Chapter 2

Surface water

2.1 The Murray-Darling Basin Authority (MDBA) established a baseline from which to measure reductions in diversions which is known as the Baseline Diversion Limit (BDL). The surface water BDL is defined as 'the sum of the long-term annual average limits (or where there is currently no limit, the long-term annual average take) for all forms of take from a surface-water [Sustainable Diversion Limit] SDL resource unit.'[1] The MDBA determined the total 2009 BDL to be 13 623 gigalitres per year (GL/y) for surface water.[2]

2.2 The Basin Plan estimates the long-term Environmentally Sustainable Level of Take (ESLT) of water from its rivers is 10 873 GL/y.[3] The MDBA explains this ESLT is the 'amount of water that can be used for irrigation, agriculture, drinking and so forth (known as 'consumptive use') on average' and still ensure there is sufficient water in the Basin to meet environment needs, and therefore meet the objectives of maintaining the Basin as a healthy, working river system.[4]

2.3 To achieve the ESLT, the plan sets environmentally sustainable limits on the quantity of surface water that may be taken from an SDL resource unit.[5] The long-term average SDLs for water resources will come into effect in 2019[6] through state-based accredited water resource plans.[7] The MDBA describes the SDLs as:

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1 MDBA, *Draft Basin Plan Chapter Summary – Schedule 3*, www.mdba.gov.au/draft-basin-plan/draft-basin-plan-chapter-summary/schedule03 (accessed 2 August 2012); For a glossary of terms see: www.mdba.gov.au/draft-basin-plan/draft-basin-plan-chapter-summary/glossary#environmentally_sustainable_level_of_take (accessed 21 September 2012).

2 See: MDBA, Schedule 3, *Proposed Basin Plan 2012*, August 2012, pp 169–191.

3 MDBA, *Proposed Basin Plan 2012*, s. 6.04. *Note*: although a legislative instrument, the *Proposed Basin Plan* is made up of 'sections'. The Basin Plan itself states this at subsection 1.05(2).

4 MDBA, *Plain English summary of the proposed Basin Plan – including explanatory notes*, November 2011, p. vii; and *Water Act 2007*, s. 64.

5 *SDL Resource Unit*: describes a geographical area which contains a set of water resources. Boundaries of surface water SDL resource units are generally based on catchments, while boundaries of ground water SDL resource units are based on hydrogeology and existing state planning boundaries (see Chapter 6 of Proposed Basin Plan).

6 MDBA, *Proposed Basin Plan – revised draft*, 28 May 2012, Chapter 6, Division 2, p. 27.

7 *Water Resource Plans*: set out how water resources will be managed, usually for a 10-year period. They will be developed by the Basin states or in certain circumstances by MDBA, for approval by the Commonwealth Water Minister (see the glossary of the Proposed Basin Plan www.mdba.gov.au/draft-basin-plan/draft-basin-plan-chapter-summary/glossary#environmentally_sustainable_level_of_take (accessed 21 September 2012)).

> …limits on the volumes of water that can be taken for human uses (including domestic, urban and agricultural use) and are set at both a catchment and Basin scale.[8]

2750 GL/y reduction figure

2.4 The Basin Plan indicates consumptive use of surface water needs to be reduced by 2750 GL/y.[9] The MDBA has indicated that in recovering 2750 GL/y of water that '2360 GL/y should be sourced from the southern Basin' and '390 GL/y should be sourced from the northern Basin.'[10]

MDBA's rationale for the 2750 GL/y figure

2.5 The MDBA's rationale for the 2750 GL/y is unclear to the committee as well as to many of the key stakeholders who presented evidence to the inquiry. The most direct explanation that the committee received from the MDBA was in response to a question on notice from its public hearing on 24 April 2012. In this instance, the MDBA claimed that as a result of its hydrological modelling and socio-economic testing, it considered that the 2750 GL/y figure was:

