



Namoi Councils

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20 December 2010

Committee Secretary
House of Representatives
Standing Committee on Transport and Regional Services
PO Box 6021
Parliament House
CANBERRA ACT 2600

Submission No:	517
Date Received:	22/12/10
Secretary:	SC

Dear Madam/Sir

RE: Submission on the Impact of the Murray Darling Basin Plan in Regional Australia

Please find attached Namoi Councils submission on the abovementioned subject to the House of Representative Standing Committee on Transport and Regional Services.

Please note that a hard copy of the submission has also been mailed.

In concluding, should you have any queries in relation to the submission please contact me

Yours sincerely

Bruce Brown
Chair
Namoi Councils Water Working Group

* Gunnedah * Liverpool Plains * Narrabri * Tamworth * Walcha * Namoi CMA

Mission

To provide strong local government leadership, to work co-operatively for the sustainability & image of Namoi ROC and the Namoi region, and effectively advocate on agreed regional positions and priorities.

**Submission to the House
Standing Committee on
Regional Australia**

**Inquiry into the impact of the
Murray Darling Basin Plan in
Regional Australia**

20 December 2010

**Namoi Councils Water Working
Group**

Namoi Councils Water Working Group
Chair: Bruce Brown

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1. Introduction

This submission is made by the Namoi Councils Water Working Group in response to the invitation extended by the House of Representatives Committee on Regional Australia. The Committee has invited interested organisations and individuals to make written submissions regarding their *"Inquiry into the impact of the Murray-Darling Basin Plan in Regional Australia"*.

The Namoi Councils Water Working Group welcomes the opportunity to provide input into the Inquiry and would like to provide this submission as a first stage overview or summary submission. The management of the Murray Darling Basin warrants a lot more discussion and investigation to identify innovative solutions for the efficient delivery and application of environmental water, on-farm water use efficiencies and particularly the optimisation of social, economic and environmental aspects. In that regard, the Namoi Councils Water Working Group requests the opportunity to meet with the Committee to support the evidence provided in this submission and further discuss how the Namoi Councils Water Working Group can assist the Committee in the identification of solutions that will work on-ground and deliver broader integrated Natural Resource Management (NRM) outcomes for not only our regional and rural communities but for our country as a whole.

In addition, the Namoi Council's Water Working Group would like to invite the Committee to visit the Namoi Region and meet directly with the Namoi community to gain a thorough, first hand understanding of the key issues and concerns presented in this submission and to canvas opportunities for the development of a more balanced Basin Plan. We believe this is imperative and the only way to ensure practical on-ground solutions to the issues facing the sustainable long term management of the basin's water resources. Engagement and tapping into the knowledge and expertise of people and communities on-ground has been extremely poor to date and the Namoi Councils Water Working Group views this as one of the major hurdles facing the current proposed Basin Plan development and a missed opportunity in delivering a balanced plan that promotes discussion on how to deliver lasting outcomes for the environment and rural communities.

This submission focuses on the Namoi Region specifically and provides the Committee with overarching comments regarding the management of the Murray Darling Basin and the development of the Basin Plan to date. It includes the key technical concerns and issues the Namoi Councils Water Working Group has with the MDBA's Guide to the proposed Basin Plan in relation to each of the Inquiry's specific Terms of Reference. The submission also includes suggested recommendations to minimise the socio-economic impacts of the proposed Basin Plan.

1.1 Namoi Councils Water Working Group

The Namoi Councils is an alliance of five councils and the Namoi Catchment Management Authority (CMA).

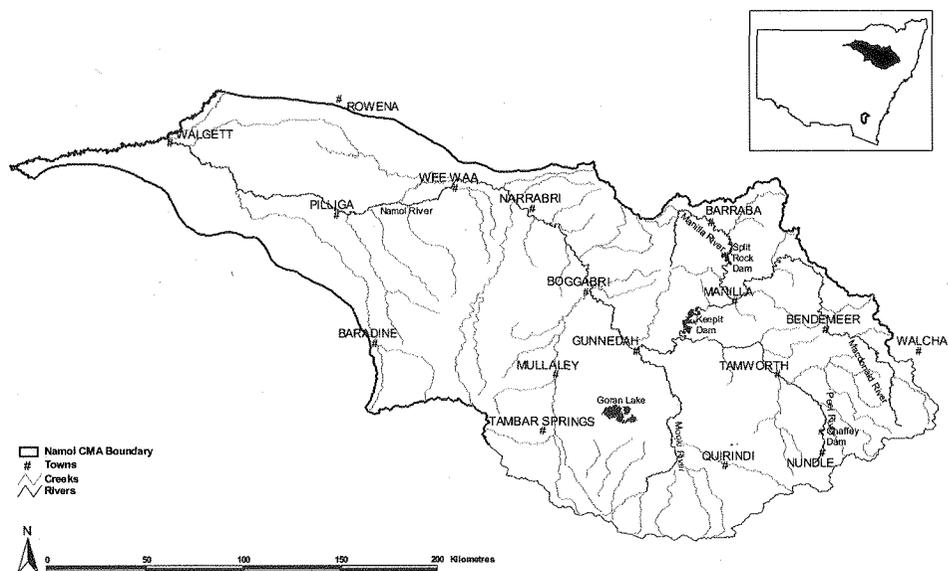
The Namoi Councils Water Working Group reports to and makes recommendations to the Namoi Councils on water policies and reforms that impact on the Namoi regional economy. In addition, it seeks to identify and leverage both Australian and NSW State Government funding (including structural adjustment monies) for the benefit of Local Government Areas in the Catchment.

The Namoi Councils Water Working Group membership comprises of representatives of Tamworth Regional Council, Narrabri Shire Council, Namoi Water, Namoi Catchment Management Authority (CMA), a major agricultural and industrial water user, mining industry and two Local Government representatives with technical skills. The group is chaired/convened by the Namoi CMA

1.2 Overview of the Namoi Catchment

The Namoi Catchment of the Murray Darling Basin is located in north western NSW and represents 3.8 per cent of the total area of the Murray Darling Basin. It consists of three distinct systems: the main Namoi River system, the smaller Peel River system and the Manilla River/Upper Namoi River system. The Namoi region also includes Lake Goran, which is located next to the Liverpool Plains which is listed as a wetland of national importance.

Namoi CMA Catchment Map



The population of the region is approximately 100,000 or 4.6 percent of the Murray Darling Basin total which is concentrated in the towns of Tamworth, Gunnedah, Narrabri, Boggabri and Wee Waa (Namoi CMA 2009).

The river is an area of spiritual and cultural significance for the Gamilaroi people.

The Namoi River system provides a wide range of aquatic habitats and is ecologically important. The floodplain downstream of Narrabri contains large areas of anabranches and billabongs. When flooded, these areas are considered to be important and work on similar rivers has established that they provide large amounts of dissolved organic carbon, which is essential to aquatic ecosystem functioning (Thoms et al., 2005).

The only wetland of listed national importance in the Namoi Region is Lake Goran (EA, 2001), which is located adjacent to the Liverpool Plains. The lake is at the end of an internal drainage basin that does not connect to the Namoi River.

The western parts of the Namoi, that is the area that falls within the Darling Riverine Plains Bioregion, is an important example of an inland drainage system where the streams flow into an arid region. The wetlands of this bioregion are the most important wetland habitats in the inland regions of the state. They provide essential habitat for bird and fish breeding events in otherwise dry environments (Namoi Conservation Strategy 2008).

The Namoi Catchment is a major agricultural, industrial and domestic user of water. Water is a highly utilised resource within the Namoi Catchment from both surface and groundwater.

