

**Submission on the Senate Inquiry:
Management of the Murray Darling Basin**

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**NSW Farmers' Association
Level 25, 66 Goulburn Street
Sydney NSW 2000**

Ph: (02) 8251 1700

Fax: (02) 8251 1750

Email: *emailus@nswfarmers.com.au*

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SUMMARY OF RECOMMENDATIONS

1. *That the MDBA immediately adopt a true triple bottom line approach to planning*
2. *That the MDBA immediately conduct analysis into the ‘tipping points’ for Basin communities, and factor this into their planning processes*
3. *That the MDBA consider the full suite of environmental health indicators for the Basin system, rather than making assessments based only on end of system flow*
4. *That Basin communities are engaged in identifying key environmental assets and invited to contribute to developing the strategies to sustainably manage them into the future*
5. *That socio-economic analysis associated with the Basin Planning process note the impact of major cities in the Basin, such as Canberra City, in terms of employment and economic impacts, given that they can be considered as detached from the Basin*
6. *That the increased exposure to flood damage as a result of environmental watering is factored into the Basin Plan with every measure taken to prevent this damage. Where damage occurs, compensation must be paid to affected landholders*
7. *That the Committee consider the Water for Rivers model as a mechanism for identifying priorities and solutions and achieving stakeholder engagement in the Basin Planning process*
8. *That Federal and State/Territory Governments and the MDBA support the National Water Commission’s recommendation that industry, water and land-use planners and governments adopt a precautionary approach to CSG developments, ensuring that risks to the water resource are carefully and effectively managed*
9. *That the Committee recommend the establishment of a Register of Foreign Sovereign and Private Ownership of Australian Land; and a register of Foreign Ownership of Water Licences*
10. *That the MDBA focus on finding savings required for environmental outcomes from increasing river management efficiency and other infrastructure investment*
11. *That the Committee recommend pushing the Basin Plan implementation dates for all States out to those currently in place in Victoria*

2 INTRODUCTION

The NSW Farmers' Association ('the Association') is Australia's largest state farming organisation, representing the interests of the majority of commercial farm operations throughout the farming community in NSW. Through its commercial, policy and apolitical lobbying activities it provides a powerful and positive link between farmers, the Government and the general public.

The Association welcomes the opportunity to provide input to the Senate Standing Committee on Rural Affairs and Transport Inquiry into the Management of the Murray Darling Basin. The Basin planning process is one of the most critical issues currently facing regional NSW and the Association requests the opportunity to address the Committee to support the positions outlined in this submission.

The Association has prepared a submission to the Murray Darling Basin Authority (MDBA) on the Guide to the Proposed Basin Plan. This document outlines the Association's concerns with the current Basin Planning process and provides an indication of the type of process we believe is required moving forward. This document is included as Appendix 1 of this submission and will be referred to throughout.

2.1 Association Policy

The Association has formal policy on the Basin Plan and planning process. Association policy relating to the Basin Plan is as follows:

1. *That the Murray Darling Basin Plan must:*
 - a) *be based on a collaborative planning process that engages local expertise and the farm sector at valley scale in optimising water allocation;*
 - b) *balance social, economic and environmental outcomes; and*
 - c) *prioritise on-farm water savings and investment in infrastructure as a means of achieving these outcomes.*
2. *That the Association call on the State Government to extend the Murray Darling Basin Water Sharing Plans in NSW until 2019, thereby deferring implementation of the Basin Plan until 2019 in line with Victoria.*
3. *That the Association calls on the Murray Darling Basin Authority (MDBA) to withdraw the 'Guide To The Proposed Basin Plan' and redraft on the basis of social, economic and environmental considerations in equal measure. In particular, the Association calls on the MDBA to:*
 - a) *recalculate Sustainable Diversion Limits, in each valley, on the basis of social, economic and environmental impacts in the region; and*

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- b) *clearly define these impacts in the Proposed Plan with the ideal balance between social, economic and environmental requirements to be recommended as the proposed outcome.*

2.2 Basin Plan Position Statement

The following Position Statement was prepared by the Association June 2010 and underpins the Association's approach to the Basin Planning process.

The Association is committed to working with the MDBA and Government on water reforms that embrace triple bottom line sustainability principles. However, the Association is greatly concerned that the Murray Darling Basin Authority's approach to developing the Murray Darling Basin Plan does not embrace these principles.

The Association believes that the current planning process is flawed. A sustainable outcome for the Basin demands:

- *A collaborative planning process that engages local expertise and the farm sector at valley scale in a process of optimising water allocation;*
- *Explicit management of the social and economic impacts of any reductions of water available for agricultural production, or the security of that water;*
- *Integration of engineering works, specific watering strategies and land management practices in achieving the Basin's environmental water requirements to ensure efficient and effective use of environmental water; and*
- *Consideration of tradeoffs between environmental, economic and social needs, as required by the National Water Initiative.*

If the current legislation does not require the MDBA to plan in this way, then it is the Association's view that the legislation must be changed.

We agree that water planning within the Basin must be improved. However, the new Basin Plan must be developed collaboratively with the farming communities that depend on this water for their livelihoods. This process must include careful consideration of the economic consequences to Australia of damaging the production capacity of our most important and productive agricultural system.

The current planning methodology involves determining how much water is required for the environment and then allocating what remains between the other water users in the Basin. This process bypasses the cost benefit analysis necessary to optimise triple bottom line outcomes; only one third of the picture is visible. An informed discussion about how much water should be allocated to different environmental needs in the Basin cannot be

had without a clear understanding of social and economic consequences of removing this water from its current uses.

The Basin planning process has coincided with the worst drought in recorded history and on the basis of scientific modelling regarding future water inflows that is subject to low statistical confidence levels. All parties acknowledge that predictive science is uncertain, but whilst a precautionary approach is being taken with regard to the environmental values in the Basin the same cannot be said for social and economic values.

The current planning regime risks over-regulating environmental water to produce outcomes that do not reflect the natural environmental characteristics of the Basin; a system well adapted to long periods of dryness. Far less flexibility exists for irrigation businesses that have been founded on the basis of a secure share of regulated water supply. While environmental systems in the Basin may rebound quickly following extended dry periods, rural and regional communities once dislocated will take generations to recover or may result in a population shift to larger regional centres, coastal areas or capital cities.

Maintaining the capacity of the Basin to secure Australia's food requirements while meeting the needs of increasingly valuable food export markets must surely be a national priority. In 2005-06, 39% of the gross value of Australia's agricultural production came from the Basin with a value of \$38.5 billion (ABARE, 2008).

The consequences of the Basin planning process for food security need careful consideration. Global demand for food is increasing creating both threats and opportunities for Australia in the medium and long term. The Australian community needs to understand that policy decisions that reduce productive use of water resources affect not just farmers and farming communities, but have strategic implications that go beyond purely environmental matters.

We call on all Australians to reflect on the economic and social consequence of the Basin Plan. All due care must be taken to ensure that our farming communities and Australia's competitive advantage in global markets for food and fibre are not sacrificed for the sake of fulfilling political agendas: there is simply too much at stake to get this wrong.

3 TERMS OF REFERENCE

The comments below relate to the specific terms of reference of the inquiry and should be read in conjunction with the Association's Submission on the Guide to the Proposed Basin Plan¹.

The management of the Murray-Darling Basin, and the development and implementation of the Basin Plan, with particular reference to:

3.1 The implications for agriculture and food production and the environment

One of the Association's biggest concerns in relation to the current Basin Planning Process relates to the lack of consideration of third party impacts that will be associated with decisions which have clearly been made primarily with the environment in mind.

In the Association's view, the MDBA has been 'planning inside a bubble'. They have given thought to achieving an environmental outcome, primarily aimed at fulfilling the obligations set out within the Ramsar Convention on Wetlands and other international agreements; but they appear to have had scant regard for the potential implications that could result in terms of agriculture, food production and the environment on a broader scale.

In the absence of detailed socio economic assessment by the MDBA, the Association conducted a survey of NSW Basin community concerns regarding the planning process and the likely impacts of further cuts to irrigation water, beyond those already made as the result of the NSW Water Sharing Plan process. As can be seen in Figure 1, only 7% of respondents to the survey felt that significant reductions in water entitlements would not affect their community; while 52% said income from rates and levies would reduce, meaning less investment in infrastructure and essential services, 72% felt farm families would leave the district, 74% said the viability of irrigation infrastructure would be reduced and 63% felt the overall appeal of the district would be reduced.

These findings point to the significant implications of the Basin Planning process for agriculture and food production in the Murray Darling Basin and highlight the importance of an appropriate triple bottom line planning approach.

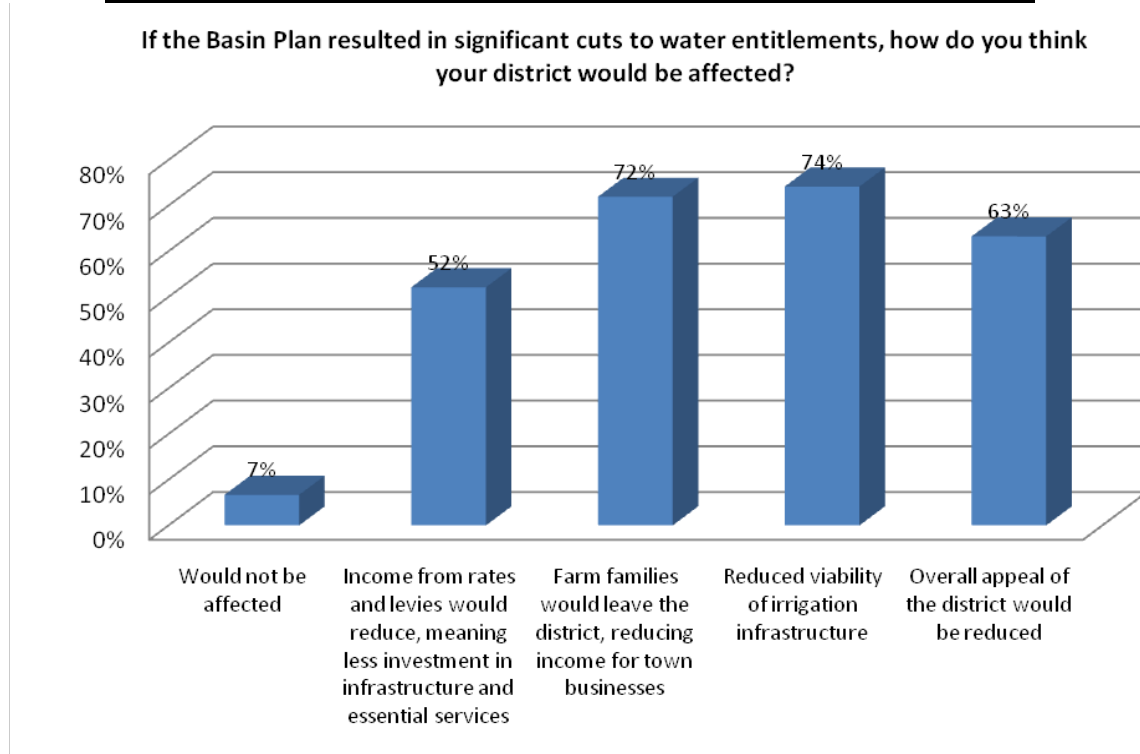
The Association is seeking a far more holistic approach to planning. It is extremely difficult to predict the potential impacts of a planning process when so little is known about what that process actually requires.

¹ Appendix 1- NSW Farmers' Association Submission on the Guide to the Proposed Basin Plan

Recommendation 1:

That the Murray Darling Basin Authority immediately adopt a true triple bottom line approach to planning.

3.1.1 Figure 1: Impacts of significant cuts to water entitlements within districts²



The Association submits that all water-dependent agricultural production systems within the Basin have a ‘tipping point’ at which a minimum amount of water is required to sustain the production system. It is the Association’s view that a key function of the planning process is to determine where these tipping points are and ensure that environmental purchases do not approach that tipping point.

Analysing these tipping points, community by community, is essential to the triple bottom line planning approach recommended above. However, it would appear that this analysis has not yet been undertaken, let alone been factored into the planning process. It is the Association’s submission that the MDBA must commence planning with a view to considering the potential impacts on agriculture and food production immediately.

² Appendix 2- NSW Farmers’ Association- MDB survey

Recommendation 2:

That the Murray Darling Basin Authority immediately conduct analysis into the ‘tipping points’ for Basin communities, and factor this into their planning processes.

Likewise, the Association also believes that there may be adverse environmental outcomes associated with the MDBA’s current planning approach (an approach clearly focused on achieving end of system flows). The Association has called on the MDBA to consider the entire range of environmental health indicators rather than simply focusing on end of system flow as the primary determinant of system health.

The Association submits that high end of system flow does not, in itself, ensure a healthy environment. And further, in situations where a lack of vegetation exists, planning outcomes that achieve a high system flow could in fact achieve negative environmental impacts by causing erosion and degradation throughout the system.

There are a wide range of environmental health indicators which must all be given consideration in terms of their potential to deliver environmental outcomes. To focus on flow alone is to consider only one small part of an extremely complex and interrelated environmental system.

Recommendation 3:

That the Murray Darling Basin Authority consider the full suite of environmental health indicators for the Basin system rather than making assessments based only on end of system flow.

The Association is also concerned about the lack of recognition of farmers as environmental managers in the system and particularly the lack of engagement that the MDBA has undertaken with regional Basin residents in terms of determining the environmental objectives of the Basin Plan. Only 6% of respondents to the Association’s survey indicated that they had been consulted by the MDBA in relation to the priority environmental assets in their region³.

³ Appendix 2- NSW Farmers’ Association- MDB survey

The Association questions why the MDBA would set about creating a list of key environmental assets in the Basin without seeking input from the local people who hold such a wealth of knowledge in regard to the local environments.

Recommendation 4:

That Basin communities are engaged in identifying key environmental assets and invited to contribute to developing the strategies to sustainably manage them into the future.

Unfortunately, it is the Association's submission that this top-down planning approach has typified the MDBA's approach to planning in general and this has led to a great deal of cynicism and mistrust in the process. We believe that significant steps must be taken immediately to address community concerns and engage communities in planning their own irrigation futures. In the Association's view, the MDBA should act as a facilitator and coordinate input between the array of valley stakeholders in this process.

Ultimately, the Association would like to see an open and transparent process that fully outlines the predicted impacts on social, economic and environmental requirements of the Basin. This is the only process that will allow a full and robust discussion of the aims and objectives of the Plan, contrasted with the potential implications.

In regards to the specific environmental requirements for each valley, the Association submits that the Proposed Basin Plan must include a detailed explanation which includes:

- A clear definition of the different environmental requirements in the valley
- Discussion of each requirement with the attachment of a priority level, i.e. what is the highest environmental priority through to the lowest
- A detailed discussion on how and when this water would be required to be delivered for each of the environmental requirements
- How much water is required to achieve these objectives?
- Are there potential alternatives that may reduce this requirement?
- What are the social and economic requirements of the valley and where are the predicted 'tipping points' beyond which the production system and the local community become threatened?
- What is the gap between current environmental water, including State and privately held water, and the current water use cap?

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- Can this gap realistically be met via infrastructure works as part of the \$5.8 billion Rural Water Use Efficiency and Infrastructure Program?
 - Where the answer is no, the MDBA must spell this out, **but decisions on tradeoffs between social, economic and environmental requirements must be left to Government**

The MDBA must also consider water infrastructure savings that can be made within the system and include suggestions. This will aid State and Federal Government discussions and help speed up the roll out of infrastructure projects.

As discussed below, the Association recommends that the Senate considers in detail successful implementation methodology employed by Water for Rivers in achieving balanced water planning outcomes at valley scale. This offers an excellent template for achieving better management of the Basin with both production and environmental benefits.

3.2 The social and economic impacts of changes proposed in the Basin

Estimates of social and economic impacts of the proposed SDLs outlined within the Guide vary tremendously between different studies. But, it is the Association's submission that there simply has not been enough work done on this matter to make any robust assessments of potential impacts.

It is the Association's sincere hope that this Inquiry will provide some significant advances in relation to potential social and economic impacts of proposed changes and the Association is eager to work with this Committee to ensure it is adequately resourced to fulfil this role.

The Association was greatly concerned by the MDBA's decision to publicise suggested job losses associated with the proposed changes of 800 jobs throughout the Basin. This was the figure that the MDBA reported to the media when the Guide was released and it was the figure reported across most of the major media reports on this issue.

The Association submits that this figure was grossly misleading and we question the MDBA's decision to publicise these figures, particularly as the report that the MDBA took this figure from acknowledged that it had used a number of assumptions in coming up with the figure and stated "actual employment effects will depend on a number of uncertainties that are not incorporated into the modelling"⁴.

⁴ ABARE-ABS Report- Environmentally sustainable diversion limits in the Murray-Darling Basin: Socioeconomic analysis, page 40.

Furthermore, the MDBA had access to a number of other reports into potential social and economic effects of reductions in productive water use that provided a far different story. The Judith Stubbs and Associates report, for example, suggested that permanent reductions in irrigation water of 25% –less than the minimum 30% recommendation of the MDBA – would be associated with around 14 000 job losses throughout the Basin⁵. That the MDBA chose to ignore all other reports and publicise a figure that was, by its own admission questionable, is a serious concern for the Association, to the extent that it brings into question the motives of the MDBA on this issue.

The Association would stress to the Committee, that in assessing any employment or economic impacts of the proposed Basin Plan, care be taken to exclude statistics for major metropolitan centres, such as Canberra, Toowoomba, Albury and Wagga Wagga from the analysis. Canberra, for example, is by far the most significant population centre in the Basin, yet socially and economically it can be considered as detached from the Basin. Any figures that include Canberra and other cities will provide a misleading picture of the real impacts of the Basin Plan.

Recommendation 5:

That socio-economic analysis associated with the Basin Planning process note the impact of major cities in the Basin, such as Canberra City, in terms of employment and economic impacts, given that they can be considered as detached from the Basin.

Another potentially major impact on social and economic factors in the Basin relates to the potential for environmental water holdings and releases to increase the risk and severity of flooding. This particular issue has raised its head during the past few weeks, with one example being the releases from Lake Eucumbene.

The Association understands that an agreement to release between 4 and 5 Gigalitres of water per day from Lake Eucumbene, regardless of downstream impacts, has had significant implications for downstream farmers and communities in the region. These releases appear to be occurring regardless of the fact that Lake Eucumbene is currently only at around 30% capacity.

The Lake Eucumbene releases provide an example of where flexibility is required within the Basin Plan framework to allow the right decisions to be made in the interests of

⁵ Judith Stubbs and Associates- Exploring the Relationship Between Community Resilience and Irrigated Agriculture in the MDB: Social and Economic Impacts of Reduced Irrigation water

communities and the environment. Clearly the best outcome in this circumstance would be to hold the water in Lake Eucumbene until the threat of flooding has receded; unfortunately this action seems to have been prevented by the policy framework and this situation must be adequately dealt with under the Basin Plan.

