised expansion as being a sensible, desirable and rational method of achieving profitability.

In Bundaberg there are two major constraints on expansion

- cost and availability of irrigation water
- environmental legislation on vegetation management and tree clearing.

The Sugar Industry Act 1999 lists it's principal objective as being to facilitate an internationally competitive, export orientated sugar industry based on sustainable production that benefits those involved in the industry and the wider community.

The concept of 'sustainable development' arose from widespread concern about the current and future social and environmental impacts of economic growth and development. In Australia, governments have adopted the term 'ecologically sustainable development' to address these considerations. In 1992, in releasing the National Strategy for Ecologically Sustainable Development (NSESD), the Council of Australian Governments considered that ESD:

…aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations. (CoAG 1992b, p. 6)

Three core objectives are articulated in the NSESD:

- Enhance individual and community wellbeing and welfare by following a path of economic development that safeguards the welfare of future generations;
- Provide for equity within, and between, generations; and
- Protect biological diversity and maintain essential processes and life-support systems.

Embodied in these core objectives are the three dimensions of ESD :

- Economic
- Environmental
- Social.

While the concept of sustainability is based in science ESD also has implications for the broader concerns of welfare and equity and the terms of reference have recognised this.

The following two examples are symptomatic of how the system has failed to provide for welfare and equity and has caused considerable angst, enormous intangible cost and direct and unnecessary expense.

AR & AL Read

Mr & Mrs Read are cane farmers in the Bundaberg area and are members of CANEGROWERS.

I have attached a copy of Mr Read's expression of dissatisfaction, which he has also sent to QFF.

In his words *" Some of the properties have been in the hands of the Read family for nearly 100 years; having been freeholded in 1915 after some 10 or so years of leasing same. Part of the property has been growing sugar cane for the same length of time, having supplied the Invicta Mill in the early 1900's.*

My father took over from my Grandfather in 1925. My brother and I took over from my father in 1951. My wife and I then purchased my brothers share in 1991. Over all this time we grew sugar cane on a dryland basis and only increased our cleared area only by the area required to meet increased assignment granted for the growing of sugar cane.

In 1966 we purchased another property on lower Waterloo Road containing 399 hectares of which about 15 hectares was cleared and assigned for cane growing. The remainder consisted of 40/45-year-old regrowth (very dense). The property had previously been ring-barked and used as a dairy and cane farm. Today we have about 40 hectares cleared and 36 hectares growing dryland sugar cane.
In total we own 746 hectares of land under Freehold Title, of which 164 hectares are cleared and under crop. The remaining 582 hectares including 110 hectares of good cane growing land are still in their natural state

The Read family is unable to clear this area to expand production in order to increase profitability despite having developed their farming enterprise in an environmentally sustainable manner and intent.

Even more insidious is the refusal by DNR to allow Mr Read to construct a 5-hectare dam to capture water, which would certainly have allowed increased production, or for the production of a summer crop of pumpkins on fallowed cane land.

"….I sought SunWater permission to carry 130 megalitres over at a 50% discount, that is 65 megalitres carried into 2001/02 water year. When this was refused I decided I would put in an on-farm dam which was allowable up to 5 hectares coverage. I had a contractor survey the job and he estimated that he could complete the job in time for me to fill it by the end of the water year, 30 June 2001."

Before the dam wall was started Mr Read contacted DNR&M. He was ordered to immediately stop commencement of the operation. This resulted in the Read's having to pay for and lose 130 megalitres of water. In addition to the direct costs, Mr Read estimates that this deprived his family enterprises of a net income of some $70,000.

According to Mr Read they had considered building this dam some years prior but due to the limited catchment area had been advised that it would be uneconomic. Mr Read notes that with the advent of the Avondale Irrigation Scheme in 1995 he had considered that the dam would be viable as a tail water catchment and would provide environmental benefits by capturing run off from 3 different farms.

Mr Read observes *"….When one considers that the proposed dam would catch the run off from three different farms (something we are supposed to do to be good environment protectors) one must wonder what the reasoning is or whether it verges on lunacy or is deliberately done to get rid of Family Farms."*

It certainly is easy enough to see how he came up with this notion.

WA & D Fritz and G & PM Shepherd

Mr and Mrs Fritz and Mr & Mrs Shepherd are cane farmers in the Elliott Heads-Riverview area of Bundaberg and are members of CANEGROWERS.

I have attached copies of relevant reports and their statement of events.

The Fritz's and Shepherd's share a common boundary and use bore hole pumps to extract water from the underground aquifer. Over a period of time the aquifer in the area has had problems with seawater intrusion and they have been placed under severe water restrictions for the last ten years.

In 1995 D.P.I Water Resources were investigating the feasibility of bringing surface water to the area and identified an area between the Fritz's and Shepherds properties as a potential storage area. Whilst the storage capacity was insufficient for DPI Water Resources purposes, the growers were told that it would be an ideal area for them to build water storage for their own use and were advised that they should do something for themselves.

