



Legal analysis of the Proposed Murray-Darling Basin Plan

Environment Defenders Office (Victoria)

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1. Summary

The key purpose of the Water Act is to return extraction in the Basin to long term sustainable levels to support both the ecosystems that depend on the Basin and continued productive use of the Basin.

In our view the Proposed Basin Plan (draft Plan) does not comply with the Act in a number of respects. In addition, it is clear from the draft Plan and the associated explanatory materials that the approach the MDBA has taken in the development and drafting of the Basin Plan has been to consistently give provisions their weakest interpretation and/or give effect to them in the weakest way.

Examples of this are:

- The management objectives for the Basin as described in Chapter 5 of the Basin Plan do not accord with the Water Act. This is significant as it sets direction for the rest of the MDBA's decision-making approach.
- The MDBA's approach to determining the environmentally sustainable level of take does not accord with the Water Act as it prioritises social and economic considerations and operational constraints above the issue of what extraction level is sustainable. The Water Act does not allow this.
- The MDBA's approach to setting SDLs does not accord with the Water Act as it prioritises possible negative social and economic factors and operational constraints above the consideration of what is sustainable, and it appears to have set an SDL that is likely to compromise many aspects of the environment. The Water Act does not allow this.
- The MDBA has allowed concerns about operational constraints to override the requirements of the Water Act. Although constraints can be considered in setting SDLs there is no indication that they should override the key objectives of the Water Act or the Plan – i.e. to give effect to international agreements, and to return extraction to sustainable levels.
- The MDBA's decision to increase groundwater extraction by more than double current amounts does not appear to be based on best available science and does not align with the precautionary principle – both requirements of the Water Act. In the absence of scientific evidence to justify the increase to groundwater extraction across the Basin, then the proposed substantial increase in groundwater extraction goes against the fundamental purpose of the Act which is to ensure that extraction is set at long term sustainable levels.
- A key requirement of the Water Act is to give effect to certain international agreements, particularly the Ramsar Convention and the Biodiversity Convention. Whether the draft Plan will in fact implement the international agreements and the requirements of s21 is very difficult to ascertain from the draft Plan and accompanying explanatory documents. There is no indication that the MDBA has any understanding of what those international agreements require of them through the Basin Plan.
- The Water Act gives the MDBA the power to set binding environmental targets, and water quality and salinity targets that the States must meet in order to achieve the management objectives of the Basin Plan. Although this appears to be the intent of the Act, the MDBA has chosen to give these provisions their weakest interpretation and make non-binding targets only. This significantly weakens the Commonwealth's ability to achieve the management objectives of the Basin Plan.
- A State can only be considered to be non-compliant with the Basin Plan if it exceeds its SDLs by 20% or more *and* it does not have a reasonable excuse. Therefore the MDBA cannot take any compliance action against a State that has exceeded the SDLs by up to 19%. This is not appropriate for the Basin Plan which sets a legally binding extraction limit and for which it is expected that States will be able to provide reliable data. It is an unnecessarily excessive buffer that will significantly affect achievement of SDLs.

- Compliance with SDLs will be recorded cumulatively across years. There is no limit to the number of years or amount of water that can be accumulated, and no rules surrounding how any credits can be used. If for example an upstream State is allowed to take its entire credit in one year, it could dramatically reduce available water for downstream users and ecosystems in low flow years. The MDBA has made no provision for this in the draft Plan and does not appear to have considered these practical impacts.

Although there are a number of problems with the legal instrument itself, most of these issues could be resolved with minor changes. The major legal issue is therefore not with the legal instrument itself, but with the way the MDBA has made decisions regarding the environmentally sustainable level of take and the sustainable diversion limits. The considerations they have used to make these decisions do not accord with the requirements of the Act and therefore the Plan may be invalid. These issues could be resolved if the MDBA reconsidered its approach to setting SDLs to ensure it aligned with the Act.

2. The purpose of the Water Act and the Murray-Darling Basin Plan

2.1 The Water Act and the Basin Plan

The key purpose of the Water Act is to return extraction in the Basin to long term sustainable levels to support both the ecosystems that depend on the Basin and continued productive use of the Basin.¹ It does this by requiring the development and implementation of a Basin Plan that gives effect to relevant international agreements, sets sustainable extraction levels based on best available science, and optimises social, economic and environmental outcomes.² Other purposes of the Basin Plan are to improve water security for all users and for water to reach its most productive use through efficient water trading.³

The aim of the Basin Plan is to manage water resources in the Basin in a way that is environmentally sustainable, protects ecosystems, improves water security for all uses of Basin water resources, and allows efficient trade so that water can go to its most productive use.⁴ An important consideration when developing Basin Plan is how the use of Basin water resources has negatively impacted on biodiversity and ecosystems, particularly Ramsar wetlands, and the requirement to implement special measures and wise use of Basin water resources to protect and restore those ecosystems.⁵

The Act and the Basin Plan are based on a recognition that current extraction levels are unsustainable and have been for a number of years, and that this is causing environmental degradation, impacting on human use of the water (e.g. through salinity), and affecting water security for all users. The purpose of the Basin Plan is to return extraction to sustainable levels to fix those problems. It is clear from the provisions of the Water Act that the requirement in the Act to reduce extraction levels is not solely aimed at ensuring the health of Basin ecosystems; it is also an attempt to make extraction sustainable to ensure human use of the resource can continue.⁶

2.2 The MDBA's approach to developing the Basin Plan

The Water Act is quite complex, in part due to the complexity of the subject that it regulates - water management. In interpreting the Water Act, provisions can be categorised into three main types:

- Those where the requirements on the MDBA in making the Basin Plan are quite clear.⁷
- Those where the Water Act provides some discretion to the MDBA in the way in which they achieve the requirements of the Act.⁸
- Those that contain some flexibility in the way they can be interpreted, as the drafting does not point to one overriding meaning.⁹

The MDBA is a statutory authority established by the Water Act and thus the entirety of its powers come from the Water Act. The Basin Plan is a statutory instrument made under the Water Act and must be developed and

¹This can be seen through the objects of the Act, the purpose and basis of the Basin Plan in ss3, 20 &21.