The Association submits that an increased risk of flood damage to productive and residential land will be an unavoidable consequence of increased environmental watering practices associated with the Basin Plan. These risks must be factored into planning decisions and mitigated wherever possible. Where flood damage does occur compensation must be paid to affected landholders.

Recommendation 6:

That the increased exposure to flood damage as a result of environmental watering is factored into the Basin Plan with every measure taken to prevent this damage. Where damage occurs, compensation must be paid to affected landholders.

In the Association's view, the best way to minimise the risks associated with the environmental watering requirements of the Basin Plan is to facilitate the planning process by providing the best available data. Fully integrated feedback loops that provide real time system information must be a central focus of the planning process.

A particularly good example of a project that has provided great improvements in real time system information is the Murumbidgee Computer Aided River Management Project which was delivered by 'Water for Rivers'⁶. In addition to improving the system information that will be critical to environmental management, the project also expects to recover up to 80 gigalitres previously written off to system losses. The Water for Rivers approach will be discussed in greater depth later in this submission.

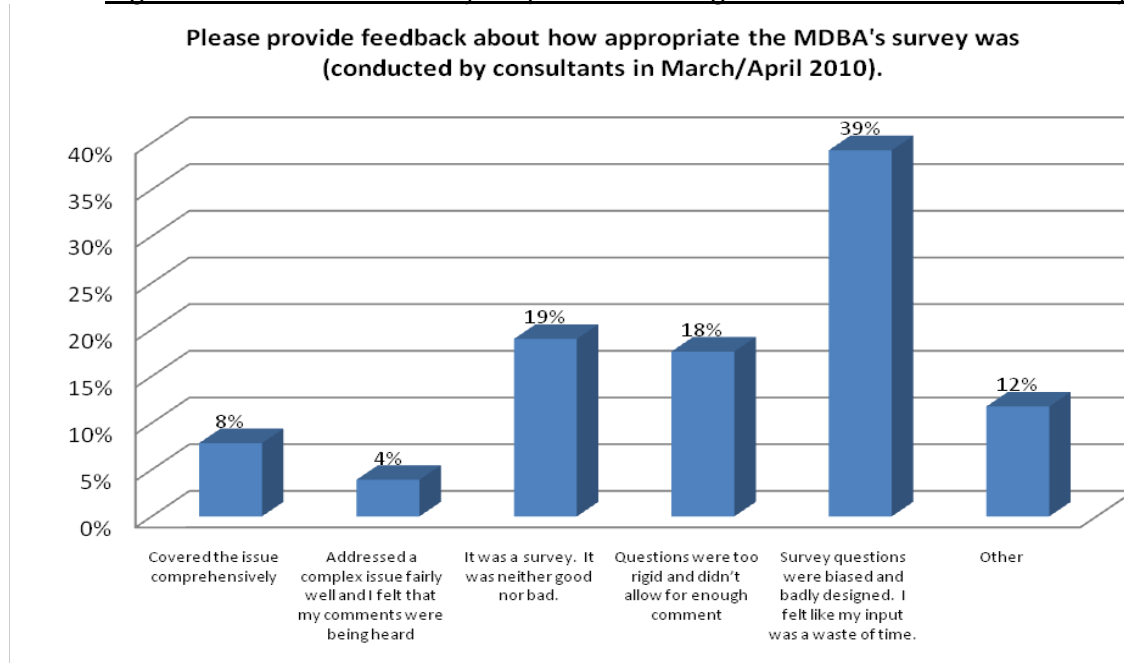
Finally, it is evident in the Guide that the MDBA has based much of its limited social and economic analysis on the Marsden Jacobs Associate Survey⁷. In this regard, the Association would direct the Committee to our own survey report, in which 57% of respondents (who had completed the Marsden survey) felt the Marsden Jacobs questions were either too rigid and didn't allow for enough comment, or were biased and badly

⁶ Water For Rivers CARM Project-
<http://www.waterforrivers.org.au/projects/current/murrumbidgee.asp>

⁷ Marsden Jacobs Associates *et al*- Economic and social profiles and impact assessments for the Murray Darling Basin: synthesis report.

designed⁸. The Association received a number of calls from members raising concern about the Marsden Jacobs survey; it was these calls that led to us including this question in our own survey.

3.2.1 Figure 2: Association Survey responses relating to the Marsden Jacobs Survey



In the Association's view, the high level of focus that the MDBA has placed on the Marsden Jacobs survey, combined with the large number of concerns raised with the Association about the survey's structure, provide further evidence of the need to dramatically expand the amount of social and economic research that is being undertaken into the impacts of the Basin Plan and the design of solutions.

3.3 The impact on sustainable productivity and on the viability of the Basin

As discussed in section 3.1 above, the Association submits that each community and every production system will have a definable 'tipping point' beyond which the productivity of the system will no longer be viable. The Association is especially concerned about the lack of information that the MDBA appears to have compiled in regards to these tipping points.

Most of the economic analysis undertaken by the MDBA to date appears very linear in nature and fails to acknowledge the complex nature of productive systems within the Basin. Every business within a rural community is dependent on different factors and it is

⁸ Appendix 2- NSW Farmers' Association- MDB survey

beholden on the MDBA to determine exactly what these factors are and where the particular sensitivities lie.

Every community is a complex network of interrelated parts and when these parts are removed the picture begins to break down. It is the Association's view that the MDBA has failed to pay much attention to the social and economic fabric of regional communities in the Basin and this has been a key failing of the Basin Planning process to this point in time.

The Association welcomes the additional social and economic analysis that is now being undertaken by the MDBA prior to the release of the Proposed Basin Plan. A clear message was delivered by rural communities following the release of the Guide that this analysis was critically lacking and it is pleasing to see that the MDBA has heard these concerns and set about rectifying them.

However, the true value of this additional social and economic work will only be known after there has been an opportunity to see how the MDBA has incorporated it into the Proposed Plan.

The lack of substantive social and economic analysis in the Guide has prevented any real discussion of what the Association considers to be the core issue at the heart of this debate – what are the localised values of the environmental objectives in the Plan and how do these compare with the costs of implementing the Plan on local communities and production systems?

It is the Association's submission that the MDBA's role is to facilitate this discussion by providing a clear and accurate representation (at local, valley and Basin scale) of the values at stake and full explanation of the rationale behind proposed solutions.

For example, the proposal to 'shepherd' environmental flows to the lower lakes in South Australia is a particularly contentious issue. There is a perception amongst some of the community, and certainly amongst some of the Association's members, that a significant driver of the present reform process is to get water to the lower lakes (at any cost) to sustain an artificial ecosystem that would arguably be better off returned to its natural state.

The Association makes no submission on the factual basis for these views; however, we see the MDBA's role as facilitating an open and transparent discussion about the relative value of environmental assets and the full costs and benefits of such critical environmental water allocation decisions. If the social, economic and environmental benefits of maintaining the lower lakes as an artificial wetland system outweigh those of returning it to its natural estuarine state then this must be rigorously demonstrated by cost benefit

analysis. In addition to quantifying the costs to upstream communities, this analysis should include formal comparison of key scenarios such as removing the barrages, moving Adelaide's water off-take further upstream and so on.

3.4 The extent to which options for more efficient water use can be found and the implications of more efficient water use, mining and gas extraction on the aquifer and its contribution to run off and water flow

First and foremost, it is important to recognise the significant efficiency gains that have been achieved and continue to be achieved by farmers throughout the Basin. There is a misconception that farmers are poor environmental managers and this is wildly inaccurate and damaging to rural communities in this debate.

One of the most significant failings of this process to date has been the lack of cooperation between State and Federal Governments in getting the \$6 Billion infrastructure fund delivered. The Association submits that there are huge potentials in this area but the process to date has limited its success.

The Association has considered a number of models for delivering water savings via infrastructure investments within the Basin. Water for Rivers (WFR) has successfully demonstrated an effective adaptive model that engages local communities in planning their own irrigation futures⁹.

In the Association's view, one of the primary advantages of WFR as a delivery mechanism is its company structure and governance model. WFR is owned by three equal shareholders being the NSW, Victorian and Federal Governments but operates like a private company, rather than a government bureaucracy. This helps to address what has been one of the primary obstructions to delivery of infrastructure funding, which is achieving timely agreement on project approval.

As a public company limited by guarantee, WFR, can operate more rapidly and strategically than a government agency.

WFR is effectively a facilitator between individual irrigators and communities and Government funding bodies. The project ideas are coming from local water users and service providers with WFR providing a facilitation and governance structure.

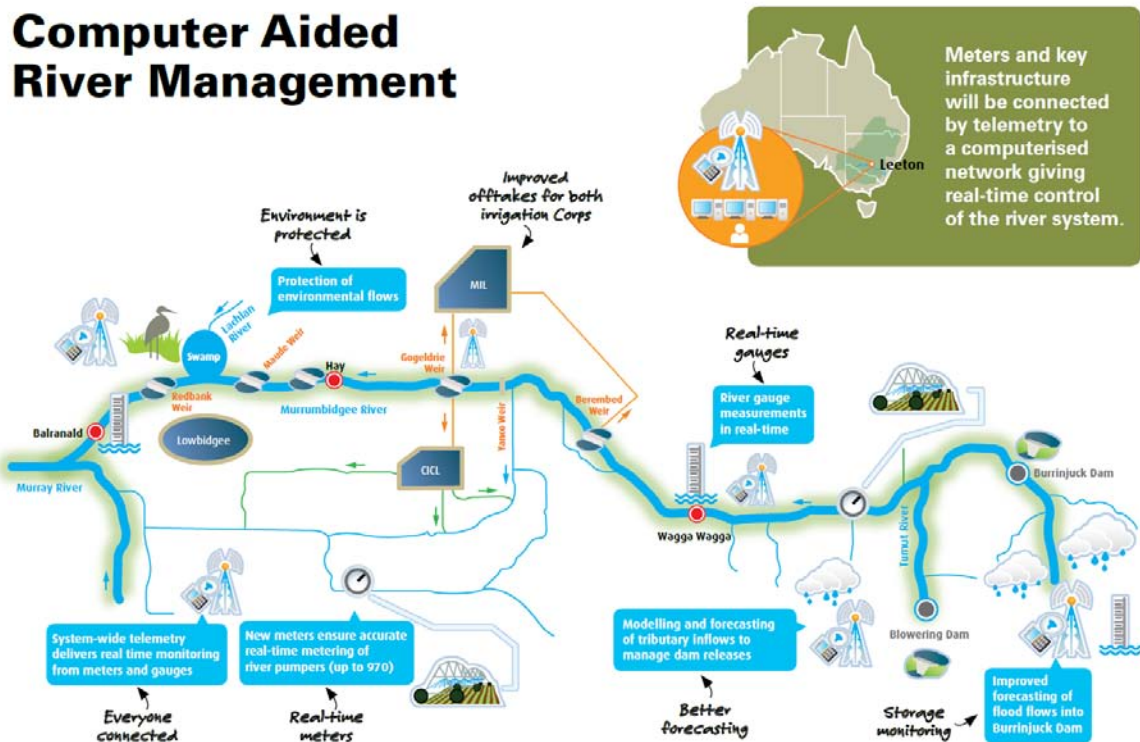
The WFR model is adaptive enough to work across any project that has the potential to deliver positive outcomes within the system. Projects have ranged in size from the

⁹ This section on Water For Rivers is taken from the Association submission on the Guide- see Appendix

Deniliquin Golf Club project that returned 0.238 gigalitres, to the Mokoan Project in Victoria that returned 50.2 gigalitres.

Computer Aided River Management is central to the WFR delivery model (see figure 1). In addition to providing water savings, investments in water information systems are integral to delivering an efficient water market.

3.4.1 Figure 3: Water for Rivers Computer Aided River Management Project¹⁰



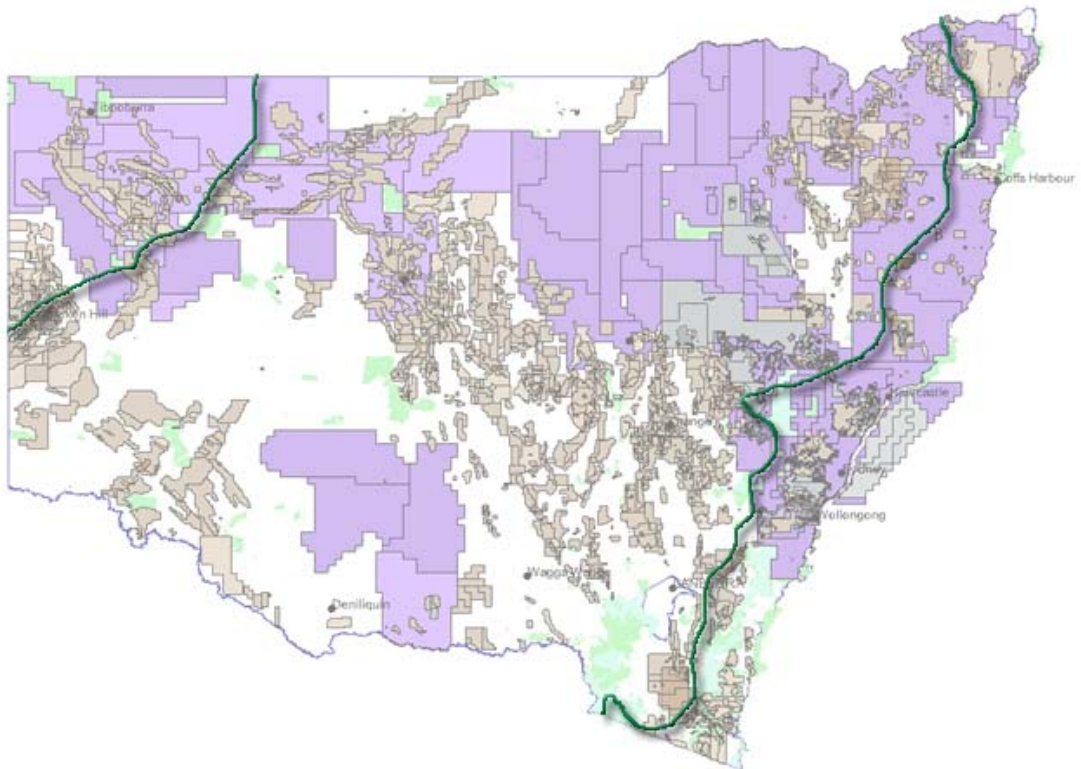
Recommendation 7:

That the Committee consider the Water for Rivers model as a mechanism for identifying priorities and solutions and achieving stakeholder engagement in the Basin Planning process.

¹⁰ From the WFR website- <http://www.waterforrivers.org.au/projects/current/murrumbidgee.asp>

The Association welcomes the Standing Committee's interest in the implications of mining and gas extraction on the aquifer and its contribution to run-off and water flow. The Association has been extremely concerned by the absence of considered debate in Murray Darling Basin planning process regarding extractive industries, in particular the impact of these industries on the quality and quantity of water within and beyond the Basin.

3.4.2 Figure 4: Title Map of Current Coal, Mineral and Petroleum Titles and Applications, Declared Wilderness Areas and National Parks in NSW, Showing Boundaries of Murray Darling Basin



More than 70% of NSW is currently under mineral and petroleum title and application, including a large portion of the Murray Darling Basin (see Figure 4 above). The Association recently released its *Framework for Sustainable Development – Planning for Agriculture and Extractive Industries*¹¹, which includes a requirement for improved aquifer protection. At a state level, Part 3A¹² of the *Environmental Planning and Assessment Act 1979* has removed the power of the NSW Office of Water to require Aquifer Interference Approvals under Section 91 of the *Water Management Act 2000*. Where extractive industries may involve interference with groundwater systems, including those within the Basin, proponents should be required to obtain an Aquifer Interference Approval under the

¹¹ NSW Farmers' Association (2010), *Framework for Sustainable Development – Planning for Agriculture and Extractive Industries*, www.nswfarmers.org.au

¹² Part 3A relates to major projects and is a mechanism by which the Minister can override normal planning approval processes.

Water Management Act 2000. This could readily be achieved by implementing the existing requirement under Section 33 of the *Water Management Act 2000* for an Aquifer Interference Regulation to be developed; and exempting Section 91 of the *Water Management Act 2000* from the scope of Part 3A of the *Environmental Planning and Assessment Act 1979*.

The Association welcomes the introduction of the National Water Commission into the debate about the coal seam gas (CSG) industry in Australia. As evidenced in Figure 4, large tracts of NSW are already covered by Petroleum Exploration Licences, with further applications in the system. Whilst the water consumed and extracted will vary from region to region, experience in Queensland has shown that massive amounts of water will be involved. The Commission highlighted the following potential risks of the CSG industry to sustainable water management:

- *“Extracting large volumes of low-quality water will impact on connected surface and groundwater systems, some of which may already be fully or overallocated, including the Great Artesian Basin and Murray-Darling Basin”*
- *Extracting large volumes of low-quality water will impact on connected surface and groundwater systems, some of which may already be fully or overallocated, including the Great Artesian Basin and Murray-Darling Basin.*
- *Impacts on other water users and the environment may occur due to the dramatic depressurisation of the coal seam, including:*
 - *changes in pressures of adjacent aquifers with consequential changes in water availability*
 - *reductions in surface water flows in connected systems*
 - *land subsidence over large areas, affecting surface water systems, ecosystems, irrigation and grazing lands.*
- *The production of large volumes of treated waste water, if released to surface water systems, could alter natural flow patterns and have significant impacts on water quality, and river and wetland health. There is an associated risk that, if the water is overly treated, 'clean water' pollution of naturally turbid systems may occur.*
- *The practice of hydraulic fracturing, or fraccing, to increase gas output, has the potential to induce connection and cross-contamination between aquifers, with impacts on groundwater quality.*
- *The reinjection of treated waste water into other aquifers has the potential to change the beneficial use characteristics of those aquifers.*

In addition to these water management risks, CSG development could also cause significant social impacts by disrupting current land-use practices and the local environment through infrastructure construction and access.”¹³

¹³ *The Coal Seam Gas and water challenge: National Water Commission position, December 2010*
<http://www.nwc.gov.au/www/html/2959-coal-seam-gas.asp?intSiteID=1>

The Commission highlighted that if not adequately managed and regulated, the CSG industry “risks having significant, long-term and adverse impacts on adjacent surface and groundwater systems”. As such, and to meet National Water Initiative objectives, the Commission has called for industry, governments and planners to adopt a precautionary and more integrated approach to managing water-related impacts of CSG development. Given the role of the Commission in auditing the effectiveness of implementation of the Murray Darling Basin Plan and associated water resource plans, adopting this recommendation is of extreme importance to the Basin planning process.

