Report on how local communities influenced Basin Plan implementation – MDBA

The Murray-Darling Basin's 2014- 15 annual report on using local knowledge and solutions to implement the Basin Plan (Schedule 12, Item 6)

Reporting context

The success of the Basin Plan and associated water reforms depends on working closely with communities and stakeholders who can provide the necessary local knowledge and solutions to effectively implement the Plan.

The Basin Plan requires Basin States, the Authority and the Commonwealth Environmental Water Holder to draw on local knowledge and solutions across a range of Basin Plan activities including long-term watering plans, annual environmental watering priorities and water resource plans.

It also requires that the best available knowledge (including scientific, local and cultural knowledge), evidence and analysis be used where practicable to ensure credibility, transparency and usefulness of monitoring and evaluation findings.

The purpose of this report is to monitor the extent to which local knowledge and solutions have influenced implementation of the Basin Plan during 2014- 15. The report is a requirement of Chapter 13 of the Basin Plan and relates to Item 6 of Schedule 12.

Indicators for measuring success

The use of local knowledge to inform Basin Plan implementation is evaluated using the following indicators:

- How engagement influenced Basin Plan implementation (**6.1**)
- Processes used to identify stakeholders and other relevant groups and individuals from local communities and peak bodies (**6.2**)
- How stakeholders and other relevant groups were engaged (**6.3**)

6.1: How engagement influenced Basin Plan implementation

Where possible include specific examples of:

- *how local knowledge and solutions were used by the reporter*
- *how involving communities made a difference to Basin Plan implementation*
- *how decisions changed as a result of community involvement*

Local knowledge might include knowledge drawn from Traditional Owners and other Indigenous people and groups. When reporting on Aboriginal participation and influence, processes of involvement may be as important as outcomes.

In 2014-15 reporting, we would expect use of local knowledge to feature in development of Water Resource Plans.

Examples or case studies are not mandatory but may be a useful way to describe how local knowledge and solutions inform implementation of the Basin Plan.
(max. 800 words)

Response

ABORIGINAL KNOWLEDGE

Water resource plans

The Basin Plan (Chapter 10, Part 14) requires state jurisdictions to consider the views of Aboriginal people with respect to cultural flows and for the MDBA to consider Traditional Owner advice in assessing state water plans. In 2014-15 the MDBA Aboriginal Partnerships team and members of the Murray Lower Darling Rivers Indigenous Nations' (MLDRIN) and Northern Basin Aboriginal Nations' (NBAN) met with state government representatives to discuss the approach to Aboriginal engagement within the context of state water resource plans.

NBAN and MLDRIN

The Northern Basin Aboriginal Nations and Murray Lower Darling Rivers Indigenous Nations are the two peak Traditional Owner based organisations in the Basin with a primary focus on natural resource management. This makes them an invaluable partner in delivering better environmental outcomes.

The MDBA recognises the importance of independent, culturally authoritative and strategic input from Aboriginal people. In 2014-15 NBAN and MLDRIN have guided and provided advice on Basin Plan implementation matters, including:

- Development, implementation and evaluation of the Aboriginal Waterways Assessment project
- Water Resource Planning, specifically in relation to Chapter 10 Part 14 of the Basin Plan. Specifically, NBAN and MLDRIN worked with the MDBA to develop the Guide to Traditional Owners for the water resource plan areas. The Guides (map and lists) show the relevant Traditional Owners for surface and groundwater water resource plan areas.
- Development of terminology of 'Aboriginal Environmental Outcomes'
- Feedback and advice on reports including the Basin-wide Environmental Watering Strategy, Aboriginal Partnerships Action Plan, Strengthening Connections, Yarns Woven, Socio-economic Survey Report

- Representation and presentations to various peak body representatives (environmental and irrigators) and government agencies including Parliamentary Secretary and Commonwealth Environmental Water Holder

- Participation on National Cultural Flows Research Steering and Planning Committee

Ongoing support for these groups will assist with the implementation of the Basin Plan, build on years of investment in Aboriginal water knowledge and enhance already robust working relationships.

Aboriginal Waterways Assessment – case study

The Aboriginal Waterways Assessment (AWA) project tested and adapted a Māori-originated water assessment tool to suit Traditional Owners' preferences and needs in the Murray-Darling Basin. The purpose of the project was to develop a tool that consistently measures and prioritises river and wetland health so that Traditional Owners can more effectively participate in water planning and management in the Basin.