> ...sufficient to achieve most of the key ecological targets and objectives set by the Authority, while also ensuring that social and economic impacts on the Basin community are manageable.[11]

2.6 The MDBA claimed that it undertook 'sensitivity analysis' of water reduction scenarios of 2400 GL/y and 3200GL/y. It stated that the analysis of the 2400 GL/y figure would not achieve a number of key ecological targets and outcomes. On the other hand, the MDBA stated that the 3200 GL/y scenario only had marginal improvements on the 2800 GL/y scenario and that this did not justify the potential additional socio-economic impacts.[12]

2.7 In addition, the MDBA referred to a number of system constraints having an impact on the prospect of using the additional environmental water that would be available under the 3200 GL/y (and other) scenarios. These constraints include physical and legal barriers to delivering water, for example, due to preventing the flooding of roads, bridges and private property, among other things.[13]

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8 MDBA, *The proposed 'environmentally sustainable level of take' for surface water in the Murray-Darling Basin: methods and outcomes*, November 2011, p. iii.

9 MDBA, *Proposed Basin Plan – revised draft*, 28 May 2012, Chapter 6, Division 2, p. 27.

10 MDBA, *The Socio-economic implications of the proposed Basin Plan*, May 2012, pp 1–2.

11 MDBA, answer to question on notice, 24 April 2012, (received 7 June 2012).

12 MDBA, answer to question on notice, 24 April 2012, (received 7 June 2012).

13 MDBA, answer to question on notice, 24 April 2012, (received 7 June 2012).

Criticisms of the 2750 GL/y figure

2.8 Despite the rationale provided by the MDBA for the setting of the 2750 GL/y, there has been significant criticism for many different groups about the figure and how it was developed.

2.9 The most common criticism received by the committee was that the MDBA had not provided sufficient details in support of its decision. Many key stakeholders, including peak bodies, told the committee that the reasoning for the decision to set the 2750 GL/y figure was not based on information that the MDBA has made available for their consideration.[14]

2.10 This criticism was highlighted by the CSIRO discussion of the science behind the a 2800 GL/y scenario, in a review commissioned by the MDBA:

> The panel [of CSIRO scientists that conducted the review of the MDBA's modelling] understands that other reduction scenarios have been modelled, but the panel has not seen modelling results for these other scenarios, and thus it is not clear how the 2800 GL/y reduction proposal was arrived at. The panel *assumes* this proposal was arrived at as a result of socio-economic considerations by MDBA...[15] [emphasis added]

2.11 The Wentworth Group of Concerned Scientists (Wentworth Group) also criticised the rationale for the 2750 figure. Its representatives told the committee that the 2750 figure has no scientific justification and that this has not changed across the various iterations of the plan and the supporting documentation released by the MDBA.[16] Mr Stubb's gave this colourful description:

> Just to be clear, that model did not tell [the MDBA] that 2,750 was the number. You select a number and plug it into the model. It is like a sausage machine. So if you put good mince in, you will get nice sausages. If you put bad mince in, you will get bad sausages.[17]

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14 This was particularly an issue for witnesses in Hay/Mildura see, for example, Mr John Culleton, CEO, Coleambally Irrigation Co-operative Limited, *Committee Hansard,* 2 April 2012, p. 29. Although the National Irrigators' Council stated that the MDBA consulted well on the modelling, it did note the significant difficulties in dealing with the vast quantities of documentation on the website, Mr Tom Chesson, CEO, National Irrigators' Council, *Committee Hansard,* 23 April 2012, p. 53.

15 Young WJ, Bond N, Brookes J, Gawne B and Jones GJ, *Science Review of the estimation of an environmentally sustainable level of take for the Murray-Darling Basin.* A report to the Murray-Darling Basin Authority from the CSIRO Water for a Healthy Country Flagship, November 2011, p. 31. Note: the 2800 GL/y was reviewed by the MDB prior to the release of the 2750 GL/y figure.