Recommendation 8:

That Federal and State/Territory Governments and the Murray Darling Basin Authority support the National Water Commission’s recommendation that industry, water and land-use planners and governments adopt a precautionary approach to CSG developments, ensuring that risks to the water resource are carefully and effectively managed.

3.5 The opportunities for producing more food by using less water with smarter farming and plant technology

The Association is aware of commentary to the effect that cuts to irrigation water will not necessarily reduce Australia’s food production capacity and competitive advantage in global food markets. ‘Smarter farming’, they say, can balance the loss of water so we should not fear cuts to irrigation water. The logic of this position is flawed on several levels.

Firstly, Australian farming in recent decades has led the world in achieving water efficiency in ‘doing more with less’ and working smarter. While the sector will continue to innovate, it is important to recognise the diminishing returns that occur when systems reach the limits of efficiency. Many farmers in the Basin have already implemented state-of-the-art water technology, have already refined their practices and minimised their water inputs. It is these farmers who potentially have most to lose from further reductions in water allocations, having acquired significant debt through investment in efficient irrigation infrastructure. Cuts to water allocations will be experienced directly by these farmers as cuts to their return on capital and will affect their ability to service loans.

Secondly, with global population projected to reach 9 billion by 2020 and increasing Asian demand for high quality food, Australia should be seeking to maximise, not limit, its food production and export revenue potential. From a competitive advantage of nations view

point, the aim of the water reforms should be to maximise the water yield of our catchments. Maximising productivity includes reducing the water intensity of each unit of food produced.

Thirdly, and perhaps most importantly, organisations like Water for Rivers have shown that 'win win' solutions - simultaneous improvements of environmental quality and productivity - are readily achievable through effective local scale planning and improved river management. In short, maximising productivity does not have to be at the expense of the environment, and *vice versa*.

Central to improved management is the installation of 'smart' technology including real time measurement, electronic ordering (of production and environmental water) and automation of control gates. Computerised river management systems dramatically reduce the wastage of water in the system by allowing river managers to precisely control deliver and allocation.

3.6 The national implications of foreign ownership

The Association is concerned by recent increases in foreign ownership of land and water resources and the potential for this to impact on Australia's food security and competitive advantage. Australian agricultural land is being targeted by farsighted foreign Governments looking to address emerging domestic food security problems and by transnational corporations and funds which have identified long term upward trends in food commodity prices.

A recent report by the Oakland Institute stated 'China intends to increase its rice production from 100 000 tonnes to 500 000 tonnes in the next five years. To achieve this it has looked abroad to other foreign countries and in 2008 purchased 101 171 hectares in Zimbabwe and investing \$800 million dollars in Mozambique to modernise agriculture for rice exports. Japan and South Korea both source around 60 per cent of food from abroad. In response to the 2008 food crisis the South Korean government announced it was formulating a national plan to facilitate foreign land acquisitions. Daewoo Logistics Corporation planned to grow half of South Korea's corn requirements on 1.3 million hectares in Madagascar, however, this plan fell through due to local civil backlash.'

Land grabs not only have an impact on a countries' land production, but also trade markets.

The Association would like to see this issue addressed immediately via the establishment of a Register of Foreign Sovereign and Private Ownership of Australian Land and also Foreign Ownership of Water Licences.

Recommendation 9:

That the Committee recommend the establishment of a Register of Foreign Sovereign and Private Ownership of Australian Land; and a register of Foreign Ownership of Water Licences.

3.7 Means to achieve sustainable diversion limits in a way that recognises production efficiency

As indicated above and in its submission to the Guide to the Basin Plan, the Association believes that the focus of the Plan should be on finding savings required for environmental outcomes from increasing river management efficiency and other infrastructure investment. Diligent and creative planning at valley scale (and investment in practical engineering based solutions) should obviate the need to cut irrigation water allocations. Savings from improved farming technology (reductions in water intensity per unit of agricultural produce) should not be allocated to environmental purposes but instead should be used to increase Australia's agricultural production capacity.

In addition to the above, serious consideration must be given to mechanisms by which environmental water holdings can be sold back to irrigators in times low environmental need.

Flexible, market based solutions could immensely improve both the environmental and productive efficiency of the system and would remove the need for the currently proposed permanently destructive cuts.

Recommendation 10:

That the MDBA focus on finding savings required for environmental outcomes from increasing river management efficiency and other infrastructure investment.

3.8 Options for all water savings including use of alternative basins

The Association would be supportive of systematic investigation of proposals to deliver additional water into the Murray Darling Basin, where the proposal can be shown to be in the interests of the Basin and the nation as a whole.

Such investigation should include creative thinking regarding the watering of key environmental assets. To provide a hypothetical example, the Koorong's hyper-salinity issues could potentially be ameliorated with flushing flows from the local catchment to the

east, without the need for allocation from the Basin. Such an approach could result in a significant environmental water savings due to the shorter transmission distances and the directness of the injection of fresh water. To extend this hypothetical example, the construction of a dedicated local storage for the Koorong could ultimately be a cheaper, more reliable and less socially destructive way of protecting this Ramsar listed wetland than taking gigalitres of water from productive irrigation districts in NSW and Victoria and flushing it out the mouth of the Murray.

Climate scenarios predict increased monsoonal events in the Northern Australia: if an effective means of delivering some of this water into the Basin is tabled can stand up to scientific and engineering scrutiny then it should be considered.

3.9 Other related matters- Disparity in implementation timeframes

The Association is greatly concerned by the current implementation timeframes for the Basin Plan in NSW and, particularly, the disparity that currently exists between the proposed implementation dates between Victoria and other Basin States. As the Committee is aware, the Basin Plan is due to commence in NSW and other States in 2014 while in Victoria it is not due to commence until 2019/20.

The Association encourages the Committee to suggest amendments to these timeframes by pushing the implementation date for all States out to those currently in place in Victoria.

In addition to providing for the fair and equitable process that this reform process demands, this outcome would also provide the time required to get this process right. The Association will not accept a process that significantly disadvantages the interests of NSW in relation to other Basin States.

Recommendation 12:

That the Committee recommend pushing the Basin Plan implementation dates for all States out to those currently in place in Victoria.

4 CONCLUSION

The Association is committed to working with the MDBA and Government on water reforms that embrace triple bottom line sustainability principles. However, the Association is greatly concerned that the MDBA's approach to developing the Murray Darling Basin Plan has not, by their own admission, embraced these principals to this point in time.

In the Association's view, the entire Basin Planning Process is balanced on a knife's-edge. The methodology so far employed by the MDBA and its proposed cuts to irrigation water have severely damaged business confidence, with social and economic impacts already being felt.

Leadership is urgently required from this Senate inquiry to reassure Basin communities that a different planning process will now be commenced. This process must be grounded at valley scale and must engage rural and regional communities in planning their farming futures.

Both the Minister for Water and the Prime Minister have affirmed the Federal Government's commitment to delivering a balanced Basin Plan. The Minister for Water has also confirmed his legal advice that the MDBA can deliver optimisation under the current legislation.

But the time for talk is over and what is needed now is a clear and defined roadmap for the reform of this process. The Association is confident that this Committee will be central in leading this reform and we offer our resources to help in any way we can.

Response to the Guide to the Proposed Murray Darling Basin Plan

December 2010

**NSW Farmers' Association
Level 25, 66 Goulburn Street
Sydney NSW 2000**

Ph: (02) 8251 1700

Fax: (02) 8251 1750

Email: *emailus@nswfarmers.com.au*

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SUMMARY OF RECOMMENDATIONS

1. *That the MDBA develops in consultation with the Basin States, the farm sector and other regional stakeholders, the methodology that it will now use for developing a balanced Basin Plan.*
2. *That the MDBA clarifies the model by which social, economic, outcomes will be compared and optimised, and how the analysis will shape the Basin Plan and SDLs.*
3. *That the MDBA considers the Water for Rivers model as a mechanism for identifying priorities and solutions and achieving stakeholder engagement.*
4. *That the MDBA clearly defines all environmental water products, be they State, Federal or Private, and explains how they will be used to meet the environmental requirements of the Plan.*
5. *That local Environmental Watering Plans, developed in collaboration with local communities, State Governments and relevant industry expertise, precede any firm decisions regarding sustainable diversion limits.*
6. *That the MDBA applies a holistic approach to achieving environmental objectives that considers the physical, hydrological, and water process options at local and valley scale so as to minimise impacts on productive water use.*
7. *That the MDBA considers a wider range environmental performance indicators and also provides indicators of social and economic performance.*
8. *That the impacts of mining and coal seam gas extraction activities on water resources be considered in the Proposed Plan, both in terms of volume and quality.*
9. *That the MDBA implements participatory planning processes at valley scale and increases transparency regarding data, modeling and the technical basis of decision making.*

2 INTRODUCTION

The NSW Farmers' Association (the Association) welcomes the opportunity to comment on the *Guide to the Proposed Murray Darling Basin Plan* (the Guide) and wishes to be closely involved in designing future steps in the planning process.

The Association is Australia's largest state farming organisation, representing the interests of the majority of commercial farm operations throughout the farming community in NSW. Through its commercial, policy and apolitical lobbying activities it provides a powerful and positive link between farmers, the Government and the general public.

As member of the National Farmers' Federation (NFF), the Association has contributed to and endorses the NFF's detailed submission on the Guide. The present submission focuses on deficiencies of the current Basin planning process and on possible solutions.

3 REQUIREMENTS OF AN EFFECTIVE PLANNING PROCESS

There is considerable concern in the NSW rural community that the Basin planning process has lost sight of its true objective, which is to run the Basin more efficiently and sustainably.

All stakeholders in Basin Plan recognise that water is a scarce and valuable resource, and that management of irrigation water and environmental water can be significantly improved. It is essential that, from this point on, the planning process builds on this common ground and does not lapse into a polarised debate about 'environment' versus 'production'.

From its outset in the mid 1990s the Council of Australian Governments (COAG) water reform process has recognised the multi-factorial nature of the Basin Planning problem. There is no silver bullet solution. On the contrary, the reforms have recognised the need, among other things, to:

- Improve water information and management systems, and hydrological science
- Separate land and water title
- Clarify the rules and conditions applying to water transfer and trade
- Establish a functioning water market (which depends on robust information, clear water title and transparent trading rules)
- Deliver irrigation efficiency and improved infrastructure
- Address environmental issues in the Basin

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- Align policy and systems across Basin jurisdictions
 - Establish coherent planning and allocation systems at valley, State and Basin scale

A Basin Plan worthy of the name would address all of these issues and deliver a coherent road map for achieving progress on all these fronts.

From the outset, COAG has recognised that the reform process must embrace the needs of all stakeholders and that triple bottom line principles must inform all decision making. In short, no single perspective – be it environmental, economic or social – can be allowed to dominate decision making.

Unfortunately, domination by a single perspective has occurred within the current Basin Planning process, with the MDBA focusing its efforts on setting environmental flow targets. This is not a criticism of the MDBA as such and, as was made clear by Chairman Mike Taylor on his resignation in December, the planning approach currently being taken by MDBA corresponds with the requirements of the legislation.

In the view of the Association, more efficient management of the Basin entails resolving fundamental jurisdiction and policy problems that historically have plagued the Basin. This is a challenge for decision makers at both Federal and State tiers of government and it is not constructive to lay the problem entirely at the door of the MDBA. A necessary step, therefore, in getting the Basin Plan back on track is establishing political consensus on how the planning process will now proceed.

3.1 The National Water Initiative

The National Water Initiative (NWI) is the key driver for reform in the Murray Darling Basin. The NWI states that:

Decisions about water management involve balancing sets of economic, environmental and other interests¹⁴.

And further:

...governments have a responsibility to ensure that water is allocated and used to achieve socially and economically beneficial outcomes in a manner that is environmentally sustainable¹⁵.

The NWI, in discussing the requirement for an intergovernmental agreement on the Murray Darling Basin, states:

¹⁴ Intergovernmental Agreement on the National Water Initiative, paragraph 2.

¹⁵ Intergovernmental Agreement on the National Water Initiative, paragraph 2.

The MDB Intergovernmental Agreement will be consistent with the objectives, principals and actions identified in this Agreement¹⁶.

Currently, there is some doubt regarding the adequacy of the Federal *Water Act 2007* to empower the required planning process.

The Productivity Commission report into Market Mechanisms for Recovering Water in the Murray Darling Basin states:

The value people place on environmental outcomes, the opportunity cost of forgone irrigation, and the role of other inputs, such as land management, must also be considered. If the Water Act 2007 precludes this approach, it should be amended...¹⁷

Notwithstanding the fitness of the *Water Act 2007* for the task at hand, a balanced outcome from the Basin Plan is in the interest of all stakeholders. In the Association's view, all stakeholders in this process are seeking the same outcome – more efficient management of the Basin that optimises social, economic and environmental outcomes.

Both the Minister for Water and the Prime Minister have affirmed the Federal Government's commitment to delivering a balanced Basin Plan. The Minister for Water has also confirmed his legal advice that the MDBA can deliver optimisation under the current legislation. On this basis, the MDBA should now develop, in consultation with the Basin States, the farm sector and other regional stakeholders, the methodology and process that it will now use in developing a balanced and practical Basin Plan.

Recommendation 1:

That the MDBA develops in consultation with the Basin States, the farm sector and other regional stakeholders, the methodology that it will now use for developing a balanced Basin Plan.

While it will be difficult, the Association believes there is no alternative to a properly resourced collaborative process that simultaneously engages Federal Government, State Government and local expertise in developing solutions at both valley and Basin scale.

At valley scale, teams would design the engineering works, computerised river management systems, environmental water allocations needed to maximise the efficiency of water use. At Basin scale, planners would connect up valley scenarios and provide

¹⁶ Intergovernmental Agreement on the National Water Initiative, paragraph 14.

¹⁷ Productivity Commission report into Market Mechanisms for Recovering Water in the Murray Darling Basin

feedback to valley planners regarding the suitability of competing scenarios to deliver sustainable net outcomes.

Organisations such as Water for Rivers have demonstrated the capacity of scenario driven, collaborative water planning processes to deliver water savings and improved environmental, social and economic outcomes at valley scale. What has so far been lacking is a Basin wide organisational and informational framework for this valley scale reform.

3.2 “Triple Bottom Line” Planning

The Association endorses the principle of Ecologically Sustainable Development (ESD).

The key insight of the United Nations Brundtland Report, which established the principle of ESD in 1987, is that environmental policy which neglects human needs is unsustainable. The Brundtland Report concluded that sustainability depends on the balanced consideration of the social, economic and environmental needs of present and future generations: *“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”*.¹⁸

The MDBA has made only cursory mention of the social and economic consequences of its proposals and appears to have conducted no systematic analysis of either the social or economic values at stake in the Basin or of the consequences of the proposed cuts to irrigation water. As is obvious to all stakeholders, the proposed cuts would have significant direct impacts on farm businesses and regional communities with negative multiplier effects throughout the value chain. This in turn affects business confidence, investment decisions and, potentially, the social and economic viability of entire districts. These structural considerations must be at the centre of the Basin Planning process, not at the periphery or as an afterthought.

The Association welcomes the additional social and economic analysis that is now being undertaken by the MDBA but questions the scale at which this work is being undertaken, the model by which social, economic and environmental outcomes will be compared and optimised, and how the analysis will shape the plan and SDLs.

As it stands, the lack of social and economic data and analysis in the Guide has prevented any substantive evaluation of the relative values of environmental assets compared to the costs to local communities and production systems and Australia’s

¹⁸ *Our Common Future, Report of the World Commission on Environment and Development*, World Commission on Environment and Development, 1987

agricultural production capacity. In short there has been no cost benefit analysis at local or Basin scale. It is hoped that this will now be forthcoming.

The MDBA is proposing major cuts to irrigation water without providing any detail as to how reforms will be achieved and how impacts will be managed at valley scale. The details of models, assumptions, and how environmental targets will be achieved have been kept from the public. Nor, it appears, has the MDBA worked openly with the Basin States. The NSW government has raised, in its submission in response to the Guide, significant concerns regarding the process, the data, the underlying planning assumptions and the failure to address social and economic impacts.¹⁹

Cuts of 3000 GL upwards are likely to cause permanent and unnecessary damage to the social and economic capacity of the Basin and will reduce Australia's competitive advantage as a major agricultural producer.

In the view of the Association, such cuts should not be contemplated until the full potential of infrastructure driven solutions has been exhausted, and costs and benefits have been diligently assessed across triple bottom line criteria.

Recommendation 2:

That the MDBA clarifies the model by which social, economic, outcomes will be compared and optimised, and how the analysis will shape the Basin Plan and SDLs.

3.3 The Association's survey

A constant theme in comments from respondents to a recent Murray Darling Basin Plan survey conducted by Association in mid 2010 was that the current planning process lacks balance and is excluding the people with most at stake.²⁰

The overwhelming majority of the 500 respondents to the Association's survey expressed concern about the likely social and economic impacts of further cuts to irrigation water.

- **74% responded that there would be reduced viability of irrigation infrastructure;**
- **72% of respondents indicated farm families would leave the district,** reducing income for town businesses; and
- **66% responded that their town would be dramatically affected,** risking the future viability of businesses and the town.

¹⁹ NSW Government Response to the Guide to the proposed Basin Plan, December 2010.

²⁰ NSW Farmers' Association Murray Darling Basin Survey- see appendix

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- **59% of respondents' families have been farming in their local region for more than 60 years**, with 30% of respondents farming for four generations or more. The impacts reported throughout the survey will therefore affect multiple generations, meaning that generations of history could be lost.
 - **76% of respondents are worried about their farm debt to equity ratio** should further reductions in water entitlements be implemented.
 - **38% of respondents said that they would exit agriculture** altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system. More than **52% of these farmers have been farming for three generations or more**. This indicates the depth of social disruption that could occur to irrigation towns/regions.
 - **31% of respondents would cut back on staff numbers**, which has long-term ramifications both within and beyond the Basin.

3.4 Enfranchising regional stakeholders

Presently farmers and regional citizens in NSW feel that their interests in the Basin planning process are being disregarded and invalidated.

Farmers value the environment and have achieved significant local improvement to riparian environments as is discussed below.

Farmers' primary interest in the Basin reforms, however, is in improving overall management of the system and increasing the reliability of supply.

Farmers want to see better water information, more responsive allocation and water ordering systems, more accuracy in the measurement and timing of flow events and a properly functioning water market.

A better managed river benefits both production and the environment - for example, computerised and automated river management systems enable both environmental flows and irrigation flows to be delivered more efficiently. In the view of the Association, the MDBA needs to do far more to recognise the validity of farmers' interests in the planning process.