Building on long-term relationships between Aboriginal Nations in the Basin and the MDBA, a Participatory Action Research strategy provided the inquiry framework for collaboration with Nations as they carried out the pilots. The three participating Nation groups were Wemba Wemba/Barapa Nations, Gamilaraay Nation, and Dhudhuroa/Waywurru Nations.

The research found that each Nation group agrees that the AWA tool and process is a culturally appropriate, safe and strengthening way to assess the health of river and wetland places.

Additionally, the AWA was found to:

- Produce accurate, accessible and useful information

- Be good for people's health and wellbeing

- Increase Aboriginal peoples' confidence in using their knowledge in water planning and management environments

- Enable members of Nations with limited knowledge of Country to contribute to river and wetland health assessment

- Provide local knowledge of biodiversity and flow conditions; extended time frames of flow characteristics; and current observations of the local impacts of water policy and regulation to Nations, and

- Prevent further loss of Traditional Owners' knowledge of Country by: a) providing an analysis of river and wetland health relative to cultural uses; b) recording the current state of cultural values and uses of Country; c) contributing to cultural transmission including historical stories; and d) providing valid and locally owned information for caring for Country.

A multi-disciplinary and cross-cultural team worked in partnership with the MDBA's Aboriginal Partnerships team. The teams provided technical expertise with regard to the Māori Cultural Health Index (or tool), river and wetland ecological management, Social Ecology and Participatory Action Research. MLDRIN and NBAN authorised the development and the approach.

The research was guided by three questions that were drawn from conversations with participants at initial place visits and team meetings. They are:

- Viability - Does the AWA tool work?

- Appropriateness - Is the AWA tool useful for communities?
- Practice - What is the best way to conduct our business with each other?

The questions generated thirty-seven validated findings, which inform 12 conclusions.

Structure of the Indicator

The AWA consists of three linked components:

1. Component 1 - Site status – a statement of whether or not the site is an area of traditional significance and whether local Aboriginal people would return to the site in the future
2. Component 2 - Current use of site – a measure of the value of a river or wetland to Aboriginal people based on whether food and other resources are available and suitable for cultural use, and
3. Component 3 - Cultural stream health – a measure made up of eight individual stream health indicators, such as vegetation, riverbed condition and water quality.

Pilot activity

Local Aboriginal leadership groups in each pilot location selected the Assessment Team of about 10 Traditional Owners in advance. That team was responsible for the assessments and selection of places for assessment. In the context of capacity to participate, the Research Team needed to introduce its role of explaining the tools to the Assessment Team, facilitating reflection on the day's experience of using the Assessment Form, and organising vehicles, food and other resources including local NRM information.

On Day 1, as part of the training, the Assessment Team was introduced to the Assessment Form, and tried out the Indicator questions at a place close to town, if possible in good condition, to set a benchmark for assessment.

Places were selected by the Assessment Team to give a good spread of different kinds of Country. Decisions on which places to visit were made the day before, refined further in the morning and sometimes as the day progressed. Decisions were often the subject of intense discussion about the relevance of places to an overall assessment of Country.

On arrival at a place, the Assessment Team split up to work with people they knew, or to work alone. They walked around to look at the place, then worked through the questions in the Assessment Form. They talked over their thoughts with each other if they needed to, or with members of the Research Team. Each was encouraged to make their own decisions on ratings and comments, but the Research Team did not cut across discussion within subgroups.

At the end of each subsequent day in the week-long visit, the Research Team made up a map of the places assessed, entered the ratings into spread sheets to calculate the scores for each place, began transcribing comments and made up a report on each place with scores, photos and representative quotes. An example of a report is in the Appendix.

The Assessment and Research Teams together discussed how the day had gone, what was working and not working with the Assessment Form, and how the Teams were working together.

How did we gather research data? Working to Free, Prior and Informed Consent protocols throughout the strategy

Evaluation of the assessment tool and its use has drawn on the following data gathering activities, each based on Assessment Team participation and deliberation:

- Place Assessment forms completed by each Assessment Team for each place, and in particular Team members' qualitative comments
- Mapping of place by a Research Team member using a GIS mapping program
- Photographs of assessment activity taken by the Research Facilitator with Assessment Team consent
- Notes taken by the Research Facilitator from discussions with the Assessment Team about observations from the day as they used the Assessment Form in the field
- Discussion with the Assessment Team in reflective sessions at the host community centre about the experience and the data gathered, and
- Discussions within the Research Team.

Analysing the data

At this point in time the technology and knowledge of how to use the data is not available in local communities. Therefore, the Research Team developed the approach to assimilating the data. This was based on a scoring method that integrates river health with cultural values.