16 Dr John Williams, Member, Wentworth Group of Concerned Scientists, *Committee Hansard,* 10 September 2012, p. 14.

17 Mr Tim Stubbs, Environmental Engineer, Wentworth Group of Concerned Scientists, *Committee Hansard,* 10 September 2012, p. 18.

2.12 The MDBA's statements that the 2750 figure is a result of 'sensitivity analysis' is considered by the committee to need further explanation given that alternative modelling scenarios were not clearly articulated to even the CSIRO as part of the MBDA commissioned review, or made available to the public and Parliament for debate.[18] The committee notes that the MDBA is currently modelling a 3200 GL/y scenario, which it plans to provide to the Ministerial Council on the Murray-Darling Basin before the Basin Plan is tabled.

Reliance on historical data

2.13 Another key criticism of the 2750 GL/y and related modelling is that it relies on historical data up to 2009. When asked why more recent periods have not been used, especially a date that would include the extensive rainfall and runoff in the basin of the last two years, the MDBA claimed that it would have little impact. However, the committee considers this to be an unsatisfactory explanation given the claims by the MDBA to use the 'best available science' to develop the Basin Plan.[19]

Climate change impacts omitted

2.14 The absence of specific climate change assumptions in the modelling of the Basin Plan is of great concern to the committee. Climate change was identified by the MDBA as a significant issue in the development of the *Guide to the Proposed Basin Plan* (the Guide, released October 2010), and considered it 'essential that the proposed Basin Plan appropriately addresses the impacts of climate change.'[20]

2.15 Specifically, the Guide goes on to state:

> In light of the various issues associated with climate change, the Authority has determined that 3% is an appropriate allowance to account for the effect of climate change in the proposed Basin Plan. That is, the reduction being considered as necessary to achieve an environmentally sustainable level of take is inclusive of a 3% reduction in the current surface-water diversion limit in the Basin.[21]

2.16 Despite this, the MDBA chose not to specify the impact of climate change in the Basin Plan. The committee heard extensive evidence that climate change is likely

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18 The MDBA's comments regarding sensitivity analysis and the reason for not modelling other scenarios can be found in: *Committee Hansard*, 24 April 2012, pp 78–80 and 23 August 2012 p. 12.

19 MDBA, *Plain English summary of the proposed Basin Plan – including explanatory notes*, November 2011, p 109.

20 MDBA, *Guide to the proposed Basin Plan*, 2010, Canberra, p. 33.

21 MDBA, *Guide to the proposed Basin Plan*, 2010, Canberra, p. 34.

to have significant impacts on the outcomes to be expected from returning water to the basin through the SDLs.[22]

2.17 It is forecast that the impact for water run-off is far more significant than the change in rainfall due to a multiplier effect. As was pointed out in the Garnaut Review on climate change 'a decrease in rainfall can result in a two- to three-fold decrease in streamflow.'[23]

2.18 The CSIRO conducted extensive analysis on this issue in 2008, including modelling rainfall run off to the year 2030. According to the report, the likely impact would be significant:

> The best estimate or median indicates that the future mean annual runoff in the MDB [Murray Darling Basin] in ~2030 relative to ~1990 will be lower, by 5 to 10 percent in the north-east and southern half [of the Basin], and by about 15 percent in the southernmost parts. Averaged across the entire MDB, the best estimate or median is a 9 percent decrease in mean annual runoff.[24]

2.19 The committee is of the view that the impact of climate change has not been adequately explained by the MDBA.

2.20 The Wentworth Group, for example, strongly criticised the lack of consideration of climate change projections in the Basin Plan and noted that the MDBA's position 'conflicts with Government Policy on climate change.'[25]

2.21 The committee also notes that the MDBA has ignored the recommendation of the Windsor Report which urged the MDBA to 'apply greater rigour to the assumptions made to develop the proposed sustainable diversion limits, including the forecast impact of climate change'.[26]

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22 See for example, Ms Juliet Le Feuvre, Healthy Rivers Campaigner, Environment Victoria, *Committee Hansard*, 24 April 2012, p. 25; and Wentworth Group of Concerned Scientists, *Statement on the 2011 draft Murray-Darling Basin Plan*, November 2011, p. 19.

