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Other issues — urban creep; potable water for rural communities; and competing uses of water facilities

6.1 This chapter reviews three particular issues which were raised with the Committee during the Inquiry — the impact of 'urban creep' on good agricultural land; potable water supplies for rural communities; and competing uses of publicly-funded water facilities for tourism and recreation.

The impact of 'urban creep' on agricultural land

6.2 The expression 'urban creep' describes the spread of cities and towns into what was previously good agricultural land. Agricultural land is sub-divided into either hobby farms or into residential blocks, but either way the primary use changes from agricultural production.

6.3 Most of the interior of Australia receives very little rainfall and land use is restricted to low-intensity grazing. The areas which receive the best and consistent rain are along the coast, and that is where most of the productive land is also located.

6.4 It is not surprising that the main population centres started up along the coastal fringe, where comparatively reliable water supplies were available. As these urban concentrations have grown and developed, they have naturally spread inland and up and down the coastline.

6.5 In this process, some of Australia's best agricultural land has been taken over for residential and industrial purposes.

6.6 When farmers sell their land for urban sub-division the rating valuation of other farming properties in the region tends to increase. This often means that the remaining farmers who want to continue to farm in that region cannot afford to do so. They will usually have to purchase a new farm further inland and farm less productive land with less reliable water resources. Their productivity decreases because they have relocated to less productive agricultural areas and other costs, such as transport, increase as they are now further from end-users.

6.7 The Committee is concerned at this trend and questioned several witnesses as to possible solutions. Mr Chris Davis, Chief Executive Officer of the Australian Water Association, commented:

> I believe what has happened with urban encroachment on previously agricultural land is a tragedy. Diversity is lost and we get these very homogeneous, boring cities that just spread out eternally, and the rich fabric of market gardens and close-in farms disappears.[1]

6.8 Mr Davis indicated that this issue had been considered at a conference in 2002 which recommended:

> …there should be a mosaic of land use that is coherently planned so that you get the best use, you protect good agricultural land and you have it close to the city. You would get a more interesting fabric, retain fresh produce close to the city and the farmers can be cost effective.

6.9 In response to a question by the Committee as to the way forward, Mr Davis said:

> The ideal would be a GIS system which has a model that says, 'Given the slope, the location, the climate, the soil—what is the optimum use of this land?' and then planners actually take that into account. It seems to me that quite often development is very bottom-line driven and that the developers carry a lot of clout.

6.10 In evidence to the Committee on the issue of 'urban creep', Councillor Patrick Brassil, AM, Chairperson of the Water Management Committee of the Local Government Association of NSW said that in his experience the rate of financial return will, in the end, determine the use to which land is put. He said:

> Various schemes have been tried over the years, like the green belts around Sydney which apparently slowed development in

1 Transcript of evidence, p. 553.

> some areas for a little while. Towns expand into prime agricultural land only because the prime agricultural land does not give the return that it will as residential land. It is a terrible thing but those are the facts of the matter. So the land will tend to its most valuable use. People say this should not occur, and in planning you try to avoid it. But at the end of the day, if the town is growing and somebody wants to subdivide land for residential use, the Council is going to say that it can be done and by whom.[2]

6.11 Local councils are normally in a situation where they would like to increase their income base, and the reality is that denser development is often attractive because it gives them that possibility.

6.12 The Committee asked Cr Brassil if more rigid or better planning might be an answer. In reply he made the point that farmers, although they might love their calling, prefer to have control over their own land rather than be restricted by government regulation. On the subject of planning he commented:

> I believe that Australia generally should be adopting a plan which is more of a population distribution plan than anything else. There are lots of economic circumstances that come into play to decide where people are going to live, and governments affect them.[3]

6.13 The Committee recognises that urban creep and the resultant loss of prime agricultural land is a difficult issue, and as with most water-related issues, no simple solution is evident.