The region uses 2.6% of the surface water diverted and it has one of the highest levels of groundwater development in the Murray Darling Basin and is 15.2% of the Murray Darling Basin total groundwater use (CSIRO 2007). Water security and quality is a critical need for all the major urban, peri urban and stock and domestic users.

Split Rock Dam on the Manilla River and Keepit Dam on the Namoi River are the two main storages in the Namoi River Valley with Chaffey Dam on the Peel River principally supplying Tamworth city with water supply and minor irrigation supply.

The economy of the Namoi Catchment is highly dependent upon primary production with the dominant landuse being agriculture (cattle, sheep, dryland cropping and irrigated cotton). Irrigated agriculture account for 48% of the gross value of agricultural production in the Namoi Catchment (Namoi CMA, CARE Report 2006). It is important to note that mining, intensive agriculture, for example poultry, and urban water needs have also risen.

The Gunnedah Basin has been estimated by the NSW DPI to have 13.1% of the total coal reserves in NSW. The region is poised for large scale expansion of coal mining and coal seam gas extraction and this needs to be better accounted for in at the catchment scale in all levels of planning to ensure impacts are minimised and opportunities are maximised.

The Namoi region is not foreign to water reform and the people of the Namoi region have played an active and valuable role in contributing to the development of an environmental flow policy, water quality objectives, farm dams policy, floodplain harvesting policy, water sharing plans and the National Water Initiative the over the last 15 to 20 years. This involvement has been a critical component in the delivery of successful on-ground implementation of integrated natural resource management.

2. Overarching comments

There is general agreement and acknowledgement across the Namoi River Valley that water use, management and delivery needs to be improved and that something has to be done to ensure the riverine and floodplain environment remains functional and in turn supports a vibrant agricultural industry and rural communities.

However, this has to be done in a way that balances the social, economic and environmental outcomes that society is seeking to achieve. The current Guide to the proposed Basin Plan does not deliver this balance.

This section outlines overarching comments the Namoi Councils Water Working Group would like to make regarding the Guide to the proposed Basin Plan.

2.1 Issues with the Water Act

The social and economic considerations able to be undertaken by the MDBA have been the subject of what appears to be conflicting legal analysis and interpretation. Namoi Councils Water Working Group understands that the MDBA sought advice in the first instance upon which they acted to provide a Guide which focuses solely on environmental outcomes, with social and economic consequences limited in role to description only. It is also understood that subsequent to the release of the Guide the Commonwealth Minister for Water, Tony Burke obtained (and released) further legal advice in respect of the consideration of social and economic matters. Whilst Minister Burke interpreted that advice such that the Authority *is* able to take social and economic matters into consideration in setting Sustainable Diversion Limits (SDLs), Namoi Councils Water Working Group notes that questions remain over this interpretation.

The Namoi Councils Water Working Group are not supportive of the process outlined in the Guide to the proposed Basin Plan that does not provide the balance of treating environmental, social and economic outcomes as equivalents. The Guide clearly treats the latter two as secondary considerations which can be taken into account only after the environmental outcome is given primacy.

It is the position of Namoi Councils Water Working Group that the National Water Initiative (NWI), as agreed by all Basin States in 2004, must remain the driver for national level water reform. It is the NWI that was intended by all States as the platform for reform that provided the guiding principles.

Focussing solely on the environmental requirements will not solve the problem, neither will focusing merely on the social and economic impacts. Considering the "trade off" as envisaged by the NWI is an approach that will.

RECOMMENDATION

- The Basin Plan needs to find an appropriate balance between environmental, economic and social interests.
- The Committee in their Inquiry determine whether the *Water Act* is in conflict with the National Water Initiative.

2.2 Focus on a “Healthy Working River”

The Namoi Councils Water Working Group suggests the Inquiry focuses on seeking a “healthy working river” outcome in your deliberations on the management of the Murray Darling Basin. The Namoi Councils Water Working Group notes that the process for the development of a Basin Plan to date has not followed this path and we see this as essential in being able to deliver practical on-ground solutions for the sustainable management of the Basin’s water resources. It is clear that we are living and operating in a modified riverine environment and will not return to a natural pre-development condition. However there is scope to develop innovative solutions that will deliver better management and a healthy working river.

The term “Healthy Working River” has been successfully used in various past planning processes used to assess the environmental flow needs of various rivers, that is for example, The Living Murray Initiative and the Murrumbidgee River Water Sharing Plan. A similar concept known as the “living working river” was applied to the Fraser River Estuary in Canada (FREMP 1994). A healthy working river is one that is managed to provide trade-offs, agreed to by the community, between the condition of the river and the level of human use. This definition acknowledges the need for negotiation and compromise between the often competing values and uses of the river.

A key aspect of the healthy working river concept is that the river is managed to sustain an agreed level of work and an agreed state of the river “health” indefinitely. If the level of work reduces the “health” of the river below what the community desires, it is no longer a healthy working river, regardless of the economic gains that are made in the interim and is not sustainable in the long term. The “working” part of the definition refers to the use of water resources for economic gain, water supply or for recreational purposes. Working river objectives are easily quantified using specific measures such as security of supply for irrigation water, end of valley salinity targets, as constrained by channel capacities, capacity of impoundment, legal requirements, minimisation of back erosion, water demands, travel times and other factors. Some stream health characteristics can be similarly well defined.

The Namoi Catchment Community agreed in 2004 in returning water to the environment within the Namoi at their cost, which resulted in a reduction in the long term reliability of supply of surface water licences in the Namoi. Under the scenarios outlined in the Guide to the proposed Basin Plan, the volume agreed on has now been proposed to increase by an additional 31GL – 51GL per annum on average to meet the environmental water requirements within the Namoi valley and a further 41GL – 42GL per annum on average to meet the downstream environmental water requirements of the Barwon Darling i.e. a total long term average of 72 GL - 93 GL per annum. This has been done without any consultation or engagement with the local Namoi Community.

RECOMMENDATION

The principle of a “healthy working river” be adopted for the management of the Murray Darling Basin and particularly as a key component in the development and implementation of the Basin Plan as the basis for determining a balance between social, economic and environmental aspects.

2.3 Engagement Process to date

The MDBA has undertaken a large amount of work on an extremely complex issue and should be applauded for the amount of work they have undertaken in an extremely short period of time. However, the management of the Murray Darling Basin is an extremely complex and difficult task that cannot be solved overnight by one organisation and the process deserves a substantial investment of time and resources in both the development and implementation phases of the Basin Plan that draws on local knowledge and expertise.

As outlined in this submission, the Namoi Councils Water Working Group have a number of concerns regarding the process to date and believe if it continues in this manner, will not deliver the outcomes we are all trying to achieve in a balanced triple bottom line. Some of our key concerns regarding the MDBA process to date include;

- During the early stages of plan development the MDBA sought responses from peak groups and others across the Basin as to how they would like to be consulted in the development of the Basin Plan. The peak groups indicated unanimously that they wanted to be sincerely engaged in the development of the Basin Plan and did not wish to be consulted by being asked to provide comments on a "draft" (read Guide). However, this does not appear to be the approach taken by the MDBA in the release of the Guide.
- An engagement process that allows for the input of local knowledge and expertise has clearly been lacking to date. The reaction by not only irrigators, but support industries, local businesses in rural communities and rural communities themselves have been scathingly critical of both the Guide to the proposed Basin Plan and the MDBA process of consultation and engagement.
- The way in which the MDBA chose to release the Guide to the proposed Basin Plan resulted in placing a large cloud of uncertainty over the future of regional and rural community's right across the Murray Darling Basin. This in turn has impacted on local investment in farm infrastructure expansion plans and water efficiency measures and property purchases.
- Articles in the media indicated that the banks, as a result of the release of the Guide to the proposed Basin Plan, were considering foreclosing on mortgages in those areas hardest hit by the proposed reductions in current diversions indicated in the Guide.
- There have been other downsides in not truly engaging with rural communities. Locally held data, local knowledge and expertise and fresh ideas on reaching healthy working river status have not been used in the development of the proposed Basin Plan.
- It is also important to note that mental health and stability in already fragile regional communities on the back of the drought, have suffered as a result of additional uncertainty with many serious outcomes. Better engagement with people on the ground is imperative.
- People are an important part of the environment and this needs to be acknowledged and recognised in every aspect of plan development and implementation.
- There is a distinct lack of trust related to the data accuracy, targets, modelling and assumptions. This includes environmental, social, economic, cultural disciplines related to the plan. Local input and knowledge should be sought and valued.