23 Professor Ross Garnaut, *The Garnaut Climate Change Review: Final Report*, Cambridge University Press, 2008, p. 109.

24 Chiew FHS, Vaze J, Viney NR, Jordan PW, Perraud J-M, Zhang L, Teng J, Young WJ, Penaarancibia J, Morden RA, Freebairn A, Austin J, Hill PI, Wiesenfeld CR and Murphy R, *Rainfall-runoff modelling across the Murray-Darling Basin. A report to the Australian Government from the CSIRO Murray-Darling Basin Sustainable Yields Project*. CSIRO, 2008, p. 13.

25 Wentworth Group of Concerned Scientists, *Evaluation of Proposed Basin Plan*, August 2012, p. 4.

26 House of Representatives Standing Committee on Regional Australia, *Of drought and flooding rains: Inquiry into the impact of the Guide to the Murray-Darling Basin Plan*, May 2011, p. xvii.

Interceptions

2.22 A final consequence of the reliance on historical data is that it may overlook changes in water interception that may have occurred due to changes in land management over the past century.

2.23 The current modelling process also appears to fail to account for interception in regarding certain forestry projects. Professor Mike Young provided information to the committee that stated:

> Under the Proposed Plan, States will be required to adjust for the adverse effects on water availability of increased forestry, increases in farm-dam interception and increases in the capture of overland flows...
>
> Missing from the Proposed Plan is a requirement for the adverse interception effects of biodiversity plantings to be fully accounted for.[27]

2.24 CSIRO climate modelling for 2030 predicts a five per cent lower median and a 15–20 per cent extreme range lowering of rainfall in the Southern Basin. The relative high proportion of high security water purchase from South Australian and Victoria under the Commonwealth Restoring the Balance in the Murray-Darling Basin program will have a disproportional effect on agriculture as a result of climate change. Consequently these states will suffer disproportional socio-economic effects relative to other Basin states.[28]

Water entitlement types in the 2750 figure

2.25 Finally, the committee was concerned with how various types of water entitlement had been taken into account by the MDBA when developing the 2750 GL/y figure. The committee heard evidence that the outcomes for the Basin system could vary significantly based on the type of water used.

2.26 The committee's concern with water types used in the modelling for the 2750 GL/y figure focussed on four main types: high security water; general security water; supplementary water; and terminal water. The MDBA acknowledged that depending on the type of water used this could have a significant impact on the outcomes for the Basin:

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27 Professor Mike Young, "Droplet No. 20: Which is better – The Existing or Proposed Administrative Arrangements for the MDB Basin?", April 2012, p. 3. This quote above was also read into the Hansard by Senator Nick Xenophon on 24 April 2012. See *Committee Hansard,* 24 April 2012, p. 8.

28 Chiew FHS, Teng J, Kirono D, Frost AJ, Bathols JM, Vaze J, Viney NR, Young WJ, Hennessy KJ and Cai WJ *Climate data for hydrologic scenario modelling across the Murray-Darling Basin. A report to the Australian Government from the CSIRO Murray-Darling Basin Sustainable Yields Project.* CSIRO, June 2008, [p. *iv*]; SEWPaC, *Progress of water recovery under the Restoring the Balance in the Murray-Darling Basin program*, http://www.environment.gov.au/water/policy-programs/entitlement-purchasing/progress.html, (accessed 2 October 2012).

