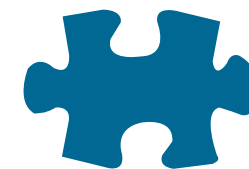


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“ We need to lift our game in the way we manage water. Major environmental restoration is required. High demand for water can be expected yet less water will be available ... ”

Fifty years is a lot of water (recycled or otherwise) under the bridge. Who knows what Australia's climate will be by 2057? ... The advantage of having the state and the nation largely onside is an opportunity to be grasped. At stake is an environmental future that demands, and should receive, an ecumenical approach.

Editorial, the Age, 13 February 2007

Numerous examples can be found to demonstrate that, on some fronts, we are already managing water at best-practice levels in this country. At the same time, however, we do have significant institutional problems that need to be squarely addressed if we are to restore and maintain our freshwater ecosystems, achieve widespread water efficiency, and continue to provide water for our population's needs and to produce exports.

THINKING NATIONALLY ABOUT WATER

We have a long tradition of not thinking nationally about water! The constitutional arrangements for water were established at Federation. Under the *Commonwealth of Australia constitution act (1900)*, section 100, all the power was vested in the States:

'The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.'¹

In the time since, successive state governments approached the management of their water resources with a view to underwriting state development: the growth of cities, agriculture, manufacturing, mining and, more recently, service industries, such as tourism. Water was never seen as a limiting factor. There was more recognition of public health issues than the environmental degradation that went with water extraction and diversion.

Yet, over at least the past four decades, the pressure on our water resources has grown considerably; our rivers and streams have been seriously over-allocated and degraded.

In 2004-05 there were some 76 000 surface-water access entitlements across Australia, representing a combined total body of water of almost 23 000 GL. However, total water consumption in agriculture was just over half the total volume of these surface-water entitlements. In

other words, there is a substantial over-allocation of surface-water entitlements.²

In addition, our groundwater supplies have been over-allocated, salinised and contaminated with nitrates. Vegetation has been cleared from thousands of kilometres of river banks. Tree clearing on a massive scale has resulted in rising water tables and increasing dryland salinity.

Despite a hundred years of major dam construction, water supply to all mainland capital cities (except Darwin) is now at troublingly low levels. From the early 1980s the CSIRO predictions of greenhouse impacts on our climate have gone unheeded.

The Commonwealth taxation system has been exploited by water-hungry arrangements such as managed investment schemes covering plantations and, more recently, farm enterprises. There is little formal regulation across Australia requiring large-scale recycling in industry and in our cities. If ever there was a need to think nationally about how to manage our water into the future, that time is clearly now.



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STRATEGIC THINKING FOR THE LONGER TERM

Long-term issues will not be solved by short-term thinking. Unfortunately, regular changes in government do not promote strategic thinking for the longer term. In the course of the five decades in which water availability and use started to become seriously problematic, Australia has been governed by 10 federal governments, formed under new prime ministers, and more than 70 state governments. At the federal level, one in every three elections has seen a change of the party in power.

Over the last two decades at least, Australian governments have been urged to consider the mounting evidence that Australia's climate will be adversely affected by global warming. Since 1991 we have had federal governments unwilling to acknowledge this evidence. Local and international reports were dismissed, inquiry processes were stalled and international agreements, such as the Kyoto Protocol, were actively avoided.

Australia has not been willing to accept the need to change its internal policy settings so as to reach agreed emissions targets. The standard response, illustrated by the prime minister as recently as March 2007, is that measures which threaten domestic jobs or our international trading position will not be countenanced.³ There seems to be little, if any, recognition that the position in 20 years' time – without change and adjustment now – may result in huge job losses and adverse economic

impacts. Meanwhile, other OECD countries are positioning themselves for the future by developing new, low-emission technologies that may well leave us stranded with vast reserves of coal largely unwanted by the marketplace.

Yet another example of short-term thinking putting at risk long-term environmental imperatives is what has recently happened to the Snowy River. The Snowy River Hydroelectric Scheme operates under a management arrangement involving the Federal Government and the state governments of NSW and Victoria.