²*Water Act 2007* ss 20, 21, 22.

³ *Water Act 2007* s23

⁴*Water Act 2007* s21

⁵*Water Act 2007* s21

⁶ This intent can be seen throughout the Act, in particular in s3, the definition of 'environmentally sustainable level of take' in s4, ss20 & 21, and in the explanatory memorandum. This is discussed further below.

⁷For example the SDL provisions, the need to give effect to international agreements, the contents of the Basin Plan.

⁸For example the determination of what is a 'key environmental asset' & 'key ecosystem function'.

⁹For example the requirement to make water quality and salinity targets could be interpreted as requiring binding targets, or allowing the option of non-binding targets.

implemented in accordance with the Water Act. There is no ability for the MDBA to depart from the Water Act in its functions or its development of the Basin Plan, regardless of any political or other factors. If it does it may have breached its obligations under administrative law.

In our view the *Proposed Basin Plan* (draft Plan) does not comply with the Act in a number of respects. As noted above, there are provisions of the Act where the requirements on the MDBA are clear, and some where the MDBA has some discretion in applying the provision. Although there are many elements of the draft Plan that comply with the requirements of the Act, the draft Plan also gives rise to non-compliance with the Act in both those circumstances. Specific analysis of the key legal flaws with the draft Plan is set out from section 2 below.

In addition, it is clear from the draft Plan and the associated explanatory materials that the approach the MDBA has taken in the development and drafting of the Basin Plan has been to consistently give provisions their weakest interpretation and/or give effect to them in the weakest way. Instances of when this has occurred are outlined throughout this paper. This has the effect of weakening the Plan and making it more difficult to meet the objectives and purposes of the Water Act. The Water Act certainly allows the Plan to be stronger in a number of areas but the MDBA has chosen not to take those opportunities in the current draft Plan. Although legally it may be open to the MDBA to take this path, it is against the spirit and intent of the Act, and the purpose for which the MDBA was established.

As a final foundational point, this first iteration of the Basin Plan is especially important as it sets up the frameworks and procedures and institutional arrangements that, once established, will likely continue through many further iterations of the Basin Plan and Australian water management more generally. If the MDBA adopts a weak approach to setting up these structures in order to avoid inter-State or political ramifications it will impact water management for far longer than this first Basin Plan. The MDBA and the Minister should use this opportunity to set up frameworks and procedures and institutional arrangements that will provide the best possible opportunity of achieving the purposes of the Water Act into the future.

The following parts analyse the key legal issues that arise through the draft Plan, and in particular identify elements of the draft Plan that are unlikely to comply with the Water Act.

3. Management objectives of the Basin Plan

The Water Act requires the Basin Plan to contain 'management objectives and outcomes to be achieved by the Basin Plan'.¹⁰ Although they are not operational in the sense that they are not mandatory requirements that must be achieved, they set the scope and tone for the rest of the Basin Plan and provide parameters that other elements of the Basin Plan should be aligned with. The Water Act states that the management objectives and outcomes must be consistent with the purposes in s20 of the Act, and must address environmental outcomes, water quality and salinity, sustainable diversion limits and trading in water access rights. Chapter 5 of the draft Plan contains the management objectives and outcomes.

Rather than take management objectives directly from the Act, the MDBA has chosen to move away from them and develop its own objectives that better align with its own approach to Basin planning. The language focuses on the concept of a healthy working basin and has economic considerations as a primary concern. Two objectives in particular don't wholly accord with the Act - the objectives for the Basin Plan as a whole in clause 5.02 and the objectives for the SDLs in clause 5.05.

The management objectives for the Basin Plan as a whole in 5.02 focus on achieving a 'healthy working basin' and the optimisation of economic, social and environmental outcomes. It also mentions the international agreements and water security. This is a very selective choice of objectives and in fact leaves out the main objective of the Act and Basin Plan which is establishing environmentally sustainable limits on the water that can be taken from the Basin. The management objectives for the SDLs in 5.05 similarly focus disproportionately on economic considerations such as recovering water through water use efficiency, improving certainty for water users and providing time for entitlement holders to adjust to the SDLs. These are all valid objectives for the SDL, but more relevant for the SDL objectives is to protect and restore ecosystems and maintain ecosystem function and the productive base of the system, none of which are mentioned in the SDL objectives. A limited reference to protection of ecosystems in light of climate change only appears in the management outcomes¹¹.

This deliberate shift from the language and focus of the Water Act is indicative of the MDBA's approach throughout the draft Plan. As intended, the MDBA has used those objectives to guide its focus for other parts of the draft Plan. The move away from the objectives of the Act has therefore influenced the whole Plan.

In order to ensure full compliance with the intent of the Water Act the MDBA should adopt the language of the Act and ensure that its objectives fully align with the Act's objectives. The Act does not allow the MDBA to shift from the Act's objectives to pursue divergent objectives.

¹⁰ *Water Act 2007* s22 item, 4

¹¹ In clause 5.05(2)(a)

4. The MDBA's approach to determining the environmentally sustainable level of take and sustainable diversion limits

The key component of the Water Act and the Basin Plan is the requirement to establish sustainable diversion limits (**SDLs**) across the Basin. The obligations on the MDBA in this regard are quite clear. This is the key area in which the draft Plan does not comply with the Water Act. There appear to be two main flaws with the way the MDBA has calculated the SDLs – 1) it has prioritised concerns about possible negative social and economic impacts above the question of what is sustainable, and 2) the SDLs that it has set appear likely to compromise many parts of the environment. These issues are discussed in detail below.

