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House of Representatives Standing Committee on
Regional Australia
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**Submission to the Inquiry into the impact of the Murray-Darling Basin Plan on
Regional Australia**

SUMMARY: Any proposal for interbasin water transfer from the Clarence River catchment into the Murray-Darling Basin river systems is environmentally unsustainable, economically unviable and unlikely to reliably yield sufficient fresh water to mitigate water security problems within the Basin. Communities within the Clarence Valley have historically strongly opposed water diversion on environmental, economic, social and cultural grounds.

I am lodging this submission because it has been reliably reported that Senator Nick Xenophon of South Australia and Tony Windsor the Independent Member of Parliament for New England discussed the possibility of including interbasin water transfer within the brief of the Standing Committee on Regional Australia's *Inquiry into the impact of the Murray-Darling Basin Plan on Regional Australia* [Adelaide Now online, *Calls to divert Wivenoe dam water to Murray-Darling Basin*, 21 October 2010 & The Daily Examiner, *Xenophon grabs at Clarence water*, 23 October 2010] and, on the fact that at the date of writing approximately thirty per cent of eighty-seven submissions posted on the Standing Committee's webpage made some mention of water diversion into the Basin as an option to be considered and four submissions specified the Clarence River as a possible water source.

Whilst I have sympathy for the fears expressed by individuals, businesses and communities within the Murray-Darling Basin, I cannot support any call for interbasin water transfer.

My opposition to water diversion from the Clarence River catchment is based on observations, research and data set out below.

PART ONE – Physical aspects, infrastructure and population

The Clarence River rises at Rivertree in New South Wales and flows to the estuary mouth at Yamba-Iluka.

It is saline and tidal for approximately one-third of its length, however its main tributaries above the tidal zone are freshwater creeks and rivers.

The catchment area is some 22,700 square kilometres, with land elevations ranging from 0-25 to 1,200-1,600 m above sea level [NSW Dept. of Environment, Climate Change and Water, *Northern Rivers Regional Biodiversity Management Plan*, April 2010].

*The catchment is bounded in the west from Stanthorpe to Glen Innes by the great Dividing Range (Northern Tablelands); by Baldblair, the Doughboy Ranges and The Dorrigo Plateau in the south; and by the Macpherson Ranges, which form part of the border with Queensland, in the north. The eastern boundaries are defined by coastal ranges from Coffs Harbour to Yamba, where the river enters the ocean and the Richmond Ranges north of Iluka. Generally the catchment is characterised in its western extremities by tableland areas which fall away to the relatively large, flat coastal floodplain [Australian Government, *Natural Water Resources Atlas*, May 2009].*

The Clarence catchment falls within two distinct climatic zones, with the temperate inland zone (roughly equating with 19,080 square kilometres) having higher summer and cooler winter temperatures and generally lower rainfall than the sub-tropical coastal zone. This inland zone covers the upper reaches of many of the Clarence River's freshwater tributaries [Land and Water Australia, Research and Development, 1999 and CSIRO & Bureau of Rural Sciences & Bureau of Meteorology, 2004, 2008].

As much by happy historical accident as by considered design the Clarence River and its tributaries are relatively healthy in comparison with other eastern Australia river systems.

The Clarence River catchment has few impediments on natural river water flow within its boundaries. However, major water infrastructure does exist in the form of the 30,000 megalitre Shannon Creek side dam, the 5,600 megalitre Karangi water storage dam holding water piped from the Orara and Nymboida rivers, the 100 megalitre Rushford Road reservoir, the Nymboida River weir and a few remaining irrigation licenses [Clarence Valley Council, North Coast Water business unit, *Regional Water Supply Strategy*, 2010].

In 2009 the Clarence River catchment supplied fresh water to an estimated 52,054 residents living in the Clarence Valley local government area and, to another 71, 677 residents in the Coffs Harbour local government area which is located outside the catchment and historically is provided with a significant measure of water security by the Clarence Valley [Australian Bureau of Statistics, National Regional Profiles, Clarence Valley LGA and Coffs Harbour LGA, released 22 November 2010].