RECOMMENDATION

- The Committee recognises the importance of local knowledge and expertise of regional and rural communities in the development and implementation of a plan that will deliver practical on-ground outcomes for the Murray Darling Basin.
- The Committee note and support the Namoi Councils Water Working Group request to the MDBA to collaboratively design an engagement strategy which will sincerely engage the Namoi Catchment Community in the development of the Basin Plan.

2.4 SDLs Methodology used is not clear and transparent

The Namoi community are experiencing serious difficulties in understanding how the reductions in the current diversion limits have been derived and used as the basis to determine the new SDLs.

The Guide to the proposed Basin Plan does not adequately explain the basis or rationale for the proposed SDLs or environmental watering requirements, nor does it provide transparency to the MDBA's decision making rationale.

There is an urgent need for the MDBA to provide a step-wise process diagram that outlines the methodology used for both environmental water requirements and SDLs. Such a diagram needs to outline what were the steps taken, what were the judgement calls made by the MDBA at different stages and what was the basis of these. It also needs to outline the assumptions made in the process and what were the inputs at what stage of the process.

A process diagram that clearly outlines the methodology used by the MDBA would provide a very useful tool for both the regional community and the MDBA to get on the same page and move forward towards the identification of potential solutions that will work on ground.

Currently the community cannot see what has been done and are being asked for blind faith.

RECOMMENDATION

The Committee note that the Namoi Councils Water Working Group have requested that the MDBA develop a process diagram that clearly outlines the steps, inputs, assumptions and outputs of the SDL methodology including the judgement calls and the basis for these

2.5 Environmental Water Requirements

It is unclear how the MDBA calculated the environmental water requirements included in the Guide for the proposed Basin Plan. There are serious questions regarding how they were determined, what were the steps taken and what was the basis.

There is little confidence from rural and regional communities regarding the basis for environmental water requirements as it is difficult to ascertain what information and science has been taken into account, whether it has been superseded by improved knowledge and

whether the assumptions are correct or there are other more innovative ways in regard to local management that has not been considered.

There is a lot of on-ground knowledge and expertise that has not been considered and taken into account that could add value to the development and implementation of a Basin Plan.

It is understood that the "Health rating" of each catchment is predominantly based on only two reports alone – this appears to be very limited. It should also be noted that these reports clearly outline their limitations and assumptions. We have concerns as to whether this an appropriate approach.

The practicalities in delivering environmental water requirements and any constraints in implementing what is proposed by the Guide for the Namoi do not appear to have been adequately considered and the Namoi Councils Working Group would appreciate further discussion with the MDBA to clarify.

The lack of an environmental watering plan is another key weakness in the Guide. The Namoi CMA can provide considerable information and coordinate on-ground knowledge and expertise across the Namoi Catchment regarding the development and implementation of an environmental watering plan for the Namoi. This includes benchmarking and monitoring to support adaptive management.

In our recent submission to the MDBA, the Namoi Councils Water Working Group have strongly recommended engagement with local NRM bodies, such as the Namoi CMA, who already hold a substantial amount of knowledge and information regarding the current state of environmental assets within the Namoi Catchment. The Namoi CMA also has excellent working relationships with other local experts across the catchment that are able to provide valuable on-ground knowledge, information and input. This input has not been adequately sought to date but its inclusion will assist in the delivery of a workable Basin Plan. The Namoi Councils Water Working Group would appreciate any support the Committee can provide in regard to this request.

2.5.1 Within Namoi catchment targets

- Namoi environmental assets – the guide identifies the key assets for Namoi as the river gauges. The Namoi community feel there is better information on the environmental assets of the Namoi and would like to engage with the MDBA in this regard.
- The Cotton CRC have also undertaken extensive research into the habitat and biodiversity related to and created by irrigation. This has not been considered.
- The Namoi Councils Water Working Group are currently compiling these and are keen to provide that information and provide input to the process for the development and implementation of a Basin Plan.

2.5.2 Outside Namoi Catchment targets – i.e. for Barwon Darling

- The Namoi contribution to downstream targets is not clear and needs to be better explained regarding the basis, assumptions and guiding principles particularly in regard to how the shares across the contributing catchments are determined.

RECOMMENDATION

- The Committee note there is a distinct lack of trust related to the data accuracy, targets and assumptions used to determine the environmental water requirements.
- Local input should be sought and valued in the identification of key environmental assets and functions.
- Peer review the science (i.e. the numbers) both by experts and the local community, which includes the States.
- The Namoi CMA is well placed to assist the MDBA in the successful development and implementation of an environmental watering plan particularly in regard to facilitating input of local knowledge and expertise right across the Namoi Catchment. The CMA also have established working relationships with key stakeholder groups right across the Namoi.

2.6 Data and information used – concerns regarding accuracy and currency

As the information released to date by the MDBA has been limited, the Namoi Councils Water Working Group's submission recently made to the MDBA, reflects high level concerns relating to the content of the Guide to the proposed Basin Plan and outlines additional work that should be completed by the MDBA before it finalises the Basin Plan. The Namoi Councils Water Working Group also identified a number of issues requiring clarification by the MDBA particularly regarding the methodology and the currency and accuracy of the data and information used and have sought a meeting with the MDBA technical staff to work through these issues of clarification.

2.6.1 Inaccuracies in the base Namoi data contained in the Guide

The Namoi community has concerns that the data used as the basis for the "current situation in the Namoi has not been tested, verified or ground-truthed with local on-ground experts and that it has just simply been accepted by MDBA as accurate and fit for use.

The Namoi Councils Water Working Group has some questions over the accuracy and currency of some of the data used and would like to follow up on these with the MDBA. The currency and accuracy of the base information is of a major concern as if it is not current then it will not accurately reflect the current state of play or condition of the Basin water resources/environment and therefore there is a high risk that decision making process are being mis-informed and actions may actually lead to perverse outcomes.

As an example there are significant queries on the database used to develop the Namoi cutbacks including how the 165 GL in water interceptions arrived at and how the Namoi's water course diversion of 343 GL was calculated is not clear.

RECOMMENDATION

- The Committee note there is a distinct lack of trust related to the data accuracy, targets and assumptions and note the Namoi Councils Water Working Group request to the MDBA to meet with their technical staff to clarify and reconcile.
- State and local input should be sought and valued in the development and implementation of the Basin Plan.
- Peer review the science (i.e. the numbers) both by experts and the local community, which includes the States.
- The Namoi CMA can provide valuable assistance regarding the provision of local NRM data, knowledge and information for the entire Namoi Catchment. They also have established working relationships with other key stakeholder groups.

2.6.2 Surface Water

The process and methodology by which SDLs are determined is not transparent nor can it be determined from the Guide to the proposed Basin Plan. Far more information and explanation is needed to allow the reader to gain even a rudimentary understanding of how SDLs have been calculated and how this relates to current arrangements. Suggestions to address this are made in the earlier section of this submission.