An overarching requirement of the Act is that in carrying out its functions regarding the Basin Plan the MDBA must act on the basis of the best available scientific knowledge and socio-economic analysis.¹² This is particularly relevant to the determination of the environmentally sustainable level of take (**ESLT**) and SDLs.

The Basin Plan must set sustainable extraction limits for the Basin – the SDLs. The SDLs are described in the Water Act as the maximum long term average annual average quantities of water that can be taken on a sustainable basis from the Basin or a part of the Basin.¹³ SDLs must reflect an 'environmentally sustainable level of take'.¹⁴ ESLT is defined as the level at which water can be taken from the water resource which, if exceeded, would compromise key ecosystem functions, key environmental assets, the productive base of the water resource, and key environmental outcomes including ecosystem function, biodiversity, water quality and water resource health.¹⁵ It should be noted that this definition is focused not just on maintaining healthy ecosystems, but also ensuring the natural physical processes that support human use of the Basin can continue to function (i.e. removal of pollution and salt, preventing algal blooms etc). In part, this is referred to in the Act as the productive base. Essentially, the ESLT is the level of water that can be taken out of the system for human use without compromising the environment and the productive base of the system.

4.1 Calculating the environmental sustainable level of take

The first step in determining the SDLs is to calculate the ESLT for the Basin.

4.1.1 How the ESLT is described in the Water Act

The clear directive of the Act for determining the ESLT is that it must be a level which if exceeded would not compromise key environmental assets, key ecosystem functions, the productive base of the resource and key environmental outcomes (termed '**ESLT characteristics**' hereafter). Essentially it is supposed to be an uncompromised calculation of what is required to maintain a healthy environment, and to maintain the ecosystem services that allow production to continue. There is no provision at this stage to factor in any potential negative social and economic impacts, any system constraints, any State Government interests or any other matter. The two things required here are to determine what the ESLT characteristics are for the Basin, and then how much water they will need to maintain their function and health. As there is no further guidance in the Act on the ESLT characteristics, the MDBA has some discretion in how to determine those ESLT characteristics, provided it is consistent with the objectives and provisions of the Act.

¹² *Water Act 2007* s21(4)

¹³ *Water Act 2007* s22 item 6

¹⁴ *Water Act 2007* s23

¹⁵ *Water Act 2007* s4

4.1.2 The MDBA's approach

Rather than determining the ESLT in the method described above the MDBA has based the ESLT on a mix of environmental, socioeconomic and operational factors.¹⁶ For example the MDBA states that the calculation of the ESLT 'incorporates the assessment of the social and economic benefits and costs to changes in water use' and 'provides for the integration of environmental, social and economic considerations at several key decision points'.¹⁷ For example in determining the flow requirements of key environmental assets it has factored in local water management arrangements and physical and operational constraints in the system that prevent environmental water from being delivered.¹⁸ These may be considered to be irrelevant considerations under administrative law and therefore cannot be used to make a decision regarding the ESLT. The MDBA also states that it chose a reduction amount, and then modeled the environmental outcomes that could be achieved from that amount, rather than the other way around.¹⁹ There is no evidence that the MDBA has determined the uncompromised ESLT for the Basin.

Further, the MDBA has adopted the overall management objective of "achieving a healthy working Murray-Darling Basin, including a healthy environment, strong communities and a productive economy" and then determined the ESLT that aligns with this objective.²⁰ However as noted in part 2 above there is no legal basis for this objective – it does not accord with the Act and is not consistent with the ESLT definition. It is not open to the MDBA to choose an objective that does not accord with the Act. Doing so may be considered ultra vires (beyond power) in administrative law. Framing the ESLT in this way distorts the entire consideration of the ESLT.

4.2 Calculating the sustainable diversion limits

Once the ESLT characteristics are defined and the ESLT is determined, the SDLs can be developed.

4.2.1 How the SDLs are described in the Water Act

As noted above the SDLs are the maximum long term average annual average quantities of water that can be taken on a sustainable basis from the Basin or a part of the Basin²¹ and must reflect an 'environmentally sustainable level of take'.²² The Act does not contain a definition of 'sustainable', however the explanatory memorandum for this provision of the Water Act states that "the intention is to ensure that water is taken from Basin water resources on an environmentally sustainable basis rather than based on historical levels of surface water use as is the case for current long-term diversion caps set under Schedule F of the *Murray-Darling Basin Agreement*".²³

The way this provision is drafted indicates that the concept of SDLs is broader than that of the ESLT. It must reflect the ESLT but does not necessarily have to be the same number.

¹⁶ See in particular part 6.2.2 of Murray-Darling Basin Authority, *The proposed 'environmentally sustainable level of take' for surface water of the Murray-Darling Basin: methods and outcomes*, November 2011.

¹⁷ Murray-Darling Basin Authority, *The proposed 'environmentally sustainable level of take' for surface water of the Murray-Darling Basin: methods and outcomes*, November 2011, p. vi.

¹⁸ Murray-Darling Basin Authority, *The proposed 'environmentally sustainable level of take' for surface water of the Murray-Darling Basin: methods and outcomes*, November 2011, p. vi.

¹⁹ See for example p 18 of Murray-Darling Basin Authority, *The proposed 'environmentally sustainable level of take' for surface water of the Murray-Darling Basin: methods and outcomes*, November 2011

²⁰ Murray-Darling Basin Authority, *The proposed 'environmentally sustainable level of take' for surface water of the Murray-Darling Basin: methods and outcomes*, November 2011, p. 2

²¹ *Water Act 2007* s22 item 6

²² *Water Act 2007* s23

²³ Explanatory Memorandum Water Bill 2007, 10 August 2007, para 54.

A strong requirement of the Act is that Basin Plan must give effect to Australia's obligations under treaties such as the Ramsar Convention and the Convention on Biodiversity. The primary way to do this is through the SDLs (i.e. ensuring there is enough water in the system to meet the requirements of those treaties).