An average monthly natural flow at or near the assessment place is provided in the place reports to enable Assessment Teams and other community members to compare current flow conditions with modelled pre-development flows.

The scores are also presented on One-page Place Summaries, which provide photographic evidence of the Assessment Team making their assessments, as well as the condition of the river at the place. Comments recorded on the Assessment Forms are included on these pictorial summaries, to preserve local observations about cultural, biodiversity and/or flow conditions of the place.

CONSTRAINTS MANAGEMENT

In late 2014 the MDBA published the draft regional reach reports for constraints on the MDBA website. The reports were the culmination of extensive discussions with Basin communities and captured what people said about how higher river flows could affect land and infrastructure in their region. This local knowledge, together with technical information including modelling and mapping, is helping the MDBA understand the potential impacts of addressing constraints in those areas.

In early 2015 MDBA staff met with communities to discuss and update the reach reports with any new information and to ensure the community views had been represented. Updates ensured that all the effects of higher flows on land management were accounted for, such as effects on fencing and weeds, the effects of longer flows on pastures, and including more detailed case studies of likely effects at a property scale.

The Basin Plan requires the MDBA to report annually to Basin ministers about progress with matters covered by the Constraints Management Strategy. Some community stakeholders felt that their concerns about the higher flow rates (captured in the reach reports) were not adequately represented in some sections of the annual progress report, which was published in December 2014. MDBA has recognised that the summary table in the annual report did not meet community expectations in terms of explicitly recognising community issues with certain flow rates, and has updated the reach reports to capture all concerns. In addition, in response to community feedback about the effects of some of the higher flows, the highest flows in several reaches are no longer being investigated.

A key component of the engagement with stakeholders this year has been to seek input to refining the cost estimates of mitigation measures, such as infrastructure works and easements. MDBA has worked with consultants and met extensively with councils, business owners and riparian landholders to better understand the effects of proposed higher flows. The information provided by the stakeholders involved in this work will help to ensure the effects on communities are fully accounted for in the business cases, which will form the basis for decisions by Basin Governments by June 2016.

In response to community concerns about flood risk, we are developing the scope for ongoing work to explore flood risk associated with higher environmental flows. MDBA, along with the consultants, has met with and spoken to stakeholders to ensure their concerns are captured.

States and MDBA are preparing draft business cases which are due to be finalised in November 2015. To ensure transparency in the process, MDBA and the states will share the business case content with the community and seek feedback prior to finalising the work.

ENVIRONMENTAL WATERING

The *Basin-wide environmental watering strategy* was published in November 2014 along with a companion document, *Summary of feedback on the Basin-wide environmental watering strategy*. The summary of feedback sets out the main changes the MDBA made to the strategy on the basis of feedback received. MDBA received forty-one submissions.

Some of the main changes the MDBA made to the strategy as a result of community input included adding a case study on environmental watering undertaken with an Aboriginal community, adding vegetation condition data and important fish sites and describing the relationship between the strategy and water resource plans.

NORTHERN BASIN

In 2014-15 the Northern Basin Advisory Committee, its working groups and a number of stakeholders in the north influenced the MDBA's work in the northern Basin. The advice received:

- helped define the scope of the environmental science projects (e.g. response of fish to changes in flow project and waterbird breeding response to flow at Narran lakes project)
- contributed to the social and economic impact assessment project (e.g. learning from the Deloitte economic model developed for the Namoi Regional Organisation of Councils)
- shaped the scope of the hydrological modelling work program for the northern Basin review,
- helped define the scope of the floodplain graziers' benefits project in March 2015, which will assess the social and economic impacts of Basin Plan water reforms on floodplain graziers in the Lower Balonne under a range of water recovery scenarios, and
- suggested that we ground-truth and peer review the outcomes of the northern Basin review.

Stakeholders also advised the MDBA to clearly communicate how the environmental science and the social and economic projects may lead to amending or confirming sustainable diversion limits in the northern Basin.

SOCIAL AND ECONOMIC INTEGRATION

Results from the community and industry information collection and analysis (described under 6.3 below) will help us understand, assess and monitor the effects of Basin Plan water reforms.

6.2: Processes used to identify stakeholders and other relevant groups and individuals from local communities and peak bodies

Where possible include process used to identify stakeholders and other relevant groups/individuals (max. 800 words)

Response

The MDBA has specialist engagement staff to assist program areas in stakeholder mapping and analysis, and maintaining stakeholder relationships. This includes management of a client relationship database. We work closely with our advisory committees to ensure we are aware of relevant networks and we monitor media to identify people interested in the Basin Plan.