6.14 The Committee is concerned, however, that unless there is more focus on this issue, the problem will continue to grow. Planners should take more account of the most productive land uses and a scheme should be devised whereby rateable values reflect usage rather than potential. As this is an issue affecting most parts of Australia the Committee believes that the Commonwealth should establish a Commonwealth/State task force to study this issue, review international experience, and to identify possible solutions.

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2 Transcript of evidence, p. 591.

3 Transcript of evidence, p. 591.

Recommendation 27

6.15 **The Committee recommends that the Commonwealth Government, through the Council of Australian Governments, establishes a special Task Force to identify solutions to the issue of loss of prime agricultural land through 'urban creep'.**

Potable water for rural communities

6.16 The Committee received evidence in a number of submissions regarding the provision of potable water supplies for domestic use in rural and regional areas.

6.17 Many small communities would like to provide reticulated water systems for their residents, but cannot afford to build and maintain such systems. At the public hearing on 15 August 2003 Mr Rod Lehmann, President of the Australian Water Association highlighted this as an important issue for Australia. He said:

> We believe a lot of small communities do not have adequate supplies of water…there needs to be some investment in developing systems which can be adequately installed in small communities in a cost effective way.[4]

6.18 The Tasmanian Government made a similar point in its submission. It commented:

> Tasmania's low population base and small, decentralised, and sometimes isolated, communities means that water development projects are often restricted by cost and the standards of water service accepted by the majority of Australians living in big cities is not possible.[5]

4 Transcript of evidence, p. 542.

5 Submission no. 157, p. 2.

6.19 The submission from the South Australian Government made the following comment on this issue:

> The cost of providing water services to rural areas is generally much higher than metropolitan areas due to diseconomies of scale, remoteness and poor quality of local water resources. The lack of trained staff required to operate and maintain water services in remote communities is perceived by some as an issue that may limit the use of relatively complex water systems. As a result, many rural towns suffer from a deficiency in reticulated water and waste water services that impede regional economic development.[6]

6.20 The experience of Esk Shire Council, north-west of Brisbane, is probably fairly typical of many regional areas. Esk shire made a submission[7] which focussed on the difficulty of supplying potable water to small communities. Representatives of the Shire also gave evidence during a public hearing in Boonah on 17 February 2003.

6.21 Esk Shire covers an area about 125 kilometres long by 70 kms wide (about 4,000 square kilometres) north-west of Brisbane. The Shire serves a population of 14,500 spread across the region. There are five townships with populations of around 1,000, two more with populations of around 500, and a number of villages with populations between 50 and 200.

6.22 The Council currently operates five urban water supply schemes, but the submission admitted that the Council 'struggles to operate the current town water supply schemes let alone provide town water to those communities with no town water'.[8]

6.23 To try to cover operating costs the Council charges 1.53 per kilolitre, which it estimates is about 30 percent higher than water charges in the outer suburbs of Brisbane. Even so, the income generated does not cover operating costs and the water fund has to be subsidised from other income.

6 Submission no. 104, p. 16.

7 Submission no. 32 and Supplementary Submission no. 133.

8 Submission no. 133, p. 2.

6.24 The Council would like to provide reticulated water to the smaller communities, but the cost is excessive. Coominya is a town of about 550, only 12 kms from Wivenhoe Dam, but to install a water supply scheme would involve the following costs:

> For example to install a water supply scheme in Coominya the cost would be about $5 million for 330 lots and even with State Government subsidy the cost is still more than $11,000 per lot.[9]

6.25 At the public hearing Mr Ralph Ash, Utilities Engineer of Esk Shire Council, explained:

> The trouble we face is being able to put these little schemes in every town up and down our shire and then continue to operate them. Other Shires near us have at least one very large centre and they are able to cross-subsidise within their Shire to service their small towns. Because we do not have one big centre anywhere in our Shire we do not have the ability to function in that way.[10]

6.26 The lack of reticulated water supplies was seen by the Council as a major deterrent to growth in the area. As Mr Ash said:

> One of the reasons we are looking at trying to get some water supplies to our communities is because, without that, they cannot grow…We are close to Brisbane…and we have the potential... But while we cannot even supply people with town water, why would anyone think about subdividing in Esk when they can do it next door, in Ipswich, which has all the facilities.