Although much prominence has been given in the debates around the Basin Plan to the requirement to 'optimise environmental, social and economic outcomes' this is not in fact a priority requirement of the Act. The requirement to 'optimise' is mentioned twice in the Act, in the s3 objectives of the Act and the s20 purposes of the Basin Plan. It is a lower order requirement than many of the others in the Act, as it is mentioned only in guiding provisions (purposes and objectives) rather than operational provisions, and in the objects provision is expressed to be subject to the requirement to give effect to international agreements. This does not mean that socio-economic issues are irrelevant to the SDLs – they are relevant and must be considered as discussed below.

The primary requirement when setting the SDLs is therefore to determine the maximum long term average annual quantity of water that can be taken from the Basin on a sustainable basis, ensuring that it reflects the ESLT and gives effect to the international agreements. The MDBA has some discretion in determining what is sustainable at this stage. Once this is determined, the MDBA should achieve the SDLs in such a way that it optimises economic, social and environmental outcomes. The MDBA has discretion as to how to do this –for example it could include measures such as allocating SDLs to water resource areas according to where it will have the least socio-economic impact (provided ESLT characteristics are not compromised).

If it were not possible to meet all the ESLT characteristic requirements at the present time, with the present operating system and the present level of scientific knowledge, the MDBA should develop a pathway that will achieve that over time. It is not open to the MDBA to abandon that goal in favour of a lesser objective. Further if there is a lack of scientific knowledge about sustainability of resources in some parts of the Basin a precautionary approach must be taken in line with the precautionary principle.²⁴

Therefore although socio-economic impacts are relevant to determining SDLs, the possibility of negative socio-economic impacts cannot be used as a reason to reduce the SDLs to the point where they are no longer sustainable and are compromising the ESLT characteristics and failing to meet the requirements of the international agreements. If this occurred the Basin Plan would not meet the purpose of the Water Act which is to achieve sustainable extraction levels in the Basin once and for all.

4.2.2 MDBA's approach

The MDBA's approach to determining SDLs does not accord with the above analysis. There appear to be two main flaws with the way the MDBA has calculated the SDLs – 1) it has prioritised concerns about possible negative social and economic impacts above the question of what is sustainable, and 2) the SDLs that it has set appear likely to compromise many parts of the environment.

4.2.2.1 Prioritising socio-economic impacts

The SDL for the Basin is set at the same level as the ESLT – 10,873GL. To achieve this, extraction levels will need to be reduced by 2750GL (from a 2009 baseline). This indicates that the SDL suffers from the same problems as the ESLT does – that concerns about socio-economic factors have been a determining factor in setting the SDLs rather than being used for optimisation after the SDL has been determined. Further, as the SDL must reflect the ESLT, it would be near impossible to have a proper calculation of the SDL if the method for determining the ESLT is flawed. The MDBA's calculation of the SDL therefore relies on an irrelevant consideration and may therefore be unlawful.

²⁴ The precautionary principle is a relevant consideration when making the draft Plan under s21(4).

There are many other provisions in the Act that consider socio-economic impacts and provide ways to minimise any negative impacts on those affected. This includes transitional provisions allowing SDLs to be phased in over a number of years, as well as lag time for WRPs to come into force. In addition the Government has agreed to buy back or pay for irrigation upgrades for all water needed to achieve the SDL thereby significantly reducing the impact on water users and has committed to many other regional assistance measures to reduce the impact of the reforms. Reducing the SDLs to avoid negative socio-economic impacts is not one of options provided by the Act, as it will not help to achieve the key purpose of the Act which is sustainable extraction.

The issue of physical and operating constraints in the system that according to the MDBA prevent more water from being delivered to the environment has also been a determining factor in setting SDLs. This issue is discussed in detail in the next section.

4.2.2.2 Failure to meet environmental requirements

As noted above, the SDLs must reflect the ESLT, which requires the ESLT characteristics to not be compromised. The MDBA has developed a set of ESLT characteristics (primarily a list of key environmental assets for the Basin) and environmental targets and determined how much water they require as part of their calculation of the ESLT.

It is outside our expertise to comment on whether the method for determining targets and water requirements is valid. However the MDBA commissioned a review from the CSIRO of the validity of the MDBA's ESLT determination, including environmental targets.²⁵ The CSIRO review states that the SDLs that the MDBA is proposing do not achieve the majority of the targets, and that the MDBA should model higher SDLs in order to properly assess what higher SDL levels could achieve.²⁶ The report states "the proposed SDLs would be highly unlikely to meet specified ecological targets even in the absence of future climate change".²⁷ CSIRO also states that it is not clear how the proposed SDLs were arrived at, but presume it reflects socio-economic considerations.²⁸

The Act does not allow the environmental requirements to be compromised in this way – it is contrary to both the intent and the letter of the Act. The Act clearly provides that the Basin Plan and SDLs must be set at sustainable levels that protect and restore key parts of the environment²⁹. The MDBA has identified what those key parts are through its environmental targets, but the SDLs it proposes will fail to meet the majority of them according to CSIRO. This does not comply with the Act.

²⁵ CSIRO *Science Review of the Environmentally Sustainable Level of Take for the Murray Darling Basin* November 2011

²⁶ CSIRO *Science Review of the Environmentally Sustainable Level of Take for the Murray Darling Basin* November 2011 p29

²⁷ CSIRO review p 30

²⁸ CSIRO *Science Review of the Environmentally Sustainable Level of Take for the Murray Darling Basin* November 2011 p30

²⁹ See s23 and the definition of 'environmentally sustainable level of take' in s4; and s21(1)-(3) of the Water Act.