They decided to wait and see what the proposed surface water package could do for them and in early 2001 they were told that the proposed rescue package was no longer a D.P.I project.

In their words
"….we were becoming desperate to get some water to help us grow a decent crop of sugarcane. We decided to go ahead and construct a wall across a gully which is situated between our properties on Freehold land. We contacted a Contractor for suggestions. The Contractor suggested the top-over weir type of construction as it could act as a roadway between our properties, and could also act as a chemical and fertilizer trap. The Contractor advised us to go to D.P.I Water to see what permits were needed for the project. We were also told to check the E.P.A land-clearing map to see if any permits were necessary to clear the area for construction of the wall. We contacted D.P.I Water and we were told that no permit was necessary as the structure was not eight meters high and there was no running water. The land clearing map showed the area was in white, we were told that no permit was necessary. We went ahead and constructed the wall to D.P.I specifications in the area D.P.I Water resources identified and suggested.

Approximately a week after the wall was built, we were contacted by D.P.I Fisheries and informed that they were acting on a complaint from a Riverview resident about the construction and we were told by the Inspectors that we had interfered with a fish habitat and destroyed marine plants in a tidal area and that we would have to restore the area back to where the fresh water and tidal water can meet and let the fish travel upstream and downstream. "

On the 8th of May 2001 the Department of Primary Industries issued a Restoration Notice

Mr & Mrs Shepherd and Mr and Mrs Fritz issued a Notice of Appeal against the Restoration Notice and after a series of postponements an appeal hearing in the Fisheries Tribunal was set down for 18th September 2002. The Fisheries Tribunal determined that it was unable to hear the appeal as the successful appeal to set aside the Restoration Notice would be deemed to be de facto approval of a Marine Plants application and recommended that the appellants make a retrospective application for Marine Plant Removal and to undertake Waterway Barrier Works. In the event that the retrospectively considered applications were refused the Tribunal could then hear all aspects simultaneously.

Mr Fritz advised that *"….After we applied for a permit, for which we paid $247.00, we received a letter stating that we would have to pay $2500.00 assessment fee for them to do another assessment of the area. We thought this was an exorbitant amount as they had all the information they needed about the area. The fee of $2500.00 was paid on 23rd January2003. On the 30th January2003 we received a letter dated 28th January refusing the permit."*

DPI refused the application for removal of marine plants and also expressed the opinion that other alternatives were available. In considering the location of the weir, the growers

considered a number of alternatives prior to selecting the present location. The rationale for selecting the design and location was:

(1) The weir was at the narrowest point in the drainage line therefore minimising the disturbance of vegetation and reducing the cost of earthworks.
(2) The weir provides an optimum haul route that connects existing farm roads between the appellant's properties, thereby improving the efficiency of farming operations.
(3) The weir was as far down the catchment as practicable to maximise the storage volume and optimise the capture of potentially contaminated runoff from the catchment.
(4) The weir does not result in a substantial reduction in freshwater flows, yet still provides for outwelling of material to fisheries resources in the estuary during flood events.
(5) The location was as far down the catchment as practicable, but still well landward of any mangroves, ensuring no mangrove habitat was disturbed during construction, and, in fact is located at or above the level of Highest Astronomical Tide.

A detailed assessment of the potential environmental impacts of the weir was undertaken by Max Winders and Associates (Consulting Engineers & Environmental Scientists) and an economic analysis undertaken by Sugar Services, Bundaberg. It was found that the weir maximises the treatment of potentially contaminated runoff from 435ha catchment. The location may therefore be considered the optimal location and results in:

(1) Restoration of Pre-European Sediment and Nutrient Flux.
(2) Retention of agricultural chemicals.
(3) "Out of kind" mitigation through 'outwelling' from the freshwater wetland and the provision of a refuge habitat for fauna inextricably linked to the health and visibility of estuarine ecosystems eg. Wading birds.
(4) Significant improvement in crop yield.

The Fritz's and the Shepherd's were summoned to appear in Magistrates Court on 28th of May 2003, charged with building a wall across a waterway and destroying marine vegetation without a permit.
The Court case was held 28th May 2003 and on the advice of their Barrister and faced with the financial clout of the Queensland Government they decided to cut their losses and plead guilty. The Fritz's and the Shepherds and their contractor were each fined $1,000 on offences under the fisheries act in relation to destruction of Salt Couch

In Mr Fritz's and Mr Shepherd's view "…..*We feel we have been victimised by Fisheries and believe they are wrong but intend breaking us with the things they are doing …we felt that the best option was for us to plead guilty, as the Barrister was informed that Fisheries were to spend any amount of money to save face."*

The saga is ongoing as the notice the Restoration Notice issued on the 8th of May 2001 is still being pursued by the DPI Fisheries and this will be heard by the Fisheries Tribunal. A date has not been set for this hearing as yet.