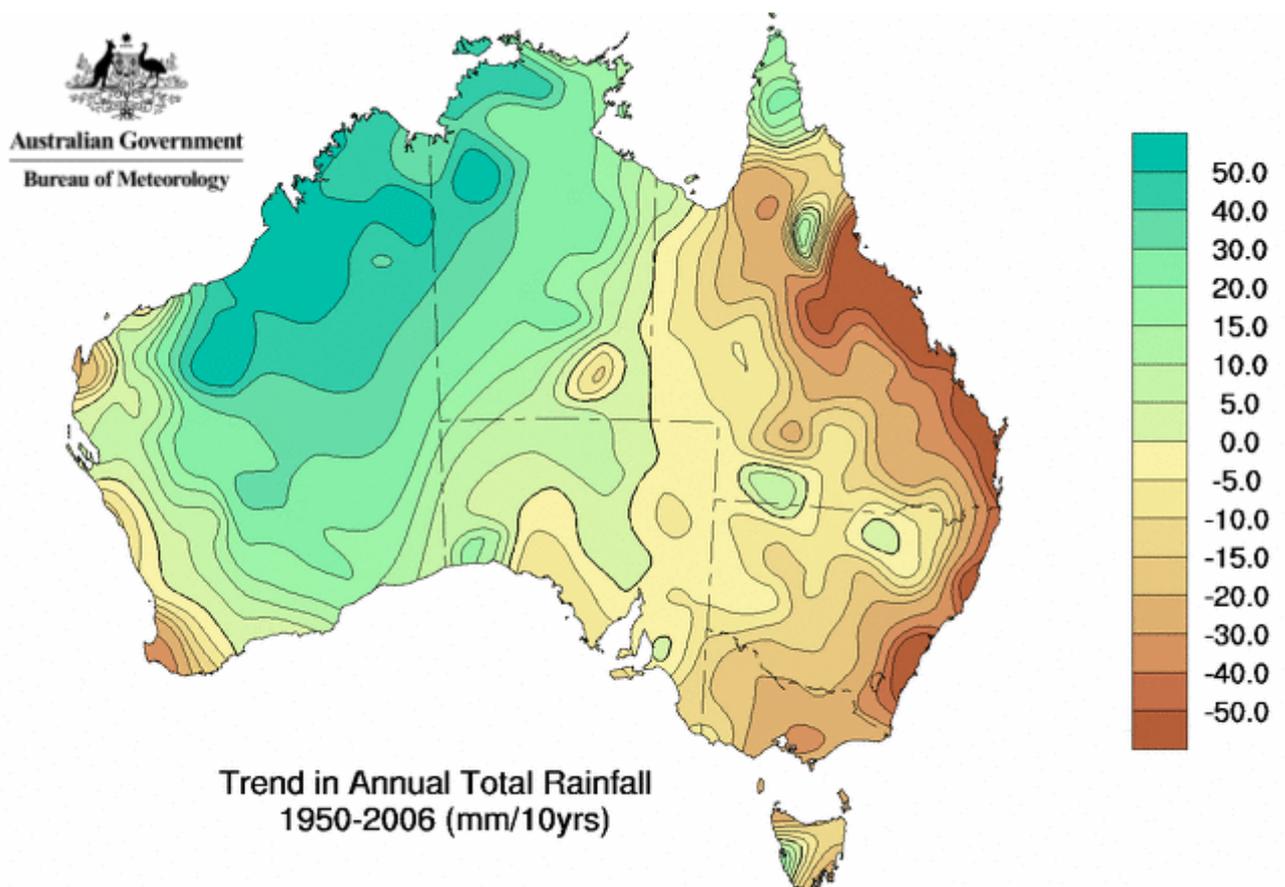
Population growth in the Clarence Valley is expected to stabilise through natural increase and net migration by 2036 and future population growth is expected to be strong in the Coffs Harbour area [Planning NSW, New South Wales *Statistical Local Area Population Projections, 2006-2036*, March 2010].

Clarence Valley local government follows best practice in relation to water extraction and sustainable yield is predicated on an allowable daily volume rather than an annual yield figure [Australian Government, *Natural Water Resources Atlas*, May 2009].

Because rivers within the catchment are highly variable and the call on fresh water resources is constant in a region experiencing sustained population growth, there have been mandatory year round water conservation measures in place since 19 June 2007 [Clarence Valley Council, *Water Restriction Policy for Clarence Valley Local Government Area*, 2007].

