

## CHAPTER 14: HEALTHY ENVIRONMENT

### Key findings of the Committee:

- 14.1 To address the challenges posed by the advent of climate change, a number of initiatives have been introduced to support research and development of clean coal technology.
- 14.2 In terms of strategies directed at strategic and economic research into climate change impact, in viewing this as a whole of government issue, the establishment of an Office of Climate Change within the Department of Premier and Cabinet with a budget allocation over three years of \$5.5 million will have a strategic role in coordinating policy work and research on, not only the environmental aspects of climate change, but also economic and social aspects.
- 14.3 Key areas where funding will be targeted at researching the impact of climate change include emissions trading, supporting a national study into the economic impacts and examining various vulnerabilities in key sectors such as the effect on infrastructure, biodiversity and the land.
- 14.4 The report of Professor Garnaut on the economic impact of climate change nationally should be tabled in the Victorian Parliament when completed in 2008 and the Department of Premier and Cabinet should ensure that the Parliament is informed of the applicability and implications of the recommendations of that report to Victoria.
- 14.5 Information received by the Committee revealed that at the end of February 2007, the catch of rock lobsters was only 263 tonnes, or about 58 per cent of the quota for western Victoria (the year before the catch was 336 tonnes or about 75 per cent of the quota). Although the Minister for Agriculture explained a number of reasons why there is not a sustainability concern in Victoria in this regard, the Committee believes that the trend in rock lobster catches needs to be closely monitored over time to assess whether any structural changes will need to be made to the industry and the quota system in future.
- 14.6 Scope exists for the Department of Sustainability and Environment to monitor the effectiveness of the government's water saving initiatives in terms of reducing indoor water use in the mid winter months of the year that are unaffected by water restrictions.

### 14.1 Introduction

In considering the budget estimates pertaining to the *Healthy Environment* vision of the *Growing Victoria Together* initiative, the Committee asked a total of 58 questions, which represented 8.4 per cent of all questions asked during the budget estimates hearings.

Answers provided at the estimates hearings were recorded in *Hansard* and the transcripts of evidence were contained in Appendix 1 of the *Report on the 2007-08 Budget Estimates – Part One* and the *Report on the 2006-07 Budget Estimates – Part Two*. The material received to the questions on notice and unasked questions since the Part Two report is presented in full in Appendices 4 and 5

respectively of this report. These responses are categorised according to the applicable *Growing Victoria Together* vision to which they relate.

This chapter sets out a more detailed analysis of several issues pursued by the Committee at the estimates hearings that relate to the *Healthy Environment* vision for protecting the environment for future generations and the efficient use of natural resources.

## 14.2 Research into climate change impact

According to authoritative advice, climate change has accelerated in recent decades, with most of the warming over the past 50 years attributable to the increase in greenhouse gas emissions from human activities.<sup>197</sup>

The *Healthy Environment* vision includes a goal for the efficient use of natural resources. The budget reveals that since 1999 the government has invested in new technologies that minimise greenhouse gas emissions, with the \$100 million Victorian Greenhouse Strategy committed towards the development of innovative energy and greenhouse technologies.<sup>198</sup>

At the estimates hearing with the Minister for Water, Environment and Climate Change, the Committee was informed that in relation to tackling climate change in the context of initiatives included in the budget to support the development of clean coal technology in future:<sup>199</sup>

*For Victoria, we need to have a comprehensive approach to climate change that includes boosting renewable energy, being more energy efficient and ensuring that where we use coal and fossil fuels, that we drive down as far as possible the emissions from that. Victoria has a very substantial resource of brown coal which, apart from the climate change impact, is a relatively clean fuel and provides a source of jobs and prosperity for much of the state. For our government it is critical that we do invest in research and development of clean coal. This budget continues the efforts in that. We have made a commitment to provide \$7 million for a clean coal authority in the Latrobe Valley to develop new clean coal industries in Victoria and investigate carbon capture and storage technology. We have also committed substantially to innovative clean coal projects through the ETIS strategy – the energy, technology and innovation strategy – and funding has been provided to the Cooperative Research Centre for Greenhouse Gas Technologies. Through that, we are doing a demonstration of carbon capture and storage in the Otway Basin. As a government, part of our overall climate change portfolio is investing in research and development for clean coal.*

