

WATER RESOURCE ALLOCATION SOCIO-ECONOMIC IMPACTS ASSESSMENT AND RESPONSE FRAMEWORK

PROJECT PROPOSAL

MARCH 2018



1. BACKGROUND

Murray Darling Association

The Murray Darling Association (MDA) is a membership based peak representative organisation representing local government and communities across the Murray Darling Basin. The Basin covers 14 percent of the land mass of Australia. There are 167 councils and local government organisations across the Basin who derive their wellbeing from the resources of the Basin.

The Murray Darling Association's purpose is to provide effective representation of local government and our communities at state and federal level in the management of Basin resources by providing information, facilitating debate, and informing government policy.

CSIRO

CSIRO Land and Water provides the science to underpin Australia's economic, social and environmental prosperity through stewardship of land and water resources ecosystems, and urban areas.

Through an integrated systems research approach the CSIRO provides the information and technologies required by government, industry and the Australian and international communities to protect, restore, and manage natural and built environments.

University of Canberra

The University of Canberra's Regional Wellbeing group is nationally recognised for its work examining how changes in rural and regional industries and in access to resources impact rural communities. To help in this work, they established the Regional Wellbeing Survey to fill the gaps in knowledge about how Australia's rural and regional communities are performing socially and economically. They have worked extensively on understanding the impacts of change in access to resources including water, land, forests, and fisheries.

The Challenge

The allocation and availability of water resources is recognised as a critical factor in the environmental, social, cultural, and economic health and stability of our nation as whole, and particularly across the rural and regional communities of the Murray Darling Basin.

Significantly, the Murray Darling Basin Plan came into effect in 2012, with a planned staged implementation of major reforms over a 12-year period. The allocation of water resources and the changes in availability continues to impact communities, requiring adaptive strategies and planning foresight if communities are to capture the benefits of the implementation process, and pursue economic opportunity.

In order for communities across the Murray Darling Basin to adapt effectively to changing water allocations, the impacts of those variations, including those occurring under the implementation of the Basin Plan must be properly understood.

Members and stakeholders alike have identified a need for a consistent, rigorous and repeatable impacts evaluation framework with the tools to assist communities and

governments to quantify and respond to the social and economic impacts of changing water allocations, and to identify and clear and consistent means of determining social and economic neutrality.

Current tensions between and among state and federal governments and communities over the recovery of the additional 450GL of up-water by 2024 has put the very existence of the Murray-Darling Basin Plan at risk.

The Basin Plan sets a higher threshold of assessment in relation to the socio-economic impacts of the 450GL, requiring that these efficiencies maintain or improve social and economic outcomes.¹ It has been widely accepted that the provision for socio-economic neutrality in the Water Act (2007) and the Basin Plan is inconsistent with accepted definitions of socio-economic impacts, and is certainly at odds with community expectation.

In order for all parties to remain committed and for the Basin Plan to be delivered on time and in full, confidence must be restored in governments' commitment to a triple-bottom line outcome, trust and good faith must be restored in the process underpinning the SDLAM, and there needs to be agreement on the veracity of any definition or assessment of socio-economic neutrality.

WHAT IS NEEDED?

The MDA, in partnership with the CSIRO and University of Canberra aims to develop a rigorous and repeatable water resource allocation impacts assessment and response framework and methodology against which the social and economic impacts of the Plan can be measured and assessed, and apply this to assess impacts of the Plan during its implementation to date, and enable future ongoing assessment.

The MDA has identified that such an assessment tool must be able to identify and distinguish short term, unrelated, and one-off impacts from the underlying performance of the Plan.

It must also be able to differentiate between the impacts of different actions implemented as part of the Plan: for example, the impacts of investments in irrigation infrastructure are different to those of directly buying back water entitlements from irrigators. Similarly, continuing investment in on-farm irrigation infrastructure has a flow on impact on a local irrigation community to off-farm irrigation infrastructure investment.

A robust impact assessment must be able to differentiate between these in order to distinguish between the impacts of using different policy mechanisms to achieve water recovery, and assist governments in the development of policy.

Through this assessment tool, the MDA aims to:

- identify social and economic impacts to rural and regional communities as a result of the Basin Plan;

¹ Basin Plan 2012 – Chapter 7, Part 2, Section 7.09(a)

- understanding how actions taken as part of the Plan interact with other existing social and economic changes occurring in these communities;
- Distinguish between the effects of the Basin Plan and the effects of other factors influencing social and economic outcomes in rural communities
- distinguish between different impacts related to the Basin Plan: these need to include understanding impacts occurring in the shorter-term and those caused by uncertainty or public debate, versus longer term impacts related to the underlying performance of the Basin Plan;
- identify and develop targeted solutions;
- enable communities to seek out opportunities for economic development and structural adjustments in response to changing water allocations;
- identify the benefits to communities of the Murray Darling Basin Plan with a view to strengthening the benefits through identifying optimal design of policy interventions to achieve future water savings.
- enable better region-wide decision making and the development of regional solutions;
- identify and clarify stakeholder responsibility;
- support community engagement in the timely development of state water resource plans,