6.27 Esk Shire submission recommended that the Commonwealth provide funding for the installation of water supply schemes for small scattered communities, supported by annual grants to assist with operating costs. The Council's experience is that water supply schemes with less than 1,000 connections can not cover their operating costs.

6.28 Households in rural areas not situated within precincts of a town normally rely on rainwater, and groundwater where that is available, for their potable water requirements.

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9 Submission no. 133, p. 2.

10 Transcript of evidence, p. 79.

6.29 The submission from the Tamborine Mountain Progress Association Inc[11] indicated that the 6,000 residents on the 2,000 hectares which make up the Tamborine Mountain region in south-east Queensland have enjoyed the self-sufficiency provided by rainwater tanks topped up, as required, by groundwater. However, the Progress Association expressed concern at the sustainability of the groundwater resource as the demands on the water supply grow due to increased agricultural, industrial and tourism activities.

6.30 There is currently no regulation or monitoring of groundwater usage on Tamborine Mountain, as the resource is not considered 'significant' under State legislation.

6.31 The submission from the Tamborine Mountain Progress Association made a number of practical suggestions, including that the criteria for assessment of ground water supplies as 'significant' by the State take into account the importance to the local community of that resource, and that a scientific assessment of the sustainability of the resource be undertaken by the State authorities.

6.32 The submission suggests that first priority for use of the resource should be for consumption by local residents, followed by local use for agriculture and gardens. Commercial use for sale off Tamborine Mountain should be allowed only if it can be demonstrated that this will not deplete supplies for residents.

6.33 The Progress Association believes that similar issues are faced by regional communities all over Australia where ground water is a significant part of their water supply. It recommends that the Commonwealth develop national guidelines for the sustainable use of water resources by rural communities and suggests that the Tamborine Mountain experience be taken as a case study for the development of such guidelines.[12]

6.34 The submission from the Victorian Division of the Planning Institute of Australia commented on the age and inefficiency of much of the public water infrastructure in small towns. It said:

> But what of the water use in rural townships? How many times have you visited Council public toilets on that long haul trip, to find ancient single flush toilets, consuming vast quantities of water and taps which do not turn off? In some rural Victorian towns,

11 Submission no. 23.

12 Submission no. 23, p. 5.

> outdated sewerage and stormwater systems, some based on technology and infrastructure of two centuries ago, now need to be replaced following the EPA's review of urban discharge licences across the State. Much more needs to be done to reduce water wastage across the country.[13]

6.35 The Committee received evidence from the Cooperative Research Centre (CRC) for Water Quality and Treatment, both in the form of a written submission and the Chief Executive Officer (Professor Donald Bursill) and the CRC's Leader of Regional Water Supplies (Mr Darryl Day) appeared at a public hearing in Adelaide on 28 April 2003.

6.36 The CRC for Water Quality and Treatment was created in 1995 under the Commonwealth's Cooperative Research Centres Program. Its activities focus on potable water, providing research and knowledge management on water quality and treatment issues "from the catchment to the tap."[14]

6.37 Funding for a second period of 7 years commenced on 1 July 2001. Under the new agreement, the Commonwealth will provide $16.7 million and the other 30 partners from industry, government and the research community will contribute $65 million.

6.38 While the CRC's focus had been on water quality issues in major urban centres, it perceived a need for 'research to provide better, more affordable solutions to water supply problems in regional, remote and rural Australia'[15].

6.39 In late 2001 the CRC established a separate Regional and Rural Water Supplies Program with Mr Day, General Manager Water Services, Northern Territories Power and Water Corporation as program leader. In relation to the establishment of this program the submission notes:

> It is recognised by the CRC that many of the water providers in these communities do not have the resources to effectively initiate and undertake research into water quality issues that may impact on the health of the community.

