



# "Water Issues"

CARE Team Meeting Friday 21<sup>st</sup> May 2010

Captain Proud Murray Bridge

## John Caldecott Speakers Notes

### Adelaide's Connection with the River Murray (Slide 1)

I would like to thank the organisers of "Community Action for the Rural Environment" CARE for the opportunity to speak at today's meeting. There is quite a community-driven political storm brewing in South Australia. Water and environmental issues is but one of the areas causing considerable community concern and angst. One of the major areas of concern is the River Murray and its interdependency with the environment and South Australians.

### WAC Rally 10<sup>th</sup> October 2009 (Slide 2)

While the Murray has been suffering from a severe drought it is by no means broke. The Murray is in crisis because of the actions of Federal and State politicians have not been the right ones. They have forgotten who they represent and have put "Water Reform" before the interests of the River and the interests of South Australians. "Weaning Adelaide off the Murray" and "Weaning South Australians off the Lower Lakes" makes no sense unless you want to give Australia's water to financial markets to abuse and drive up water prices to create healthy profit margins for private water operators. It also doesn't make sense to build desalination plants in our Gulfs as an excuse to drive up water prices for private water suppliers and to increase GST. It also makes no sense if the result adds to the death sentence that already hangs over the Lower Lakes, Coorong, Murray Mouth and the endangered Adelaide Coastal Waters of Gulf St Vincent.

### WAC Rally 10<sup>th</sup> October 2009 (Slide 3)

100,000 Megalitres or 100 Gigalitres is in reality a drop in the bucket in terms of the Murray-Darling Basin. Adding to the environmental crisis of Adelaide Coastal Waters by building a Desalination Plant is public policy gone mad. The addition of a further 110 GL of toxin brine makes no environmental, economic or social sense to an environment already polluted by up to 200 GL of wastewater and stormwater with vast areas of old-growth seagrass forests destroyed. Clearly the money being spent on the Adelaide Desalination Plant could have been better spent on water and environmental conservation projects not only in metropolitan Adelaide but all around the state. Communities throughout the length and breadth of the state are saying enough is enough. Firstly a brief background on the Water Action Coalition

### A Sustainable Water Future (Slide 4)

WAC is about a sustainable water future without compromising the health of interdependent ecosystems. The environment needs to be made better not worst for future generations. The aim of this talk is to give you insight into the issues around the River Murray to propose some of the steps that need to be taken.

### Mission (Slide 5)

As you will see, we have had protracted droughts before, but never before has the Murray in South Australia been allowed to run down so badly with devastating environmental, social and economic consequences from the border to the Murray Mouth. Replacing Murray water with Desalinated water is not a solution for Gulf St Vincent and Spencer Gulf when it is these Gulfs that also need to be saved. It is this crisis that has significantly contributed to the formation of the [Water Action Coalition](#) by concerned South Australian community groups and individual citizens.

These are extracts from our Mission Statement that form the foundation of our actions and public message. WAC's Charter, "A Call to Action" discussion paper and Brochure can all be downloaded by Googling "[Water Action Coalition](#)".

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The Brochure details the members of the foundation committee, supporting organisations, International Patron Maude Barlow and Honorary Reference Group members. I would like to take the opportunity to thank all those who have helped and supported the activities of the Water Action Coalition thus far.

### What's Been Happening (Slide 6)

The catalyst for the formation of WAC was the Community Water Summit held on 14<sup>th</sup> March 2009. A key part of this event was a community workshop which generated a lot of the ideas that have been carried forward to be implemented by WAC. This list of WAC events is also a tale of progress; the Community Water Summit held at the Alan Scott Auditorium of the University of SA was attended by around 150 people and one politician, David Winderlich. WAC's [Big Water Debate](#) held in co-partnership with The Bob Hawke Prime Ministerial Centre at the same venue, attracted a full-house of around 400 people, many politicians and the event was reported in The Advertiser.

WAC's Rally Proclamation was read out in Parliament by Mark Parnell of the South Australian Greens and Mitch Williams of the Liberal Party of South Australia. Mark went on to move a motion on the 3<sup>rd</sup> December 2009, the last sitting day of the Legislative Council of the current Parliament to move a motion calling for a vote for a Public Inquiry into Water and Environmental Management. Although the Liberal Party did not vote for it, their support allowed the bill to be debated. The more I research the River Murray the more pressing the need for a Public Inquiry with the powers of a Royal Commission becomes; this presentation helps to build that case.

### The Problem - Described (Slide 7)

South Australian Governments since the 50's have been asleep at the wheel while diversions were dramatically increased from around 3,500 GL in 1950 to around 11,600 GL by 2000, a 331% increase. The natural median flow to the sea in pre-colonial times was around 13,900 GL. For decades South Australia has worked within a total diversion cap of 650 to 729 GL of high reliability water to cover town & urban water supplies, industry and irrigation use whilst the eastern states, particularly NSW and Victoria continued to dramatically increase their diversions. South Australia's minimum entitlement of 1850 GL was supposed to be sacrosanct during low flows and not only guarantees water supplies but sustains the environment and needs to be recognised as such by the new MDBA Plan. The last two terms of the Rann Labor Government have failed to stand up for our rights, failed to listen to communities and has put growth at any cost, and development, ahead of all else. No where is this more evident than its lack of real actions on the River Murray, ensuring a sustainable water future for South Australia without compromising interdependent ecosystems. The government and its agencies have gone along with the water reform agenda of COAG to the detriment of SA without a murmur of protest.