The exclusive focus by the MDBA on environmental concerns disenfranchises stakeholders who are expecting their practical problems and concerns to be addressed within the planning process.

Related to this is the MDBA's failure to acknowledge the extensive work already done by Basin States, local communities and irrigators to improve the environmental condition of the Basin and to implement effective water sharing plans.

The Basin Plan is but the latest in an ongoing process of water reform in NSW. By failing to highlight past programs and achievements the MDBA has given the impression that it either is ignorant of this work, or considers it to be of little worth.

3.5 Infrastructure investments, not buybacks

To this point in time the focus of the Federal Government has been on water buybacks via the Water Entitlement Purchase Program. In the view of the Association, the focus should now shift to infrastructure works via the Rural Water Use Efficiency and Infrastructure Investment program.

Buybacks have returned significant volumes of water back to the environment, but these purchases can have negative impacts on rural communities as there is no guarantee that the money will remain in the region. The significant rain that has occurred throughout the system in recent weeks has reduced the imperative for buybacks and created an opportunity to work on an effective model for achieving water savings via strategic investments in efficiency programs.

The Association has considered a number of models for delivering water savings via infrastructure investments within the Basin. Water for Rivers (WFR) has successfully demonstrated an effective adaptive model that engages local communities in planning their own irrigation futures.

3.6 The Water for Rivers model

In the Association's view, one of the primary advantages of WFR as a delivery mechanism is its company structure and governance model. WFR is owned by three equal shareholders being the NSW, Victorian and Federal Governments but operates like a private company not a government bureaucracy. This helps to address what has been one of the primary obstructions to delivery of infrastructure funding, which is achieving timely agreement on project approval.

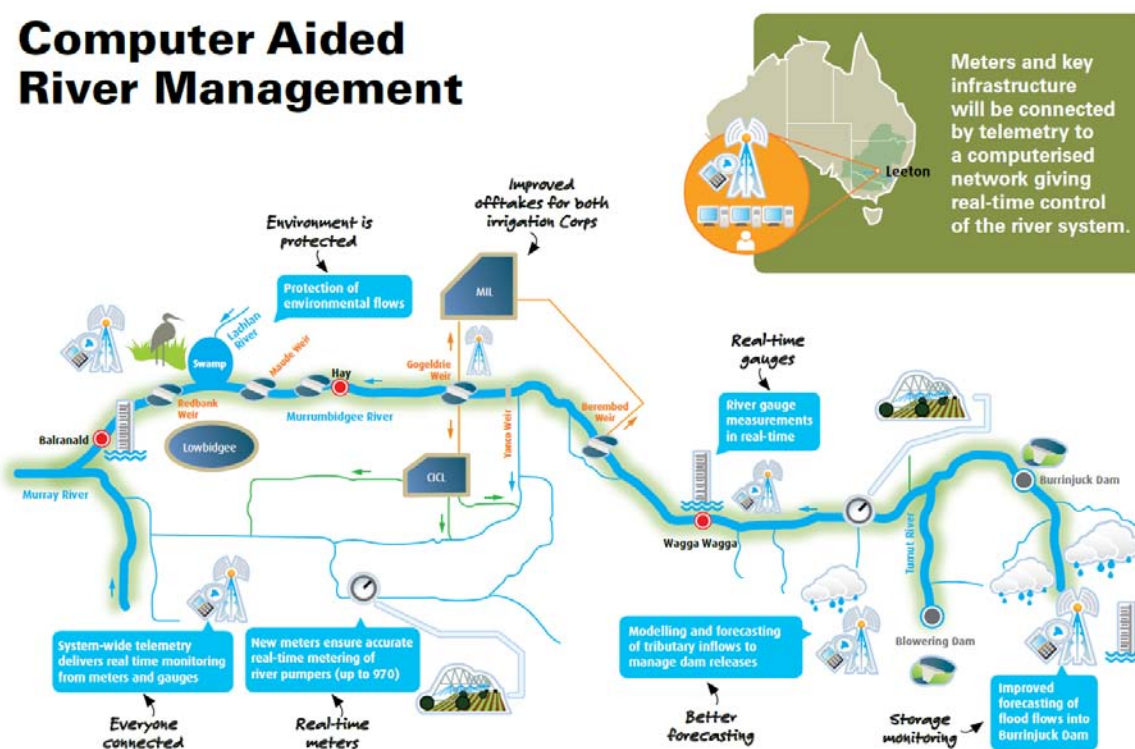
As a public company limited by guarantee, WFR, can operate more rapidly and strategically than a government agency.

WFR is effectively a facilitator between individual irrigators and communities and Government funding bodies. The project ideas are coming from local water users and service providers with WFR providing a facilitation and governance structure.

The WFR model is adaptive enough to work across any project that has the potential to deliver positive outcomes within the system. Projects have ranged in size from the Deniliquin Golf Club project that returned 0.238 gigalitres, to the Mokoan Project in Victoria that returned 50.2 gigalitres.

Computer Aided River Management is central to the WFR delivery model (see figure 1). In addition to providing water savings, investments in water information systems are integral to delivering an efficient water market.

Figure 1: Water for Rivers Computer Aided River Management Project²¹



Recommendation 3:

That the MDBA considers the Water for Rivers model as a mechanism for identifying priorities and solutions and achieving stakeholder engagement.

3.7 Disparity in implementation timeframes

The Association is greatly concerned by the current implementation timeframes for the Basin Plan in NSW and, particularly, the disparity that currently exists between the proposed implementation dates between Victoria and other Basin States. As the MDBA is

²¹ From the WFR website- <http://www.waterforrivers.org.au/projects/current/murrumbidgee.asp>

aware, the Basin Plan is due to commence in NSW and other States in 2014 while in Victoria it is not due to commence until 2019/20.

The Association encourages the MDBA to suggest amendments to these timeframes by pushing the implementation date for all States out to those currently in place in Victoria.

In addition to providing for the fair and equitable process that this reform process demands, this outcome would also provide the time required to get this process right. The Association will not accept a process that significantly disadvantages the interests of NSW in relation to other Basin States.

3.8 Environmental Water Holdings

The Association is aware that there is a significant amount of confusion about environmental water holdings, particularly which holdings will contribute towards achieving the environmental water requirements outlined in the Plan and which may not. It is the Association's submission that ALL environmental water holdings must be included in the equation, be they State, Federal or privately held.

Currently there is a real risk that double accounting is occurring within the planning process with both the MDBA and State Governments setting water aside to achieve the same environmental outcome. The NSW Government submission on the Guide references savings of over 332 gigalitres that have already been provided to the environment in addition to the NSW Water Sharing Plans. The MDBA must clarify how this water been accounted for in the Guide and what impact will this have on achieving environmental requirements?

The Association submits that a clearer means of accounting for this water should be provided by the MDBA, together with a reference to whether or not the environmental water will contribute towards achieving the environmental requirements of the Plan. I.e. the SDLs.

Recommendation 4:

That the MDBA clearly defines all environmental water products, be they State, Federal or Private and explains how they will be used to meet the environmental requirements of the Plan.

3.9 Environmental Watering Plans

As indicated above, the Association supports the objective of improving environmental conditions in the Basin but does not believe the MDBA is approaching this task in an effective manner.

The Association understands that the MDBA is not intending to develop operational Environmental Watering Plans (i.e. when, where, how and why water is to be delivered) and, on the contrary, has taken the position that it is the role of the States to develop such plans after the Basin Plan and its SDLs have been finalised.

As it stands, the extent of the MDBA's Environmental Watering Plans is to identify end-of-subsystem flow targets (measured at key indicator sites) which it has put forward as a surrogate for good environmental condition. These end-of-system/sub-system targets are then relied on to derive Sustainable Diversion Limits and cuts to productive water.

The MDBA is not engaging in valley scale environmental water planning, is not analysing the most efficient ways to achieve environmental outcomes and has not sought the views and expertise of Basin communities regarding solutions and environmental priorities.

Recommendation 5:

That local Environmental Watering Plans, developed in collaboration with local communities, State Governments and relevant industry expertise, precede any firm decisions regarding sustainable diversion limits.

While the MDBA appears to have invested considerable time and effort in identifying its key indicator sites, its scientific assumptions in this regard warrant close inspection.

A primary assumption relied upon in the preparation of the Guide is that 'shepherding' physical water through the system so as to achieve increased flow volumes at key indicator sites (and, ultimately, at the mouth of the Murray) is a necessary condition for an environmentally healthy Basin.

It seems probable, however, that there are many possible scenarios for an ecologically sustainable Basin, and not all of them would involve net increases to in-stream flows at the indicator sites.

The MDBA needs to apply a more holistic approach to achieving environmental objectives, an approach that considers the physical, hydrological, and water process options at local and valley scale that may allow the objectives to be achieved with the minimum impact on productive water use.

By locking so early into its end of system flow and indicator site based model, the MDBA has prematurely excluded solutions that minimise impacts on production.

In the view of the Association, a collaborative planning model, such as the approach taken by WFR in restructuring catchments and irrigation systems, has capacity to identify more efficient ways of achieving environmental outcomes without the need for significant cuts to allocations or further buybacks. There are well documented examples of how excellent environmental outcomes have been achieved as part of collaborative catchment scale planning and restructuring exercises. Certainly, such planning avenues should be exhausted before permanent cuts are made: cuts that will result in permanent negative social and economic impacts to Basin Communities and reduce Australia's agricultural production capacity.

It is clear, however, that the MDBA currently sees the development of such solutions as being outside its ambit.

Recommendation 6:

That the MDBA applies a holistic approach to achieving environmental objectives that considers the physical, hydrological, and water process options at local and valley scale so as to minimise impacts on productive water use.

3.10 Sustainability indicators

End of system flow has been used as the primary indicator of system health throughout the Basin. While the Association does not suggest that this is not an important indicator, there are many other indicators, which may be equally important, but are not considered in the Guide.

Tables such as those listed on page 68 of Volume 1 of the Guide provide an estimate of system health, based on end of system flow under the current situation at the 3000GL environmental requirement and at the 7600GL requirement amongst others²². The Association submits that these sorts of illustrations, particularly as they are used in the Guide are misleading.

End of system flows are but one indicator of system health. Moreover, it is possible to have high system flows in an unhealthy system, yet this has not been explained in the Guide. Further, where the MDBA presents indicators of outcomes under different volumes of water there should also be corresponding social and economic indicators that provide the reader with the opportunity to view the full sustainability picture.

Recommendation 7: That the MDBA considers a wider range environmental performance indicators and also provides indicators of social and economic performance.

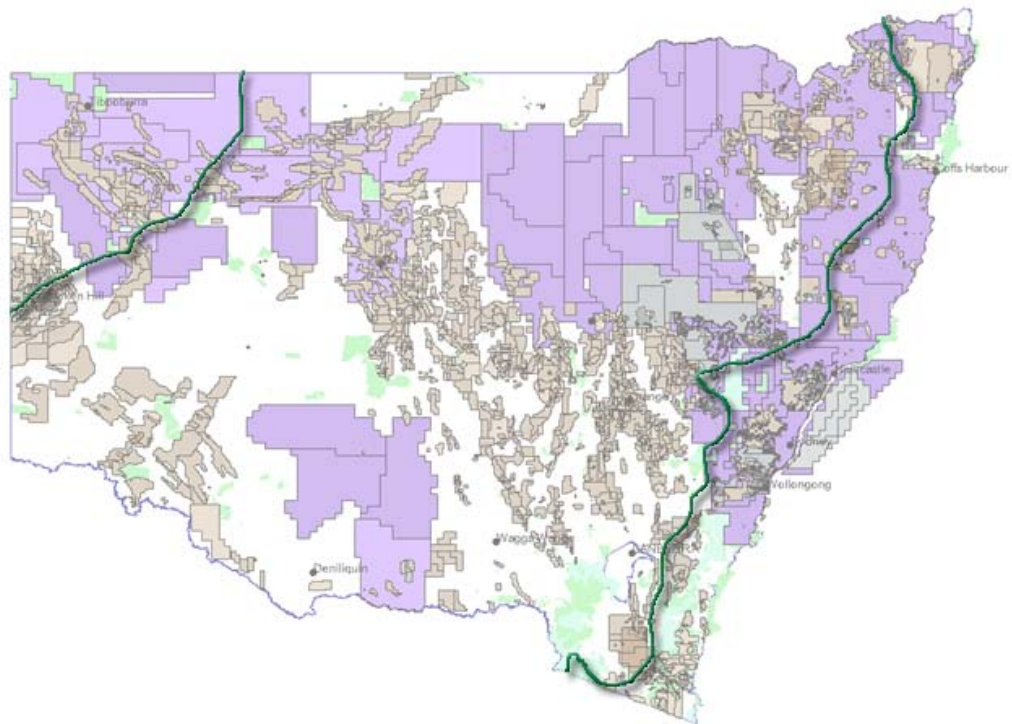
3.11 Aquifer interference

The Guide makes no reference to consumption of water and damage to aquifers resulting from mining and coal seam gas extraction activities in the Basin. Measures should be taken to quantify the impacts of these activities, and their effect on aquifers and overland flows. Given the scale and intensity of current and proposed mining and coal seam gas activities in the NSW portion of the Basin (see Figure 1 below), these activities must be considered as part of the Basin planning process.

Recommendation 8:

That the impacts of mining and coal seam gas extraction activities on water resources be considered in the Proposed Plan, both in terms of volume and quality.

Figure 1: Map of Current Coal, Mineral and Petroleum Titles and Applications, Declared Wilderness Areas and National Parks in NSW, Showing Boundaries of Murray Darling Basin



²² MDBA Guide to the Proposed Basin Plan, volume 1, page 68

3.12 Consultation

Over the past 15 years, regional communities in NSW have been through intensive water sharing planning process, catchment planning processes and numerous environmental and natural resource projects and initiatives. Not only do these communities possess considerable knowledge and expertise regarding water management and environmental reform, they have a reasonable expectation that government will actively engage and collaborate with them in identifying issues and solutions. The thousands of people who attended the MDBA presentations made it clear that they do not just want to be 'consulted': they want to be involved in the planning process every step of the way. They want to participate in designing the future of their valleys, towns and businesses. The Association therefore recommends that the MDBA gives careful consideration to its future engagement model and, as discussed above, implements participatory planning processes at valley scale. This must be supported by greatly increased transparency regarding data, modeling and the technical basis of decision making.

Recommendation 9: That the MDBA implements participatory planning processes at valley scale and increases transparency regarding data, modeling and the technical basis of decision making.

4 CONCLUSION

The Association is committed to working with the MDBA on a collaborative Basin planning process that accords with triple bottom line principles and which draws on all available expertise and technology to deliver an optimal outcome for the Basin environment and its communities.

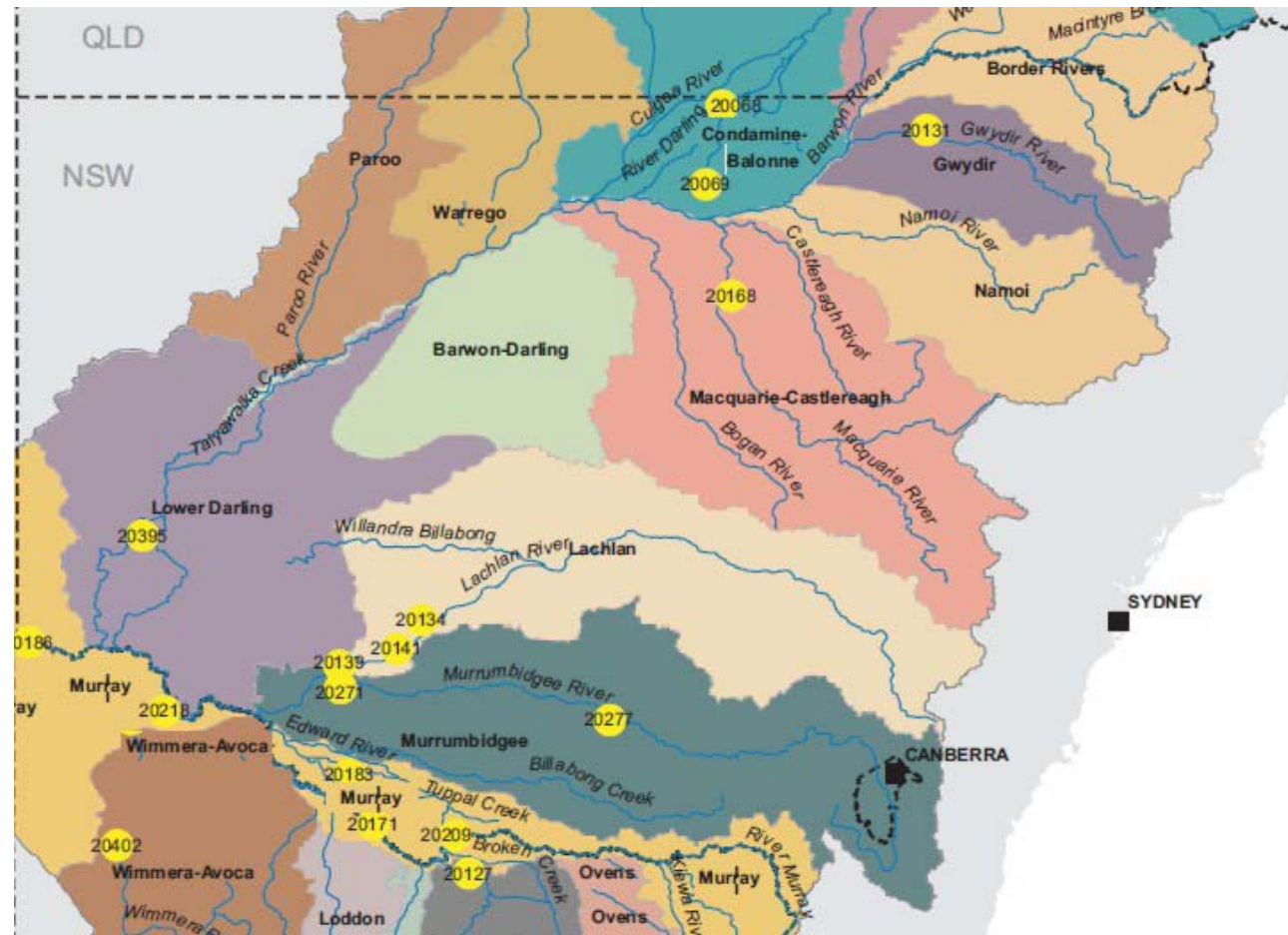
The Association believes that the MDBA should focus upon the urgent task of improving the efficiency of water management in the Basin and restoring resource security and business confidence to regional stakeholders in line with triple bottom line principles.