5. The MDBA's consideration of constraints in setting SDLs

The MDBA has stated that system constraints were a very important limiting factor in setting SDLs.³⁰ They have said that it would be very difficult to return more than 2750GL to the system because physical and operating constraints would prevent that water from being delivered. It is clear that this has had a strong influence in the decision making process when setting the SDLs.³¹

From a legal perspective it is questionable whether the MDBA can give such strong weight to such a consideration. The Water Act does not mention the concept of 'constraints'. However the Act acknowledges that there is currently productive use of the Basin and that this will continue, thereby acknowledging the altered state of the Basin³². Constraints are therefore relevant to the determination of how the Basin should be managed. Further, constraints can be considered part of the socio-economic factors that must be optimised once other requirements are met.

However, although constraints must be considered as a factor there is no indication that they should override the key objectives of the Water Act or the Plan – i.e. to give effect to international agreements, and to return extraction to sustainable levels. It can be argued that while constraints must be taken into account, they must be ignored wherever possible, and for those that can't, work should be done to lessen their impact so that the objectives of the Act can be met. This would require an active program to remove or minimise constraints to ensure that the SDLs do meet the requirements of the Act as soon as possible.

This does not appear to be the approach of the MDBA who have identified many constraints but no solutions to overcome those constraints. If constraints are a barrier to achieving the requirements of the Act, it should be clearly stated how constraints will impact the outcomes, with a program outlined in the Plan as to how they will be overcome.

There are problems with the MDBA's treatment of constraints beyond the interpretation issue. The MDBA has said that constraints will be assessed by the 2015 review or the 2019 implementation of the SDLs. They have also said that if constraints can be overcome by the 2015 review date, that can result in the SDLs being increased (i.e. in less water being returned to the system from consumptive use). There are two problems with this position. The first is that it is too late by 2019 to be overcoming constraints. As constraints have been a key factor in determining the SDL, a program to overcome constraints must be in place as soon as possible so that the SDLs can be adjusted to take account of that. By 2019 the SDLs will be set and it will require another amendment to the Basin Plan to change them.

Secondly the MDBA's statement that removal of constraints can lead to more water being retained for consumptive use is illogical. If constraints are a key reason why more than 2750GL cannot be returned to the system, then removal of constraints should allow that number to increase not decrease. If the MDBA use removal of constraints as an opportunity to decrease the 2750GL figure then their claim that constraints is a key reason more water cannot be returned to the environment must be false.

³⁰ See for example Craig Knowles, *Murray Murmurings: The MDBA explains where the 2750GL figure comes from*, published in Crikey <http://blogs.crikey.com.au/rooted/2011/12/16/murray-murmurings-the-mdba-explains-where-the-2750-figure-comes-from/>

³¹ See for example Murray-Darling Basin Authority, *The proposed 'environmentally sustainable level of take' for surface water of the Murray-Darling Basin: methods and outcomes*, November 2011 p 3

³² See for example s3, s20, s21(4)

6. Increases to groundwater extraction

The Water Act requires the Basin Plan to set SDLs for surface water and groundwater. The draft Plan proposes an increase to ground water extraction by 2596GL/year, from 1744GL to 4340GL, more than double the current extraction levels.³³ According to the Wentworth Group of Concerned Scientists, there is no publicly available peer reviewed science to show this increase is sustainable. They state that the publicly available science, including the previous work of the MDBA to develop the Guide to the Plan, supports the need for a decrease in groundwater extraction in order to reach sustainable levels.³⁴ The MDBA has not released scientific evidence to support its proposed increases.

In the case of Victoria, the draft Plan proposes to increase extraction in 7 of the 15 SDL resource areas, and maintain current levels of extraction in 7 resource areas. Only one resource area has a recommended decrease.³⁵ The MDBA has therefore determined that the current levels of extraction set by the Victorian Government are sustainable in 14 of the 15 resource areas. However the Victorian Auditor-General found in October 2010 that the Victorian Government did not know whether current groundwater extraction levels were sustainable as the Government did not have adequate information on stocks, extraction and recharge rates, or the interconnection between groundwater and surface water.³⁶ The MDBA has not released any information to indicate that they have more data now to support this conclusion than when the audit was conducted.

In the absence of scientific evidence to justify the increase to groundwater extraction across the Basin, then the proposed substantial increase in groundwater extraction goes against the fundamental purpose of the Act which is to ensure that extraction is set at long term sustainable levels. As noted above, the MDBA has no power to make decisions outside this legal framework, regardless of any political, social or economic justification. In particular, if there is no scientific basis for the increase then the MDBA's approach breaches two key requirements of the Water Act: that SDLs be set at sustainable extraction levels as outlined in Part 3 above; and the requirement to for the MDBA to act on the best available science;³⁷

A further important requirement is for the MDBA to act in accordance with the precautionary principle.³⁸ Case law has stated that the precautionary principle will apply in decision-making where there is a threat of serious or irreversible environmental damage and scientific uncertainty as to the environmental damage.³⁹ For example, in 2010 the Victorian Civil and Administrative Tribunal held that a water authority could not issue a groundwater licence until there was greater scientific certainty as to the sustainability of extraction from the groundwater resource.⁴⁰ If the MDBA does not have enough scientific evidence to determine whether groundwater extraction should increase or decrease the precautionary principle requires it to take a conservative approach.

The groundwater increase also has implications for the setting of surface water SDLs. The National Water Commission has stated that groundwater and surface water systems should be treated as being connected, unless there is clear proof that they are not.⁴¹ Many of the surface and groundwater systems in the Basin are

³³Wentworth Group of Concerned Scientists, *Statement on the 2011 draft Murray-Darling Basin Plan*, January 2012, p13.

³⁴Wentworth Group of Concerned Scientists, *Statement on the 2011 draft Murray-Darling Basin Plan*, January 2012, p13.

³⁵See Plain English Summary p88.

³⁶Victorian Auditor-General's Office, *Sustainable Management of Victoria's Groundwater Resources*, October 2010, pvii-viii.

³⁷*Water Act 2007* s21(4).

³⁸*Water Act 2007* at s 21(4)(a).