6.40 In commenting on the work of the new program, Mr Day said:

> In Australia the responsibility for water in regional and rural Australia involves Commonwealth, state and local government agencies as well as local communities…the collaboration between the National Health and Medical Research Council, the CRC for

13 Submission no. 176, p. 8.

14 Submission no. 66, p. 3.

15 Submission no. 66, p. 7.

> Water Quality and Treatment and other cross-sectoral interests is absolutely critical in addressing key research issues to provide evidence-based practice and policy for water in regional and rural Australia…include other CRCs, such as the CRC for Aboriginal and Tropical Health and the CRC for Desert Knowledge, which are both due to commence on 1 July this year…these issues in improving public health through good, wholesome, reliable water supplies and sanitation are complex and involve technical, social, administrative and economic considerations.[16]

6.41 The Committee questioned Professor Bursill about the general quality of rainwater captured in rainwater tanks, as this is what many households in small and remote communities must rely on for their potable supplies. He replied:

> I often get asked to address community groups, to do interviews on radio, in general discussing water, and this question of rainwater tanks always comes up: why doesn't the government support rainwater tanks and subsidise them?
>
> My reply is always that I have never seen a sample of rainwater come to our laboratories over the years that has come within cooee of meeting the microbiological guidelines that are in place.
>
> Often there are other problems, depending on where it comes from; it could contain lead and cadmium and other chemicals or pesticides. I have seen samples with a lot of pesticides in them; crop-dusting aircraft have flown across rooftops with all their gear still going and it has rained not long after and it has a cocktail of contamination.
>
> I always say that it is hard for government to recommend something and perhaps even subsidise something that they know full well does not meet health guidelines for drinking water.[17]

6.42 Professor Bursill added that filtration and sterilising technology is available to enhance the quality of water held in rainwater tanks to potable standard. It cost him $700 to do this at his own holiday house. Some submissions recommended that the Commonwealth fund research into water purification in an endeavour to reduce the cost.

16 Transcript of evidence, p. 290.

17 Transcript of evidence, p. 298.

6.43 The submission from the Department of Agriculture, Fisheries and Forestry indicated that the Bureau of Rural Science (BRS) is undertaking a study of water supplies for remote communities. The submission noted:

> The project has assessed water supplies from a number of rural communities across Australia with populations between 50 and 10,000. It is noteworthy that preliminary results from the study indicate that up to about 20% of rural communities use water that exceeds Australian Drinking Water Guidelines (NHMRC / ARMCANZ, 1996) for total dissolved salts.[18]

6.44 In commenting on the preliminary results of the BRS study, Mr Day of the CRC for Water Quality noted:

> We are using many waters throughout regional and rural Australia without a good understanding of what the health risks are.[19]

6.45 The submission from the South Australian Government made the following observation:

> Sufficient quantity of water is often not available to readily meet all reasonable needs of remote Aboriginal and non-Aboriginal communities. Water quality is also an issue. Salinity, for example, can be quite high in bore water supplies, and is a problem for many Aboriginal and non-Aboriginal rural communities (in some locations, for example at Yalata, Penneshaw and Roxby Downs, desalination plants have been installed).[20]

6.46 The South Australian Government submission recommended that the Commonwealth could consider increasing funding for research into cost-effective, low-technology solutions for improving the quality of water supplies, with a focus on drinking water supplies, and into cost-effective wastewater services to rural and remote communities, with an emphasis on safe reuse for appropriate purposes.[21]

6.47 The submission from the Tasmanian Government made the point that the Clean Quality Water Program, a partnership program with the Commonwealth, has improved domestic water services to rural communities in Tasmania in recent years. It went on to say:

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18 Submission no. 160, Attachment A, p. 32.