Further mitigation that the Fritz's and Shepherds have formally offered to the DPI Fisheries include:

(1) Construction of diversion banks, where practicable, to further enhance the capture of runoff from cane lands that are presently downslope of the weir.

(2) The appellants would not oppose resumption of a potential land area of 1.92ha in a portion of Lot 4 RP 93267. The location of the land on Lot 4 RP 9367 includes approximately 0.74 ha of Salt couch and 0.74 ha of mangroves. Access arrangements to the resumed area for fisheries habitat maintenance purposes may also be negotiated.

(3) Stocking with fish to provide a protected off-stream reservoir for replenishment of fish stocks in the estuary during overtopping.

The Sugar Services report also demonstrated that water stored in the dam can significantly increase sugar production from both farms and that its construction has a substantial net positive value.

Mr Fritz and Mr Shepherd advise that *"…ever since this started we have been forced to spend money for tests Fisheries have undertaken and not proved anything. The tide has reached the wall on two days when there were unusually high tides in February 2002. The closest we have seen water to the wall since the wall was constructed would be approximately 60 to 100 meters away.*

The frustration, the contradiction and the sheer lack of commonsense is best described by the growers *"….We have been forced to spend money on legal fees, an Environmental Scientist and Surveyors to get answers for something that should not have reached this level. The latest from Fisheries is that we have stopped the nutrients from running into the sea. What are they going on about, with the Government Reef-Water Protection Plan that is now in place*

DISCUSSION

Much of the current comparative advantage that our main competitors enjoy over our industry is due to a significantly lesser commitment to environmental and social equity by their industry. This is evidenced by the highly uneven distribution of assets, income and power in the Brazilian Sugar Industry. (Winpenny 1993)[9]

[9] Winpenny J.T 1993 Values for the Environment a guide to Economic Appraisal HMSO London pp 212..213

For many years the Australian Sugar Industry has established a demonstrated culture of continuous environmental improvement and performance and is known to have adopted worlds best practice in Ecological sustainable production of raw sugar.

In both of the two cases used as examples growers have taken into account the heightened community interest in the environment and more specifically the regulations impacting upon the management of natural resources and have acted in good faith and with integrity.

In both cases the growers have sought advice from Government agencies and have been directly and indirectly encouraged to seek more efficient methods of cane production by undertaking or attempting to undertake the capital works detailed.

In both cases the growers have not been able to capture efficiencies that they have planned for and targeted due to conflicting regulation and science.

In both cases this conflict in regulation and science has been compounded by an almost rabid zealousness by individuals who are employed by the Government agency tasked with the administration of the regulation or legislation, in ensuring that deep green eco centric interpretations are made. This demonstrated lack of practical life skills is apparent in all Government agencies.

In both cases the actual physical land area where environmental harm is supposed to have been or planned to have been occasioned are inconsequential and restorative trade offs have been offered.

In both cases analysis of the environmental harm is negligible and a benefit cost analysis taking into account all positive as well as negative environmental externalities would most likely indicate that these projects have positive environmental impacts. (Refer attached report from Max Winders & Associates.

The uncertainty and economic loss that these growers are suffering is very common and is a direct result of a tangle of confusing and often conflicting State and Federal legislation and regulations and departmental interpretations which unnecessarily complicates and restricts sustainable farming activities.

Dale Holliss
Manager
CANEGROWERS Bundaberg
24/06/03

Note: 2 documents by growers from Bundaberg will be included in the submission mailed to the Productivity Commission.

Attachment D: Paper from CANEGROWERS Isis

Note: A document from Isis will be included in the submission mailed to the Productivity Commission.

Attachment E: Letter from CANEGROWERS Maryborough

One of our growers (Jeff Atkinson) has run into a problem with the Vegetation Management Act and has asked that I convey his issues onto you.

When the Maryborough Effluent Reuse Scheme was first proposed the Council called for expressions of interest from landholders within a specified distance from the storage dam.

Obviously Council had to ensure that there was a large enough area suitable for irrigation to ensure the economic viability of the reuse project.

Some of the land included was uncleared land adjacent to the storage dam that is suitable for cane growing.

Jeff's plan was to lease this land and install two centre pivot irrigators.

Unfortunately a tree clearing permit was not applied for before Mr Robinson announced the total ban on clearing.

Jeff has engaged consultants to act for him on this matter and they have subsequently made a submission to the DNRM.

Should this submission be unsuccessful it will limit the area available for effluent reuse and subsequently result in further discharges of effluent into the Mary River.

Would you please include this matter in your submission to the Productivity Commission.

Attachment F: Paper from CANEGROWERS Tully

Please see attached documents