³⁹*Telstra Corporation v Hornsby Shire Council* (2006) 67 NSWLR 256

⁴⁰*Alanvale Pty Ltd & Anor v Southern Rural Water & Ors*[2010] VCAT 480

⁴¹ National Water Commission 2011, *The National Water Initiative—securing Australia's water future: 2011 assessment*, p100.

connected, and in some systems the level of connectivity is unknown.⁴² Increasing groundwater extraction will therefore have a direct impact on surface water SDLs in many of the systems in the Basin. A proposed increase in groundwater extraction therefore must be taken into account when setting surface water SDLs, and in most cases would require more water being removed from consumptive use than would be required if groundwater extraction were to remain the same. According to the Wentworth Group the MDBA's current modelling for surface water SDLs does not factor in groundwater.⁴³

Unless the MDBA can provide scientific evidence that establishes that increasing groundwater extraction by the amount set out in the draft Plan is sustainable according to the requirements of the Act, the Basin Plan should require a decrease in groundwater extraction in accordance with the currently available science. In addition the MDBA should ensure that proposed SDLs for all surface water systems take account of SDLs in relevant groundwater systems, unless the surface water system is definitively known to have no connection to groundwater.

The MDBA should be wary of putting the Commonwealth in the situation of allowing significant increases in groundwater extraction based on inadequate scientific information, only to require massive decreases in future years when full scientific evidence and effects of climate change become apparent. This could open the Commonwealth to massive liability and cause significant and unnecessary impacts on water users who took up the offer of increased groundwater use only to lose their water rights under future Basin Plans.

⁴²Wentworth Group of Concerned Scientists, *Statement on the 2011 draft Murray-Darling Basin Plan*, January 2012, p13

⁴³Wentworth Group of Concerned Scientists, *Statement on the 2011 draft Murray-Darling Basin Plan*, January 2012, p13.

7. Uncertainty in Surface Water Sustainable Diversion Limits

The Water Act requires the MDBA to set SDLs for each water resource area, and the Basin as a whole.⁴⁴ The SDLs can be expressed as a quantity of water per year, a formula for calculating a quantity or any other method the MDBA thinks is appropriate.⁴⁵

To determine what current extraction must be reduced by to achieve an environmentally sustainable level of take, current extraction must first be calculated. The MDBA has included the concept of 'baseline diversion limits' (BDLs) in the draft Plan which is their calculation of the current extraction for each area, which forms a baseline from which the new SDLs are calculated. For groundwater, the MDBA has expressed the BDLs and SDLs in gigalitres per year.⁴⁶ It is therefore clear what current extraction levels are (according to MDBA calculations) and what current extraction will be reduced to, or increased to, as a result of the SDLs in each water resource area.

However, for surface water the situation is considerably more complicated. In Schedule 3 of the draft Plan, surface water BDLs are not expressed as a number, but as a complex series of instructions on how the BDL should be calculated. The notes included with the BDL instructions indicate that the MDBA has not actually calculated each element of each BDL – it estimates some elements and notes that it is yet to estimate others. In Schedule 2 of the draft Plan it sets out the surface water SDLs. Rather than expressing the SDLs as gigalitres per year, they are expressed as a reduction from the BDLs (e.g. the SDL is the BDL minus 8GL). This is how the 2750GL number is derived – it is the sum of all the reduction amounts (noting that the 2750GL figure is not the Basin-wide SDL, it is the amount that current extraction must be reduced by to meet the Basin-wide SDL). However as the BDLs are not known, it is impossible to know what the SDLs are for each area and for the Basin as whole.

The MDBA does make an estimation of what the BDL and the SDL is for each area in the notes in Schedule 2. However, notes in regulations are not actually part of the regulation and are not binding, therefore these notes are a guide only and are subject to change. (It is also unclear what these estimations are derived from seeing as schedule 3 states that the MDBA has not yet calculated many elements of the BDLs.)

There are two points to note from this approach to setting SDLs:

1. As the Basin Plan is currently drafted, the aspect of the SDL calculations that will not change and will be binding is the reduction amount for each area (as expressed in Schedule 2), which adds up to 2750GL for the whole Basin. As currently drafted, regardless of what current extraction turns out to be, it will need to be reduced by 2750GL to comply with the SDL provisions of the Basin Plan.
2. The MDBA does not actually know what the SDLs are in any surface water area, or for the Basin as a whole. It only has an estimate, and it is unclear how that estimate is derived. It also does not know what the BDL (i.e. current extraction) is in each area. This leaves a great deal of uncertainty around the SDLs, and what outcomes they can achieve. It is unclear how the MDBA has determined that a reduction of current extraction by 2750GL/year will be sustainable, when it does not know either current extraction levels, or what extraction levels will be once they have been reduced by 2750GL. As lawyers we cannot comment further on scientific validity of this as it is outside our expertise.

⁴⁴ *Water Act 2007* s22, item 6

⁴⁵ *Water Act 2007* s23(2)

⁴⁶ Proposed Basin Plan Schedule 4

8. 2015 review of SDLs

The MDBA has included a provision in the Draft Plan for a 2015 review of the SDLs⁴⁷. The review may result in a recommendation to amend the SDLs up or down. The Act does not mention a 2015 review; reviews of the Basin Plan are 5 years after it comes into force and every 10 years thereafter.⁴⁸ However there is nothing to stop the MDBA doing a review earlier, provided it also does the reviews required in the Act.