The greater good is being sacrificed in the interests of establishing the new water market, the turning of water into a commodity to become another toy for global financial markets and a tax on all Australians – this is the consequence of privatising water. Economists call this growth. The new water market has allowed the unbundling of a water license from land. It can be leased, borrowed, mortgaged and anybody can buy it providing they can pay for it. That includes overseas investors.

### National Water Initiative (Slide 8)

The crisis we are having is due to a conflict of interest between public interest for the greater good vs. financial markets. For too long Australian Governments have been overly focussed on privatisation and achieving what is known as the "[Washington Consensus](#)". COAG is an



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undemocratic institution that has been allowed to turn our State into a business unit of the Commonwealth. Since 1994 Governments have misled Australians about the true intent of water reform. They created a Trojan horse around the environment, promising water reform will be the new way of the future and the environment would be saved! The evidence is scant in South Australia; just ask the River Lakes and Coorong Action Group and their Water Election Team.

Water reform is about and has always been about creating a national water market for financial markets. Water should have been prioritised and conserved during this protracted drought for the common good of Australians. For those who believe in a national solution be very wary, the Constitution needs to be changed before we can trust the Federal Government with our water.

### Stormwater Discharge River Torrens (Slide 9)

If the people of Adelaide were able to visual the devastation caused by the discharge of wastewater and stormwater into Adelaide Coastal Waters they would be horrified. Over 9,000 hectares of old-growth seagrass forests have disappeared and have been replaced by deserts open to erosion. The building of ill-conceived boat launching harbours and marinas, plus the use of inappropriate dredging practices that pays little attention to coastal utility of our beaches only compounds the problem.

Comprehensive stormwater and wastewater recycling is fundamentally required to save Adelaide Coastal Waters of Gulf St Vincent and not to wean Adelaide off the Murray. For the Murray to continue to flow to the Murray Mouth all South Australians need to demand South Australia's fair share. It is the biggest users and the eastern states that have dramatically increased consumption where the changes need to be made under the new basin plan particularly when inflows result in low flows, drought and emergency situations. The basin plan needs to respect South Australia's long term prudence in capping its division to ensure the sustainability of the river system under its minimum entitlement of 1850 GL all the way to Goolwa. The minimum entitlement is critical to South Australia and needs to be reviewed up and not down.

### River Murray Structure Overview (Slide 10)

#### [NWC 2008-09 National Water Market Report;](#)

1,800 GL of entitlements and 2,158 GL of temporary water traded

The dependency of Adelaide's water supply on the River Murray varies like the climate, and ranges from as little as 40 GL in a wet year to 200 GL in a drought. The average is 80 GL which represents just 1% of average diversions from the River Murray.

One of the significant problems with the Murray-Darling Basin Agreement is that the water sharing arrangements have been largely unchanged since 1915 except for the changes made in 1989 and by COAG. South Australia's minimum entitlement of 1850 GL does not apply when either NSW or Victoria is predicted to hold a reserve less than 1250 GL in MDBA storages at the end of May. When this happens, the Special Accounting provisions of the Murray-Darling Basin Agreement apply. During periods of water shortage, River Murray water resources must be shared equally between the NSW, Victoria and South Australia.

During special accounting, South Australia is entitled to one third of the total MDBA resource either as a flow or as minimum reserve, limited to a maximum of its Entitlement Flow. Special accounting excludes inflows from state tributaries which are marked in "purple". South Australia's dilution flow to maintain water quality of 58 GL per month is assured under Special Accounting.

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I would like to suggest that Special Accounting was never designed to cope with what CSIRO have defined as once in a 300 year drought in some areas of the Southern Basin. The Southern Basin is normally the most productive area for water in the whole of the MDB. It was also never designed to cope with the new water market which essentially is intended to allow free trade in water just like global markets.

The South Australian government under the guise of "special drought arrangements" has allowed the basic principles of the "Special Accounting" provisions to go on and on, for far too long, they have let the State down. It is public policy of the NSW government to drive the system hard instead of conserving water and this is clearly evident from diversion records despite the significant reduction of in-flows that started to take place in the late 90's. This has been compounded by the false hope of the new national water market which has allowed the transfer of water from the tributaries to those with the deepest pockets for use by private sector whilst those very same tributaries have been excluded from being shared with South Australia to ensure NSW and Victoria meet their obligation to supply SA's minimum entitlement of 1850 GL. Public interest has been largely excluded. This is why there must be a National State of Emergency in the MDB to address South Australia's shortfall. At the present time there is no incentive for the NSW or Victorian governments to address South Australia's low flows except by market mechanisms which basically mean more money for these states as they have the most water. Water is a common good, a natural resource that should not be owned by anybody (see High Court Australia "ICM Agriculture Pty Ltd v The Commonwealth [2009] HCA 51 9<sup>th</sup> December 2009)

### South Australia's Right to Divert Water – Murray-Darling Basin Agreement (Slide 11)

To put South Australia's entitlement into perspective, earlier this year it was announced that Carrington Farms is being put up for sale. Carrington Farms is privately owned and comprises 16 dryland and irrigated properties in six groupings covering 57, 370 hectares of land stretching for 80 kilometres along the Macintyre River which straddles the Queensland / NSW border. The properties are licensed to store 85 GL of water in 29 dams and hold water licenses for 160 GL, or 22% of South Australia's total allowable diversion for consumptive use. The enterprise is expected to fetch from \$300 to \$400 million. According to Ticky Fullarton in the 2001 book "WaterShed" page 231, water is stored in huge 5-metre dams where water evaporation amounts to 2 metres per year. The infamous Cubbie Station has water licenses for 500 GL of water. "It brings in \$50 million a year (2001), but compare this with the entire South Australian agricultural product grown under a self-imposed cap of 700,000 megs per year, which brings in billions of dollars a year!"