The methodology so far employed by the MDBA and its proposed cuts to irrigation water has severely damaged business confidence, with social and economic impacts already being felt.

Leadership is urgently required from Federal Parliament and COAG to reassure Basin communities that a different planning process will now be commenced. This process must be grounded at valley scale and must be familiar and easy for water users to understand and engage with. The Association recommends that the process successfully demonstrated by Water for Rivers provides a good template in this regard.

Both the Minister for Water and the Prime Minister have affirmed the Federal Government's commitment to delivering a balanced Basin Plan. The Minister for Water has also confirmed his legal advice that the MDBA can deliver optimisation under the current legislation. On this basis, the MDBA should now develop, in consultation with the Basin States, the farm sector and other regional stakeholders, the actual methodology and process that it will now use for developing a balanced and practical Basin Plan.

NSW Farmers' Association Murray Darling Basin Plan Survey Key Findings 5 October 2010



KEY FINDINGS ACROSS THE BASIN

SOCIO-ECONOMIC OUTCOMES

- The delay in releasing the Draft Plan coupled with an expectation of significant cuts to water entitlements is causing deep anxiety in irrigation dependent towns and regions.
- A constant theme in comments from respondents is that the current planning process lacks balance and is excluding the people with most at stake. They believe the Murray Darling Basin Authority (MDBA) is not interested in the needs of affected communities or the production values of water and is focussed exclusively on delivering environmental outcomes. Comments from survey respondents and contact details for case studies are provided in the report.
- For example, local communities have not been consulted by the MDBA about how to manage the social and economic impacts of the Plan, and how to maximise the production value of water.
- While the MBDA did conduct a survey of Basin communities earlier this year, only 12% of respondents to the NSW Farmers' Association survey reported that they had been asked to participate in the MDBA survey. Worryingly, those who did reported that survey questions were biased and that their input was a waste of time (39%); with only 8% reporting that the MDBA survey covered the issue well and that their comments would become a valuable part of the Basin Planning process.
- The overwhelming majority of respondents expressed concern about the likely social and economic impacts of the Plan:
 - **74% responded that there would be reduced viability of irrigation infrastructure;**
 - **72% of respondents indicated farm families would leave the district,** reducing income for town businesses; and
 - **66% responded that their town would be dramatically affected,** risking the future viability of businesses and the town.
- A massive **59% of respondents' families have been farming in their local region for more than 60 years,** with 30% of respondents farming for four generations or more. The impacts reported throughout the survey will therefore affect multiple generations, meaning that generations of history could be lost.

- Only 7% of respondents felt that the Plan would not impact on their district; and 11% in the case of their town.
- At this point in the planning process, there has been no attempt by the MDBA to systematically document the views and knowledge of irrigation communities as an input to the Plan.

THE FUTURE

- **76% of respondents are worried about their farm debt to equity ratio** should further reductions in water entitlements be implemented.
- Worryingly, **38% of respondents said that they would exit agriculture** altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system. More than **52% of these farmers have been farming for three generations or more.** This indicates the depth of social disruption that could occur to irrigation towns/regions.
- Another troubling finding in response to the same question is that **31% of respondents would cut back on staff numbers,** which has long-term ramifications both within and beyond the Basin.

WATER FOR PRODUCTION

- **75% of respondents indicated that they had already seen a reduction in their entitlement** as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps, with 27% of respondents having already experienced cuts to their entitlements of more than 50%.

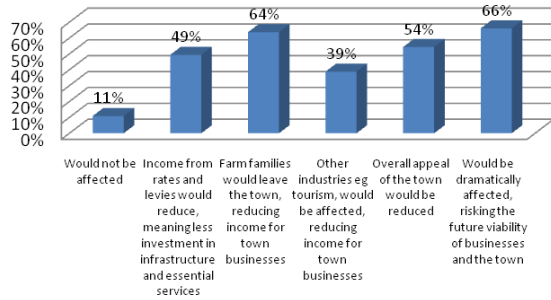
WATER FOR ENVIRONMENT

- A massive **94% of respondents had not been consulted by the MDBA about priority environmental assets in their region,** suggesting that the Authority is not using local knowledge in establishing environmental priorities.
- Awareness of key concepts used by the MDBA in the planning process is relatively low, with only 54% of respondents citing that they know what a Sustainable Diversion Limit is.

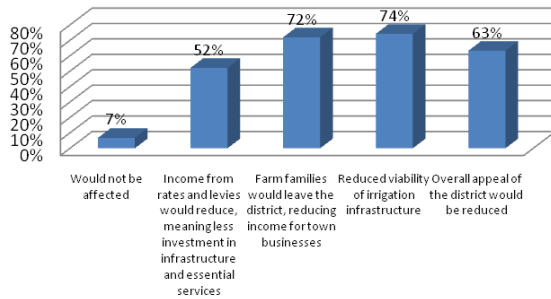
KEY FINDINGS ACROSS THE BASIN THE FUTURE

SOCIO-ECONOMIC OUTCOMES

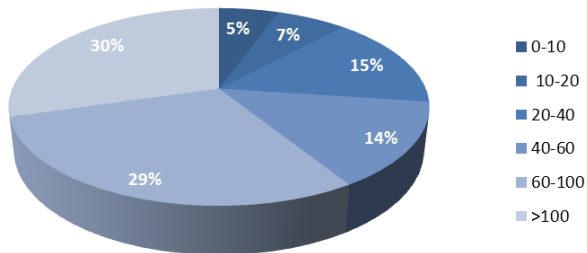
If the Basin Plan resulted in significant cuts to water entitlements, how do you think your town would be affected?



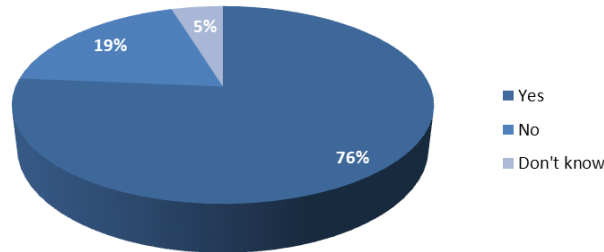
If the Basin Plan resulted in significant cuts to water entitlements, how do you think your district would be affected?



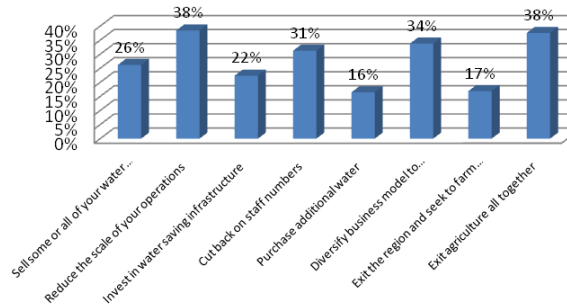
Including earlier generations, approximately how many years has your family been farming in your local region?



Are you concerned about your farm debt to equity ratio, should reductions in entitlements be implemented?

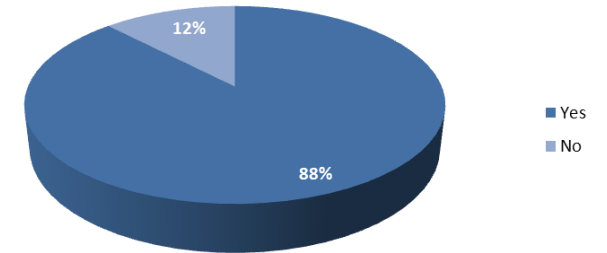


If the Basin Plan fails to deliver the water necessary to continue farming under your current system, what will you do?

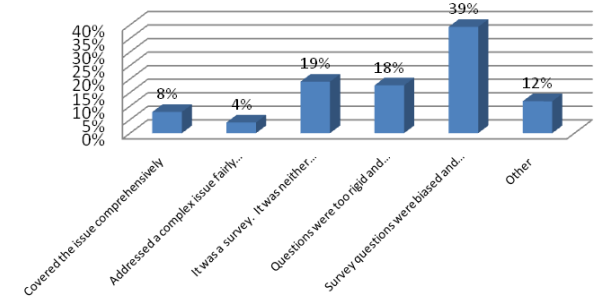


BASIN PLANNING PROCESS

Were you aware of the Basin Plan or the Basin planning process before completing this survey?

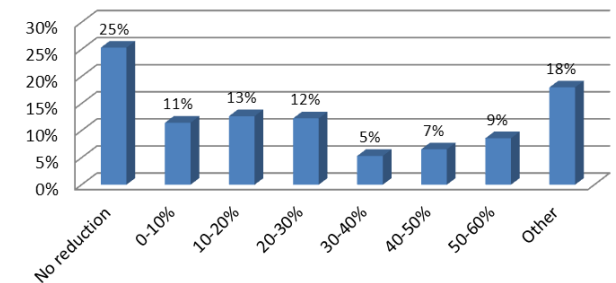


Please provide feedback about how appropriate the MDBA's survey was (conducted by consultants in March/April 2010).



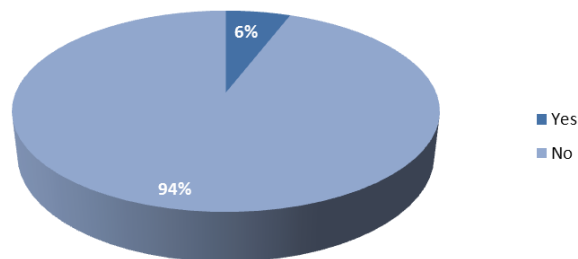
WATER FOR PRODUCTION

In percentage terms, how much has your entitlement been reduced as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps?

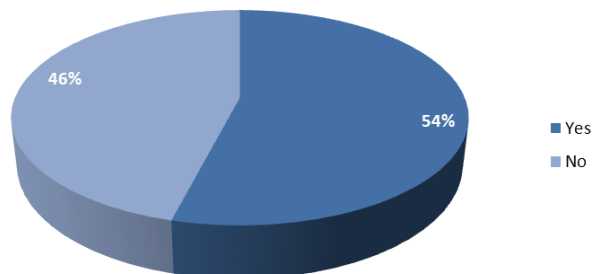


In your own words, what is your single biggest concern about the Basin Plan or the Basin

Have you been consulted by the Murray Darling Basin Authority or Government about priority environmental assets in your region?



Do you know what a Sustainable Diversion Limit is?



Murray Valley

- ☞ *“My main concern is the loss of income and the destruction of the family unit if this occurs. As they say it takes a village to raise a family and these villages will become decimated.” (Berrigan)*
- ☞ *“Our community is constantly being undermined by Govt. Policy, be it the Basin Plan, water buybacks in general or State Forests/Pastoral Stations being turned into National parks. The Southern Riverina is being hung out to dry. To be quite frank it’s like watching an old friend die. Who would invest in this area when the future is so uncertain?” (Moulamein)*

Murrumbidgee Valley

- ☞ *“There is no way we can survive and keep producing wool, beef and lamb to feed our country without water.” (Queanbeyan)*
- ☞ *“Our very existence is threatened. Our livelihoods will be destroyed. Our town will implode. Our district will be decimated.” (Griffith)*
- ☞ *“The uncertainty has taken its toll, especially when you combine it with the prolonged drought. Farmers already gamble every year on yields, prices and weather events and this will add another unnecessary worry for farmers to have. I know of many young farmers (ie. 25-40 yr olds) who have recently left or are in the process of leaving. The knowledge and efficiencies that these young people possess will be lost forever from the industry. (Griffith)*

Lower Darling Valley

- ☞ *“More balance in decision making. People in the Basin should be the decision makers, not outside bureaucracy.” (Oxley)*

Macquarie-Castlereagh Valley

- ☞ *“Communities will decline even further and become unviable. The rural community has had enough setbacks with nature, without the government destroying our industry.” (Gulargambone)*

Namoi Valley

- ☞ *“Concerned that communities will reach a tipping point where they will no longer be able to survive and services (eg health, schools, infrastructure, employment) etc will decline to a level where the town will not be able to survive.” (Gunnedah)*
- ☞ *“The unknown factor every year is my biggest concern. Not only are we working with the uncertainties of nature, but also government regulation that is changing, so it is hard to develop a plan for the future. The only option seems to be moving to another area, but selling in this market of unknown water allocation is impossible. So planning for the future is the biggest concern. Not being able to pay interest is an ever present stress.” (Wee Waa)*

Lachlan Valley

- ☞ *“The decisions made by Government don't affect them but can devastate us! There is no concept of certainty and as such I am not happy to invest anymore. The 'rules' keep changing.” (Condobolin)*

Warrego Valley

- ☞ *“These people have too much power over other people’s lives, jobs and property rights. They do not produce a social and economic plan that should make the Basin viable. It makes me sad to see the end results of these so called plans.” (Bourke/ Brewarrina)*

VALLEYS IN PROFILE- MURRUMBIDGEE

BASIN PLANNING PROCESS

- Only 9% of respondents were unaware of the Basin Plan or Basin planning process before completing the survey, a reflection of the expectation that the Murrumbidgee Valley will be one of the most significantly affected valleys in NSW.
- Despite an environmentally-skewed approach to the Basin Planning process to date, a massive 96% of respondents had not been consulted by the MDBA about priority environmental assets in their region, suggesting that the Authority is not using local knowledge in establishing environmental priorities in the Murrumbidgee.
- Awareness of key concepts within the draft Plan was second highest of all valleys, with 66% of respondents citing that they know what a Sustainable Diversion Limit is. Again, this reflects the central nature of the valley to the Basin Plan, but demonstrates that Government still has a long way to go in terms of informing all communities.

WATER

- 78% of respondents indicated that they had already seen a reduction in their entitlement as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps.
- 77% of respondents are concerned about the potential impacts of the Plan on stock and domestic water, indicating that the bulk of the farmers in the region see the Basin Plan as the 'thin edge of the wedge'.

SOCIO-ECONOMIC IMPACTS

- 56% of respondents' families have been farming in their local region for more than 60 years, with 24% of respondents farming for four generations or more. The impacts reported below will therefore affect multiple generations within the valley.
- Respondents are extremely concerned about how their town and/or district will be affected if the Basin Plan results in significant cuts to water entitlements, with:
 - 74% responding that there would be reduced viability of irrigation infrastructure;
 - 74% of respondents indicating farm families would leave the district, reducing income for town businesses; and
 - 71% responding that their town would be dramatically affected, risking the future viability of businesses and the town.
- Only 6% of respondents felt that the Plan would not impact on their district; and 10% in the case of their town.

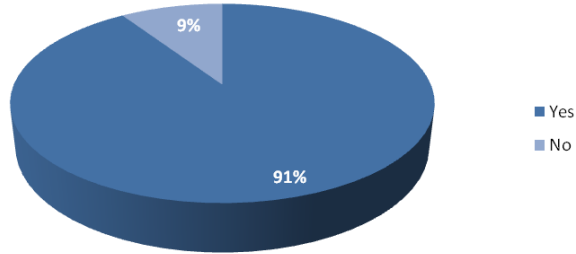
THE FUTURE

- 84% of respondents were worried about their farm debt to equity ratio should reductions in entitlements be implemented, demonstrating the potential for the Basin Plan to impact directly on the viability of farmers and communities across the Murrumbidgee.
- **Of extreme concern for all Australians is the fact that 54% of respondents said that they would exit agriculture altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system.**
- Other respondents said they would have to reduce their scale of operations (38%); one in four said they would cut back on staff numbers (26%); and one in five said they would sell all or part of their water licence (20%).

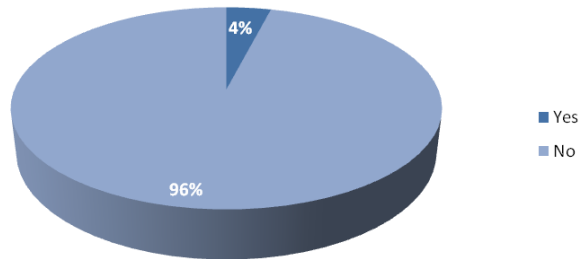
KEY FINDINGS IN THE MURRUMBIDGEE

BASIN PLANNING PROCESS

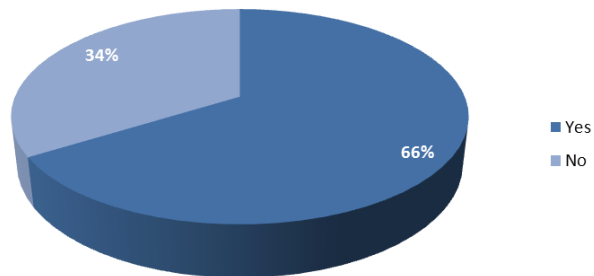
Were you aware of the Basin Plan or the Basin planning process before completing this survey?



Have you been consulted by the Murray Darling Basin Authority or Government about priority environmental assets in your region?

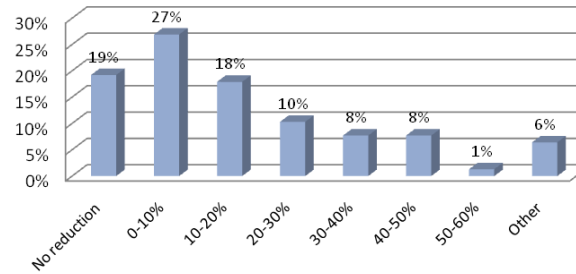


Do you know what a Sustainable Diversion Limit is?

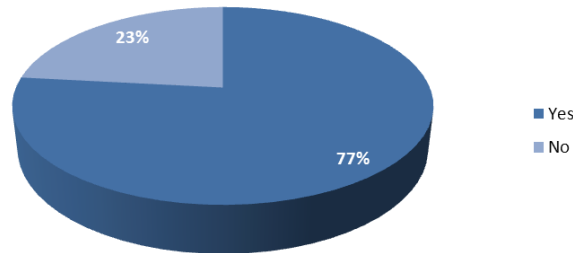


WATER

In percentage terms, how much has your entitlement been reduced as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps?

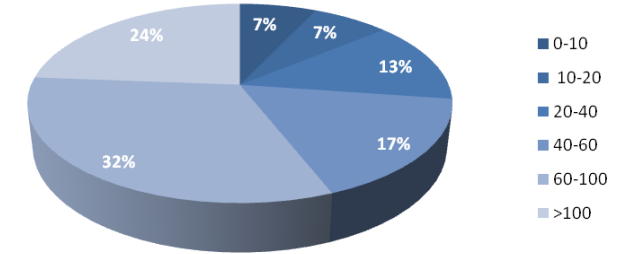


Do you have concerns about the potential impacts of the Basin Plan on Stock and Domestic Water?