The review provision in the Draft Plan can only require a *review* – it cannot (and does not) require the Basin Plan to be amended. Any amendment following the review will have to follow the process set out in the Water Act, which is essentially the same process as making the Basin Plan in the first place including public consultation, consultation with State Ministers and tabling of the amendment in Parliament.⁴⁹

Although the MDBA should not fetter their discretion by pre-empting the outcome of the review, language in the plain English summary of the Draft Plan does that. It states “Between now and 2015 we can expect to learn more about the river system...this may mean the 1468GL proposed for recovery could be reduced significantly – perhaps in the order of hundreds of gigalitres.⁵⁰ This view is echoed in regards to the constraints issue – the MDBA states that if constraints are removed and environmental outcomes can be achieved with less water the 2015 review would allow the SDLs to increase (i.e. more water for consumption).⁵¹

There is no acknowledgement in the MDBA documentation that the 2015 review could also result in the SDLs being decreased, for e.g. due to factors such as new knowledge about the needs of the system or better understanding of climate impacts, or advances in irrigation and farming water efficiency. The language indicates that the MDBA already has a bias towards the review resulting in an increase to consumptive water. It is not open to the MDBA to fetter their discretion in this way.

The language which evidences bias towards increasing SDLs must be removed from the explanatory materials or this may affect interpretation and implementation of the Draft Plan. In addition the draft Plan should set out in more detail the factors that must be considered in the review including the latest climate modelling and the latest science on the environmental requirements of the Basin.

⁴⁷ Proposed Basin Plan cl 6.07

⁴⁸ *Water Act 2007* ss49A and 50

⁴⁹ *Water Act 2007* s45

⁵⁰ Plain English Summary pviii

⁵¹ MDBA, *River management – challenges and opportunities*, 25 November 2011, p4

9. Implementation of international agreements

An important element of the Basin Plan is giving effect to the international agreements listed in the Water Act.⁵² There is a general overarching requirement in the Water Act that the Basin Plan must “give effect to” relevant international agreements, along with more specific wording in relation to the implementation of the Convention on Biodiversity and the Ramsar convention in s21. For example, section 21 requires that the Basin Plan be prepared having regard to the fact that the use of Basin water resources has had significant adverse impacts on biodiversity and that as a result special measures are required to conserve biodiversity (language from the Convention on Biodiversity). It also states that the Basin Plan must promote the wise use of water resources and promote conservation of Ramsar wetlands in the Basin (based on requirements in the Ramsar Convention).

Whether the draft Plan will in fact implement the international agreements and the requirements of s21 is very difficult to ascertain from the draft Plan and accompanying explanatory documents. There is no indication that the MDBA has any understanding of what those international agreements require of them through the Basin Plan, or that they have made a significant attempt to include measures to meet those requirements. There is no discussion on the draft Plan or the explanatory documents of what the international agreements require, and how those have been met in the Basin Plan.

Analysis of what the Water Act requires in relation to the international agreements, and whether the draft Plan meets those requirements will be included in our submission to the MDBA on the draft Plan.

⁵² *Water Act 2007* ss 3, 20(a) & 21(1). The international agreements are listed in the s4 definition of “relevant international agreement”.

10. Consideration of climate change

The requirements in the Water Act to take into account the precautionary principle and act on the basis of best scientific knowledge are particularly relevant to the consideration of climate change. The precautionary principle states that *where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation*. As noted above there is significant case law in Australia around the need to properly apply the precautionary principle in decision-making.

The MDBA has considered a range of climate change projections in its determination of SDLs. The MBDA has largely disregarded the higher and lower estimates by the CSIRO and other studies and concentrated on the median outcome for the Basin in 2030⁵³. There is no indication that the median estimate is *more likely* to occur than the higher or lower predictions, just that it is the median.

However when actually applying climate change to the determination of the SDLs, rather than using projected 2030 climate projections to set baselines for the SDLs the MDBA has used historical climate data from 1895-2009. It states that this is because "the median projected climate change impacts on streamflow are currently within the range of natural variability".⁵⁴

There are three issues with this:

1. the median climate change projection is not within the range of historical natural variability because climate change will cause a permanent shift or step change rather than a temporary fluctuation as has occurred in the past;
2. the precautionary principle favours a more conservative approach than using the median projection, particularly as climate predictions are still uncertain and there is no indication that the higher predictions are less likely than the median predictions;
3. considering the median projection that the MDBA has chosen is less variable than the climate for the past 100 years, a precautionary approach would suggest that the dryer scenarios should be used to set baselines.

⁵³See Plain English Summary of Proposed Basin Plan p115 and the MDBA Factsheet on climate change and the Basin Plan.

⁵⁴Plain English Summary of Proposed Basin Plan p115

11. Environmental Watering Plan and Water Quality and Salinity Management Plan

11.1 Targets

Under the Water Act the MDBA has the power to set binding environmental targets, and water quality and salinity targets that the States must meet in order to achieve the management objectives of the Basin Plan.⁵⁵ This is an opportunity to implement Basin-wide standards in a way that is not being done through inter-state management. Although this appears to be the intent of the Act, the MDBA has chosen to give these provisions their weakest interpretation and make non-binding targets only.⁵⁶ While targets have been specified in the draft Plan⁵⁷, the Draft Plan states that “if a target is not achieved this does not in itself mean that a person has acted inconsistently [with the Plan].⁵⁸

This significantly weakens the Commonwealth’s ability to achieve the management objectives of the Basin Plan. The management objectives are high level and non-measurable. The Commonwealth will have no power to require adherence to environmental outcomes or water quality and salinity outcomes and will not be able to take action for non-compliance with them. Therefore there is a high risk that these objectives will not be met, seriously undermining a key requirement of the Water Act.

The environmental and water quality and salinity targets in the draft Plan should be binding. If there are concerns around the ability to meet the targets as soon as the Basin Plan comes into force and/or around the ability of the States to meet them 100% of the time, two options could be included in the Basin Plan:

1. If there are standards to address water quality and environmental problems that are highly desirable, but the States do not believe they can currently be met, the draft Plan should include a pathway to achieving them over time. Lower targets could be set in the initial years that increase over time to achieve the level of water quality and environmental quality that is necessary to meet water quality and environmental objectives. This would provide realistic binding targets that the States must comply with, and clear pathway to achieving objectives.
2. If States are concerned that due to weather and other unforeseeable events it will be impossible
3. to meet water quality and environmental targets 100% of the time, the Basin Plan include binding targets but state that they only need to be met (say) 90% of the time.