### New Allocations July 2008 & Actual Average Demands for River Murray 2003 to 2008

(Slide 12)

For decades South Australia has used the least amount of water while our irrigators have been the most productive and efficient in their use of water. Of course all this has been forgotten now that water is worth even more as a commodity than what it is to grow crops particularly in the eastern states.

### Time Line of Some Key Decisions / Events (Slide 13)

This is but a snap shot of some of the key events that have taken place to establish the new National Water Market. The point I want to get across is that [Augusto Pinochet used](#) a dictatorship to openly privatise water in Chile in 1980 by unilaterally changing Chile's constitution. In Australia it has been covertly done by changing legislation in small pieces all over the place over a long period of



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time. Never has the word "water privatisation" been used. This is the biggest scandal in Australia's history and questions the integrity of Australian political parties and their politicians over the last two decades.

### The Problem – Failure to Adapt? (Slide 14)

As you will see later the downward trend in inflows has been evident for some time, since the late nineties. The continuance of low flows in 2002 should have rung alarm bells in all Governments of the Murray-Darling Basin. But no they didn't worry as the new water market will take care of these problems as markets can do no wrong or so they thought. That was before the Great Financial Crisis.

### The Problem – Deep Droughts Been Before? (Slide 15)

As you can see there have been deep protracted droughts before. The Federation drought was just as severe in the early 1900s and again in the 1940s. So why the problems with SA's water supply?

**Some Clues:** page 14 "Background to water management in the NSW Murray and Lower Murray-Darling river systems" May 2006 (NSW Government Department of Natural Resources)

"Typically, NSW makes as much water available to licensed water users in any year as is available to the State, within the limits of the Murray-Darling Basin cap. This maximises water use in any one year but means that NSW maintains minimum water reserves for the next year. This is a deliberate policy of NSW that ensures that it is the decision of the individual user whether to use water or not to use the water they are entitled to, trade the water or save some to carry-over into the following season."

Water is allocated on the Goulburn and Murray systems according to how much water is in the storages for each system. As the storages for each system are in different catchments there will be different levels of water in store in any particular year and therefore allocations will vary between the two.

The table below shows the allocations on the two main irrigation systems over the past 15 years in Victoria.

| Irrigation Season | Water allocation as a % of water right |                 |
|-------------------|--|-----------------|
|                   | Murray System                          | Goulburn System |
| 1991/1992         | 200                                    | 200             |
| 1992/1993         | 200                                    | 200             |
| 1993/1994         | 200                                    | 200             |
| 1994/1995         | 200                                    | 200             |
| 1995/1996         | 200                                    | 200             |
| 1996/1997         | 130                                    | 120             |



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|           |     |     |
|-----------|-----|-----|
| 1997/1998 | 200 | 100 |
| 1998/1999 | 200 | 100 |
| 1999/2000 | 130 | 100 |
| 2000/2001 | 200 | 100 |
| 2001/2002 | 200 | 100 |
| 2002/2003 | 129 | 57  |
| 2003/2004 | 100 | 100 |
| 2004/2005 | 100 | 100 |
| 2005/2006 | 144 | 100 |
| 2006/2007 | 95  | 29  |
| 2007/2008 | 43  | 57  |

Note: The table expresses water allocations as a percentage of water right. Due to changes in water policy future allocations will be expressed as allocations against HRWS and allocations against LRWS. "

<http://www.murraydairy.com.au/water-victoria.html>

South Australia's allocation history for Murray system (based on average of monthly allocations for water year; 2003/2004 - 87%, 2004/2005 – 89%, 2005/2006 – 94%, 2006/2007 – 67%, 2007/2008 - 24%, 2008/2009 – 13%, 2009/Jan2010 – 27%)

### The Problem – Reduction of Lock 1 Flows (Slide 16)

There is an excellent report prepared by the Murray-Darling Basin Natural Resource Management Board developed for the Murray-Darling Basin Ministerial Council "[Lake Alexandrina and Albert Ecological Condition Progress Report](#)" dated April 2008 that everybody should read.

### Historical Flow to SA (Slide 17)

This report underscores the need for a National State of Emergency in the MDB to immediately restore South Australia's minimum flow entitlement of 1850 GL and a Royal Commission in South Australia into SA's entitlements and management of the Murray, Lower Lakes, Coorong and Murray Mouth.