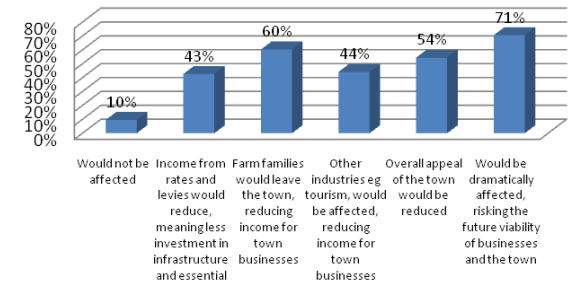


SOCIO-ECONOMIC IMPACTS

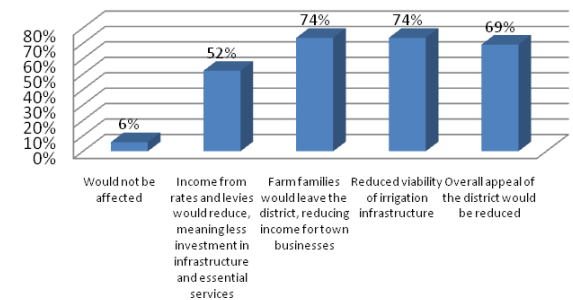
Including earlier generations, approximately how many years has your family been farming in your local region?



If the Basin Plan resulted in significant cuts to water entitlements, how do you think your town would be affected?

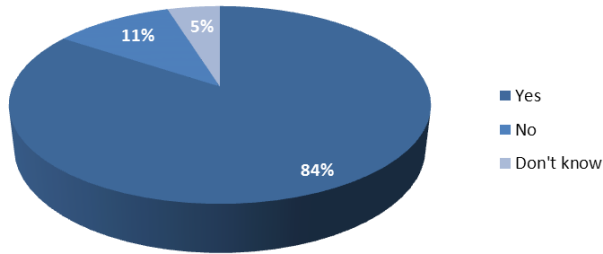


If the Basin Plan resulted in significant cuts to water entitlements, how do you think your district would be affected?

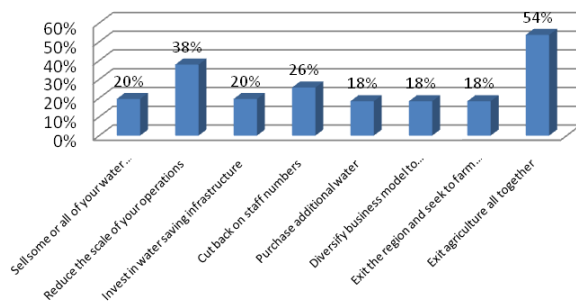


THE FUTURE

Are you concerned about your farm debt to equity ratio, should reductions in entitlements be implemented?



If the Basin Plan fails to deliver the water necessary to continue farming under your current system, what will you do?



CASE STUDY: WARD FAMILY, MURRUMBIDGEE VALLEY

John and Dorothy Ward have two properties in the Murrumbidgee where they farm cattle and grow prunes and grapes. John's family has been farming in the Griffith and Coleambally regions for over three generations. The family started out farming sheep and cattle, before diversifying into dryland crops in the 1960s; and irrigated crops in the early 1980s.

John's business was focused on rice production until reduced water entitlements and drought forced him to rethink his farming mix five years ago. Since then John has undertaken a massive restructure, investing \$300,000 in the expansion of his prune farm; and bringing one of his four daughters into the business.

"I restructured to stay viable in the wake of cut backs from previous water planning programs," John says. "My business is now set up to take full advantage of the entitlement I have. Any reduction from here threatens my entire investment, and could force me to rethink my future on the land," he says.

"My youngest daughter, Kayleen who's 27 years old, has always been passionate about agriculture - she had to convince me to let her buy into our prune farming enterprise! We've invested a lot, so it's worrying to think we could lose the lot through the Basin Plan," John says.

John and Dorothy Ward on the farm with their grandson Charlie and four daughters Kayleen, Janet, Allison and

"If young people turn their backs on agriculture, they won't return. The future of Australia's food production is at stake here," John says.

John also has grave concerns the Basin Plan could decimate his region.

"There's no question the Griffith region is dependent on irrigated agriculture and horticulture. No business is immune from the impact of reduced water," John says.

"My three other daughters live in the region - I'm worried the Basin Plan could take away their jobs," he says.

John acknowledges the importance of protecting the environment, but believes there has been a severe lack of discussion about how the community would cope under any reductions in productive water use.

"We're emerging from the worst drought in recorded history where locals suffered terribly. The Basin Plan has the potential to echo the effects of the drought - on a permanent basis. I'm worried this could be too much to bear for many farmers," John says.

John is a passionate advocate for mental health support, and helped set up the 'Farm Shed' during the drought. He worries the Basin Plan could put even more demand on mental health services in the future.

"The social impacts of the Plan can't be ignored. It's time for the Federal Government to take this issue seriously, and work with communities to ensure a balanced outcome," John says.

① John Ward, Ph: 0428 969 475



VALLEYS IN PROFILE- MURRAY

BASIN PLANNING PROCESS

- Only 6% of respondents were unaware of the Basin Plan or Basin planning process before completing the survey, a reflection of the expectation that the Murray Valley will be one of the most significantly affected valleys in NSW.
- Despite an environmentally-skewed approach to the Basin Planning process to date, a massive 91% of respondents had not been consulted by the MDBA about priority environmental assets in their region, suggesting that the Authority is not using local knowledge in establishing environmental priorities in the Murray.
- Awareness of key concepts within the draft Plan was considerably higher in the Murray than in any other valley, with 82% of respondents citing that they know what a Sustainable Diversion Limit is. Again, this reflects the central nature of the valley to the Basin Plan and planning process.

WATER

- A massive 86% of respondents indicated that they had already seen a reduction in their entitlement as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps.
- 82% of respondents are concerned about the potential impacts of the Plan on stock and domestic water, the highest level of concern of all valleys surveyed.

SOCIO-ECONOMIC IMPACTS

- A massive 62% of respondents' families have been farming in their local region for more than 60 years, with 24% of respondents farming for four generations or more. The impacts reported below will therefore affect multiple generations within the Murray.
- Respondents are extremely concerned about how their town and/or district will be affected if the Basin Plan results in significant cuts to water entitlements, with:
 - 91% responding that there would be reduced viability of irrigation infrastructure (the highest response of all valleys surveyed);
 - 89% of respondents indicating farm families would leave the district, reducing income for town businesses (again the highest response of all valleys surveyed); and
 - 86% responding that their town would be dramatically affected, risking the future viability of businesses and the town (again the highest response of all valleys surveyed).
- Only 2% of respondents felt that the Plan would not impact on their district; and 3% in the case of their town – a clear indication of the potentially devastating socio-economic implications for communities in the Murray.

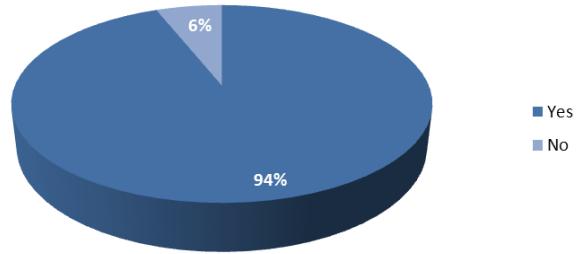
THE FUTURE

- 88% of respondents were worried about their farm debt to equity ratio should reductions in entitlements be implemented. This was the highest level of concern reported in any valley surveyed.
- Worryingly, 37% of respondents said that they would exit agriculture altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system. Others reported that they would have to reduce their scale of operations (35%); diversify their business model (33%); and/or cut back on staff (29%).

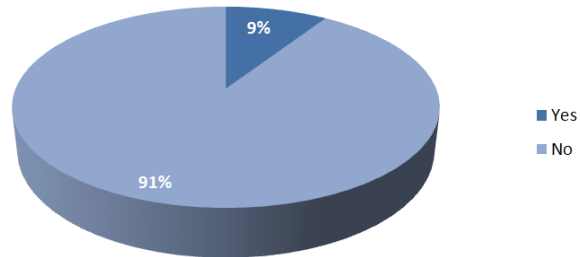
KEY FINDINGS IN THE MURRAY

BASIN PLANNING PROCESS

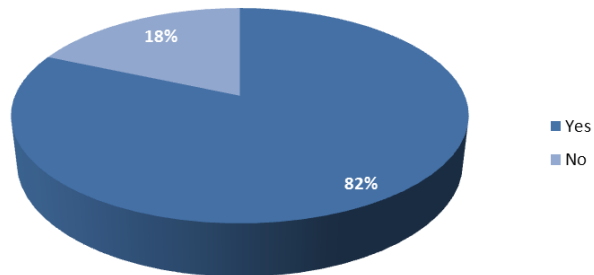
Were you aware of the Basin Plan or the Basin planning process before completing this survey?



Have you been consulted by the Murray Darling Basin Authority or Government about priority environmental assets in your region?

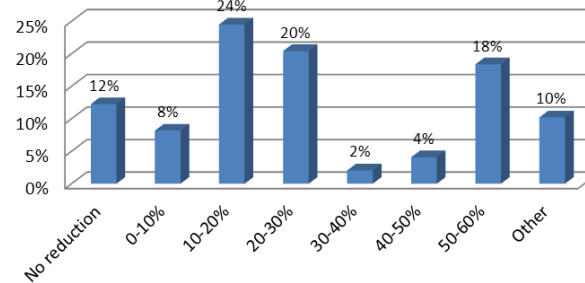


Do you know what a Sustainable Diversion Limit is?

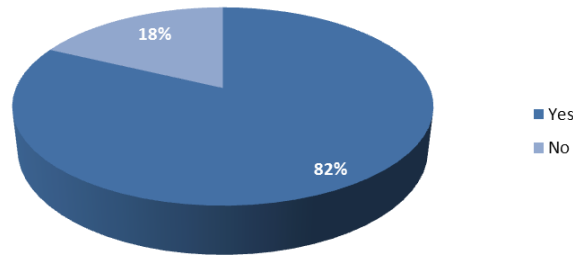


WATER

In percentage terms, how much has your entitlement been reduced as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps?

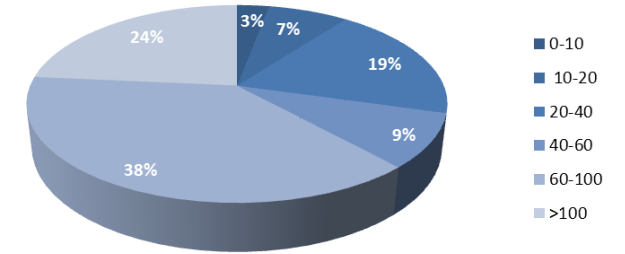


Do you have concerns about the potential impact of the Basin Plan on Stock and Domestic Water?

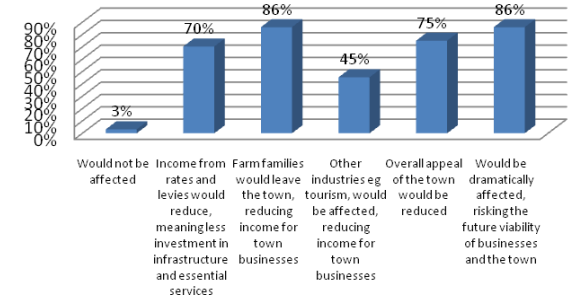


SOCIO-ECONOMIC IMPACTS

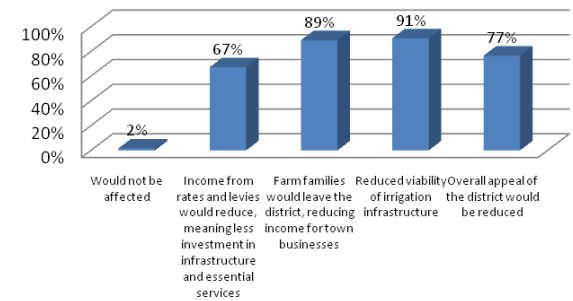
Including earlier generations, approximately how many years has your family been farming in your local region?



If the Basin Plan resulted in significant cuts to water entitlements, how do you think your town would be affected?

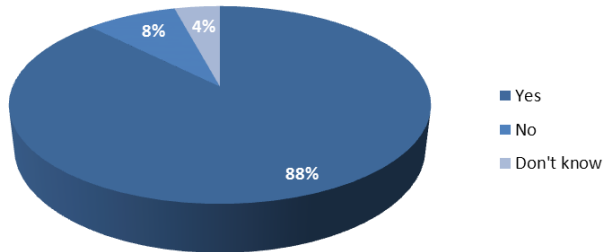


If the Basin Plan resulted in significant cuts to water entitlements, how do you think your district would be affected?

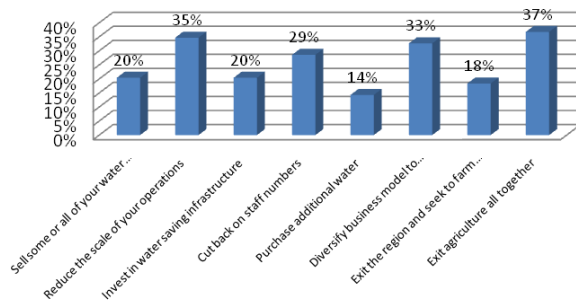


THE FUTURE

Are you concerned about your farm debt to equity ratio, should reductions in entitlements be implemented?



If the Basin Plan fails to deliver the water necessary to continue farming under your current system, what will you do?



CASE STUDY: MOAR FAMILY, MURRAY VALLEY

Geoff Moar is a fourth generation farmer in the Murrumbidgee Valley who runs a mixed farming, cropping and horticultural enterprise in the Oaklands region, comprised of 6000 acres of dryland cereal crops and 600-700 acres of irrigated potatoes. With a family history that focussed on sheep and cropping, Geoff stepped out alone and began his business with 6 acres of irrigated potatoes in 1967. He now employs four full time staff and four casuals.

A member of the Corugan Private Irrigation District Geoff says his biggest concern about the Basin Plan is that it could make the scheme unviable.

“On our farm alone we have invested close to \$2.5 million in irrigation and irrigation dependent infrastructure, if our irrigation scheme fails this investment becomes redundant” Mr Moar said.

Geoff believes that the Basin Plan has the potential to significantly reduce land values in his region. “We are at a crossroads, the last decade of drought has caused untold damage in our community but people are hanging on, the Basin Plan has the potential to be the last straw for many farmers, the tolerance levels just aren’t there anymore.”

“Large reductions in productive water in our region will cause people to leave the district; it is as simple as that,” Geoff says.

“Our private irrigation scheme is dependent on a large number of users. As these users sell their water the costs increase for those remaining to the point that it may become unviable to deliver water to some users. At this point stranded assets become a major problem and the whole system begins to break down.”

“The Murrumbidgee Valley is one of the most exposed areas in the Murray Darling Basin due to the extent of irrigation that exists. Towns throughout the region are dependent on water for their survival: if the Basin Plan focuses too closely on the environment and ignores the impacts on communities viable regional towns will shut down.”

The whole of the horticultural industry in this area is under threat from the Basin Plan. People in the city who don’t understand the issue have to realise that this will impact on them as well. The Basin Plan will lead to increased grocery prices for all Australians. Mr Moar said.



Geoff and Lesley Moar on the farm with their granddaughter Emily, daughter-in-law Tarin and son Shane

① Geoff Moar, Ph: 0412 193 799

CASE STUDY: HOLM FAMILY, MURRAY VALLEY

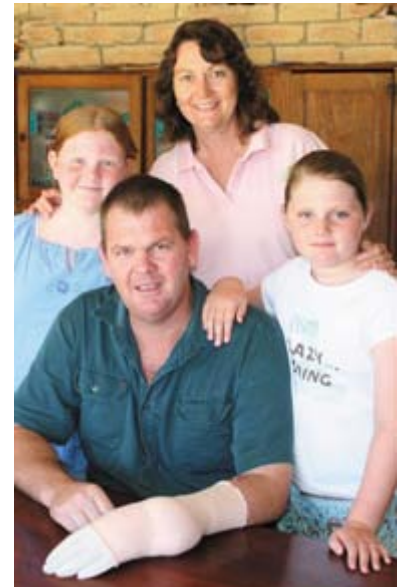
Malcolm and Jenny Holm, and their children Ellena and Talei are dairy farmers from the Blighty area in the Murray Valley. Malcolm is a fourth generation dairy farmer, employing three full-time staff and seven part-time staff, plus themselves ,in a business that is heavily reliant on irrigation.

Malcolm is very concerned about the Basin Plan and the impact that it could have on his farm, his community and his industry. “The Plan just doesn’t seem to be focussed on whole-of-Basin outcomes and I am really worried that it will be small communities like mine that will suffer” Malcolm said.

“There also seems to be a lack of strategic planning where water is being purchased, which isn’t good for communities or the environment” Malcolm said. “There is a focus on water volumes, which has the greatest impact on food production. But what Government doesn’t seem to realise is that water volume is one of about 20 key river health indicators”.

Like a lot of farmers in his community, Malcolm is unsure what the future holds. “The devil of this Plan will be in the detail, and for a variety of reasons, we haven’t seen that detail yet” Malcolm said. “My fear is that the Plan will force the region into a permanent, man-made drought”.

One of Malcolm’s frustrations with the Basin Planning process is that it has not been well communicated to his city cousins. “People in the city like the idea of a healthy environment, but I’m worried that they don’t understand the people impacts of current policies. When the Basin Plan does in fact impact on people in the city, it will be too late for us. They need to start thinking about it now, not when they see a change in prices at the check-out”.



Malcolm and Jenny Holm with daughters Ellena and Talei.



Malcolm is worried that the impacts of the Plan will be felt right across his industry. “The Basin Plan is already undermining confidence” Malcolm said. “Farmers will give up and move elsewhere. I have children. They don’t want their friends to leave”.

① Malcolm Holm, Ph: 0418 662 180

VALLEYS IN PROFILE - NAMOI

BASIN PLANNING PROCESS

- Only 3% of respondents were unaware of the Basin Plan or Basin planning process before completing the survey, representing the highest level of awareness of all valleys surveyed.
- Despite an environmentally-skewed approach to the Basin Planning process to date, a massive 97% of respondents had not been consulted by the MDBA about priority environmental assets in their region, suggesting that the Authority is not using local knowledge in establishing environmental priorities in the Namoi.
- Despite strong awareness of the planning process, awareness of key concepts within the draft Plan was relatively low, with only 42% citing that they know what a Sustainable Diversion Limit is. This is further evidence of the absence of detail in the planning process to date.

WATER

- 74% of respondents indicated that they had already seen a reduction in their entitlement as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps, with a staggering one in three (35%) indicating that they had experienced cuts of more than 60%.
- 66% of respondents are concerned about the potential impacts of the Plan on stock and domestic water, indicating that the bulk of the farmers in the Namoi see the Basin Plan as the 'thin edge of the wedge'.