2.6.2.1 Current Diversion Limits

The Namoi local communities were involved in the development and implementation of local water sharing plans and understand how the long term average diversion limits currently used by the Basin state jurisdictions under these plans were derived including the assumptions made in the models and the limitations of the data inputted to the models. Therefore they are able to determine with some degree of confidence the potential long term reliability of supply on which to base planning decisions and identify opportunities for improved water efficiencies. However, these same community members are finding it extremely difficult to reconcile these current plan limits with the baseline CDLs included in the Guide to the Basin Plan.

The numbers are different and the MDBA have indicated that there are good reasons for this, i.e. for example there is a longer time series for the data. However it is not clear to the community how these were calculated i.e. what's "in" and what's "out", what assumptions have been made and whether these assumptions differ and if so why. Therefore it is difficult to determine whether the "starting point" accurately reflects the current on-ground situation and is appropriate to use as the basis for determining SDLs and applying new sharing arrangements. There is no clear and transparent evidence that the appropriate checks and balances have been included in this process.

One particular area of concern for the Namoi is that the CDL in the Guide does not appear to include an accurate volume for floodplain harvesting activities in the Namoi. It should also be noted that more accurate figures are currently being determined and negotiated with the NSW Office of Water via the implementation of the NSW Floodplain Harvesting Policy. These negotiations need to be taken into consideration when determining the current diversion limits in the development of the Basin Plan.

A full explanation of how the Namoi CDLs included in the Guide to the proposed Basin Plan have been derived including the assumptions taken into account and the data used, would be most helpful to allow the community to have confidence in the starting point.

It is understood that the MDBA are producing a document to reconcile the numbers and explain the linkages between the WSP numbers and the Guide numbers. This is an important and essential tool to ensure people have confidence and trust in the process.

The Committee note that the Namoi Councils Water Working Group are seeking further discussions and meetings with the MDBA technical staff to better understand the figures and information used.

2.6.2.2 Interception Activities

It is understood that the modelling used by the MDBA is based on the state river system models and these do not recognise some interception activities i.e. for example farm/hillside dams in the upper catchments and the impact of plantations etc. The MDBA advise that they have made allowance for these interception activities and included a volume for interception activities in the CDLs. However, it is difficult to understand how the figure of 165 GL for interception activities in the Namoi has been arrived at, particularly given the definition for interception activities included in the Guide and what is physically on-ground in the Namoi Region. This is another issue requiring clarification and explanation. There is a concern that these figures have not been ground-truthed or validated for accuracy and water may be double counted.

As outlined in the above issue, the Committee note that the Namoi Councils Water Working Group is currently seeking further discussions with the MDBA technical staff to better understand the science used by MDBA to estimate the level of interception included in the Guide in the Namoi, particularly in regard to farm dams other than basic rights figure.

2.6.2.3 End of system flows

There is some uncertainty as to how end of system flows have been determined or calculated in the modelling used by the MDBA to determine surface water SDLs.

Once again, via our recent submission, the Namoi Councils Water Working Group has sought further discussions with the MDBA technical staff to clarify how end of system flows are considered and accounted in the current methodology.

RECOMMENDATION

- The Committee note there is a distinct lack of trust related to the data accuracy, targets and assumptions. State and local input should be sought and valued.
- The Committee note and support the Namoi Councils Water Working Group recent request to the MDBA for a specific technical briefing on the hydrologic modelling used in the determination of SDLs for the Namoi to a select group of Namoi key stakeholder organisations. The Namoi Councils Water Working Group has offered to facilitate such a briefing.
- The Committee note and support the Namoi Councils Water Working Group's recent request to the MDBA to grant access to modelling and other information used to develop the proposals in the Guide to allow robust analysis of the adequacy of the

proposals. This will assist in clarifying issues and concerns and determine whether the methodology adopted in the Guide works practically on ground.

- The Committee note and support the Namoi Councils Water Working Group's recent request to the MDBA to provide an explanation of how they determined the CDL for the Namoi and reconcile this number with the current WSP limits for the Namoi.
- The Committee note and support the Namoi Councils Water Working Group's recent request to the MDBA that the development and implementation of the Basin Plan takes into account the current negotiations with NSW to confirm a more accurate long term average volume allowance for floodplain harvesting activities in the Namoi

2.6.3 Groundwater

In our submission to the MDBA, the Namoi Councils Water Working Group have also raised issues and considerable concern with the MDBA's approach to setting SDLs for groundwater and the proposed reductions, particularly given the recent reductions already achieved through the \$135 million Achieving Sustainable Groundwater Entitlements (ASGE). The difference between "sustainable yield", i.e. the basis for the ASGE Program and the "sustainable diversion limits" that warrants a further 13% in the Lower Namoi Alluvium diversions needs explanation. Further information is provided under the Committee's specific term of reference relating to previous relevant reform and structural adjustment programs in Section 3.6 of this submission.

2.7 Peel River Valley

2.7.1.1 Surface Water

Peel Valley water users contend that the Peel Valley should have a separate SDL rather than being included with the Namoi under a combined SDL. The irrigation characteristics of the Peel Valley are distinctly different from the Namoi Valley, for example, in the Peel Valley the farms are smaller, landuse is different, irrigation licences are smaller, and the irrigation methodology, behaviour and commodities are different. Furthermore, all hydrologic modelling for the Peel Valley has been undertaken separately from the Namoi River Valley and the Peel (combined water sources) has a separate Water Sharing Plan to the Namoi water sources. These are all examples of why consideration should be given to designating the Peel River Valley as a separate area for the development and implementation of SDLs.

Under the 3,500GL scenario outlined in the current Guide to the proposed Basin Plan there is a proposed reduction of 25% to current diversion limits for the Namoi. If this was to be applied across the total Namoi, including the Peel, this would reduce the current diversion limit in the recently made water sharing plan for the Peel from 15.1GL to 11.2GL. Given that town water supply for Tamworth makes up a large component of the entitlement in the Peel and are likely to be quarantined from any impacts associated with the implementation of SDLs, the proposed reductions or additional environmental water requirement would need to be met from a much smaller number of licence holders and would result in a much higher percentage impact - i.e. long term average current diversion limit component for irrigation in the Peel would be reduced from 6.1.GL to 2.3 GL. This is not sustainable and will put irrigators out of business in the Peel.

Even prior to reductions in surface water access imposed by the recent NSW Water sharing plan for the Peel Valley the long term average annual extraction in the Peel regulated river water source was about 5% of the long term average annual flow.

2.7.1.2 Ground Water

Peel Valley Alluvium

The Guide to the proposed Basin Plan suggests an SDL of 7,300 ML for the Peel Valley Alluvium which equates to 14.4% of the current licensed entitlement in this system. The Water Sharing Plan implemented in July 2010 this year (i.e. less than 6 months ago) determined a long term average extraction limit of 9,344ML/annum – this was based on comprehensive modelling. The Namoi Councils Water Working Group questions why the SDL included in the Guide differs so dramatically (i.e. some 20% lower) from the WSP limit calculated only a matter of weeks earlier and what scientific modelling or information this is based on. The Namoi Water Working Group has suggested to the MDBA that the SDL be revised to align with the NSW WSP plan limit of 9,344ML.

Fractured Rock

The Namoi Water Working Group has recently raised with the MDBA that the Guide has no reference to the fractured rock groundwater system that exists in the Peel Valley and has advised that this system has a long term average annual extraction limit of 71,218ML.