In 2002 the parties agreed to restore an environmental flow of at least 28% to the Snowy River.⁴ This was the lowest estimate deemed acceptable by an independent scientific panel appointed to assess the river's failing health. Four years later, in 2006, the NSW Government (being the major shareholder) proposed that the Snowy River Hydroelectric Scheme be sold. Victoria and the Commonwealth felt they had no option but to go along with the proposed sale. However, intense public protest and political pressure led to the plan being shelved. (Incidentally, the NSW Government's motivation for the sale was to use the proceeds to retire debt before the anticipated state election in 2007.)

BIPARTISANSHIP ON MAJOR ISSUES SUCH AS WATER

On big issues, such as water, a culture of bickering and adversarial partisan politics is seen by the electorate as both disappointing and unproductive.

In January 2007, the prime minister released *A national plan for water security*.⁵ The states along the Murray–Darling system were asked to respond to this \$10 billion proposal and, specifically, to refer their powers to the Commonwealth.

One of the first requirements of effective collaboration is appropriate consultation between the major parties. This did not occur. Instead, following the announcement, the various heads of government traded cheap shots, almost daily, for weeks. The states aired suspicions about a constitutional takeover by stealth. The South Australian premier's insistence on an independent national authority was derided by the Commonwealth. The Victorian Government refused to refer powers as requested. The NSW premier agreed to the referral of powers almost immediately – no doubt in line with his expectations that NSW would receive most of the available money. Federally, National Party ministers in the coalition government expressed opposition to a key provision in the plan: the proposed Commonwealth purchase of water entitlements.

TIMELY, STRATEGIC & INTEGRATED PLANNING

When the clock is ticking, as it is now with respect to the state of our environment and water supplies, we can ill afford inertia and poor planning by governments and their agencies.

In an example of poor planning and inertia, Sydney Water Board officials were told over 25 years ago that the city would run out of water by 2000 unless urgent action was taken. In 1979 the Snowy Mountains Engineering Corporation completed a report for the then Water Board, concluding, 'It can be seen that by the year 2000, the demand could be ... greatly in excess of the present (1978) capacity of the system.' Recently, a former middle manager at Sydney Water stated, 'We knew the climate was changing, we knew we had problems with over-consumption, we knew we had to recycle.'⁶ The earlier prediction was almost on the mark. Sydney in 2007 has a disturbingly low level of supply and, throughout this period, no major initiatives were implemented to recycle water.

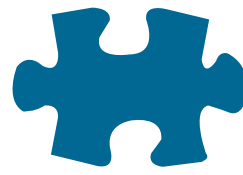
Take another example. In 1977, Gutteridge, Haskin and Davey made recommendations

With such political and point-scoring behaviour, we are not likely to arrive at what is best for the country as a whole, and certainly there will not be any equality across the population's individual needs.

Castlemaine/Campbells Creek Watermark Australia group

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to the Federal Government about a national program for widespread water recycling.⁷ Yet, 30 years later, according to a member of the original consultancy team, nothing has been done.⁸ In November 2003, the prime minister's Science Engineering and Innovation Council delivered its report on water recycling for Australia's cities.⁹ And then, in November 2004, the Australian Academy of Technological Sciences and Engineering produced its report on water recycling. Despite all this, we still have only draft national guidelines for recycled water.¹⁰

VIGILANCE & TRANSPARENCY REGARDING DUE PROCESS

There have been demonstrable failures in our planning processes, such that we can justifiably

ask – albeit when it's almost too late – how could this have been allowed to happen?