SOCIO-ECONOMIC IMPACTS

- 39% of respondents' families have been farming in their local region for more than 60 years, with 21% of respondents farming for four generations or more. The impacts reported below will therefore affect multiple generations within the valley.
- Respondents are extremely concerned about how their town and/or district will be affected if the Basin Plan results in significant cuts to water entitlements, with:
 - 84% responding that there would be reduced viability of irrigation infrastructure (higher than for most other valleys);
 - 71% responding that their town would be dramatically affected, risking the future viability of businesses and the town; and
 - 69% of respondents indicating farm families would leave the district, reducing income for town businesses.
- Only 2% of respondents felt that the Plan would not impact on their district; and 8% in the case of their town, a reflection of the massive community impacts predicted by farmers in the Namoi.

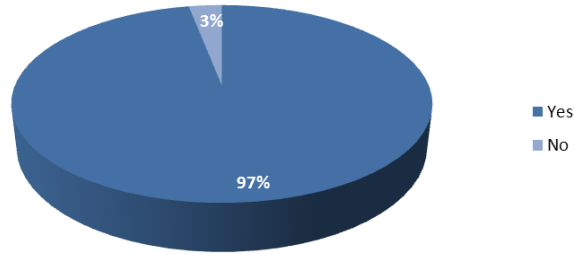
THE FUTURE

- 78% of respondents were worried about their farm debt to equity ratio should reductions in entitlements be implemented, demonstrating the potential for the Basin Plan to impact directly on the viability of farmers and communities across the Namoi.
- Worryingly, 23% of respondents said that they would exit agriculture altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system.
- Other respondents said they would have to diversify their business model (49%); reduce their scale of operations (37%); and/or cut back on staff (31%).

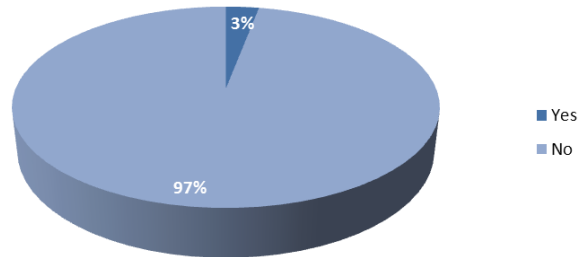
KEY FINDINGS IN THE NAMOI

BASIN PLANNING PROCESS

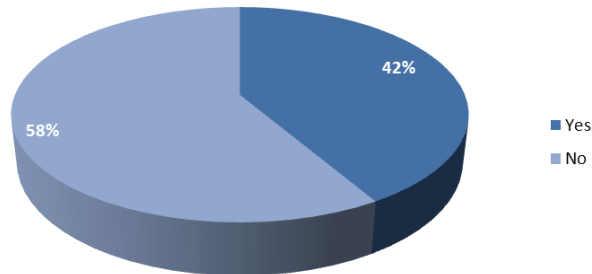
Were you aware of the Basin Plan or the Basin planning process before completing this survey?



Have you been consulted by the Murray Darling Basin Authority or Government about priority environmental assets in your region?

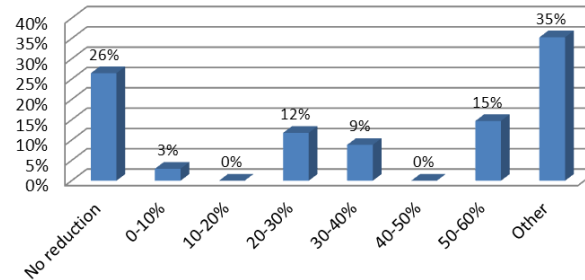


Do you know what a Sustainable Diversion Limit is?

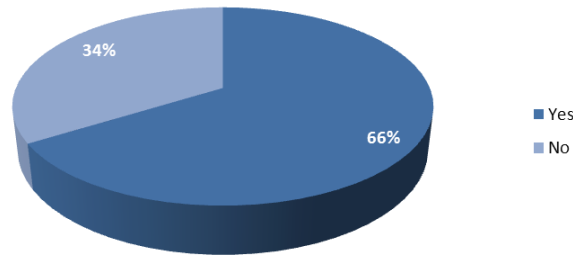


WATER

In percentage terms, how much has your entitlement been reduced as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps?

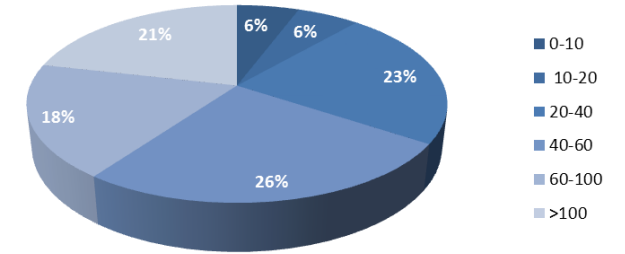


Do you have concerns about the potential impacts of the Basin Plan on Stock and Domestic Water?

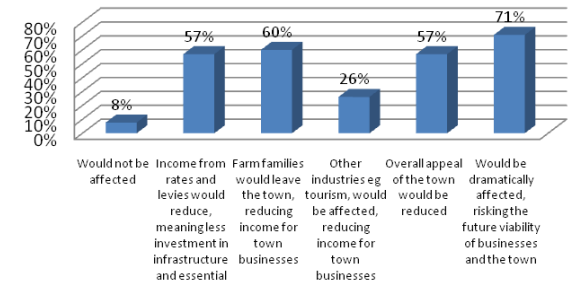


SOCIO-ECONOMIC IMPACTS

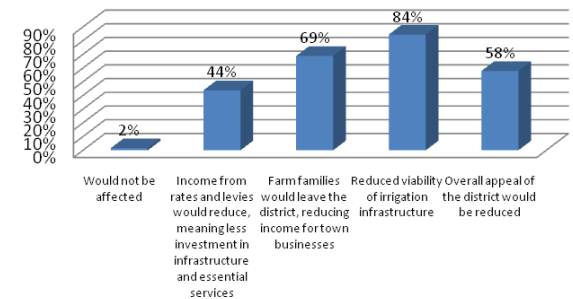
Including earlier generations, approximately how many years has your family been farming in your local region?



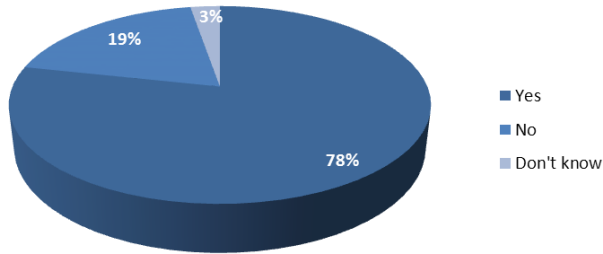
If the Basin Plan resulted in significant cuts to water entitlements, how do you think your town would be affected?



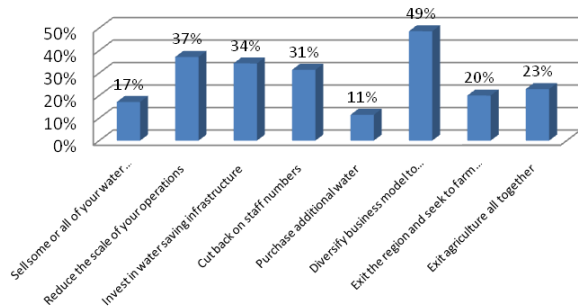
If the Basin Plan resulted in significant cuts to water entitlements, how do you think your district would be affected?



Are you concerned about your farm debt to equity ratio, should reductions in entitlements be implemented?



If the Basin Plan fails to deliver the water necessary to continue farming under your current system, what will you do?



CASE STUDY: HAMBLIN FAMILY, NAMOI VALLEY

Mark and Glenys Hamblin, and their children Mitchell (8) and Claudia (5) run an 1100ha irrigated cotton and grain farm at Emerald Hill, north-west of Gunnedah. Mark is a second generation farmer, employing three permanent staff, and an additional four staff during harvest. Mark says “You would need to have your head in the sand not to realise how big an impact the Murray Darling Basin Plan is going to have”.



Glenys and Mark Hamblin with daughter Claudia (5) and son Mitchell (8)

The Hamblin family’s farm is 85% reliant on irrigation. The family has already made massive investments in water infrastructure to achieve maximum irrigation efficiency with their precious water resources. As a result of their efforts in this area, 2/3 of their enterprise now utilises an overhead lateral system for irrigation, which is far more efficient than the traditional method of running water down rows in between crops. The Hamblins are already dealing with a 78% cut to groundwater allocations, meaning that any further cuts brought about as a result of the Basin Plan could be devastating.

“Further cuts to groundwater would mean that we could no longer invest in irrigation infrastructure to enable us to continue using water at the highest levels of efficiency” Mark said. “We would have to dramatically reduce the amount of irrigated crop. In fact, we’d probably have to halve it”.

The Hamblins are frustrated that farmers across the Basin have been “left hanging”, with the release date of the draft Plan continually delayed, resulting in uncertainty across the Basin. Whilst the detail of the Plan has still not been released, the Hamblins know that the Sustainable Diversion Limits recommended in the Plan could have massive impacts, not only on their farm, but also their community and their industry.

“Farmers are going to have less money to spend in town, meaning that agricultural and machinery businesses that rely on us are going to hurt too” Mark said.

Whilst the impacts of the Plan will certainly be felt across the cotton and irrigated grain industries, Mark is also concerned about the feedlot and chicken industries that are reliant on grain for feed. “What people in the cities need to realise is that reduced grain production will drive up input prices for meat-producers, which could drive up poultry and meat prices in the supermarket, meaning that consumers outside the Basin could also be affected by the Basin Plan.

① Mark Hamblin – Ph: 0429 302 749

VALLEYS IN PROFILE- GWYDIR

BASIN PLANNING PROCESS

- 19% of respondents were unaware of the Basin Plan or Basin planning process before completing the survey, which demonstrates the ineffective community engagement process to date throughout the Gwydir region. With 'valleys' being introduced as new geographic boundaries in NSW, it appears that some farmers are not aware that they are within the boundary of the Basin, as defined by the Murray Darling Basin Authority.
- Despite an environmentally-skewed approach to the Basin Planning process to date, a massive 97% of respondents had not been consulted by the MDBA about priority environmental assets in their region, suggesting that the Authority is not using local knowledge in establishing environmental priorities in the Gwydir.
- Awareness of key concepts within the draft Plan was the equal lowest of any valley surveyed, with only 32% of respondents citing that they know what a Sustainable Diversion Limit is.

WATER

- A staggering 92% of respondents indicated that they had already seen a reduction in their entitlement as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps, with 31% of respondents indicating that they had experienced a cut of more than 60%.
- 52% of respondents are concerned about the potential impacts of the Plan on stock and domestic water.

SOCIO-ECONOMIC IMPACTS

- A massive 58% of respondents' families have been farming in their local region for more than 60 years, with 46% of respondents farming for four generations or more. The impacts reported below will therefore affect multiple generations within the Gwydir.
- Respondents are very concerned about how their town and/or district will be affected if the Basin Plan results in significant cuts to water entitlements, with:
 - 68% responding that there would be reduced viability of irrigation infrastructure;
 - 68% of respondents indicating farm families would leave the district, reducing income for town businesses (again much higher than in other valleys); and
 - 57% responding that the overall appeal of the district would be reduced.
- Only 4% of respondents felt that the Plan would not impact on their district; and 21% in the case of their town.

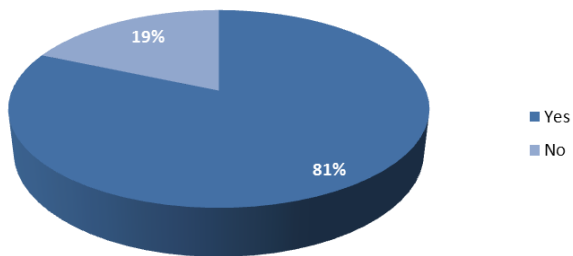
THE FUTURE

- 59% of respondents were worried about their farm debt to equity ratio should reductions in entitlements be implemented, demonstrating the potential for the Basin Plan to impact directly on the viability of farmers and communities across the Gwydir.
- Worryingly, 50% of respondents said that they would exit agriculture altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system.
- Other respondents said they would have to cut back on staff (50%); diversify their business model (50%); and/or sell some or all of their water licence (42%).

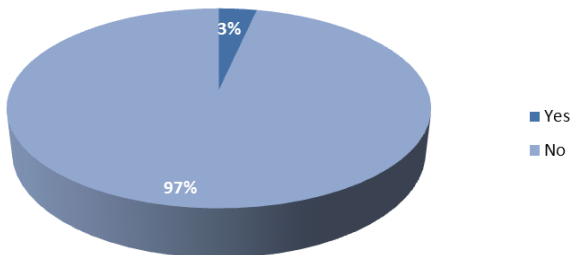
KEY FINDINGS IN THE GWYDIR WATER

BASIN PLANNING PROCESS

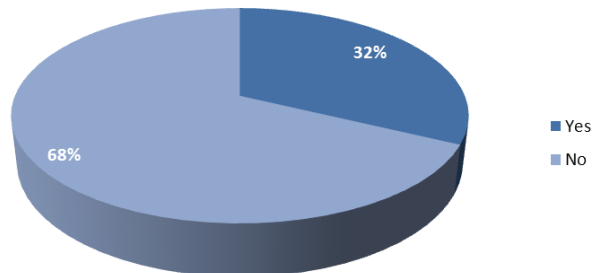
Were you aware of the Basin Plan or the Basin Planning process before completing this survey?



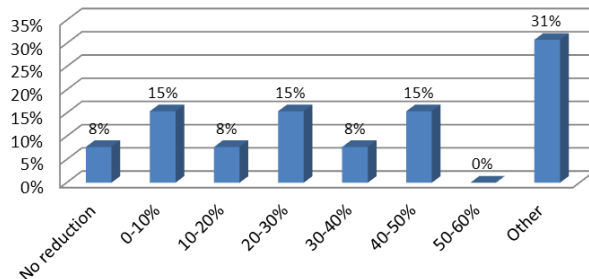
Were you consulted by the Murray Darling Basin Authority or Government about priority environmental assets in your region?



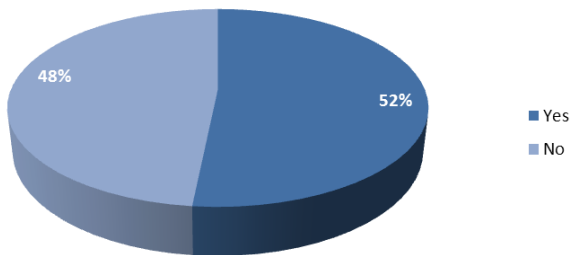
Do you know what a Sustainable Diversion Limit is?



In percentage terms, how much has your entitlement been reduced as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps?

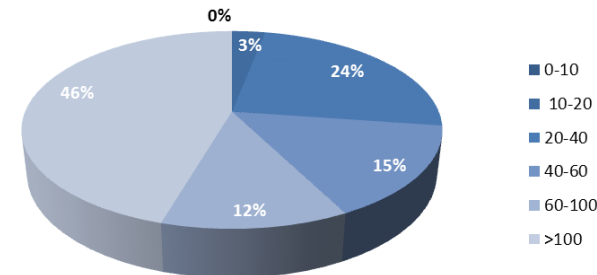


Do you have concerns about the potential impacts of the Basin Plan on Stock and Domestic Water?

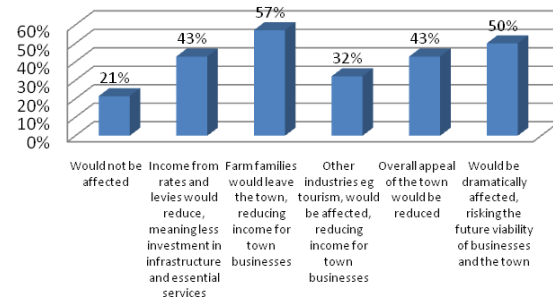


SOCIO-ECONOMIC IMPACTS

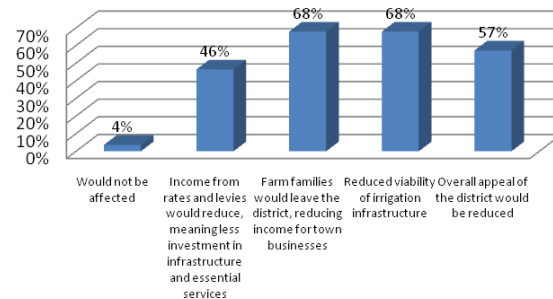
Including earlier generations, approximately how many years has your family been farming in your local region?



If the Basin Plan resulted in significant cuts to water entitlements, how do you think your town would be affected?

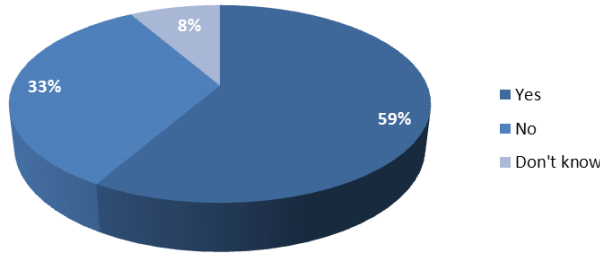


If the Basin Plan resulted in significant cuts to water entitlements, how do you think your district would be affected?

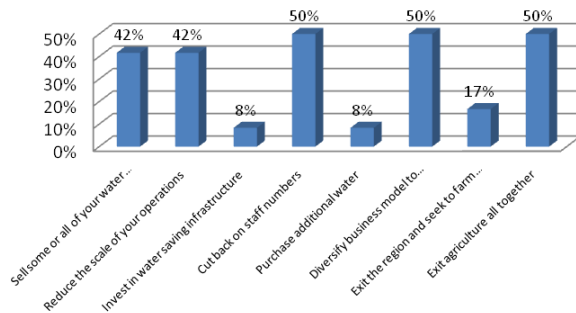


CASE STUDY: BOYDELL FAMILY, GWYDIR VALLEY

Are you concerned about your farm debt to equity ratio, should reductions in entitlements be implemented?



If the Basin Plan fails to deliver the water necessary to continue farming under your current system, what will you do?



Stuart Boydell, together with his family, farms his 6000ha mixed farming operation located 27km west of Moree. Stuart is a fourth generation farmer whose family has been farming in the region for 98 years.



Stuart Boydell with his wife Penny, daughters Dimity, Phoebe and Amber and Granddaughter Madeline

Beginning as sheep producers until 1965, the family commenced irrigation in the 1970s with construction of Copeton Dam and moved into cotton in the early 1980s. Stuart has historically employed four full-time staff on his property, but has been forced to reduce this to 2.5 as a direct result of lost productivity relating to a lack of water.