### Market Mechanisms for Recovering Water in the Murray-Darling Basin

Productivity Commission Research Report 31 March 2010

<http://www.pc.gov.au/projects/study/water-recovery/>

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See page 31 of the Productivity Commission Report "**Market Mechanisms for Recovering Water in the Murray-Darling Basin**" section "**Variation of environmental water**" and see graph:

"The National Water Commission (NWC 2009b) points out that current water plans do not adequately address water sharing arrangements in very dry conditions. The situation has been exacerbated by recent state government suspensions of water plans, and by borrowing from environmental allocations, so that consumptive needs can be met (NWC 2009b). Furthermore, the volume of water for the environment also declined following the introduction of the Cap, due to an increase in groundwater extraction and floodplain harvesting (MDBC 2000). To the extent that groundwater is connected to surface water, and that floodplain harvesting reduces flow in waterways, growth in the use of these forms of water decreases the amount available for the environment."

This was also pointed out, but not as well in CSIRO's "Sustainability Yields" project.

### Market Mechanisms for Recovering Water in the Murray-Darling Basin

Submissions

<http://www.pc.gov.au/projects/study/water-recovery/submissions>

*Extract from DR81 page 3 referenced in the above section – see graph and DR82 has lots of interesting graphs*

#### *"The Big Dry*

The past decade has witnessed a sharp drying trend in the southern part of the Basin that provides, on average, about 80 per cent of the river flows of the MDB. The Big Dry has been caused by both reduced rainfall and also higher temperatures that have increased evapo-transpiration. As a result, the proportion of agricultural land declared as being under 'exceptional circumstances', a proxy measure of the impact of the drought, has increased from about 5% in 2000 to about 70% in 2009 (Australian Bureau of Statistics, Australian Bureau of Agricultural and Resource Economics and Bureau of Rural Sciences 2009, p. 92). For the period 2002-2007, average annual net inflows in the Murray River totalled 3,986 GL — the lowest recorded for a five year period. This is much less than in any other recorded drought. By comparison, net inflows averaged 5,501 GL over the period 1940-45 and 5,707 GL over the period 1897-1902 during the Federation Drought (see Figure 1). This has translated into much reduced water diversions by irrigated farmers of between 30 and 50 per cent (see Figure 2 for the Murray River) and virtually no flows to the River Murray Mouth (see Figure 3).

It has also resulted in the proportion of inflows diverted for agriculture in the River Murray to increase from less than 50 per cent in the 1980s and 1990s to 76 per cent over the period 2000-2008 (Grafton and Jiang 2010). The impact of the drought on the environment has been greater in terms of reduced flows because of the way regulated water is allocated in many parts of the Basin. Under existing water sharing rules reductions in water diversions are typically much smaller than the actual declines in inflows. 'Rules-based' or 'planned' water for the environment is, typically, treated as a residual after allocations to water diversions (Connell 2007a), and incurs a greater proportional reduction in volumes as inflows decline. Suspension of water sharing plans that have specified volumes of water for the environment has exacerbated this problem (Hamstead et al. 2008)."

### Future Predictions for acid sulfate soils and lake acidity (Slide 18)



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### *Future predictions for acid sulfate soils and lake acidity (page 15)*

"South Australia has a current minimum inflow in 2008-09 of 900 GL. Modeling predicts that, under this scenario, the pH of Lake Alexandrina could drop to 7. At pH 7 freshwater ecosystems will continue to function. But if the current downward trend in water level continues, the acidity of the lake could fall below pH 6.5 in the summer of 2009-2010. If flows into SA increase to 1,850 GL/yr then the pH of Lake Alexandrina will remain steady at 9."

### *Recovery (page 17)*

"There is still hope for recovery if water is made available to manage the Lakes. Significant improvement in the health of the Lakes ecosystems will only begin once the lake levels reach +0.3m AHD. From current levels, this would require in excess of 600 GL of water. This would still not be sufficient to achieve reconnection with the Coorong, which would occur at around +0.65m AHD and require approximately 800 GL. Once Lake levels reach +0.65 m AHD, all fishways are operational. Regular flushing and fishway operation would begin to restore connectivity between the Mouth, Coorong and Lakes enabling fish to migrate and complete their life cycles."

### **Climate Change Impact (Slide 19)**

These are the conclusions from CSIRO's biggest research project and most politically scrutinised project ever and again, these conclusions do not justify the building of Desalination Plants in our Gulfs or the disconnecting of the Lower Lakes from the River Murray. Again grounds for a Royal Commission in South Australia

### **The Problem – Growth in Dams (Slide 20)**

There are 65 major storages and 600,000 private dams in the MDB capable of diverting one and half times the average flow of every river in the basin and 25,560 km of irrigation supply and drainage channels. It is time a full audit of all water storages is conducted that includes all forms of water storage including flood plain harvesting, private dams, irrigation supply, drainage channels and pipe systems.

Dams were built together with weirs, locks and barrages to drought proof the Murray-Darling Basin and protect consumption from the variation in climate. The system goes pear-shape when demand is not effectively managed which the following slides demonstrate.

### **The Problem – Demand Management (Slide 21)**

A significant proportion of all water (mostly Northern Basin and South-Eastern Mt Lofty Ranges) is held by private storages. However, as you will notice the system is still capable of diverting around 5,303 GL (2006/07) - 10 years into a protracted drought. These are in fact record figures given the severity of the drought over the 111 years of records of the MDB.