> **CHAIR:** …do you agree that if you modelled [2750] gigs of buyback water that happened to be all supplementary water you would get a completely different outcome than if you modelled [2750] gigs of high-security water?
>
> **Dr McLeod:** Yes, that is correct.[29]

2.27 The Wentworth Group explained these potential impacts further and highlighted how different types of water were needed to achieve different environmental outcomes and events in the Basin system. As Mr Tim Stubbs explained:

> ...Once you have your breakdown of how you want to get those outcomes and what is the best way, you will then have some clear picture of what sort of water you would need. You might be able to say: well, to achieve all these events, we only need to achieve them when it is flooding already because we want to put a top on a peak or a tail on a flood. We may be able to use general security water for that or, potentially, even supplementary if it was in the right place at the right time. However, for other events you might have to say: well, we probably need high-security water to make sure we can be confident of achieving that event, because there will not be any supplementary water around at that time, potentially, and we will need a certain amount of high security in the bank to make sure we can hit those events, because they are drier time events. I am not sure how the authority has done it, but I imagine you would have to have a spread of entitlements to be able to hit all your targets.[30]

2.28 However, the committee remained unsatisfied with the explanations provided by the MDBA regarding water types in the development of the 2750 GL/y figure. The limited information received suggested that the assumption made was for a pro rata reduction across water types, excluding terminal water (that is, water from terminal or non-connected river systems). As the MDBA told the committee:

> **Dr McLeod:** We assumed a pro rata reduction across all the entitlement classes in each of the—
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> **CHAIR:** …So you had an equal 25 per cent terminal, 25 per cent [supplementary], 25 per cent general purpose?
>
> **Dr McLeod:** That is right. Terminal is not actually a class. In the terminal system—
>
> **CHAIR:** I can assure you, though, the impact of buying water out of a terminal river is a lot different to the impact of buying out of—

29 Dr Tony McLeod, General Manager, Water Resource Planning, MDBA, *Committee Hansard*, 23 August 2012, pp 15–17.

30 Mr Tim Stubbs, Environmental Engineer, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 16.

> **Dr McLeod:** I totally accept that. In the typical New South Wales system, there is high security, general security and supplementary. We assumed a pro rata share across each of them.[31]

2.29 The committee also received information about how this division of water types had operated in practice so far through the government's buyback program. As at 31 March 2012, of the 1238.2 GL of purchased entitlements, 455.4 GL was high security water, 695.4 GL was general, medium or low security water, 41.8 GL was supplementary water, and the remainder unregulated or unsupplemented water.[32]

2.30 The committee considers that the government needs to further explain the rationale for the particular make-up of the water types in developing the 2750 GL/y figure, how it will treat terminal water, and how this correlates to the division of water types for the government's buyback program so far and into the future.

2.31 In this regard the committee notes the recent agreement by the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) and Murray Irrigation Ltd to purchase a significant volume of water from 35 irrigation farms for return to the Basin. Murray Irrigation Ltd stated that the volume of water purchased remains confidential.[33] The confidentiality of this purchase further highlights how significant details regarding the implementation of Basin plan are not being made publicly available.

2.32 Victoria has contributed 424,150 megalitres (ML) of high security water and 22,493 ML of low security water to the Commonwealth Restoring the Balance in the Murray-Darling Basin program, a ratio of 1 to 19.[34]

Uncertainty regarding the impact of water buybacks (the Nimmie-Caira case)

2.33 The committee heard evidence about the Nimmie-Caira buyback scheme in hearings on 23 August and 10 September 2012. In order to meet part of its contribution towards the 2750 GL/y reduction, the NSW Government is proposing to purchase water from 11 properties in the Nimmie-Caira irrigation district near Hay, NSW.

2.34 The committee is aware that the NSW Legislative Council passed an order to produce documents relating to the proposed Nimmie-Caira water buy-back. On 20 September, the response was tabled in the NSW Parliament. The index of documents

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31 Dr Tony McLeod, General Manager, Water Resource Planning, MDBA, *Committee Hansard*, 23 August 2012, pp 15–17.