Stuart says that he can already notice the impacts of water sales from within the region and is extremely concerned about the compounding impacts of productive water losses from the community as a result of the Basin Plan. Stuart mentioned a University of New England study that determined that every dollar produced on farm represented seven dollars in the local community, highlighting the importance of agriculture and the region's dependence on it. The effects on the local Moree community have been evident in the past few years, with over 1600 people under the age of 45 years old leaving the district. If this trend is not addressed the whole community will collapse. "I am concerned that the impacts of the Basin Plan will only speed up this trend, thereby threatening the viability of local towns in this region," Stuart said.

Stuart said that his biggest concern about the Basin Plan relates to the potential for reduced water licence values, which will directly impact on his debt to equity ratio. "A decade of drought has left my business extremely exposed to reductions in equity," Stuart said. "My water licences are one of the most valuable assets I have and any significant reduction in their value is a direct threat to my viability. We have seen 60% reductions in our groundwater licences in this region already" he said. "Whilst we did receive some compensation for these licences, compensation is only a one off sum; it does not allow me to keep producing food and remaining viable year after year".

Stuart believes there is a severe lack of understanding about the Basin Plan amongst city cousins. "It is overwhelming the support from our city friends during the drought, however they don't fully understanding the issues faced. There seems to be a perception that farmers don't care about the environment and are only focussed on making money; this couldn't be further from the truth. The reality is that farmers are sustainable land managers, they have to be to survive," he said.

"Farming has evolved a lot over the years with many thanks to our scientists and local agronomic professionals. The ongoing research and development has enabled farmers to have a much better understanding of their environments and the unique requirements of the Australian landscape. Over 50% of my farmland is native vegetation and I value the environment. Progressive agriculture is about striking a balance between environmental and productive needs." Stuart said.

① Stuart Boydell – Ph: 0428 533 059

VALLEYS IN PROFILE- MACQUARIE CASTLEREAGH

BASIN PLANNING PROCESS

- One in four respondents were unaware of the Basin Plan or Basin planning process before completing the survey, which demonstrates the ineffective community engagement process to date throughout the Macquarie-Castlereagh region. With 'valleys' being introduced as new geographic boundaries in NSW, it appears that some farmers are not aware that they are within the boundary of the Basin, as defined by the Murray Darling Basin Authority.
- Despite an environmentally-skewed approach to the Basin Planning process to date, a massive 94% of respondents had not been consulted by the MDBA about priority environmental assets in their region, suggesting that the Authority is not using local knowledge in establishing environmental priorities in the Macquarie-Castlereagh.
- Awareness of key concepts within the draft Plan was relatively low, with less than half (44%) of respondents citing that they know what a Sustainable Diversion Limit is.

WATER

- 48% of respondents indicated that they had already seen a reduction in their entitlement as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps.
- 69% of respondents are concerned about the potential impacts of the Plan on stock and domestic water, indicating that the bulk of the farmers in the region see the Basin Plan as the 'thin edge of the wedge'.

SOCIO-ECONOMIC IMPACTS

- A massive 65% of respondents' families have been farming in their local region for more than 60 years, with 40% of respondents farming for four generations or more. The impacts reported below will therefore affect multiple generations within the Macquarie-Castlereagh valley.
- Respondents are very concerned about how their town and/or district will be affected if the Basin Plan results in significant cuts to water entitlements, with:
 - 56% of respondents indicating farm families would leave the district, reducing income for town businesses; and
 - 54% responding that there would be reduced viability of irrigation infrastructure (much higher than in other valleys);
 - 46% responding that income from rates and levies would reduce, meaning less investment in infrastructure and essential services in their town.
- Only 15% of respondents felt that the Plan would not impact on their district; and 22% in the case of their town.

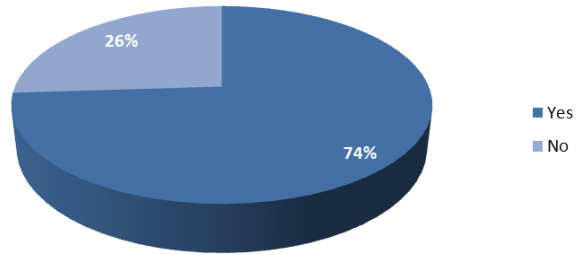
THE FUTURE

- 59% of respondents were worried about their farm debt to equity ratio should reductions in entitlements be implemented, demonstrating the potential for the Basin Plan to impact directly on the viability of farmers and communities across the Macquarie-Castlereagh.
- Worryingly, 9% of respondents said that they would exit agriculture altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system.
- Other respondents said they would have to sell some or all of their water licence (47%); diversify their business model (41%); cut back on staff (38%) and/or reduce their scale of operations (38%). It should be noted that this valley recorded the second highest response to the option of cutting back staff.

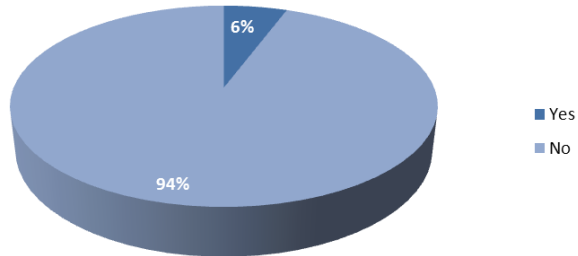
KEY FINDINGS IN THE MACQUARIE-CASTLEREAGH WATER

BASIN PLANNING PROCESS

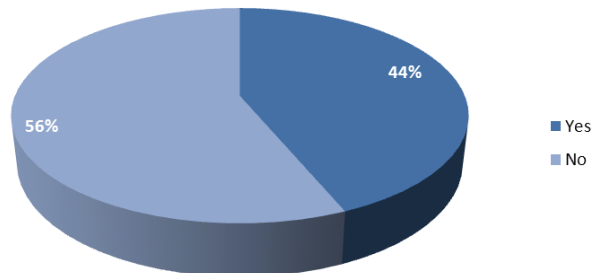
Were you aware of the Basin Plan or the Basin planning process before completing this survey?



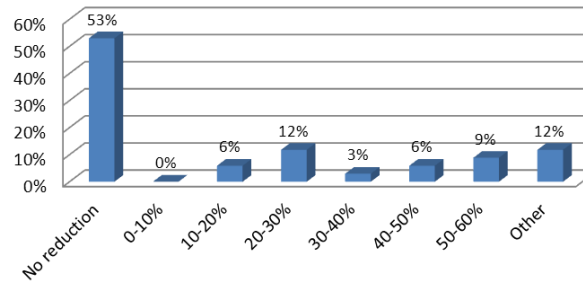
Have you been consulted by the Murray Darling Basin Authority or Government about priority environmental assets in your region?



Do you know what a Sustainable Diversion Limit is?

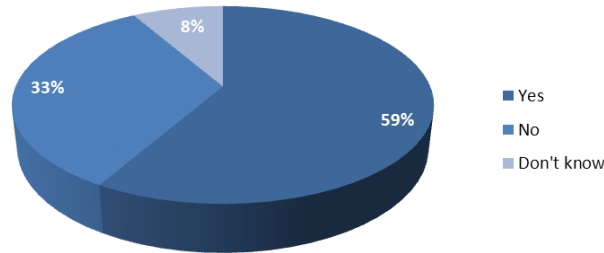


In percentage terms, how much has your entitlement been reduced as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps?

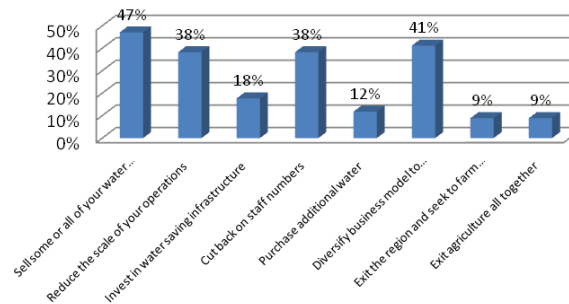


THE FUTURE

Are you concerned about your farm debt to equity ratio, should reductions in entitlements be implemented?

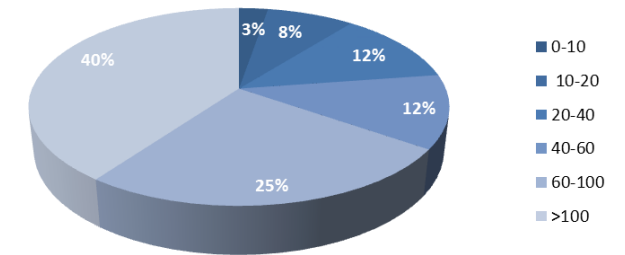


If the Basin Plan fails to deliver the water necessary to continue farming under your current system, what will you do?

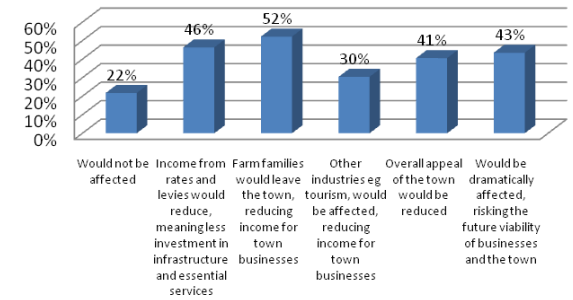


SOCIO-ECONOMIC IMPACTS

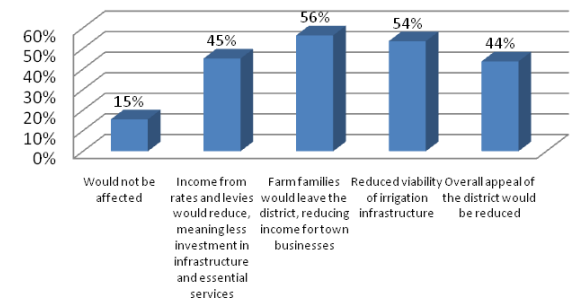
Including earlier generations, approximately how many years has your family been farming in your local region?



If the Basin Plan resulted in significant cuts to water entitlements, how do you think your town would be affected?



If the Basin Plan resulted in significant cuts to water entitlements, how do you think your district would be affected?



VALLEYS IN PROFILE- LACHLAN

BASIN PLANNING PROCESS

- 18% of respondents were unaware of the Basin Plan or Basin planning process before completing the survey, which demonstrates the ineffective community engagement process to date throughout the Lachlan region. With 'valleys' being introduced as new geographic boundaries in NS, it appears that some farmers are not aware that they are within the boundary of the Basin, as defined by the Murray Darling Basin Authority.
- Despite an environmentally-skewed approach to the Basin Planning process to date, a massive 92% of respondents had not been consulted by the MDBA about priority environmental assets in their region, suggesting that the Authority is not using local knowledge in establishing environmental priorities in the Lachlan.
- Awareness of key concepts within the draft Plan was the equal lowest of any valley surveyed, with only 32% of respondents citing that they know what a Sustainable Diversion Limit is.

WATER

- 48% of respondents indicated that they had already seen a reduction in their entitlement as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps.
- 70% of respondents are concerned about the potential impacts of the Plan on stock and domestic water, indicating that the bulk of the farmers in the Lachlan see the Basin Plan as the 'thin edge of the wedge'.

SOCIO-ECONOMIC IMPACTS

- A massive 70% of respondents' families have been farming in their local region for more than 60 years, with 38% of respondents farming for four generations or more. The Lachlan had the highest number of third and fourth generation farmers of any valley surveyed, highlighting the potential for the Basin Plan to affect multiple generations within the valley.
- Respondents are very concerned about how their town and/or district will be affected if the Basin Plan results in significant cuts to water entitlements, with:
 - 71% responding that there would be reduced viability of irrigation infrastructure;
 - 67% of respondents indicating farm families would leave the district, reducing income for town businesses (again much higher than in other valleys); and
 - 65% responding that the overall appeal of the district would be reduced.
- Only 6% of respondents felt that the Plan would not impact on their district; and 6% in the case of their town.

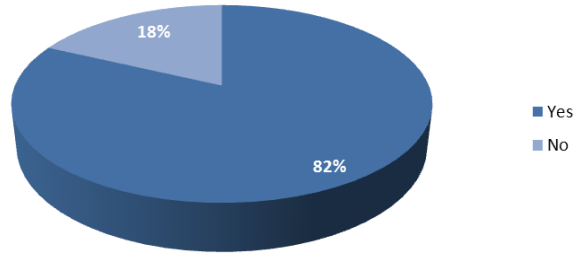
THE FUTURE

- 55% of respondents were worried about their farm debt to equity ratio should reductions in entitlements be implemented, demonstrating the potential for the Basin Plan to impact directly on the viability of farmers and communities across the Lachlan.
- Worryingly, 24% of respondents said that they would exit agriculture altogether if the Basin Plan fails to deliver the water necessary to continue farming under their current system.
- Other respondents said they would have to diversify their business model (43%); reduce their scale of operations (38%); sell some or all of their water licence (33%); and/or cut back on staff (29%).

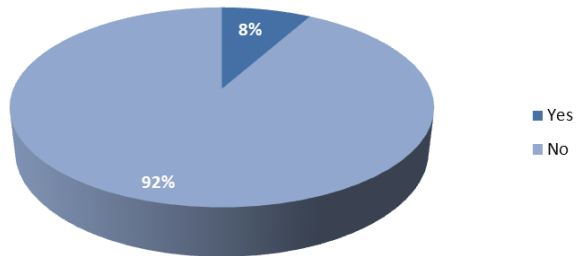
KEY FINDINGS IN THE LACHLAN

BASIN PLANNING PROCESS

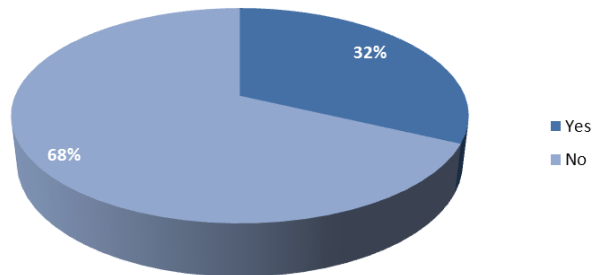
Were you aware of the Basin Plan or the Basin planning process before completing this survey?



Were you consulted by the Murray Darling Basin Authority or Government about priority environmental assets in your region?

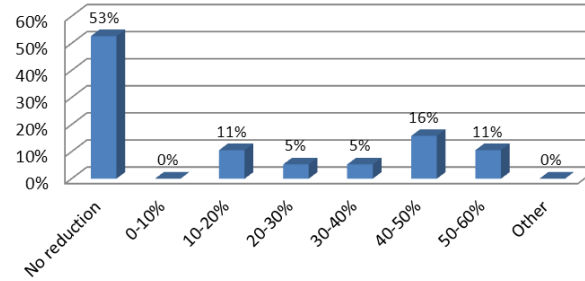


Do you know what a Sustainable Diversion Limit is?



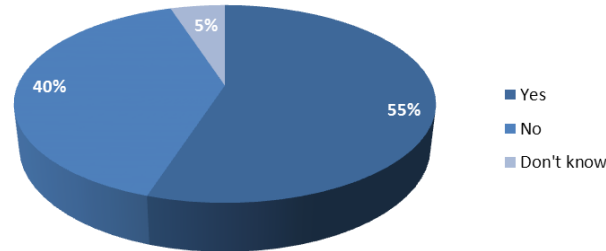
WATER

In percentage terms, how much has your entitlement been reduced as a result of previous Government programs such as Water Sharing Plans and Groundwater Caps?

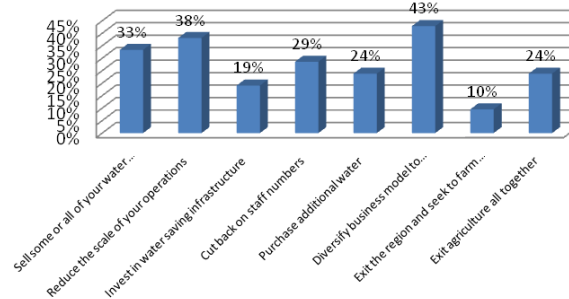


THE FUTURE

Are you concerned about your farm debt to equity ratio, should reductions in entitlements be implemented?

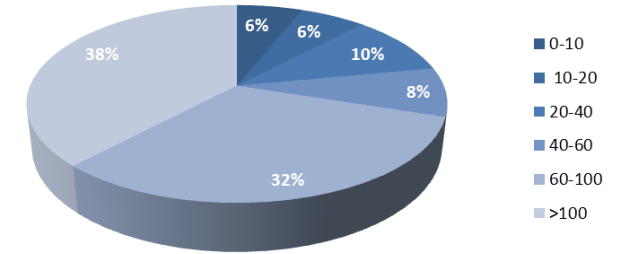


If the Basin Plan fails to deliver the water necessary to continue farming under your current system, what will you do?

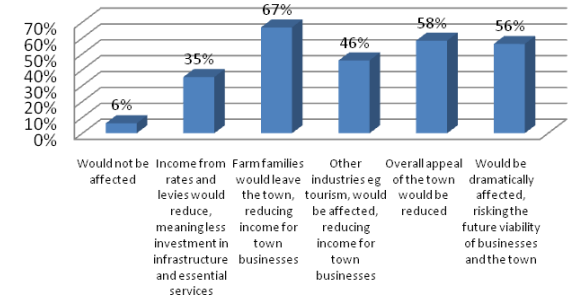


SOCIO-ECONOMIC IMPACTS

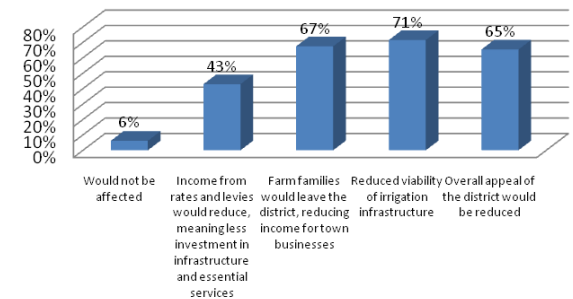
Including earlier generations, approximately how many years has your family been farming in your local region?



If the Basin Plan resulted in significant cuts to water entitlements, how do you think your town would be affected?



If the Basin Plan resulted in significant cuts to water entitlements, how do you think your district would be affected?



SURVEY METHODOLOGY

- The NSW Farmers' Association's Murray Darling Basin Survey was launched via media release 15 July 2010.
- Whilst the survey was targeted at members of the Association, it was open to any landholder in the Basin.
- Surveys could be completed electronically via the NSW Farmers' Association website, or in hard copy form.
- The survey was available from the front page of the Association's website. Hard copies could also be requested, which were either faxed or posted, depending on remoteness.
- Hard copy surveys were also made available at the Association's Annual Conference 20-22 July 2010, and at the AgQuip field days 17-19 August 2010.
- 525 responses were received.