A prime example of such a failure is Cubbie Station in southwestern Queensland, which has 14 000 ha under cotton production. The property has constructed a vast system of weirs and levees with a holding capacity of 480 billion L. Whenever rain falls over the Condamine-Balonne River System in the Darling Basin, all of the water is trapped on Cubbie Station. No water flows downstream to other farmers in Queensland and New South Wales. In addition, the country along the Culgoa floodplain no longer experiences periodic flooding. All of this was allowed to come about when the Borbidge National Party government in Queensland

granted water licences to the largest irrigated cotton farm in Australia – without first requiring an environmental impact study!¹¹

A further example of failure, this time on a even grander scale, is the situation with small farm dams on agricultural enterprises and hobby farms across Australia. These are estimated to have a capacity to hold 9% of surface water in an average year. Yet, there is no inspection regime to ensure compliance with permits, or even to check whether the total volume of water held in these dams fits with catchment management plans. Regulation is limited to the siting and construction of dams and does not extend to such issues as to how to minimise evaporation.¹²

NATIONAL INVESTMENT IN WATER EFFICIENCY

Against the backdrop of ever-increasing water use, water scarcity in major parts of Australia and the impacts of predicted climate change, we have seriously under-invested in measures directed towards water efficiency, let alone in measures directed at super efficiency.

Our irrigation systems are aging, mostly uncovered and leaking. Only now, after 10 years of drought and witnessing hundreds of rural communities stretched to the limit, have governments begun the construction of key pipeline systems that will enable movement of water in different parts of rural Australia.

Water-inefficient washing machines are still manufactured and sold, even though the most

efficient of these uses more than twice the volume of water of the least-efficient front-loading machine.¹³ It's also estimated that nearly 3 million Australian households are not fitted with dual-flush toilets, and only 17% of households have rainwater tanks.¹⁴ Timer or squirt taps in gymnasiums and leisure centres are almost non-existent.

There is no formal requirement for industry to undertake water audits and develop water-efficiency plans. Our building codes do not mandate any capture of stormwater, either. We have yet to do anything significant to save water in our cities (beyond a few demonstration projects linked to urban-sensitive water design principles). We continue to operate sewage-treatment plants that discharge huge volumes of treated waste into our oceans.

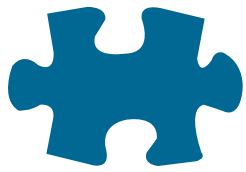
Instead of state governments embarking on long-term investment programs to address such deficiencies, money has been taken, year after year, from water retailers and spent on activities unrelated to water. In the two years from 2005 to 2006, State Governments across Australia took almost \$1 billion in dividends from their publicly owned water bodies.¹⁵

'Water efficiency' is a term in common use in the water sector and government quarters. Narrowly defined, it tends to focus only on ways of reducing direct water consumption, such as cutting down shower times or not hosing driveways. It suggests that we become water efficient when we use less water in everyday activities.

The meeting of scientists, economists, sociologists, lawyers, engineers and political scientists had been sitting in Canberra for two days, debating the future of the Murray-Darling River Basin, when Jack Larkin finally had enough. Lumbering to his feet, the big farmer looked around the room in frustration: 'When can we get some action? We've got the people here who know about the problem and we have been talking for two days. But what sort of things can we farmers do about it?'

More than 20 years have passed since that meeting in 1984, when Larkin's despair was reported in the *Age* under the telling headline, 'Basin full of strife'. Sadly, a generation on, the basic story – too much talk, not enough action – has hardly changed.⁶

Liz Minchin, 'Basin at boiling point', the *Age*, 24 April 2006



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However, real water efficiency is reached only when we significantly reduce the volumes of potable water used in our everyday activities, and when we use all available water, again and again, before we finally discharge it as waste water. At the same time, we have to reduce our use of 'embodied water' in the food we eat and the goods and services that we manufacture and consume.

The scope for greater efficiency is real and compelling. Significant improvements in water efficiency can be made in the irrigation sector which translate into major reductions in water demand. For the Murray-Darling Basin alone, water savings of at least 3000 GL are attainable.¹⁵

Our cities and regional population centres and many more of our non-farm industries can become much more water efficient. By simply retrofitting households with existing water-saving technologies, it's conceivable to reduce per-capita water consumption by around 50%.

By adopting as national goals moves towards efficiency and super efficiency, we will be able to maintain, and even improve, agricultural and industrial output with a lower water input. We can also bring about major behavioural change in our urban communities. Ultimately, these major developments and changes will result in more water being available for the needs of our natural environment.