⁵⁵ *Water Act 2007* ss25 & 28. The wording of the Water Act and ability to make a legally binding Basin Plan gives MDBA power to make binding targets.

⁵⁶ Case law suggests that ‘targets’ should be interpreted to be more than just indicators of progress – see *Nature Conservation Council of NSW v Minister Administering the Water Act 2000* [2005] NSWCA 9.

⁵⁷ *Water Act 2007* Chapter 8 & schedules 7&9.

⁵⁸ Proposed Basin Plan clauses 7.07 & 8.09.

12. Compliance provisions

The Water Act states that the Basin Plan must include a method for determining whether the SDLs have been complied with⁵⁹ but provides no requirements as to what methods the MDBA must adopt. The MDBA therefore has discretion to determine this. One thing that is clear from the Act is that the Basin Plan and in particular the SDLs are to be legally binding on Basin States, water users and Commonwealth agencies.⁶⁰

Our main concerns around the compliance sections are not because of non-compliance with the Act, but because of their impact on achieving other requirements of the Act and because they do not represent good regulatory practice. The MDBA could have made compliance requirements much stronger and better achieved the objectives of the Act, but have chosen not to do so.

The main issues are discussed below.

12.1 Non-compliance with SDLs

Clause 6.13 of the Draft Plans sets out when States can be declared non-compliant with the SDLs. Non-compliance occurs if the State reports in its annual accounts that it has exceeded the SDL for a particular water resource unit by 20% or more *and* it does not have a reasonable excuse. Therefore the MDBA cannot take any compliance action against a State that has exceeded the SDLs by up to 19%. In addition a State could be non-compliant by 20% or more and provided it has a reasonable excuse will not be considered non-compliant.

This 20% buffer appears to have been derived from the rules for the current Murray-Darling Basin cap (MDB cap) where investigation of a State's exceedance of the cap is only triggered if the State appears to be at least 20% over its cap.⁶¹ This may be appropriate for a cooperative interstate arrangement, especially where accounting for water extraction is imperfect, however it is not appropriate for the Basin Plan which is a legally binding extraction limit and for which it is expected that States will be able to provide reliable data. It is an unnecessarily excessive buffer that will significantly affect achievement of SDLs, particularly if all States are non-compliant by 20%. A better approach would be for the SDLs to be binding on all States with 0% leeway, with discretion for the MDBA to not declare non-compliance up to 20% if the State has a reasonable excuse.

A further complication from this compliance model is that compliance will be recorded cumulatively across years. It is the cumulative balance which must not exceed 20% without a reasonable excuse. This is in line with the method established for compliance with the MDB cap under the Murray-Darling Basin Agreement which assesses compliance based on cumulative water use.⁶² This will have the positive benefit of not allowing States to be 19% over the SDL *every* year. However allowing a cumulative *credit* to build up over years could have very undesirable practical impacts. Presumably if a State is under its cap for a given year it will be allowed to use more water in subsequent years until it reaches the cumulative cap. There does not appear to be any limit to the number of years or amount of water that can be accumulated, and no rules surrounding how any credits can be used. If for example an upstream State is allowed to take its entire credit in one year, it could dramatically reduce available water for downstream users and ecosystems in low flow years. The MDBA has made no provision for this in the draft Plan and does not appear to have considered these practical impacts.

⁵⁹ *Water Act 2007* s22, item 8.

⁶⁰ See for example ss34 & 35.

⁶¹ Murray-Darling Basin Agreement, schedule E clause 16. (This rule applies to Victoria and NSW – different rules apply in other States).

⁶² For an explanation of compliance under the MDB cap see Murray Darling Basin Authority, *Water Audit Monitoring Report 2009-10 Report of the Murray-Darling Basin Authority on the Cap on Diversions*, April 2011, especially p 16 http://www.mdba.gov.au/files/publications/MDBA-13971-WAM-Report-2009-10_WEB.pdf

To avoid these impacts the MDBA should include rules in the Basin Plan that determine limits to the amount of credit that can be accumulated, and how and when States can use any credit accumulated.

A further point to note is that the MDBA in its explanatory documents⁶³ states that “the 20% buffer also applies to any cumulative exceedence from the end of the first water accounting period after July 2019, having the effect of gradually tightening over time...”. However the draft Plan contains no provisions to that effect.

12.2 Reliability of entitlements

Chapter 9 of the Draft Plan sets out what States must include in water resource plans to comply with the Basin Plan. Clause 9.09 contains an exemption that could affect State compliance with the Basin Plan. It states that water resource plans must meet the requirements of Chapter 9 in a way that will not result in a change in the reliability of water allocations in that area. However if it is not possible to meet the requirements of Chapter 9 in a way that does not preserve reliability of existing entitlements, the requirement has effect only to the extent that it does not result in a change of reliability. This clause has the potential to undermine many other provisions of the Draft Plan.

It is not clear to what extent this provision would release States from the obligations in Chapter 9 and therefore this provision creates significant uncertainty. For example it is not clear if this clause could make the requirement to provide for environmental watering in a way that is consistent with the environmental watering plan and environmental objectives (cl 9.13) void. Or more fundamentally, if a State could not preserve existing reliability while meeting the SDLs, if the clause could have the effect of weakening the requirement to meet the SDLs (cl 9.12 -9.13). 9.09(2) should be removed from the Draft Plan to remove this uncertainty and weakening of water resource plan obligations. Clause 9.09(1) is a strong enough statement of intent in relation to preserving reliability.

⁶³Murray-Darling Basin Authority, *Fact Sheet, Sustainable Diversion Limit Compliance*, November 2011, http://mdba.gov.au/files/FactSheet_SDL_Compliance_low_res_updated190112.pdf

For more information

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