RECOMMENDATION:

- The Committee note that the Namoi Water Working Group's request to the MDBA that consideration be given to separate the Peel Valley from the Namoi SDL and a separate SDL for the Peel be provided.
- The Committee note that the Namoi Water Working Group's request to the MDBA that the SDLs for the Peel Valley Alluvium be aligned with the recently completed WSP limit which is based on comprehensive modelling.
- The Committee note that the Namoi Water Working Group's request to the MDBA for the inclusion and consideration of the Peel Fractured Groundwater system in the proposed Basin Plan.

3. Terms of Reference

This section focuses on the Terms of Reference of the Committee's Inquiry and outlines the key issues, concerns and suggestions the Namoi Councils Water Working Group has in terms of the socio-economic impacts of the proposed Murray Darling Basin Authority's Guide to the proposed Basin Plan on regional communities, with a particular focus on the Namoi Region.

As outlined previously, the Namoi Councils Water Working Group requests the opportunity to meet with the Committee to support the evidence provided.

The Namoi Councils Working Group has identified issues, concerns and suggestions under each of the Inquiry's following Terms of Reference;

- The direct and indirect impact of the Proposed Basin Plan on regional communities, including agricultural industries, local business activity and community wellbeing;
- Options for water-saving measures or water return on a region-by-region basis with consideration given to an analysis of actual usage versus licence entitlement over the preceding fifteen years
- The role of governments, the agricultural industry and the research sector in developing and delivering infrastructure and technologies aimed at supporting water efficiency within the Murray-Darling Basin.

In examining each of these issues, the Committee will also consider community views on:

- Measures to increase water efficiency and reduces consumption and their relative cost effectiveness;
- Opportunities for economic growth and diversification within regional communities; and
- Previous relevant reform and structural adjustment programs and the impact on communities and regions.

3.1 **The direct and indirect impact of the Proposed Basin Plan on regional communities, including agricultural industries, local business activity and community wellbeing**

Whilst not denying the need to return more water to the environment, the proposed SDLs in river diversions and further cuts in groundwater use will have very significant impacts on agricultural production in the Namoi Catchment and indirect impacts on the industries and towns servicing the irrigated industries (e.g. Wee Waa and Narrabri). This is especially the case given 48% of the Namoi Valley's agricultural output comes from the irrigated industries, most notably cotton (CARE Report).

The Guide to the proposed Basin Plan indicates that depending on which of the 3 scenario's are utilised, the loss in irrigated agricultural production will be \$0.8b - \$1.1b (13-17% of the Basin's gross value of irrigated agricultural production) and the loss of 800 full-time jobs. Given the magnitude of the Basin-wide cuts (27-37%) it cannot be believed that only 800

jobs will be lost. This is even more the case given the Guide estimates the following production losses if the proposal is accepted;

- Rice – 30%
- Cotton – 25%
- Dairy – 10%

It appears that the Guide has not “factored in” the impacts on industry and communities “past the farm gate” – this is especially significant since the MDBA in the Guide notes that food processing makes up to 33% of the Basin’s manufacturing activities. Subsequently, it appears that the Guide ignores the economic multipliers (up to 1:3.5, ABARE) that apply to the utilisation of irrigated products “past the farm gate”. Despite estimating 800 job losses, the MDBA acknowledges the paucity of socio-economic data in the Guide given it states *“there is an urgent need to undertake a comprehensive assessment of the social and economic impacts at the community and industry level.”*

Namoi Councils, some 12 months ago, realised the importance of accurate socio-economic modelling when assessing the impacts of the diversion of water for environmental purposes. To this end, the WWG was established (representatives include local government, Namoi CMA and industry representatives). Subsequently, Namoi Councils won a “Strengthening Basin Communities Program” Grant (\$760K) to enable it to conduct an in depth socio-economic analysis of the impacts of water cutbacks on the Namoi Catchment Community. This modelling will explore not only the direct impacts on irrigators – but also the impacts on households, towns and the general Catchment Community

The study will look at the potential socio-economic impacts of the proposed Basin Plan on the Namoi Catchment Community. The study is to provide detailed input/output modelling and the development of a socio-economic stress and resilience micro-simulation model (tool) to inform on the impacts of reduced water availability at the household level.

This study is an initiative of the Australian Government’s Strengthening Basin Communities Program and has a maximum project value of \$760,000 (ex GST) and will assist in all levels of planning.

The project has four key components with each component placing a strong emphasis on stakeholder engagement. The four key components are;

1. A triple bottom line (economic, environmental and social) assessment of the value of water to the entire Namoi catchment
2. A synthesis and on-going monitoring of the climate change projections for the Namoi Region
3. The development of a socio-economic resilience model and a risk assessment tool for future scenarios
4. Develop a catchment wide framework to facilitate regional climate change and water planning, including a review of existing plans and/or development of new plans to include strategies to account and mitigate climate change and water scarcity risks and implications.

The entire project is to be completed by mid 2012. However, the input/output modelling and resilience micro-simulation model (tool) is to be completed by mid 2011. This will provide an extremely useful tool to better inform a balanced approach to the setting and implementation of SDLs.

While the MDBA have recognised the need for more comprehensive data and modelling, the timeframes to adequately do what is required so it is useful and effective in informing decisions is not possible.

Recommendation/Request

- The Committee note and acknowledge the Namoi Councils Water Working Group's project and its relevance to the development of the Basin Plan and any associated mitigation or structural adjustment measures that may be required.
- The Namoi Councils Water Working Group meet with the Committee to further outline the detail and use of this study in the development of the Basin Plan, particularly regarding the input/output modelling and micro-simulation model (tool) that is to be completed by mid 2011 that will be an extremely useful tool to better inform a balanced approach to the setting and implementation of SDLs.

3.1.1 NSW vs Vic Commencement Dates - Inequity

The Namoi Councils Water Working Group are concerned about the different timeframes that each of the states need to comply with the Basin Plan and implementation of its SDLs which will occur via the new water resource management plans. NSW, South Australia and Queensland are expected to comply by 2014. However, Victoria is not expected to comply until 2019 – another five years later. This raises serious concerns regarding equity and the potential impacts that will be felt by NSW 5 years before that of Victoria.

The Namoi Councils Water Working Group suggests the implementation of the Basin Plan be better aligned across the states to ensure equity and minimise any potential third party impacts. Options for consideration may include, deferring the NSW implementation or compensation to NSW for potential loss of income.

RECOMMENDATION

- Options for an equitable implementation of the Basin Plan and its associated SDLs be investigated, by the Committee.

3.2 Options for water-saving measures or water return on a region-by-region basis with consideration given to an analysis of actual usage versus licence entitlement over the preceding fifteen years

3.2.1 Water use efficiency opportunities in the Namoi Valley

As indicated above to make any further substantial water use efficiency savings it will be necessary to initiate research and development programs and undertake detailed feasibility studies on priority projects.

There are potential water savings to be gained through improved river operations that reduce delivery losses. These improvements can be in the form of better measurement, real-time remotely sensed information or in the installation (and in some cases removal or modernisation) of infrastructure.

RECOMMENDATION

- The Committee note that the Namoi Councils Water Working Group has requested that the MDBA initiate and fund investigations into improved river operations, both at the local Namoi River system level as well as at the total Basin wide scale.

3.2.2 Menindee Lakes & supply to Broken Hill – infrastructure and storage operations

Reductions in current diversion limits (CDLs) should not occur to cover for a lack of government expenditure on infrastructure or poor management practices associated with the artificial utilisation of shallow natural lakes as water storages. A prime example of Government under spending and lack of strategic action leading to economic harm to industry and community is Menindee Lakes.