In response to the Committee inquiring into the level of funding provided in the budget for strategic and economic research into climate change impact, the Minister advised that the government is viewing this as a whole of government issue and an Office of Climate Change has been established within the Department of Premier and Cabinet to facilitate this process. This unit is to have a strategic role in coordinating policy work and research on, not only the environmental aspects of climate change, but also economic and social aspects.<sup>200</sup> The Committee noted that the budget allocated \$5.5 million over three years (\$2.3 million in 2007-08) for the establishment of the Office of Climate Change.<sup>201</sup>

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<sup>197</sup> [www.greenhouse.vic.gov.au](http://www.greenhouse.vic.gov.au), accessed 1 August 2007

<sup>198</sup> Budget Paper No.3, *2007-08 Service Delivery*, p.44

<sup>199</sup> Hon. J Thwaites MP, Minister for Water, Environment and Climate Change, 2007-08 Budget Estimates hearing, transcript of evidence, 15 May 2007, p.22

<sup>200</sup> *ibid.*, p.14

<sup>201</sup> Budget Paper No.3, *2007-08 Service Delivery*, p.319

Some of the specific areas where funding will be targeted include the following:<sup>202</sup>

- supporting Victoria’s work associated with a national emissions trading scheme in terms of understanding the various costs and benefits of different aspects of the scheme such as:
  - what the level of caps should be;
  - the way in which permits for emitting carbon dioxide should be allocated;
  - the time frame for those permits; and
  - what should happen to the funds, if any, which are produced by optioning or allocating those permits;
- providing input into the work being carried out as part of the national study by Professor Ross Garnaut into the economic impacts of climate change (a final report from the *Garnaut Climate Change Review* examining the impacts of climate change on Australian jobs and the economy is to be released by September 2008 – the report will be aimed at recommending mid to long term policies to achieve sustainable prosperity);<sup>203</sup> and
- examining some of the vulnerabilities of key sectors such as:
  - various sectors of society and the economy and how vulnerable they are to climate change;
  - the effect on infrastructure; and
  - the effect on biodiversity on the land.

The Committee considers that it will be important for the Victorian Parliament to be informed of the results of the national research conducted by Professor Garnaut and the applicability and implications of the recommendations to Victoria in terms of future policy development and resource allocation decisions.

The Committee recommends that:

**Recommendation 42:**                                    **The report of Professor Garnaut on the national study into the economic impacts of climate change on Australian jobs and the economy be tabled in the Victorian Parliament when completed in 2008.**

**Recommendation 43:**                                    **To enhance the management of climate change and provide informed input into policy development and resource allocation decisions for Victoria’s future prosperity, the Department of Premier and Cabinet keep the Victorian Parliament informed of the applicability and implications of the recommendations to Victoria from the national research into the economic impact of climate change conducted by Professor Garnaut.**

<sup>202</sup> Hon. J Thwaites MP, Minister for Water, Environment and Climate Change, 2007-08 Budget Estimates hearing, transcript of evidence, 15 May 2007, pp.14–15

<sup>203</sup> Hon. S Bracks MP, Premier, *Australia’s review on economics of climate change begins in Victoria*, media release, 31 May 2007

### 14.3 Monitoring rock lobster catches

The Committee, at the estimates hearing with the Minister for Agriculture, raised the issue of whether in view of the declining crayfish catch and the *pot lift* (that is, the number of times you put a pot down and bring it up with a catch) there is a need for a new quota system to be recognised for Victoria, given that it was in 2001 when some new quotas were introduced.

The Committee understands that at the end of February 2007 the catch was only 263 tonnes, or about 58 per cent of the quota for western Victoria (the year before the catch was 336 tonnes or about 75 per cent of the quota). In comparison, South Australia and Tasmania were not experiencing this decline.