2. OBJECTIVES

The key objectives of this project are:

1. To establish a fair and equitable, consistent framework for establishing socio-economic neutrality to optimise design of policy interventions to achieve future water savings, including the 450GL.
2. To develop a rigorous and repeatable water resource allocation impacts assessment and response framework. Fundamental to this objective is the production of a consistent set of evaluative data across the twelve Basin regions.
3. To implement the evaluation framework and methodology developed in 2 above at a regional level:
 - a. to capture the required regional data;
 - b. to interpret the data; and
 - c. to produce user friendly reporting which provides the information required to improve decision making, to identify problems and to shape regional solutions in response to changing water allocations.

3. AUDIENCE

The audience for the project outputs will be:

- Murray-Darling Basin Ministerial Council
- Local government
- Murray Darling Basin Authority
- State and Federal Government departments and agencies
- Industry groups
- Agricultural primary and secondary producers
- Rural and regional communities

4. BENEFITS

A rigorous and repeatable water allocation socio-economic impacts evaluation and response framework, able to capture both qualitative and quantitative data, will provide a consistent and comprehensive assessment tool for use by all levels of government; communities; responsible authorities; industries and other stakeholder groups.

The evaluation framework will

- Be available for use by all levels of government, community groups, and the Authority.
- Deliver data and findings in a consistent format across diverse communities and circumstances.
- Deliver data and findings free of any perception of bias.
- Identify and collate data in a consistent manner to identify and understand the adverse and the positive impacts of the Basin Plan on local communities and regions.
- Undertake assessment and information gathering in a structured, rigorous and repeatable way.
- Clearly identify where changes within communities are attributable to non-Basin Plan related factors.
- Develop evidenced based advocacy and structural reform strategies to mitigate adverse impacts and enhance benefits and opportunities.
- Provide independent evidence-based context for the identification and presentation of positive impacts attributable to the implementation of the Basin Plan.
- Assist in strengthening regional communities through locally initiated economic development strategies.

These are significant benefits that will provide evidence-based data upon which communities and the responsible authorities can build shared understandings and better relationships as the implementation of the Basin Plan progresses, and communities continue to adapt to variable water allocations.

5. BUDGET AND FUNDING

COST

The proposed budget for the project is \$786,500 (excluding GST). The project tasks are outlined in the table below.

Project tasks	Cost (excl GST)
Stage 1: Using existing regional social and economic pilot data, undertake targeted engagement workshops to establish project specific methodology and analysis.	75,000
Stage 1: Conduct meetings with the broader regional reference groups	25,000
Stage 1: Develop framework for establishing socio-economic neutrality	40,000
Stage 2: Develop detailed data collection methodology	80,000
Stage 2: Develop reporting template / specification	160,000
Stage 3: Community workshops in pilot regions	40,000
Stage 4: Develop customised Implementation Plan	120,000
Stage 5: Execute Pilot implementation and report	40,000
Stage 5: Evaluate and review framework. Revise if required	25,000
Project Management & Quality Assurance	15%
Contingency	15%
Total	786,500

FUNDING

Funding in the amount of \$450,000 has been sought through the Building Better Regions Fund – Community Investments Stream.

Commonwealth Science and Industry Research Organisation (CSIRO) have committed to a cash contribution of \$135,000

University of Canberra (UC) has committed \$55,000 in kind in the form of contribution of time by Dr Jacki Schirmer², and access to extensive datasets.

Murray Darling Association has committed to a cash contribution of \$10,000

Additional in-kind and non-cash contribution by local government including access to networks, data, technical expertise, and general support across the project is estimated to be in excess of \$250,000.

The MDA is seeking funding support from the Murray Darling Basin Ministerial Council.

² Dr Jacki Schirmer, B.Sci(For)(Hons), B.Ec, PhD, Associate Professor, Health Research Institute & Institute for Applied Ecology, University of Canberra

TIMEFRAME

The project will take approximately 52 weeks. Targeted commencement date is 1 July 2018.

6. PROJECT STAGES

The recommended project stages are outlined below.

Project Stage	Expected outcomes
1. Develop evaluation framework	Approved evaluation framework
2. Develop socio-economic neutrality applied assessment framework	Approved socio-economic neutrality applied assessment framework
3. Promote to MDA membership to identify a single Pilot region	Secured interest in framework implementation in a single region
4. Plan implementation of framework in the Pilot regions	Customised implementation plan
5. Execute Pilot implementation	<ul style="list-style-type: none">Local and regional workshopsDraft regional evaluation reportFeedback from regional stakeholdersRevision of framework if necessaryFinal regional evaluation reportDevelopment of actionable recommendationsDecisions made and solutions developed are informed by the Evaluation report

It is expected that once the Pilot implementation has been completed and assessed, implementation will extend to other regions.