The Menindee Lakes Storage Scheme was conceived in the early 1960's and resulted in the construction of a series of small dams, weirs, regulators, channels and levees to contain Darling River floodwaters. The four main lakes within the scheme – Wetherell, Pamamaroo (including Copi Hollow), Menindee and Cawndilla – have a full storage capacity of 1,731GL. This amount is increased to 2,050GL when the storages are surcharged to mitigate the adverse effects of flooding.

The Menindee Lakes Scheme delivers water to South Australia to meet part, i.e. 39% on average, of its annual entitlement. As well as the allocation to South Australia, flows are released into the Darling River to a maximum rate of 9,000ML/day to meet monthly target storage levels for Lake Victoria and to hold it full over summer to minimise losses as a result of evaporation from Menindee Lakes Scheme (Thoms et al 2000). Also, very importantly, the scheme is used as a storage for Broken Hill's town water supply requirements. The Scheme is hugely inefficient in terms of water stored compared to the amount of water delivered. The hot dry climate of the Menindee area, with an average annual rainfall of 200mm, means that evaporation levels are high and a significant volume of water is lost from these shallow lakes when they are inundated – 62.8GL/month average evaporation (NSW Department of Land and Water Conservation, 1988).

The NSW State water planning process has included the requirements of domestic water in the establishment of its Water Sharing Plans currently being implemented under the National Water Initiative (NWI). When the levels in the Menindee Lakes fall to a level of 18 months forward supply for Broken Hill, all unregulated water users upstream of Menindee have their Water Sharing Plans suspended and are embargoed from accessing any unregulated water until the level in Menindee Lakes reaches the level of 21 months forward supply.

Unregulated water is an extremely valuable source of water for water users in the northern valleys, and the industries relying on it form the foundation for many of the communities in this area. The natural losses in many of the flows that could be productively used by water users under their Water Sharing Plans, frequently exceeds 100%. The water that leaves the upstream valleys very infrequently makes it to Menindee Lakes, as intended, due entirely to natural in-stream losses.

The costs of these embargo periods to some communities in the north, in terms of production opportunities foregone, are disproportionately large compared to the cost of fixing the problem that triggers it. The cost in the Macintyre Valley alone of a recent embargo (August 2006 to December 2007) was greater than \$10 million at the farm gate and greater than \$20 million in wider economic activity in these communities. Similar, if not greater, figures would apply in the Macquarie, Namoi and Gwydir Valleys.

The current situation with Broken Hill's water supply is not suited to today's climate, in terms of the recent drought, or the projected future impact of climate change.

The Darling River Water Savings Project identified a number of options to better manage the water resource in the Darling River for the benefit of communities that derive a living from it.

RECOMMENDATION

- The city of Broken Hill should have a reliable system of water supply that provides water to its rate-payers, free of water restrictions under normal circumstances. The Namoi Councils Water Working Group are of the opinion that this is possible and highly desirable to achieve without impacting on the economic viability of unrelated communities upstream. We note that in March 2009, funding of \$16 million was announced to allow for further investigations into regional groundwater resources and the potential for managed aquifer recharge.
- The NSW Government should make the most of the opportunity of the funding to be made available under the Commonwealth's Water for the Future plan to reconfigure the water supply infrastructure for Broken Hill to a state of the art model of efficiency.
- The Darling River Water Savings Project should be taken to its ultimate conclusion in implementing the best possible engineering options as well as changed operation of the Lakes during prolonged dry spells. The aim should be to achieve the annual average saving of at least 220 GLs of water and provide an increase in the quality of the released water for South Australia.

3.2.3 Environmental Water Management and Delivery

3.2.3.1 Environmental Works and Measures

As the SDLs are based on the watering requirements of key environmental assets with no allowance made for proposed engineering works and measures, it is assumed that the future installation of engineering works and measures to improve the delivery efficiency to environmental assets would practically result in higher SDLs across the Basin. This issue is not explicitly stated in the Guide and the Namoi Councils Water Working Group strongly recommends that this assumption is incorporated into the development and implementation of the Basin Plan. It is understood that the acceptance of such works and measures allowing for an increase in the SDLs would rely on whether or not the consequent effect on flows jeopardised other key assets.

Further, the Namoi Councils Water Working Group suggests that detailed investigations be undertaken on a Basin wide basis to determine the feasibility of engineering works to deliver environmental water requirements using lower volume releases from storages then under current conditions.

RECOMMENDATION:

- The Committee consider the implementation of environmental works and measures that improve the delivery of environmental water in the development and implementation of the Basin Plan to offset the volume of environmental water requirements and minimise the impacts on current diversion limits and regional communities.
- The Committee recommend to Government that the MDBA, in consultation with the States and local communities, undertake detailed investigations across the Basin to identify options for engineering works and measures that will more efficiently deliver water to the environment. The study should include cost estimates and estimated water savings and should be undertaken prior to the finalisation of SDLs.

3.2.3.2 Expertise and management plan required

Environmental water management and delivery just like irrigation water management and delivery needs to be efficient. Currently, rural communities have little confidence in the Commonwealth Environmental Water Holder (CEWH) to manage the significant volumes of environmental water proposed for the environmental assets and functions of the Basin. Considerable expertise and a particularly well thought through Environmental Watering Plan will be essential to the efficient and targeted management of environmental water. There will be a need for the CEWH to elicit the advice of experienced river operators to "get it right". The lack of an environmental watering plan is a key weakness of the Guide and does not assist in gaining community confidence in the Government's ability to effectively and efficiently manage the large volumes of held environmental water across the Basin to maximise environmental outcomes and minimise impacts on consumption.

The Namoi Councils Water Working Group seeks to ensure that the appropriate expertise including local knowledge and experience is employed in the development and implementation of an Environmental Watering Plan, which must include best practice management and an adaptive approach. In this regard, the Namoi Councils Water Working Group suggests the implementation of case studies in environmental water management that are fully resourced and employ good governance and local input. Consideration should

also be given to the Namoi CMA, as the key on-ground NRM body in the Namoi, playing a major role in the coordination and local management of Commonwealth and State held environmental water as well as providing input into the development of a water buying strategy for the Commonwealth Environmental Water Holder for purchases in the Namoi.

Another issue the Namoi Councils Water Working Group has identified as requiring clarification by the MDBA is how the use of environmental water will be accounted for. What is the point of measurement for debiting environmental water accounts – when released from the dam or at the point of delivery to a particular point downstream?

RECOMMENDATION:

- The Committee note that rural communities have little confidence in the CEWH's ability to manage considerable volumes of environmental water effectively and efficiently. The involvement of local river operators and other local input and expertise is essential in the development and implementation of any environmental water management plans.
- Namoi CMA is well placed to coordinate the management and delivery of government held environmental water at the local Namoi Catchment level including the development of an environmental watering plan – the involvement of local NRM bodies in this regard should be further explored.
- The Committee support the Namoi Council's Water Working Group's request to the MDBA, in collaboration with the States, clarify and advise on the process for debiting environmental water accounts.

3.2.3.3 Efficient Delivery of Environmental Water

The Lower Darling River System has been identified as a hydrologic indicator site in the Guide to proposed Basin Plan. The Lower Darling River includes the river channel and adjacent billabongs and wetlands. The river extends from Menindee Lakes to the junction of the Murray and the Darling at Wentworth, covering approximately 1,400,000 ha. The Namoi Councils Water Working Group is concerned about the process and basis for determining the contributions from the Naomi and other upstream tributaries of the Barwon-Darling to meet the downstream environmental water requirements. Our main concern is whether the contributions will actually reach their intended environmental asset destinations due to the physical nature of the Darling River and its floodplains in particular.