The Minister in responding to this issue made the following comments:<sup>204</sup>

*...we should not get necessarily pot-lift effort confused with the sustainability of the rock lobster fishery. The total allowable commercial catch, for example in the western zone rock lobster for the quota year which commenced on 1 April 2007, has been set at 380 tonnes. This indeed represents a reduction of 15 per cent, or 70 tonnes, from the total allowable catch set for the last four years. As you can see from that small example, we do manage quotas in an effective way to sustainably manage the overall fishery.*

Further comments provided from the executive director, Fisheries Victoria, at the hearing included the following:<sup>205</sup>

*The idea of quota systems is to get us away from the previous situation we had where there was an inability to limit efforts – the fishermen would go out and fish and catch every rock lobster before the opposing fishermen could catch it and that was having a detrimental effect on the stocks.*

*So we brought a quota system in which allows a quota to be set, distributed amongst the fishermen. Part of the adjustment over time is to amend the amount of quota they can take. You will see variability in rock lobster catches around the world, in all the fisheries. It does not mean there is an unsustainable fishery or that it requires drastic changes to the overall process in the short term.*

*A lot of the seasonal variation and annual variation are actually due to environmental effects. There have been a lot of unusual environmental conditions observed over the last three years down in the west of the state. One of those is above-average water temperatures, which has been caused by the stoppage of a welling up of water off the coast of south-western Victoria, which causes cold water coming up from the south to be dispersed along the plateau which greatly affects the habits of the rock lobster itself. What we are finding is rock lobsters are spawning three to four months out of the normal spawning cycle. We are seeing plenty of rock lobsters in the fishery itself but the catchability of the rock lobsters is down.*

*... There are plenty of rock lobsters there because they get to breed several times before they enter the fishery and we have the most conservative catch sizes in Victoria of any state, so there certainly is not a sustainability concern here.*

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<sup>204</sup> Mr J Helper MP, Minister for Agriculture, 2007-08 Budget Estimates hearing, transcript of evidence, 17 May 2007, p.9

<sup>205</sup> Dr P Appleford, Executive Director, Fisheries Victoria, 2007-08 Budget Estimates hearing, transcript of evidence, 17 May 2007, p.10

*The catch per lift is actually an economic viability indicator. So we decrease the quota so they actually over time build the available biomass – that is, the rock lobsters that are available to be caught – up to a level where they catch more per pot lift over time.*

*What we are seeing down in the south-west is a combination of changed fishing practices and some unusual environmental conditions. We need to monitor this over time to see the overall effect on the stocks before we take any drastic actions. The best way to manage it in the short term is simply through the adjustment of the quota over time.*

The Committee believes there is a need for rock lobster catches to be closely monitored by the Department of Primary Industries to assess whether any continuance of the decline would warrant retirement from the industry, with the development of an appropriate compensation scheme, or a new quota system to be introduced in Victoria.

The Committee recommends that:

**Recommendation 44:** **To ensure that the rock lobster catch is managed on a sustainable basis in Victorian waters, the Department of Primary Industries closely monitor commercial catches of rock lobster over time to assess the overall effect of changed fishing practices and changing environmental conditions and whether there is a need for structural changes to be made to the industry and the quota system.**

**Recommendation 45:** **The Minister for Agriculture report to Parliament on the outcome of the Department of Primary Industries’ assessment of the commercial rock lobster industry.**