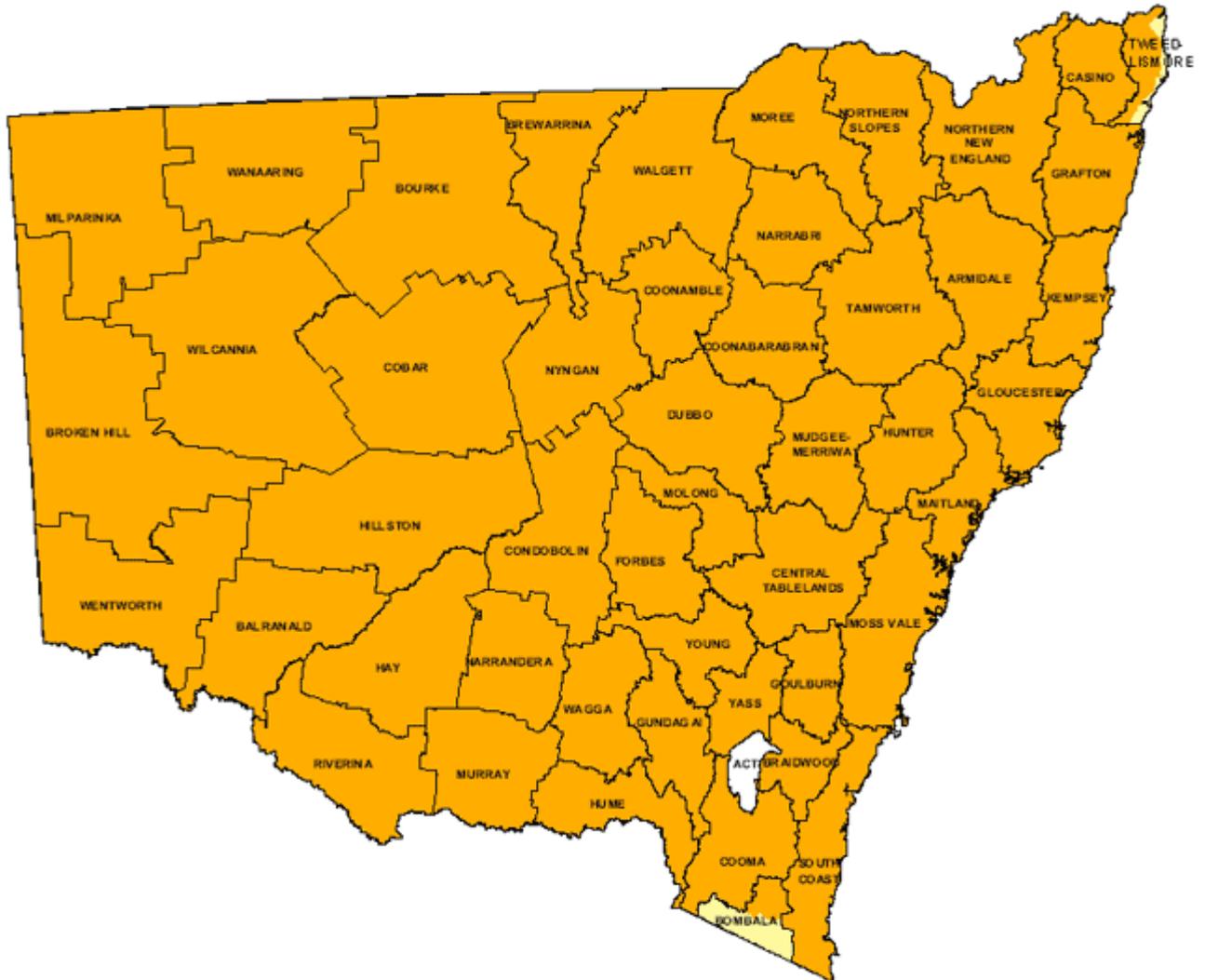
I note that the Lilydale gauge readings (which provide the most accurate flow figures available) indicate that water discharge into the sea is less than two million megalitres per year on average [Clarence Environment Centre, *Inquiry into Additional Water Supplies for South East Queensland - Traveston Crossing Dam*, Submission 214 to Senate RRAT Committee, p.3]

The Clarence River catchment has not been immune from the general drying trend that eastern Australia has experienced in modern times.