The Namoi Councils Water Working Group questions whether consideration has been given to the huge losses that may be experienced at certain river levels particularly in the vicinity of Wilcannia. Effluent systems such as the Ten Mile Creek System and the Tallywalka Creek Systems carry water away from the river, much of which does not return to the main river downstream. These substantial losses would have an impact on the targeted flow requirements to meet the needs of environmental assets in the Lower Darling.

RECOMMENDATION

- Further analysis/modelling be undertaken into the substantial losses that could be incurred in the delivery of environmental water, when determining environmental water contributions to downstream assets from upstream tributary systems to the Barwon Darling.

3.2.4 Need for better measurement

With water availability becoming scarcer across the Murray Darling Basin and competition for the resource increasing, more accurate measurement is vital to support management decisions and to assist more efficient water use. Recent studies have recognised that quantifiable water savings can be realised in regulated river water sources through the replacement of current non-urban meter installations with meters that are compliant with the new Australian National Water Meter Standards. These studies found that the replacement of pre-National standard propeller meters with compliant electromagnetic meters is likely to realise water savings of around 8% of long term average diversions.

Accurate water metering is pivotal to any water savings proposal, particularly as the nature of most mechanical water meters (such as in-line flow meters) generally under-record water use due to wear and tear and physical blockages within the meter apparatus. This is a critical issue as these mechanical meters are the most common metering device used for river extractions and represent a significant opportunity to realise water savings from improved meter accuracy.

In addition to the potential water savings that can be realised through the installation of more accurate meters and associated telemetry, there are many other broader natural resource management (NRM) benefits to be gained by water entitlement holders, the environment and water managers and operators in the regulated river systems.

The installation of more accurate metering will result in improved monitoring of water extraction and verifying water usage which has many broader benefits including, but not limited to;

- More clearly defining property rights in water
- Ensuring that a scarce and valuable resource is taken according to a licensee's volume share.
- Protecting all individual's, including the environment's rights by preventing excess extraction. Particularly given the increasing competition between consumptive and non consumptive groups – agriculture, urban, environment and to a lesser extent industrial all having different needs
- Providing an accurate record of how much water is taken and where and when at the local, regional and state level. This is essential for a range of planning purposes and to encourage water use efficiencies.
- Supporting evidence and data-based water planning, management and decision making. The rural community demands that water should be better managed so as to maximize value for the community, region and nation.
- To better inform and enable more accurate reporting for the National Water Account and MDBMC Cap accounting
- Verifies usage and provides charging equity for the component of bulk water charges that are based on water extraction

To realise on water savings derived through the installation of more accurate meters, the long-term average diversions (i.e. Cap) must be adjusted to more accurately reflect what actually has been diverted from regulated river systems. This is essential in eliminating

potential third party impacts when creating adaptive environmental water licences from these savings.

The Namoi Councils Water Working Group contends that the installation of more accurate meters, coupled with real-time monitoring of water extraction using cost effective telemetry equipment would not only return water savings to the environment through more accurate measurement but would also reduce losses in delivery of consumptive volumes through much improved river operations. These savings, the Namoi Councils Water Working Group suggests may be significant and provide a reasonable contribution to the additional environmental water being sought to meet the requirements of the Namoi catchment's key assets and functions.

RECOMMENDATION

- The Committee recognise the critical importance of more accurate metering coupled with real-time monitoring and strongly support implementation of more accurate measurement that will lead to better management and water savings.
- The Committee ensure that the Basin Plan includes provision for adjusting CDLs and associated SDLs based on the outcomes of the implementation of more accurate metering.

3.2.5 Mitigation measures - Buyback vs Infrastructure investment

The Commonwealth buyback is focussed on mitigating the impacts of the reductions to the current diversion limits on irrigators only and does not address the flow-on impacts to support businesses and services in rural communities. Under the buyback program, impacts on individual irrigators of the new SDLs will of course be more severe if there are too few willing sellers found to fully mitigate the required reduction in the current diversion limits. Another debilitating impact of the buyback scheme is the potential geographical area concentrations of willing sellers. For information, members of the Namoi Council Water Working Group has undertaken an analysis of the current distribution of licences and the location of potential willing sellers. This analysis has indicated that the potential willing sellers are likely to be concentrated in the Wee Waa area which would lead to devastating socio-economic impacts on Wee Waa.

The Namoi Councils Water Working Group sees it as essential to recover as much of the volume of water required for the environment from investment in infrastructure both on and off farm and asks that the Commonwealth Government be directed to expedite the roll-out of their irrigation infrastructure modernisation program funding.

The Namoi Councils Water Working Group recognises that investment in improved infrastructure delivers broader NRM outcomes and recommend that it should be the priority focus for recovering the required environmental water. This should be done in consultation and with input from the local communities.

Taxation issues associated with the infrastructure payments also need to be resolved. This is currently a stumbling block in the up-take of on-farm programs.

RECOMMENDATION

- The Committee recognise the critical importance of the implementation and investment in improved water use and management infrastructure
- The Committee strongly supports the expedited roll out of the Commonwealth Governments Irrigation Infrastructure Modernisation Program funding with input from local communities to minimise social and economic impacts on regional Australia.
- As a matter of priority, the Committee recommend a Commonwealth funded basin-wide study be initiated and adequately resourced to identify areas of potential major savings in river system management including evaporation and delivery losses.

3.3 The role of governments, the agricultural industry and the research sector in developing and delivering infrastructure and technologies aimed at supporting water efficiency within the Murray-Darling Basin.

3.3.1 Research & Development - New technology

The Namoi Councils Water Working Group would suggest to the Committee that most opportunities for on-farm water use efficiencies in the Namoi have been implemented via past water reforms and best management practices by the majority of irrigated farms and although there may still be some opportunities to recover water via on-farm efficiencies, this will be limited.

However, it is suggested that Research and Development (R&D) and its adoption is a key missing link in the Guide to the proposed Basin Plan and in the SEWPaC programs. R&D could well drive new technologies that further improve water use efficiency as well as identify and investigate new innovative methods and options particularly regarding environmental water management, irrigation modernisation and river operations.

With the suggested decline in water available for production, it will be necessary to produce more food and fibre per megalitre – this will necessitate advances in technology and knowledge.

RECOMMENDATION

- The importance of R&D in the better management of the Murray Darling Basin be recognised and support funding and resourcing in this area be provided to assist in mitigating the impacts of the proposed Basin Plan.

3.3.2 Monitoring and Evaluation/Benchmarking and Adaptive Management

The Namoi Councils Water Working Group suggests that the Namoi CMA, as the key NRM body covering the entire Namoi Catchment could provide valuable assistance and play an important role in benchmarking the present/current conditions concerning the six key Basin Plan elements as well as monitoring and reporting on these key elements into the future. This is a critical aspect in the development and implementation of the Basin Plan.

The six key elements to be addressed in the Basin Plan's Monitoring and Evaluation Program's framework are

- Ecosystem outcomes from the implementation of long-term average SDLs and the environmental watering plan
- The water quality and salinity management plan
- Critical human water needs
- Risks to the condition and availability of Basin water resources
- Water trading and transfer rules
- Socio-economic impacts.

The Namoi Councils Water Working Group would like to further discuss this potential role and suggest that such a program would need to be well resourced to allow the necessary benchmarking, monitoring and reporting of tasks under the Basin Plan conceptual framework. The Namoi CMA is well placed to undertake this role particularly given their local knowledge and expertise particularly the work they have done to date in this area through the successful development and implementation of a Catchment Action Plan and benchmarking NRM for the entire Namoi Catchment that provides for and delivers on-ground integrated NRM. They also have excellent working relationships with the Namoi Catchment stakeholders and broader community and could build this into and complement their existing role.