### **Basin Wide Diversions (Slide 22)**

#### **NWC 2007-08 National Water Market Report;**

921 GL of entitlements and 1,594 GL of temporary water traded.

As you can see when the Lower Lakes began to suffer, basin-wide diversion continued to treat each year one at a time as if the good times would return the following year. The reduction of inflows that began in 2002 was ignored, except in South Australia. A Royal Commission is needed to determine whether this is the result of reckless mismanagement given the emergence of the new water market

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which began in earnest in 2007 and the new direction that needs to be taken so as not to repeat the mistakes of the past.

### Is the Murray Below Lock 1 Ready for Floods? (Slide 23)

This is a record of the considerable rainfall that the Murray-Darling Basin has received in the summer of 2010 and it was still raining in March 2010. Because the river below Lock 1 has been left to dry out for too long a 120 km of government and private levee banks have cracked, heaved and deflated. River banks have cracked and slumped into the river.

Again more grounds of an immediate National State of Emergency focused on relieving South Australia's Murray disaster.

(For graphic images of the destruction see the following presentation given in the United States dated 14<sup>th</sup> January 2010 [Environment Panel - Preserving our heritage](#) by Scott Ashby, Chief Executive, Dept. of Water, Land, and Biodiversity Conservation, Government of South Australia. This presentation was part of the [G'Day USA 2010: Australia-US Water Sustainability & Management Forum](#) (Los Angeles, 14 January 2010))

### 1.1 A dry argument: a future for dairy in the Murray Basin?

Report of the Lower Murray Darling Basin Inquiry November 2009 by The Allen Consulting Group Part 1 (selected quote)

Authors: Roger Beale AO (Chair), Dr John Radcliffe AM, FTSE and Peter Ryan

"The Murray Swamps are facing an economic and ecological disaster if water allocations and river levels typical of the last ten years continue. The reduction in allocations and in particular the reduction of the Environment Land Management Allocation have led to the loss of twenty million dollars of public and private funds invested in irrigation efficiency and sustainability improvement. It has also put at risk hundreds of kilometres of the River Murray levies. Failure to gradually re-wet the Swamps is likely to lead to environmental decay because the land is virtually unusable for dryland farming. The degree of cracking and heaving and the underlying Blanchetown clays make farming it uneconomic without irrigation. Failure to re-wet the Swamps will also increase the risk to the levies. If the levies fail these areas could become another potential source of high levels of evaporation as river levels are restored."

[Report for Dairy Australia by Allen Consulting Group Part 1](#)

### Report to Dairy Australia - Water Availability – Background Paper

Final Report August 2009 by RMCG Consultants for Business, Community and Environment

#### Selected Quote: Lower Lakes

"The dairy industry on the Lower Lakes consists of the irrigated area between Narrung and Meningie and the dryland dairies south and east of Meningie. The district generally experiences hot dry summers and mild, wet winters. At present, 21 dairy farms choose to irrigate if possible, but are currently running as dryland operations. The Lower Lakes farms generally receive a reliable rainfall with an average rainfall of 466mm and a median of 456mm. For 2008, 394mm was received and the outlook for the remainder of 2009 is warmer and slightly drier than average. There is a 40 per cent chance of exceeding the median rainfall of 456mm, and an expectation the spring will be similar to 2008. The rainfall for this area has historically been consistent with the 10 per cent decile of 340mm. Rainfall occurs predominantly during the winter season, with 70 per cent falling from

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April to October. The "seasonal break" can vary from March to June, with the average being around the second week of May. Average annual evaporation ranges from 1500–1800mm.

The district is largely a coastal plain with overlying calcareous coastal dunes. These dunes trend north-west and south-east and are usually between 10-30 metres above sea level. Most sands are slightly acidic in the surface to neutral or slightly alkaline at depth. Because of the permeable nature of the mostly sandy soils, there is very little surface drainage throughout most of the area.

Groundwater in the region is part of the groundwater system of the Murray–Darling Basin. From the high rainfall areas in Western Victoria, groundwater moves slowly in a westerly direction. Discharge from the system occurs to the Lakes, the Coorong or low lying salinised areas. Salinity levels of the watertable reach levels of up to 3000mg/l in the confined aquifers and are generally unsuitable for irrigating pasture or crops."

[Report for Diary Australia by RMCG Consultants](#)

### **Agricultural Water Use 2004-2005 (Slide 24)**

Since 1997 MDB average inflows have been 5,700 GL/year vs. previous average inflows of 11,600 GL/year. MDB diversions for consumptive use during this period of time have averaged 8,893 GL/year. One of the questions that a Royal Commission needs to answer is; have the storages been run down to help facilitate the establishment of the new national water market in the Murray-Darling Basin? The total volume of water diverted is approximately 97,824 GL and South Australia's share of this water was a meagre 6% or an average of 549 GL/year<sup>1</sup> for a total of 6,037 GL.

You need to be aware that most water used for irrigation in the MDB is used for exports and is called virtual water. Water should have been prioritised to ensure South Australia received its minimum entitlement of 1850 GL to ensure sustainability of its environment, economy, communities and urban use. Any diversions need to be prioritised to ensure the needs of domestic urban water supply and food production is met before using water for exports.