COMMUNITY ENGAGEMENT ON WATER

Australians are not being encouraged to participate in discussions and debates about our water future. With a resource as critical as water, we might expect that our governments would have sophisticated consultative processes in place; that all Australians would be encouraged to become water literate, and that we would be encouraged to work towards agreed national goals. After all, water is essential to sustain every one of us. It is essential for our health and wellbeing. It is essential to sustain the healthy environments that we depend on, it is essential for the production of the food we eat, the goods and services we consume, and for many of our recreational pursuits.

Governments and the community are beginning to realise that we are entering a period of greater climatic variability, with less rainfall expected and less surface water available. Despite this, present water-reform initiatives fail to achieve basic standards of community engagement.

While the states have mapped out strategic directions for our water future, the depth of community consultation varies greatly. At the same time, political expediency remains an undercurrent, with significant differences between the major parties about implementation. Competing policies – about the use of desalination technology versus new dam construction, or the transport of water from northern Australia – illustrate this. At the Commonwealth level, the government interface with water is essentially through the

Murray-Darling Basin Commission and the National Water Initiative. While the Commission has operated a broadly based community consultative committee, the National Water Initiative consults with only a narrow stakeholder group.¹⁶

In addition, there is regular staging of water conferences and summits within the water industry. These high-cost, sponsored events shift around the country. Full registration fees are usually set in the thousands of dollars and, effectively, the community is excluded.

The most serious failure in community engagement relates to the steady move towards the establishment of a national water market for water used in agriculture by 2014. Very few Australians know about this, understand how it is being achieved or what the implications of it are. Some organisations and individuals, such as government departments, farmers, the finance industry, land and property developers, policy think-tanks, the timber and electricity industries and local governments in rural Australia know about it. But, by and large, the average person in our capital cities does not.

The fact that water is being purchased and permanently traded will come as a surprise to many. Over the past decade a series of pivotal changes have been ushered in by state governments and the Federal Government, particularly regarding the nature of water entitlements and where trading can occur. Yet there was no specific democratic reference for this agenda, even though it poses real challenges to the fundamental idea of water as a common good. Instead, we are assured that

the marketplace will effectively regulate future water problems.

RHETORIC & REALITY

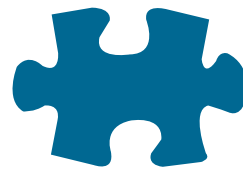
There are often huge gaps between the rhetoric and reality of water reform. The rebuilding of Melbourne's Spencer Street railway station (renamed Southern Cross railway station) was a major infrastructure project in the second term of the Bracks government. In 2003, the premier wrote in the government's Green Paper, *Securing our water future*, of the need to 'build an ethic throughout the community of water conservation. We need to cut our water use wherever we can, recycle and reuse wherever possible ... This will require some hard decisions, strong leadership and community support.'¹⁷

Despite the brand-new railway station having the largest roof area in the central business district, no water-harvesting provisions were incorporated into its design and construction. It has been estimated that in an average rainfall year, approximately 18 million L of water would be available for collection from the station's roof. The station was reopened in early 2006. One year later, the premier announced that an extra \$1.2 million would be spent on retrofitting the building for rainwater harvesting.¹⁸ A key water-efficiency initiative on a showcase project was thus presented as an afterthought.

Gaps between rhetoric and reality are not confined to government. The Business Council of Australia (BCA) released a document in 2006 called *Water under pressure: Australia's man-made water scarcity and how to fix it*. The paper argues that fundamental water reform

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is now one of the most urgent tasks facing Australian governments.¹⁹ The choice of words here is significant. The BCA does not outline any strategy whereby business itself would play a leadership role in embracing change. This is despite the fact that water use by business, particularly in mining and manufacturing, has ramped up over the past two decades.²⁰ Instead, the belief is that by getting the policy settings right, particularly on water pricing, investment by business in water efficiency and recycling will automatically follow.



The new Southern Cross railway station, Melbourne, now being retrofitted for stormwater capture.

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