The Namoi Councils Water Working Group also suggests that benchmarking and on-going monitoring and evaluation would cater for a staged implementation to environmental watering requirements and hence SDLs. The staged implementation under an adaptive management approach, it is suggested, may gain better ownership and confidence in the process from rural communities.

RECOMMENDATION

- The Committee recommend that locally based CMA's play a key role in undertaking the benchmarking, monitoring and reporting for the six key Basin Plan elements and that this be funded by the Commonwealth.
- The Committee consider a staged approach to the implementation of the Basin Plan particularly regarding the environmental watering requirements and SDLs. The staged approach should be based on adaptive management informed by appropriately resourced monitoring and evaluation programs, be adopted to minimise impacts of the Basin Plan.

3.3.3 Need for integrated NRM Plan

The Namoi Councils Water Working Group is concerned that the current process and the Guide to the proposed Basin Plan is predominantly single focused as a "just add water" solution.

Based on the knowledge and experience we have gathered particularly over the last 20 years the importance of integrated natural resource management is widely acknowledged. It appears we are going backwards.

There is a high priority to integrate land management options with water management on a catchment scale. The implementation and resourcing of a catchment management approach for healthy rivers is the solution and the Namoi Councils Water Working Group have made submissions to both Parliamentary Inquiries to further discuss this.

RECOMMENDATION

- The Committee note the Namoi Councils Water Working Group's request to the MDBA to engage with the local NRM bodies to implement an integrated NRM approach across the river catchments that would support the "healthy working river" approach
- The Namoi Council's Water Working Group would welcome the opportunity to discuss this approach in detail with the Committee

3.4 Measures to increase water efficiency and reduce consumption and their relative cost effectiveness;

Suggestions and options for measures to increase water efficiency have been outlined in the previous sections of this submission. The Namoi Councils Water Working Group sees investment in infrastructure both on and off farm as essential to recover as much of the volume of water required for the environment and asks that the Commonwealth Government be directed to expedite the roll-out of their irrigation infrastructure modernisation program funding.

There have been various views put forward that water recovery through infrastructure upgrades is more expensive, more complex and take more time than recovering water simply by purchasing entitlement via the market. However, a broader view of the benefits of recovering water via infrastructure, such as flow on effects in regional areas and broader NRM outcomes; need to be considered in determining the costs and benefits.

3.5 Opportunities for economic growth and diversification within regional communities; and

The Namoi Councils Water Working Group are interested in providing further information and evidence to the Committee in regard to this term of reference.

As outlined previously in this submission, whilst not denying the need to return more water to the environment, the proposed SDLs in river diversions and further cuts in groundwater use

will have very significant impacts on agricultural production in the Namoi Catchment and indirect impacts on the industries and towns servicing the irrigated industries (e.g. Wee Waa and Narrabri). This is especially the case given 48% of the Namoi Valley's agricultural output comes from the irrigated industries, most notably cotton (CARE Report).

We are currently working with the Regional Development Australia (RDA) Northern Inland Committee in identifying and refining opportunities for economic growth and diversification within the Namoi Region and would welcome the opportunity to provide further evidence to the Committee in this regard.

3.6 Previous relevant reform and structural adjustment programs and the impact on communities and regions.

3.6.1 Achieving Sustainable Groundwater Entitlements (ASGE)

The Achieving Sustainable Groundwater Entitlements (ASGE) Program was a major water reform program announced in June 2005. The program was designed to help water users in the Upper and Lower Namoi, Lower Macquarie, Lower Lachlan, Lower Murray, Lower Gwydir and Lower Murrumbidgee groundwater sources in the NSW manage the reductions required in their entitlements to achieve sustainable yields. These reductions were necessary to achieve sustainable use of these groundwater resources and also formed part of the NSW Government's commitment to the implementation of the National Water Initiative (NWI).

The reform comprised of a range of measures including perpetual licences, a financial assistance package, groundwater trading and a ten year transition period. The relevant Water Sharing Plans set out details for how and over what timeframe the entitlements in the groundwater source were to be reduced to achieve sustainable yield. The available extraction from these groundwater sources are gradually being reduced to the sustainable yield via the implementation of the WSPs over their 10 year term.

The Namoi Councils Water Working Group is unable to reconcile the differences between the sustainable yield for the Namoi and Peel Groundwater Sources defined in the WSP, and based on detailed hydrogeological models, and the new SDLs included in the Guide to the proposed Basin Plan. It is unclear what has changed over the last 4 to 5 years to indicate further reductions. The proposed cuts for groundwater users are particularly significant for the Groundwater users in the Lower Namoi which over some 4 years have suffered an average cut of 60% under the Achieving Sustainable Groundwater Entitlements Program (ASGE) – they now face a further 13% cut in the current diversion limit under the Guide to the proposed Basin Plan – noting that this is based on the new current diversions of only 40% of those existing only 4 or 5 years ago, prior to the implementation of the ASGE program.

The question needs to be asked what is the difference between “sustainable yield” (the basis for the ASGE Program) and the “sustainable diversion limits” that warrants a further 13% in the Lower Namoi Alluvium diversions? It is not clear what new information or science the MDBA has obtained and used post the ASGE program that suggests further reductions are required.

Also the difference in the definitions and basis for “Sustainable Yields” used in the WSP and ASGE program and the new SDLs is not clear – what is the difference, what is the basis for the change and are the assumptions correct.

Members of the Namoi Councils Water Working Group were heavily involved in the roll-out of the ASGE program across the Namoi which was successfully delivered on-ground.

RECOMMENDATION:

- The Committee note and support the Namoi Councils Water Working Group’s request to the MDBA to explain the difference between “sustainable yield” (the basis for the ASGE Program) and the “sustainable diversion limits” that warrants a further 13% in the Lower Namoi Alluvium diversions.

3.6.2 Local roll-out of Structural Adjustment Programs - Efficiencies

As outlined earlier, the implementation of the Basin Plan needs to find an appropriate balance between environmental, economic and social interests of the Basin. It also needs to be supported by a Commonwealth Government structural adjustment package to assist affected communities transition to lower water availability.

Members of the Namoi Councils Water Working Group have been involved in the successful on-ground administration and implementation of previous Government structural adjustment programs within the Namoi Valley, including for example, the Achieving Sustainable Groundwater Entitlements (ASGE) Program as outlined above.

There are numerous on-ground examples in terms of efficiency and value for money for Australian and NSW Government funds spent under this program in the Namoi. One example is a project under the Namoi Water Use Efficiency Program for Groundwater Irrigators administered by the Namoi CMA where a total of \$5 million was invested to install improved irrigation equipment; planning, measurements and monitoring equipment and attendance at training courses to promote improved knowledge and capacity – this resulted in an expected water savings of almost 7,000 ML for use to improve productivity and maintain viability. The CMA grant (NSW and Australian Government funds) contributed funds equivalent of just over 20% of the total value of the project with almost 80% of the investment being contributed by the landholder.

There is a lot to be gained from the lessons learned through this local roll-out process. In this regard, the Namoi Councils Water Working Group would like to offer assistance to and work with the State and Commonwealth Governments regarding the development of any structural adjustment programs to promote social, economic and environmental outcomes for the regional and rural communities within the Namoi Region. This would also include the determination of potential options for the design, structure and implementation of programs that are tailored to the needs of various regional communities.

RECOMMENDATION

- The development of any structural adjustment programs draws on the lessons learned by the members of the Namoi Councils Water Working Group in the local roll-out of programs.

- The Namoi Councils Water Working Group are key participants in any discussions regarding the design of any proposed structural adjustment programs for the Namoi Region.