Areas within the catchment experienced marginal to severe drought conditions in October-November 2000, June-December 2002, January-November 2003, June-December 2004, January-November 2005 and November 2009 [NSW Dept. of Primary Industry, Industry and Investment, archived drought maps].

It is not unusual to find the Clarence catchment mirroring drought conditions elsewhere in New South Wales and to the same degree, as seen in the drought map for April 2003 below:



PART TWO - Environmental, aesthetic, cultural and economic values

For the Standing Committee's information and consideration, I here outline certain facts concerning the Clarence River catchment's environmental, aesthetic, cultural and economic values [See footnote (1)]:

* The bulk of the Clarence catchment area falls within the 100km wide New South Wales coastal strip, which historically supplies approximately 20 per cent of the state's agricultural product. This coastal strip is likely to increase in importance, due to long-term difficulties experienced elsewhere in Australia with regard to water supply for food production.

* The Clarence Valley economy is heavily underpinned by agriculture, commercial fishing, forestry, beef cattle production and tourism.

* Clarence agricultural commodities have an estimated annual value of \$69.6M and, commercial fishing catches from the Clarence River estuary and North Coast ocean zones have estimated annual values of \$47M and \$27.6M respectively based on data obtained between 2002-04.

* In 2010 Clarence Valley Council estimates that the commercial fishing industry is now worth over \$92 million and generates over 430 jobs, while the recreational fishing industry which forms a large part of the \$280 million tourism industry in the Valley generates much of the economic base of Yamba, Iluka and Maclean.

* Due to tourism Yamba and Iluka regularly double their population during major holiday periods and many retired and family holiday makers are thought to be drawn to the area by fishing and other recreational opportunities on the river.

* Total agricultural value remains fairly consistent over time and the lucrative annual prawn catch in the Clarence River estuary is from one of only four NSW authorised estuary sites.

* Commercial ocean fish and crustacean species both breed and feed in the Clarence River estuary system.

* Commercial fishing fleets are sited at Iluka and Yamba on the Clarence River.

* Bulk product transport for forestry-based industry is partly dependent on coastal shipping loading timber from Clarence River docks.

* Other commercial shipping also depends on berthing in the Clarence River at Yamba, Harwood and Goodwin.

* The Clarence River catchment is the natural habitat of the endangered Eastern Freshwater or Clarence River Cod which has protected status and, is now thought to be extinct elsewhere in Australia [Commonwealth Dept. of Sustainability, Environment, Water, Population and Communities, February 2010].

* Two areas within the Clarence River catchment form part of the 1986 UNESCO World Heritage listing *Gondwana Rainforests of Australia* in the vicinity of Clarence River Gorge and Iluka [Australian Government, Department of Sustainability, Environment, Water, Population and Communities, 2010]

* The Clarence River is the subject of a registered Native Title claim by Yaegl, Bundjalung, Gumbaynggir: - *the application area is primarily the waters of the Clarence River below the bridge at Harwood and estuarine waters to the river mouth including the water within the breakwalls and the Wooloweyah Estuary. It also includes the river banks, beds, shoals, sands, reefs and tributaries.* [National Native Title Tribunal, 2001].

* A significant Aboriginal mythological site, *Dirrangun* reef, is situated in the mouth of the Clarence River [NSW Dept. of Planning, Heritage Branch, File H04/00094-*Dirrangun's Dreaming*, 2002 & Yaegl Elder Della Walker Snr. (deceased), 1999].

* Ulgundahi & Corolama Islands in the lower Clarence River (SHI 01721 Gazetted 2004) have been listed as of State significance. [Macleay Shire Council, *Community Based Heritage Study*,2006].

PART THREE- Proposals to dam and divert water from the Clarence River catchment and community response

Proposals to dam and divert water from the NSW Northern Rivers have been raised before and the Commonwealth Dept. of Water, Heritage and the Arts has stated of these:

Proposals similar to the Bradfield Scheme have also been suggested for the coastal rivers of New South Wales. A review of 22 coastal catchments found that only nine had western boundaries on the Great Dividing Range.