32 SEWPaC, answer to question on notice, 24 April 2012, (received 2 July 2012).

33 See http://blogs.abc.net.au/nsw/2012/09/0730-abc-riverina-news-25092012.html (accessed 25 September 2012).

34 SEWPaC, *Progress of water recovery under the Restoring the Balance in the Murray-Darling Basin program*, http://www.environment.gov.au/water/policy-programs/entitlement-purchasing/progress.html, (accessed 2 October 2012).

that was made publicly available in the Parliament shows that many of the relevant documents remain confidential because of claims of privilege.[35]

2.35 The committee is unsure about whether the purchase of water will be at market value. It was indicated that the total Nimmie-Caira proposal for participating land holders could be priced at around two and a quarter times the value of the water, which would include the sale of 'the land and water and the infrastructure.'[36]

2.36 The committee notes that large scale purchases of water can, in certain circumstances, legitimately attract a premium because they deliver administrative savings. This is consistent with the government's guidelines for large purchases of water under its buyback program, which allows for an up to 10 per cent premium on water purchases above 40 GL.

2.37 A recent Auditor-General's report on the water buyback program found that while governments have the prerogative to offer a premium for large scale purchases for these reasons, the potential savings should be documented:

> ...the ANAO suggests that the justification for price premiums should include explicit consideration of the reliability of the entitlements and the compatibility with priority environmental needs that are not able to be serviced through other entitlements already held. The expected administrative cost savings resulting from large purchases should also be documented.[37]

2.38 Because the details of the proposal remain confidential it is not possible to judge the value-for-money of the Nimmie-Caira proposal.

2.39 In response to questioning about the price to be paid for supplementary water as part of the Nimmie-Caira proposal, the NSW Office of Water insisted that it would not provide the information to the committee:

> **CHAIR:** Surely you can tell us what the base price of supplementary water is.
>
> **Mr Raft:** Around $300-plus a megalitre.

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35 See: NSW Legislative Assembly, Return to Order - Nimmie-Caira System Enhanced Environmental Water Delivery Project - Clerk tabled documents received on Thursday 20 September 2012 from the Director General of the Department of Premier and Cabinet, together with an indexed list of documents, www.parliament.nsw.gov.au/prod/lc/lctabdoc.nsf/cccc870c6126b1b6ca2571ee000318a4/8a60bb511edeacd8ca257a7f00209cd5/$FILE/Index%20-%20Nimmie-Caira%20System%20Enhanced%20Environmental%20Water%20Delivery%20Project.pdf (accessed 28 September 2012).

36 Mr David Harriss, Commissioner, NSW Office of Water, *Committee Hansard*, 10 September 2012, p. 40.

37 ANAO, *Restoring the Balance in the Murray-Darling Basin*, Audit Report no. 27 2010-11, 2011, p. 95.

> **CHAIR:** Yes, it was 350 on the Warrego. What you are doing there is paying $800-something for the water [based on the 2¼ multiplier]. Could we do this in camera?
>
> **Mr Harriss:** I still will not reveal the cabinet-in-confidence, rather the commercial-in-confidence.
>
> **CHAIR:** Did you say that is the first time that that has been mentioned today; that it was cabinet-in-confidence?
>
> **Mr Harriss:** No, not cabinet-in-confidence, I meant commercial-in-confidence.[38]

2.40 The committee was also concerned whether the full supplementary water entitlements or the long-term average annual yield of the Nimmie-Caira proposal would contribute towards the 2750 GL/y reduction. In the Nimmie-Caira case this would be 381 GL/y or 173 GL/y respectively. This issue was not fully explained to the committee and would have a significant impact on the implementation of the 2750 GL/y return of water to the Basin as proposed under the Basin Plan.[39]

2.41 In this respect, the committee is not able evaluate whether this important issue represents value for money for Australian taxpayers. The committee will consider this issue in further detail in the final report of the inquiry.

Adjustment mechanism

2.42 The Basin Plan (August 2012) included an adjustment mechanism to facilitate changes to the 2750 GL/y reduction in take from the river. The adjustment mechanism would provide for a 5 per cent change in the 2750 GL/y.