19 Transcript of evidence, p. 291.

20 Submission no. 104, p. 16.

21 Submission no. 104, p. 17.

> There remain a number of small communities that have not benefited from these programs, and which have great difficulty in funding the necessary technology needed to provide potable water supplies that meet modem accepted health and reliability standards. It is important therefore that the Commonwealth continues its role in the States and Territories to redress the inequity affecting small rural communities. [22]

6.48 However, similar to the Mt Tamborine situation in south east Queensland where the residents are generally satisfied with their current water supplies, the submission from the Tasmanian Government cautioned that the final decision should be made by the local community. It said:

> …some communities such as Central Highlands, are reported to not want town water and are happy with their current water quality. It is important communities have a right to determine policies on water quality for their areas.[23]

6.49 The submission from the Queensland Government commented on the support provided by the Commonwealth for Aboriginal and Torres Strait Islander (ATSI) water supply and sewerage infrastructure in the Torres Strait area. The submission recommends that the Commonwealth consider expanding the ATSI infrastructure program to include all ATSI communities.[24]

6.50 Having considered the evidence, the Committee believes that the funding of water supplies by Shire Councils for small rural and regional communities should most appropriately remain a matter for local government, supported by State government financial assistance.

6.51 However, it is axiomatic that as many Australians as possible should have access to good quality potable water. The Commonwealth could certainly play a role in funding research and development to ensure that 'world's best technology' for small scale water schemes is available and understood in Australia. The same applies to improved filters for rainwater tanks. The CRC for Water Quality and Treatment may be able to undertake this important research task.

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22 Submission no. 157, p. 4.

23 Submission no. 157, p. 4.

24 Submission no. 129, p. 8.

6.52 The Committee commends the initiative of the CRC for Water Quality and Treatment in expanding its work to include issues of water quality in rural and remote areas. It would also appear to be the most appropriate agency to undertake the research and development of small scale water schemes referred to in the previous paragraph.

6.53 When finalised, the findings of the BRS study should be widely disseminated and strategies developed to ensure that water quality for regional communities is within guidelines.

Recommendation 28

6.54 **The Committee recommends that the Commonwealth Government provides funding to investigate the development of, and the funding requirements for, small scale water schemes to assist Councils to provide high quality reticulated potable water to small regional communities.**

Water facilities used for tourism & recreation

6.55 A submission received from Mr Bob Charles MP, Member for La Trobe, raised the question: 'to whom does water in public storages belong?'[25]

6.56 Mr Charles' submission specifically referred to Lake Eildon, north-west of Melbourne, but the principle has wider application.

6.57 Lake Eildon was built by the Victorian Government to provide irrigation water to farmers but over the years has become a popular recreational and tourist area, based on water sports such as fishing and water skiing. There are many holiday homes around the shore-line, and over 700 houseboats on the Lake itself. The region has many leisure-related small businesses such as caravan parks and motels which generate significant employment.

6.58 Water in Lake Eildon had fallen to 19 percent of capacity in August 2002 when the submission was made, and was below 10 percent in March 2003 when the Committee took evidence from Mr Charles in a public hearing. The submission describes the receding lake shore as 'a mess'. Most houseboats and fuel barges are sitting on mud. Lake-side cabins and boat ramps are now a kilometre or more from water.

25 Submission no. 16.

6.59 The Goulburn Murray Water Authority (GMWA), a Rural Water Authority under the Victorian Government, manages the Lake Eildon water resource. The GMWA has stated its belief that in its view the water in Lake Eildon belongs to irrigators, and it regulates the flow of water from the Lake to suit the requirements of the irrigators. On this point the submission responds:

> To say "Well, the dam was built originally for irrigation purposes and nobody ever thought about anybody using it for waterskiing, fishing, or other boating or water leisure activity" is certainly disingenuous. Times change. Where we had farms in my electorate we now have houses. Many of us might wish that we still had farms there, but times move on and we need to address the issues as they arise.[26]

6.60 The GMWA levies fees on houseboat owners ($1,180 pa). Caravan parks and other shore-line facilities also pay levies based on their water frontage. These levies are charged even if the shore-line has receded a long way from the facility and houseboats and boats are no longer actually in water.