Even though diverting some of these nine rivers was technically possible, the cost was too high to justify construction.²⁹

Later, proposals were raised for inland water diversion from the Clarence River.

However, none of these proposals for the Clarence River were supported by cost-benefit analyses or environmental and social impact assessments.³⁰

The Clarence River basin is unique in that it lies in a transition zone between temperate and tropical flora.

This makes it a region with high biodiversity values.

A 1999 Healthy Rivers Commission report argued that any proposal to divert significant quantities of water out of this river basin would pose significant risk to the health of riverine ecosystems, and the activities and values those systems support.³¹

In 2003, an analysis of 23 options to divert water inland from the Clarence River was undertaken by Hunter Water Australia.

The study estimated that the final delivery cost to irrigators for diverted water would range from \$163 to \$2807 per ML (approximately 10 to 200 times greater than the existing irrigation

[Australian Government,2010,DWHA,Moving water long distances: Grand schemes or pipe dreams?]

It is my understanding that in relation to the 2006-07 Howard Government investigation of the potential for future Northern Rivers water diversion, when initially approached by the National Water Commission, the NSW Dept. of Natural Resources advised that there was no unallocated water available for export to southeast Queensland.

All flow being apportioned to the environment, basic land-holder rights, stock, irrigators, industry or town water supply needs. [The Daily Examiner,24 April 2007, "*Federal Govt ignored advice about lack of Clarence water*",p.5]

It is apparent from the wealth of publicly available New South Wales data, that any damming of or water extraction from the Clarence River or its tributaries carries potential risk of damage to the general environment, riparian zones, river bed stability and river ecosystems, as well as increasing existing river siltation and sand build-up in the sea approach to and bar at the Clarence River mouth.

All of these possible outcomes of additional hydrological stress and decreased inflow to the river tidal zone will impact on the viability of Clarence Valley agriculture, commercial fishing, beef cattle production, forest industry and tourism.

Yet despite the aforementioned circumstances being widely known, since the Murray-Darling Basin Authority released its guidelines to the proposed 2011 Basin Plan there have been public calls to look again at turning east coast rivers inland and mention being made of damming and diverting the Clarence River.

At this point I note that Dr. Blackmore has commented in relation to any Clarence River water diversion: *Not worth a candle....You could not get it there on the back of a flood because of the diversion capacity across....If I am going to run 1,000 megalitres down the bottom of the Darling, half of it is going to evaporate, and 500 megalitres down the bottom of the Darling - you may as well be whistling in the dark, basically.* [Blackmore,Dr. D.J.,Chief Executive,Murray Darling Basin Commission, in Senate Environment, Communications, Information Technology and The Arts References Committee,sub-committee transcript,23 May 2002].

Many in the Clarence Valley view such calls for water diversion as flawed and actively participated in efforts to bring community opposition to the notice of past state and federal governments. [See footnote (2)]

Because the Commonwealth Government has in its possession one relatively recent commissioned report concerning water diversion from the NSW North Coast, I note that there are problems identified with this Snowy Mountains Engineering Corporation desktop study (released in April 2007) titled *Integrated Water Supply Options for North East New South Wales and South East Queensland*:

- * The report does not fully cost any of the water diversion options and, fails to even attempt to cost some of the most expensive elements. It admits to basing its financial analysis on a number of sweeping assumptions.
- * Many of the data compilations used are incomplete with some of the data being unverified and, in some cases the margin for error runs at 20 per cent and higher.
- * There are no in-depth environmental impact assessments. Though the study does briefly mention having to pass through areas containing old growth forest and/or high aesthetic value and wild terrain and, that the broadly preferred options would significantly impact on the environment and some potentially impact on the Clarence River delta.
- * No detailed proposed pipeline route inspections, dam site investigations, geological assessments, theodic surveys, or engineering investigations were undertaken and, topographic assessment relied only on perusal of military maps.
- * Sustainable levels of water extraction are not sufficiently identified and are just presumed to exist.
- * No mathematical models of the Northern Rivers systems were created and no detailed computer modelling was run.
- * It is presumed that the Clarence Valley will have no significant water demand shortfalls into the future.
- * There are no in-depth economic impact assessments.
- * Social impacts and indigenous cultural values are virtually ignored.
- * No real attempt has been made to quantify any yield impacts of proposed additional water entering the Queensland system.