2.43 According to the MDBA, the proposed changes to introduce an adjustment mechanism:

> ...are designed to allow changes to be made to the SDLs when new initiatives or projects are identified that achieve better outcomes either for the environment or for Basin communities.[40]

2.44 The MDBA added that the mechanism would consider:

> ...projects based on environmental works and measures, river operations, rule changes and infrastructure developments that could use less environmental water to achieve similar environmental outcomes, or more

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38 Mr David Harriss, Commissioner and Mr Stephen Raft, Coordinator, State Priority Projects, NSW Office of Water, *Committee Hansard*, 10 September 2012, pp 41-42.

39 Mr David Harriss, Commissioner, NSW Office of Water, *Committee Hansard*, 10 September 2012 p. 42.

40 MDBA, *High Level Summary of the Basin Ministers' collective comments on the Proposed Basin Plan*, 28 August 2012. http://download.mdba.gov.au/BM_responses/Ministers_comments_28-08-2012.doc (accessed 17 September 2012).

> environmental water to improve the environmental outcomes without increasing the socio economic impacts.[41]

2.45 Under the adjustment mechanism the MDBA would not require Ministerial or Parliamentary approval for a change to 2750 GL/y within the 2040–3460 GL/y range.[42]

2.46 The committee notes that the relevant amendment to the *Water Act 2007* to provide for an adjustment mechanism was only introduced into Parliament on 20 September 2012.[43] Because of the timeframe the committee has not been able to form a specific view on the provisions of the bill.

2.47 Overall, the committee is very concerned with the lack of information about how the adjustment mechanism would work and the details in determining changes. The 2750 GL/y is a highly controversial figure but the committee is of the view that the public and Parliament need to be reassured that any changes are based on appropriate information and processes. These are yet to be detailed by the MDBA. As a result, the Parliament is again being asked to legislate on a matter with insufficient information.

Modelling of scenarios

2.48 Given the problems that have been discussed above with the 2750 GL/y scenario, the committee finds it difficult to understand the MDBA's refusal to model other key scenarios for the return of water to the Basin. Indeed, now that the Parliament will be asked to approve an adjustment mechanism that can change the 2750 GL/y figure, the committee considers that conducting and publishing the modelling of other scenarios is even more important.

2.49 The MDBA has continually claimed that significant scenarios were not modelled because of the 'sensitivity analysis' already undertaken and the issue of constraints in the system.[44]

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41 MDBA, *High Level Summary of the Basin Ministers' collective comments on the Proposed Basin Plan*, 28 August 2012. http://download.mdba.gov.au/BM_responses/Ministers_comments_28-08-2012.doc (accessed 17 September 2012).

42 MDBA, *High Level Summary of the Basin Ministers' collective comments on the Proposed Basin Plan*, 28 August 2012. http://download.mdba.gov.au/BM_responses/Ministers_comments_28-08-2012.doc (accessed 17 September 2012).

43 The relevant amendment was put forward in the Water Amendment (Long-term Average Sustainable Diversion Limit Adjustment) Bill 2012.

44 Mr Russell James, Executive Director, Policy and Planning, MDBA, *Committee Hansard*, 23 August 2012, p. 12.

2.50 However, organisations such as the Wentworth Group have disputed this as a sound justification for the 2750 GL/y figure. The Wentworth Group acknowledged that the MDBA has the best available modelling capabilities for water resources in the Basin system but lamented that it has not been used to model other scenarios.[45]

2.51 To this end, the committee welcomes the recent commitment of the MDBA to model the 3200 GL/y with constraints scenario. The committee urges the MDBA to publicly release the detail and results in a way that is suitable for public scrutiny and debate.

45 See for example, Mr Tim Stubbs, Environmental Engineer, Wentworth Group of Concerned Scientists, *Committee Hansard*, 23 April 2012, p. 17; Mr Peter Cosier, Director, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 17.