### **MDB Water Entitlements Market (Slide 25)**

This is further evidence of the need for a Royal Commission, the tradable water entitlements on issue have all been given away for free by State Governments under the leadership of the Commonwealth Government. All this has been done to turn water into a commodity for free for the benefit of global financial markets.

### **Gomersal Road Tanunda (Slide 26)**

What Government in their right mind would allow the conversion of a viable dry broadacre farm into irrigated vineyards from the River Murray in one of the most protracted droughts in history? Again more grounds for a Royal Commission in South Australia and we need get back to common-sense planning.

### **MDB Water Market Prices (Slide 27)**

Based on average temporary water price of \$370 per Megalitre, 100 GL of water would cost \$37 million vs. permanent high reliability water of \$3,100 per Megalitre at a cost of \$310 million. What Government in their right mind would build a 100 GL Desalination plant at a cost of \$1.8 billion with on-going operating and power costs of around \$200 million per year when there is no issue with water availability from the MDB? Already temporary water in the Southern Basin has fallen to around \$60 per megalitre. An extra 50 GL of water, if required for the cities and towns of South



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Australia would cost SA Water just \$3 million (6 cents per kilolitre). Compare that to what South Australian citizens are being charged for their water by SA Water.

The Australian Financial Review revealed details on 20th January 2010 of the statement of claim that the South Australian Government has lodged with the High Court to remove barriers to water trade between the states. "The SA statement of claim itemises five separate deals, where SA Water had tried to spend about \$3.4 million buying a total of 1,365.6 megalitres of high-security water entitlements from Victorian vendors." Using these prices, 100 GL of permanent high reliability water would cost just \$245 million!

Why the South Australian Government is not simply demanding a fair share of all waters of the Murray-Darling Basin under section 100 of the Constitution is another question for a Royal Commission to answer.

#### State in Water & Environmental Crisis (Slide 28)

Just how much industrialisation can the Upper Spencer Gulf take? It is time substantive Environmental Assessments were carried out of sensitive ecology areas in South Australia that are likely to be targeted for further development. It is time the Government got on the front foot with environmental matters before it is too late for future generations.

#### Recommendations (Slide 29)

On the 14<sup>th</sup> August 2008 I met with John Faulkner at the Hallett Cove Community Cabinet Meeting. At this meeting I handed over a paper "[Market Privatisation of the Murray-Darling](#)" which was subsequently published by [Fair Water Use \(Australia\)](#). This article called for a Royal Commission and State of Emergency in the Murray-Darling Basin. These measures are still required and any political party that doesn't support these measures is not to be trusted for what have they got to hide from a full and open public inquiry? By not holding a Royal Commission, any planning carried out to establish a viable system of management will not be fully informed unless the root causes of the problems of the past are comprehensively identified to prevent them from ever happening again. The Dairy Industry recognised the need to carry out a comprehensive inquiry in 2009 so they could make the right policy decisions in the interests of their industry. Governments of the MDB must recognise that a Royal Commission is inevitable given the mess that is taking place.

Above all water in Australia must remain the common property of Australia as intended by our founding fathers when the Australian Constitution was drafted.

Thank you all for listening.

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#### Some specific recommendations for the MDBA Plan

1. It is critical that SDLs are determined for each category of climate variability experienced in the basin; Floods, Normal, Low Flows, Droughts and Emergencies. Emergencies are when water allocation plans are suspended and all resources of the basin must be made available to address the emergency. Using averages and median flows would be repeating a major mistake of the past.
2. It needs to be recognised that South Australia has capped its diversions for consumptive use since the 60's and its share of diversion in the MDB have reduced while diversions by the eastern states increased by 331%. A significant proportion of that diversion is piped. Essentially this should mean that South Australia already has a sustainable system which should be revised up and not down.



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SA's diversion cap of 805 GL as a % of its minimum entitlement of 1850 GL under the Murray-Darling Basin agreement represents just 43.5%. Further flows above 1850 GL are not used for diversions which has been the case for many decades. This illustrates just how conservative South Australia has been while the eastern states drove their share of the basin increasingly harder particularly as the drought worsened during the last decade. The Commonwealth and the eastern states have forgotten that much of their wealth over many decades was a result of South Australia being very conservative over a long period of time and this performance should be rewarded.

3. All water diverted from the original natural conditions must be counted as part of SDLs and include groundwater extraction, flood plain harvesting, water used to fill the 23,000 km of irrigation channels and farm dams. During droughts and emergencies the total share that can be used for consumptive use by irrigation needs to be capped and not allowed to rise to the extent it did as was the case in the last decade when around 75% of river flows was used.

4. Failure to provide SA with as close to its minimum entitlement of 1850 GL as possible is a public policy failure for which the MDBA, and the MDBC before it, must share some of the blame for the social, economic and ecological disaster that exists below Lock 1. Creation of the new National Water Market was made the first priority instead of the River, Lower Lakes, Coorong and Murray Mouth. The basin plan and the Murray-Darling Basin Agreement must protect SA's minimum entitlement by requiring any shortfalls to be made up in subsequent years by NSW, Victoria and Queensland.

5. The creation of the new water market has significant downsides to setting SDLs which is of considerable concern. Basically irrigators now look at their water entitlements from two sets of eyes and both have dollar signs in them. One set of eyes looks at the potential of earning income from traditional irrigation whilst the other sees the value the water is worth on the open market. This is a significant impediment to sensibly setting SDLs on the eve of a Federal Election.