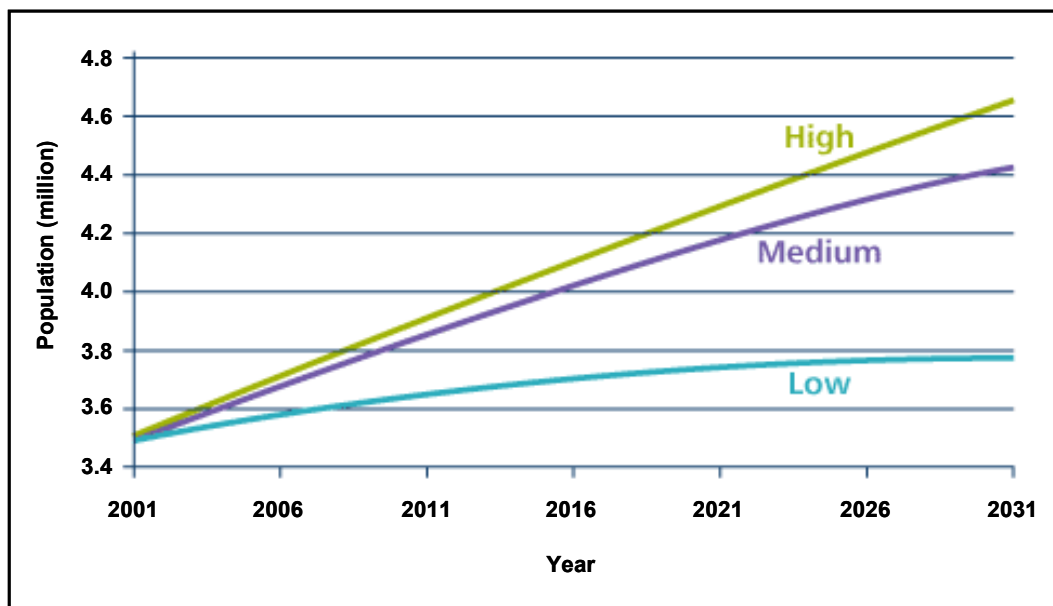
## 14.4 Melbourne’s water use

*Growing Victoria Together* espouses the concept that Victorians will experience a better quality of life if natural resources such as water are used wisely and effectively. With this in mind, the government formulated, among other things, a strategic target for Melbourne’s water usage to be reduced by 15 per cent on a per capita basis from the 1990s average by 2010.<sup>206</sup>

According to the Australian Bureau of Statistics, three scenarios for Melbourne’s population growth to the year 2031 are shown in Figure 14.1. Under the high, medium and low scenarios, Melbourne’s population is projected to grow to 4.6 million, 4.4 million and 3.8 million by 2031.

<sup>206</sup> Victoria Government, *Growing Victoria Together: A vision for Victoria to 2010 and beyond*, p.15

**Figure 14.1: Population growth projections  
Melbourne Statistical Division 2001-31**



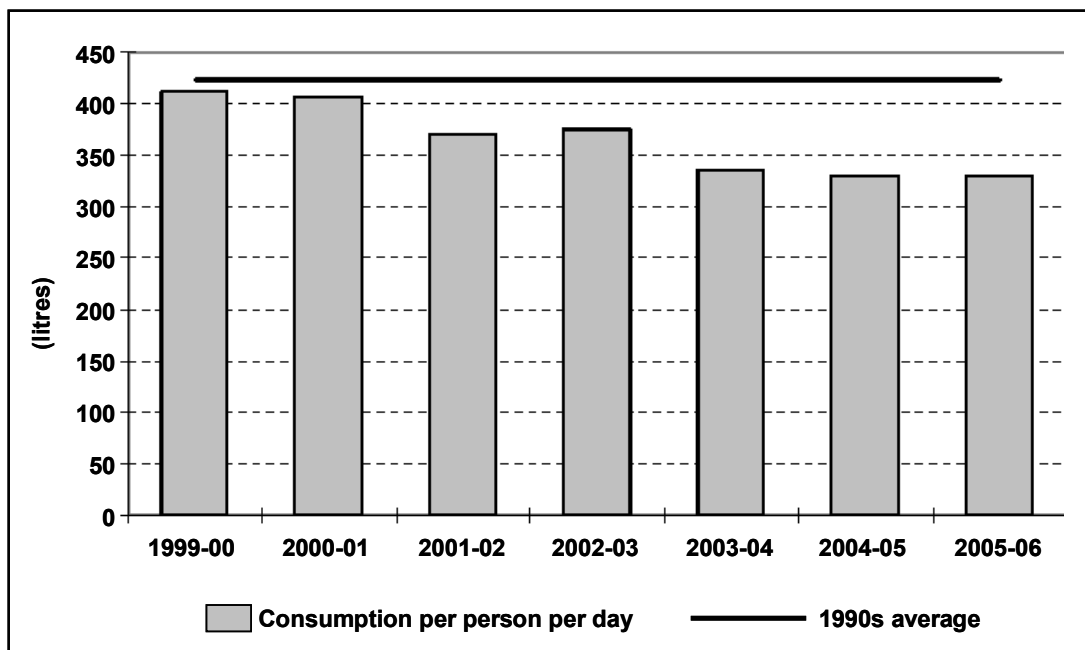
Source: Australian Bureau of Statistics, Series C, R & S Projections, 2000, modified for the region by the Department of Infrastructure