ABORIGINAL KNOWLEDGE

The MDBA harnesses Aboriginal knowledge through supporting the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) and the Northern Basin Aboriginal Nations (NBAN) participation in Murray–Darling Basin planning and programs and seeking their advice on specific issues. NBAN and MLDRIN help MDBA identify relevant local Traditional Owners and local or regional Aboriginal representative groups (for example Elders Councils) in the Basin.

MLDRIN was formed in 1998 and NBAN in 2010. They are independent, self-determining organisations comprised of delegates from 46 member Nations.

Both organisations are guided by their constitutions and share the common aim of seeking greater recognition and respect for Aboriginal knowledge and values regarding land and water management. These organisations promote the views and perspectives of Aboriginal people on water research, policy and management.

CONSTRAINTS

In 2014-15 MDBA project leaders for the constraint areas worked with stakeholders (riparian landholders, councils, regional state NRM organisations, water delivery authorities and industry groups) identified in the previous reporting year through a stakeholder mapping process. In 2014-15 efforts were made to involve new stakeholders in the feasibility investigations. To this end efforts focussed on involving more riparian landholders, businesses, councils, and Traditional Owners in order to ensure potentially affected parties have a voice in the decision making process.

In the constraints area MDBA worked with existing advisory groups in 2014-15. However, where a suitable group did not exist, such as the Murrumbidgee region, MDBA worked with the states to set up community advisory groups.

ENVIRONMENTAL WATERING

As noted in last year's report, the MDBA developed a collaboration and consultation strategy to identify and analyse stakeholders and map out appropriate engagement activities for development of the Basin-wide Environmental Watering Strategy and the 2014-15 Basin Annual Environmental Watering Priorities (BAEWP).

Identification of stakeholders for the development of the Basin-wide Environmental Watering Strategy was guided by section 8.15 of the Basin Plan and built on existing MDBA networks.

NORTHERN BASIN

In 2014-15 the MDBA appointed an additional resource to focus on community engagement in the northern Basin, including further stakeholder identification.

The Northern Basin Advisory Committee provided advice on who further to engage with in the Northern Basin – in particular, linking the MDBA into communities in the Lower Balonne.

SOCIAL AND ECONOMIC

In 2014-15, the Social and economic team has continued to build on its network of stakeholders as existing stakeholders offer new linkages and sources of information. The team's network includes people who are in interested in, and/or impacted by, the Basin Plan, as well as those who have information relevant to MDBA analyses (for example, bank and agribusiness managers, chambers of commerce and universities).

6.3: How stakeholders and other relevant groups and individuals were engaged

Where possible include:

- *range of audiences engaged*
- *range of opportunities (types of engagement)*
- *relate these to the Basin Plan obligations to have regard to local views (Chapter 8 and 10)*

(max. 800 words)

Response

The MDBA seeks the input of community stakeholders in the following ways:

- Community advisory committees
- Input from individuals and businesses affected by the Basin Plan
- Formal public consultations
- Talking regularly with peak bodies
- Citizen science

COMMUNITY ADVISORY COMMITTEES

Basin Community Committee (BCC)

The MDBA's Basin Community Committee (BCC) is established under section 202(1) of the *Water Act 2007* and guides incorporation of local knowledge into Basin Plan implementation. The BCC met quarterly in 2014-15. Committee members also attended a number of community meetings and events across the Basin.

Northern Basin Advisory Committee (NBAC)

The Northern Basin Advisory Committee (NBAC) is established under subsection 203(1) of the *Water Act 2007* and provides advice on Basin Plan implementation in the northern Basin. NBAC met quarterly in 2014-15. Committee members also attended a number of community meetings and events across the Basin.

Murray Lower Darling Rivers Indigenous Nations' (MLDRIN) and the Northern Basin Aboriginal Nations' (NBAN)

The MDBA harnesses Indigenous knowledge through supporting the Murray Lower Darling Rivers Indigenous Nations' (MLDRIN) and the Northern Basin Aboriginal Nations' (NBAN) participation in Murray–Darling Basin planning and programs and seeking their advice on specific issues.

In 2014-15 MLDRIN and NBAN each held eight meetings and discussed and provided advice to the MDBA on a range of issues relating to Basin Plan implementation.

In April 2014, the MDBA developed the Aboriginal Partnerships Action Plan (APAP) to guide how the MDBA obtains and implements Aboriginal input to managing water and improving the condition of Country in the Murray-Darling Basin.