6. MDBA state forecasts of water entitlement must be made public at the same time as the information is released to the states.

7. The MDBA independent review of Drought Water Accounts announced in early January 2009 by the MDBA CEO must also be made public.

### References & Information Sources

**ACCC and its role in the National Water Market**

<http://www.accc.gov.au/content/index.phtml/itemId/809334>



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### **Australia's Carrington Farms offered for tender, price range \$300 Million – \$400 Million**

Scott Banks March 4, 2010

<http://scottbanks.com.au/2010/03/04/australias-carrington-farms-offered-for-tender-price-range-300-million-400-million/>

### **Australian Climate Maps (Bureau of Meteorology)**

<http://www.bom.gov.au/climate/austmaps/>

### **Carrington Farms up for sale**

By Robin McConchie ABC Rural Friday, 05/03/2010

<http://www.abc.net.au/rural/qld/content/2010/03/s2838027.htm>

### **Chile Considers Constitutional Reform of Freshwater Rights**

Circle of Blue WaterNews 28 January 2010

New legislation could extend government control over private freshwater resources.

"Chilean President Michelle Bachelet's proposed constitutional reform that recognizes freshwater access as a national security concern, and declares the resource a public good, cleared its first legislative hurdle earlier this month, according to the [Inter Press Service](#).

<http://www.circleofblue.org/waternews/2010/world/chile-considers-constitutional-reform-of-freshwater-rights/>

### **CSIRO Adelaide Coastal Water Study 2008**

<http://www.csiro.au/solutions/AdelaideCoastalWaters.html>

### **Lower Murray Darling Basin Inquiry**

Dairy Australia 2009

<http://www.dairyaustralia.com.au/Our-Dairy-Industry/Industry%20Studies/Lower-Murray-Darling-Basin-inquiry.aspx>

### **The Murray Mouth:** exploring the implications of closure or restricted flow

MDBC and DWLBC (SA) July 2002

[http://www.dwlbc.sa.gov.au/assets/files/murray\\_mouth\\_exploring\\_implications.pdf](http://www.dwlbc.sa.gov.au/assets/files/murray_mouth_exploring_implications.pdf)

**Fair Water Use (Australia)** (Terms of Reference for a National State of Emergency of the MDB and a National Public Inquiry into the MDB have been published on this website)

<http://www.fairwateruse.com.au/>

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| <p><b>ICM Agriculture Pty Ltd v The Commonwealth [2009] HCA 51 (9)</b><br/>High Court of Australia 9<sup>th</sup> December 2009<br/>Clause 55 "The second point of interest is that the language of the 1896 Act and the 1912 Act does not disturb the common law notion that water, like light and air, is common property not especially amenable to private ownership and best vested in a sovereign state [55]."<br/><a href="http://www.austlii.edu.au/au/cases/cth/HCA/2009/51.html">http://www.austlii.edu.au/au/cases/cth/HCA/2009/51.html</a></p> |
| <p><b>Interim Report - Water management in the Coorong and Lower Lakes</b> 3 October 2008<br/><a href="http://www.aph.gov.au/SEnate/committee/rirat_ctte/lowerlakes_coorong/interim_report/">http://www.aph.gov.au/SEnate/committee/rirat_ctte/lowerlakes_coorong/interim_report/</a></p>  |
| <p><b>Irrigation Act 2009 (SA)</b><br/><a href="http://www.legislation.sa.gov.au/LZ/C/A/IRRIGATION%20ACT%202009.aspx">http://www.legislation.sa.gov.au/LZ/C/A/IRRIGATION%20ACT%202009.aspx</a></p>   |
| <p><b>Lake Alexandrina and Albert Ecological Condition Progress Report</b> April 2008<br/><a href="http://www.abc.net.au/news/opinion/documents/files/20080618murray-darling.pdf">http://www.abc.net.au/news/opinion/documents/files/20080618murray-darling.pdf</a></p>  |
| <p><b>Market Mechanisms for Recovering Water in the Murray-Darling Basin</b><br/>Draft research report December 2009 Productivity Commission<br/><a href="http://www.pc.gov.au/projects/study/water-recovery/draft">http://www.pc.gov.au/projects/study/water-recovery/draft</a></p>   |
| <p><b>MDBC Annual Report 2004–2005 (Chapter 2. River Murray Water)</b><br/><a href="http://www2.mdbc.gov.au/subs/annual_reports/ar0405/2_river_murray_water.htm">http://www2.mdbc.gov.au/subs/annual_reports/ar0405/2_river_murray_water.htm</a></p>   |
| <p><b>Murray Darling Basin Commission Murray Darling Drought Update Issue 15: September 2008.</b><br/>Average and total diversions estimated from Figure 5. Basin-wide diversions for the years 1991-98 to 2007-08.<br/><a href="http://www2.mdbc.gov.au/_data/page/1366/Drought_Update_Issue_15_-_September_2008.pdf">http://www2.mdbc.gov.au/_data/page/1366/Drought_Update_Issue_15_-_September_2008.pdf</a></p>  |
| <p><b>Murray-Darling Basin dry inflow contingency planning</b><br/>Overview report to First Ministers - April 2007<br/><a href="http://www.environment.gov.au/water/publications/mdb/dry-inflow-planning.html">http://www.environment.gov.au/water/publications/mdb/dry-inflow-planning.html</a></p>   |
| <p><b>National Water Commission First Market Report 17th December 2008 (section 4.3)</b><br/><a href="http://www.nwc.gov.au/www/html/956-first-national-water-markets-report---17-dec-08.asp">http://www.nwc.gov.au/www/html/956-first-national-water-markets-report---17-dec-08.asp</a></p>   |
| <p><b>National Water Commission Second Market Report 10th December 2009</b><br/><a href="http://www.nwc.gov.au/www/html/2693-water-markets-report---december-2009.asp?intSiteID=1">http://www.nwc.gov.au/www/html/2693-water-markets-report---december-2009.asp?intSiteID=1</a></p>  |
| <p><b>National Water Initiative Water Trading Study Final Report (June 2006)</b><br/><a href="http://www.environment.gov.au/water/publications/action/nwi-wts-report.html">http://www.environment.gov.au/water/publications/action/nwi-wts-report.html</a></p>   |
| <p><b>NSW Department of Natural Resources (Department longer exists) May 2006</b><br/>Background to water management in the NSW Murray and Lower Murray-Darling river systems<br/><a href="http://www.mpii.org.au/nswgovdocs_files/pdf/background_watermanagement.pdf">http://www.mpii.org.au/nswgovdocs_files/pdf/background_watermanagement.pdf</a></p>  |
| <p><b>Presentation of Results from the Murray Region</b><br/>CSIRO Murray-Darling Basin Sustainable Yields Project<br/><a href="http://www.csiro.au/resources/MurrayPresentation.html">http://www.csiro.au/resources/MurrayPresentation.html</a></p>   |