To enable Melbourne’s population to grow without placing serious stresses on the environment, the budget papers reveal that each person must use less water. Compared with the need for a permanent reduction in the average consumption of water from 423 to 360 litres per person per day if there is to be a reduction of 15 per cent in water use, Melbournians consumed an average of 331 litres of water per person per day (a 22 per cent reduction on a per capita basis from the 1990s average) in the year ended June 2006. The government has indicated that the introduction of water savings rules on 1 March 2005 have contributed to this result.<sup>207</sup>

Figure 14.2 illustrates the reduction in Melbourne’s water consumption per capita per day from 1990-2000 to 2005-06.

<sup>207</sup> Budget Paper No.3, 2007-08 Service Delivery, p.381

Figure 14.2: Melbourne's water consumption per capita per day



Source: Budget Paper No.3, 2007-08 Service Delivery, p.381

At the estimates hearing, the Committee raised with the Minister the observation that in the last five years there has not been a reduction in the amount of water used mid-winter in the Melbourne water area, that is, outside water restriction periods. Excluding per capita growth, mid-winter water use representing baseload use, which is largely indoor water use where 80 per cent of water is used, has not fallen below about 7,500 megalitres a week. In comparison, the impact of different restrictions at different times is clearly visible in January, February and March. In view of these circumstances, the Committee was interested in hearing from the Minister about the measures included in the budget to reduce water use permanently on an ongoing basis and the quantum of megalitres that this will amount to.<sup>208</sup>

The Minister informed the Committee that:<sup>209</sup>

*... we have had a substantial increase in population over that time. Therefore you would expect, as the population has increased, that our water use would rise in winter and summer, but it has not because of the measures we are taking inside the home as well as outside. In terms of what are those measures inside the home, for example, first, we are now requiring all new homes to have water-efficient appliances and shower heads. Now any new home has to have a water-efficient, five-star shower head. Your taps and things have to be water efficient. On top of that, in terms of retrofitting, we are now putting out an extra 270,000 shower heads for inside-the-home use, each of which saves, I think it is, 30,000 litres per shower head.*

*... We have also had a major behaviour change campaign, with the advertisements and others, which encourage people to use less water in their washing machines, less water around the home.*

<sup>208</sup> Hon. J Thwaites MP, Minister for Water, Environment and Climate Change, 2007-08 Budget Estimates hearing, transcript of evidence, 15 May 2007, p.9

<sup>209</sup> *ibid.*, pp.10-11

... We also have in this budget funds for a behaviour program to continue into the future of some \$3.5 million, once again, driving down in-home use.

... Has there been a bigger impact from the outside use than inside? Yes, there has. Is that surprising? No, because there is greater discretionary use of water outside the home than inside .... We are talking about drinking water; we are talking about toilet water, showers and those other items. It is harder to make the level of savings. But if you look at the fact we have actually made savings inside the home, despite the increase in the population, that is a significant effort. Are we going to do more? Yes, we are doing more, which is why we want to keep our behaviour change campaign going; that is why we have got rebates; it is why we require new homes to have these water-saving devices.

In terms of actual water use as distinct from per capita water, the Minister explained that:<sup>210</sup>

*If you look at the picture including industry, and you just compare us to the total consumption in litres per person per day, including industry, between 2001 and 2005, we came down from 404 to 329 per person per day. Brisbane went from 726 to 717 – so almost no change. Victoria, not just Melbourne but the whole of Victoria, has made a major effort in water conservation. To put it in perspective, because some people sometimes say water conservation does not matter, it does not make much of a difference, we have saved more than 100 billion litres of water a year. That is the equivalent of two times the amount of water from the Perth desalination plant – two times.*

The Committee believes that to assist in making its vision for Melbourne's water use a reality by 2010, the Department of Sustainability and Environment should monitor the effectiveness of the government's water saving initiatives in terms of reducing indoor water use in the mid-winter months of the year when water users are less affected by water restrictions.

The Committee recommends that:

**Recommendation 46:**

**The Department of Sustainability and Environment monitor the impact of the government's water saving initiatives on reducing the amount of kilolitres used per household during the mid-winter months of the year.**

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<sup>210</sup> *ibid.*