* The Gold Coast mayor, Ron Clarke, stated that the identified Logan and Nerang rivers in south-east Queensland have plenty of water and do not require Clarence or Tweed water to be piped directly into them, that such piped water would cause environmental damage, achieve little and, that these Queensland rivers flow out into the ocean anyway [ABC Online, 16 April 2007, *Gold Coast Mayor pours cold water on pipe plan*].

* A great deal of the information on which this study relies has been Googled from the world-wide web and, in one instance it brazenly seeks to rely on a brochure.

CONCLUSION:

Any recommendation to further investigate water diversion from the Clarence River catchment cannot be supported on economic grounds and, is not supported by empirical evidence and/or established science.

This is not an exhaustive list of concerns relating to calls to investigate interbasin water transfer as a solution to serious water security issues within the Murray-Darling Basin and, in particular water transfer from the Clarence river catchment.

Footnotes:

(1) *The dollar values stated in this section cover various periods from 2000-2004 and 2010 can be verified in "Northern Rivers and North Coast NSW Region: a regional profile" [C'wealth Dept. of Transport and Regional Services, April 2005] and the Clarence Valley Council Mayoral Minute of 16 November 2010.*

(2) An ABC Rural radio program – **Clarence River Stories** broadcast in 2007 revealed the following perspectives on the issue.

"It's a beautiful river and I've seen the problems they've had in the Murray Darling and other dammed rivers overseas. Why create a problem and then have to try and fix it afterwards." **Tourism & canoeing operator**

"I think in a normal ordinary season, the river is flat out sustaining itself. I think when they do their sums they'll find that there's not enough water there." **Beef cattle farmer**

At a weekly elders meeting in the riverside community of Maclean, there were cries of *"leave the water alone, don't take the water."* When the issue came up for discussion among Local Aboriginal elders.

A Clarence Valley Council spokesperson said *"Council will oppose any plans to take water from the Clarence River to pipe into Queensland."*

The Mayor said *"the proposal will damage the health of the river, and residents will fight to protect their waterway."* **Clarence Valley Council**

"When we flood, no-one likes the nuisance value and we all feel sorry for the people who actually have damage, but when it comes through here, you know it's keeping your navigation channels open ... that's critical for the fishing fleet and to keep the tourist yachts visiting Yamba." **Aboriginal community member**

"Floods are a powerful feature in the catchment... that's the time when you think yes you could grab some of that water for the western farmers but if you talk to the fisherman further down the river they really need those floods. Flood events are an important part of flushing the river ecosystem and keeping the waterway healthy." **Grazier and sawmill operator**

"Over the years as a generational fisherman I've seen the river silt up considerably... places where you can't even take boats anymore. So the more water that you do take away in natural flooding is going to lead to more siltation of the river." **Local professional fisherman**

"The sugar industry would get some benefit from holding back 25 per cent of the floodwater.

Fisherman could still rely on 75 per cent of the flow. That wouldn't ruin their industry." **Cane farmer**

"People want to eat seafood. Doctors advise us to eat seafood. Thus it is critical the we understand how important freshwater flows are for rivers and for sustaining healthy fish habitats and populations.

Water that flows freely down rivers and out to sea should not be seen as a wasted resource, it is absolutely vital for the health of the whole coastal ecosystem.” OceanWatch Australia.....

The Clarence Valley Mayor said if there was one issue that united the 51,000 residents living in the valley it was the ‘mighty Clarence River’. *“We’ll be standing shoulder to shoulder to stop the proposals going ahead,”* he said. The Mayor expected there would be job losses in the region’s fishing industry if the river was dammed.

An industry representative for the Clarence River Professional Fishermen’s Association said he feared some or many of the region’s 200 professional fishermen could lose their jobs if the river was dammed. *The Clarence River is the lifeblood of our industry and there could be severe negative impacts from interfering with the natural flows of the river.”* [Case Study: 2. Land and Water Management Issues in the Lower Clarence River Catchment, syd-srv12.ezyreg.com/~oceanwa/wp-content/uploads/2010/02/Case-Study-2-Land-and-Water-Management-Clarence-3.pdf]



[The Daily Examiner newspaper 2007 community campaign banner]