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| <p><b>Presentation of Results of Water Availability in the MDB</b><br/>CSIRO Murray-Darling Basin Sustainable Yields Project<br/><a href="http://www.csiro.au/resources/MDBSY-final-report-presentation.html">http://www.csiro.au/resources/MDBSY-final-report-presentation.html</a></p>              |
| <p><b>River Murray – River Regulation</b> (SA Government)<br/><a href="http://www.dwlbc.sa.gov.au/murray/drought/river_reg.html#SouthAustraliasRiverMurrayWaterEntitlement">http://www.dwlbc.sa.gov.au/murray/drought/river_reg.html#SouthAustraliasRiverMurrayWaterEntitlement</a></p>               |
| <p><b>River Murray Prescribed Water Course</b> (Water Allocation Plan) SA MDB NRM<br/><a href="http://www.samdbnrm.sa.gov.au/OurPlans/WaterAllocationPlanning.aspx">http://www.samdbnrm.sa.gov.au/OurPlans/WaterAllocationPlanning.aspx</a></p>   |
| <p><b>Senate Inquiry into Goulburn River by John Caldecott 2nd February 2009</b><br/><a href="http://www.aph.gov.au/senate/Committee/eca_ctte/water_amendment_bill_2008/">http://www.aph.gov.au/senate/Committee/eca_ctte/water_amendment_bill_2008/</a></p>  |
| <p><b>Senate Inquiry Lower Lakes Submission by John Caldecott 29th September 2008</b> (Sub 82)<br/><a href="http://www.aph.gov.au/senate/committee/rrat_ctte/lowerlakes_coorong/">http://www.aph.gov.au/senate/committee/rrat_ctte/lowerlakes_coorong/</a></p>  |
| <p><b>TAR-RU The Story of Lake Victoria MDBC 1st January 2003</b><br/>(Published by the former Murray Darling Basin Commission)<br/><a href="http://trove.nla.gov.au/work/25376403?selectedversion=NBD43263902">http://trove.nla.gov.au/work/25376403?selectedversion=NBD43263902</a></p>             |
| <p><b>The Living Murray</b><br/>Foundation Report on the significant ecological assets targeted in the First Step Decision (Chap 7)<br/><a href="http://www2.mdbc.gov.au/subs/dynamic_reports/foundation_report/7.html">http://www2.mdbc.gov.au/subs/dynamic_reports/foundation_report/7.html</a></p> |
| <p><b>Water Action Coalition</b><br/><a href="http://civictrust.net.au/page19.htm">http://civictrust.net.au/page19.htm</a></p>  |
| <p><b>Water for the Future - Water in Australia</b> Water Legislation<br/><a href="http://www.environment.gov.au/water/australia/water-act/index.html">http://www.environment.gov.au/water/australia/water-act/index.html</a></p>   |
| <p><b>Water for the Future Publications (Australian Government)</b><br/><a href="http://www.environment.gov.au/water/publications/index.html#mdb">http://www.environment.gov.au/water/publications/index.html#mdb</a></p>   |
| <p><b>Water Wednesday - 15 October 2008 Professor Wayne Meyers</b><br/><a href="http://www.adelaide.edu.au/environment/wrc/news/2008/event5.html">http://www.adelaide.edu.au/environment/wrc/news/2008/event5.html</a></p>  |
| <p><b>Watershed : deciding our water future - Ticky Fullerton 2001</b><br/><a href="http://catalogue.nla.gov.au/Record/1157387">http://catalogue.nla.gov.au/Record/1157387</a></p>  |