6.61 The submission contends that levies should not be charged on tourist facilities, such as houseboats, if their access to water is restricted. The submission noted:

> It is certainly crazy that the Authority can hit the property and houseboat owners for all those fees and yet make no guarantee of any water level in the Lake whatsoever.[27]

6.62 The submission suggests that, in view of the economic benefits to the region (estimated at more than 185 direct jobs, and a total contribution of over $20 million), the GMWA should take leisure activities into account in its management of Lake Eildon.

6.63 To enable the continued use of the Lake for recreational purposes, the submission recommends that water capacity should not be allowed to go below 40 percent of capacity. A public petition was circulated on the subject of a minimum water level in Lake Eildon and generated over 4,000 signatures. The submission states:

> I do not deny the rights of Victorian farmers to water. This is an important resource, and it should be used and used properly. But there are competing demands for this resource…[28]

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26 Submission no. 16, p. 4.

27 Submission no. 16, p. 3.

6.64 In response to questions by the Committee at the public hearing about the attitude of GMWA, Mr Charles said:

> It is a cultural problem, and I suspect this might well be true of other Authorities around Australia. Because the Authority's task has been to maximise return from the water in order to provide irrigation water for the farmers, it has no culture of positively dealing with these other issues. It basically just does not care. [29]

6.65 At the public hearing Mr Charles summed up his stance as follows:

> What I am saying is that because the Authority allowed the leisure industry to build up, allowed leisure operators to use the lake and charged the leisure operators for that privilege, they should have a responsibility to allow them to use part of the resource.[30]

6.66 The submission from the Victorian Government noted that under the State's '*Water for the Future*' policy, water authorities are increasingly required to adopt a triple bottom line accounting approach to improve water management. One of the expected results of that change is that such authorities will no longer be able to 'singularly focus on irrigation supply, but must recognise and value the multiple benefits that water storages provide and the broader impact of operational decisions'.[31]

6.67 The Victorian Government has publicly acknowledged that Lake Eildon is a resource with important uses other than irrigation. On 21 October 2003 the State Government announced that it would contribute an additional $8 million (on top of the original $3 million committed) towards the $30 million required to upgrade the Eildon dam wall and spillway. The balance would be funded by Murray Goulburn Water.

6.68 In announcing the contribution, the joint statement by the Victorian Minister for Water and the Environment and the Victorian Minister for Agriculture noted:

> We are committing these extra funds because we recognise that Lake Eildon is not only a significant piece of irrigation infrastructure, but is also an important site for recreational and tourist use.[32]

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28 Submission no. 16, p. 3.

29 Transcript of evidence, p. 201.

30 Transcript of evidence, p. 201.

31 Submission no. 175, p. 20.

32 Joint media release by the Victorian Minister for Water and the Environment and the Minister for Agriculture, '*Extra Funds for $30 million Lake Eildon Upgrade*', 21 October 2003.

6.69 Media comment on this announcement noted that water levels in Lake Eildon were back to about 40 percent of capacity.

6.70 The issue raised by Mr Charles is difficult to resolve. How does one prioritise equitably between competing demands on publicly-funded water facilities? The importance of tourism in economic terms has to be acknowledged. Dr Don Blackmore of the Murray-Darling Basin Commission made this point in relation to the health of the River Murray. He advised the Committee:

> In economic terms in the Basin it [tourism] is a bigger industry than rice, cotton or dairy as individual industries. Those folks are entitled to have a river that provides some amenity.[33]

6.71 The Committee considers it possible that the problems at Lake Eildon would not be so severe if there was a means by which some of Melbourne's stormwater discharge could be diverted to the Lake.

6.72 The Committee believes that once basic human needs are satisfied, it is up to communities to determine the most appropriate allocation of limited water resources between competing uses. The key requirement is that the overall resource must be managed in a sustainable manner so that it is there for future generations.

33 Transcript of evidence, p. 409.