The MDBA will continue to invest in developing processes and tools to assist Aboriginal people to engage in water research, planning and management. Potential tools include Use-and-Occupancy Mapping and the Aboriginal Waterways Assessment. In 2014/15 the MDBA worked with NBAN and MLDRIN to include Traditional Owner groups in the development of the Aboriginal Waterways Assessment project.

INPUT FROM INDIVIDUALS AND BUSINESSES AFFECTED BY THE BASIN PLAN

MDBA relies on the input of individuals and businesses across many of its program areas.

Social and economic

In our social and economic assessment work we are undertaking a number of regional and industry studies. These studies focus in detail on the effect of the Basin reforms and how they intersect with other changes occurring in irrigation industries and communities. As part of these studies we are conducting interviews with farmers and other community members to learn from their experiences and observations. We are also engaging communities to assist us with the interpretation of the findings from our regional studies, over time we expect this process will support the inclusion of local knowledge in evaluation findings.

Constraints Management

Stakeholders (including riparian landholders, councils, regional state NRM organisations, water delivery authorities and industry groups) have been engaged on an on-going basis through 2014-15 via a number of different methods suitable to the respective needs of each stakeholder. Face-to-face contact has been the preferred method, where possible, to build and maintain relationships.

Face-to-face engagement has been via both meetings with individuals and groups, principally in local regional venues suitable to stakeholders. Meetings have been organised with consideration of timing to ensure maximum attendance (i.e. avoiding the busiest times such as planting and harvest for farmers).

The community engagement to inform the cost estimates and flood risk work has generally been conducted through meetings with individuals, however in some cases it has been conducted through correspondence and phone calls at the request of stakeholders.

Basin annual environmental watering priorities

Each year the MDBA works collaboratively with environmental water holders and managers to develop the whole of Basin environmental watering priorities. An environmental watering 'outlook' is published each year in March and we invite feedback on the outlook before the priorities for the coming year are finalised and published in June.

Community input to the priorities occurs mainly at a state and regional level and this input is fed to the MDBA through environmental watering advisory committees and working groups. MDBA is

looking at a more wide-reaching approach for incorporating local knowledge into development of the priorities over coming years.

Northern Basin

Local knowledge is an important input to work on the Northern Basin Review. This happens in two ways:

- We ground truth concepts with local communities, and
- We gather data from individuals and businesses to help build a picture of the social and economic impacts of the Basin Plan on northern Basin communities.

The MDBA, in consultation with NBAC, developed an engagement strategy for the northern Basin for work to be undertaken in the next reporting year. The strategy sets out the MDBA's approach to communicating and engaging communities so they can help shape the management of water resources in the northern Basin.

Currently, after each NBAC meeting a newsletter is produced to keep communities updated on work in the Northern Basin. This reporting year NBAC also resolved to issue a communique after each meeting, which is published on the MDBA website.

FORMAL PUBLIC CONSULTATIONS

Basin-wide environmental watering strategy

In 2014 MDBA held a public consultation on the draft Basin-wide environmental watering strategy. MDBA staff met with communities in Goolwa, Murray Bridge, Renmark, Mildura, Shepparton, Deniliquin, Griffith and Dirranbandi. We also provided briefings to peak organisations representing Aboriginal Nations, farming and irrigation interests and conservation groups. Over 300 stakeholders attended the meetings in nine towns around the Basin. Stakeholders were also invited to provide written feedback on the strategy.

PEAK BODIES

The MDBA regularly hosts meetings with Basin peak bodies to talk through where our work is up to and listen to their ideas and their concerns. These meetings include representatives from farming, irrigator, conservation and Aboriginal groups.

CITIZEN SCIENCE

The MDBA has started to develop a series of 'citizen science' pilot projects to get volunteers involved in collecting data that can feed into decision making. Initially our focus has been on working with the Atlas of Living Australia to set up web portals that will give members of the public much greater access to our data holdings. The Atlas of Living Australia is also developing a portal that will support the Basin Champions program by storing and spatially mapping information, photos and videos uploaded by participating schools.

MDBA also began talking with the Bureau of Meteorology about getting Basin communities involved in collecting flow and weather information for upload to the Bureau's Weather Observations Website, which in turn can be used to ground-truth hydrology models.

We expect to be able to start reporting on how this work is influencing Basin Plan implementation in the next reporting year.

We are also investigating online engagement options to increase opportunities for dialogue and collaboration in Basin Plan implementation.