7. STAKEHOLDER ENGAGEMENT

Indicators of social and economic impacts will need to be determined and confirmed through consultation with regional stakeholders, therefore, active stakeholder engagement will be required and encouraged throughout the entire project.

The following mechanisms for engagement are recommended:

1. Steering Committee for the project to include:
 - a. MDA Executive – Emma Bradbury
 - b. CSIRO – Dr Catherine Robinson
 - c. Dr Jacki Schirmer, University of Canberra
 - d. Ministerial Council appointed representative/s
 - e. 4 x Mayor of pilot regions

All project stages

2. Broader reference group to be involved in the process of selecting the indicators to capture / measure. The reference group could include:
 - a. MDA chairs from every region
 - b. MDBA representatives
 - c. Representative from CSU / Institute of Land, Water and Society (ILWS)
 - d. Representative from Australian Institute of Health and Welfare (AIHW)
 - e. Representatives of Local Government / Regional Business Chambers
 - f. Representatives of the Indigenous communities across the regions
 - g. Key local, state and federal Government representatives
 - h. Local champions with relevant expertise

By involving a broader reference group, we'd hope to build ownership and credibility, and therefore improve the chances that the framework will be utilised in a meaningful way.

8. KEY ISSUES FOR INVESTIGATION

Impacts on communities can be categorised as:

- Social
- Cultural (linked to social)
- Economic
- Physical (infrastructure)
- Environmental (natural / systemic / built)

A significant issue in the impact assessment is having a clear methodology for distinguishing the impacts of Basin Plan related actions versus other factors on the indicators listed above.

While it is relatively easy to document how all these indicators are changing, it is more difficult to identify to what extent the change is due to the Plan versus other things, and just as importantly, how the Plan interacts with other factors to produce social and economic change in communities.

The project will develop a robust methodology to achieve this, and will engage stakeholders so they sign off on the analysis – e.g. after the pilot, workshops in which they are asked to engage with and help interpret the data, thereby developing multi-level ownership of the data, and the proposed solutions.

Social and **cultural** impacts are very closely linked. There is a considerable body of work capturing community sentiment, especially through the Regional Wellbeing Survey (RWS). This and other material will be reviewed in the desktop analyses.

Feedback from the Basin communities suggests that they want to understand what the impacts look like and what the outcomes are for rural and regional communities, small towns and local government in terms of community structure, cohesion and function, in order to develop effective and targeted solutions.

The **economic** indicators selected for monitoring by the MDBA have focused primarily on agricultural impacts with limited extension to other areas of industry or flow-on impacts. Much of the data assessed is sourced from the ABARES³ farm survey, with in-depth qualitative interviews also undertaken with farmers across the Basin.

Feedback from the Basin communities suggests that they want to better understand:

- ***the flow-on impacts of reduced agricultural production, on agricultural service providers and the overall economy; and***
- ***changes in non-agricultural industry which may be expected to take the place of agriculture as the key sector in some communities.***

³ Australian Bureau of Agricultural and Resource Economics and Sciences

An understanding of the **physical** impacts occurring in the Basin, in the form of the hard infrastructure available to communities, will likely be uncovered through discussions of the consequences of social and economic impacts.

Considerable work has been undertaken to date or is underway to capture measures of **environmental** impact across the Basin communities. The MDBA framework for evaluating environmental change is comprehensive and sits outside the scope of this project.

In response to the concerns raised by its members, in 2014 the MDA partnered with the MDBA to assess the information available from local government organisations within the Basin to assist the MDBA to analyse the trends and drivers of economic change over time. The project identified that local government does collect information that is useful to the ongoing monitoring of impacts, however, there is a lack of consistency of information across jurisdictions and much of the information collected does not directly align to the questions that need to be answered.

For the reasons identified above, the evaluation framework to be developed will focus on the Social and Economic dimensions of impact. It will seek to capture both positive and negative impacts being experienced; and to identify the degree of linkage of the impacts to the Basin Plan, i.e. it will seek to distinguish short term, unrelated, and one-off impacts from the underlying impacts of the Plan.

The selection of the specific indicators to be captured is the subject of Stage 1 of the project and the types of information that will be considered in each dimension are described in the tables overleaf.

ECONOMIC INDICATORS

The focus of data collection for this dimension is to source metrics that can track changes occurring in industry and economic health across the Basin, as well as the probable causes of the changes occurring.

Impact area	Potential indicators
Overall community and business confidence	<ul style="list-style-type: none"> • development applications • construction certificates • land valuations • estimates of business confidence (survey) • employment data
Farm / agricultural industry viability	<ul style="list-style-type: none"> • profitability • farm sales and trends • water availability and pricing (affordability) across irrigation districts, including trends in the cost of water delivery • overall productivity levels – dairy, fruits etc. • private investment in irrigation and other infrastructure • trends in farming practice (i.e. moves from cropping to permanent plantings; food to fibre etc.) • intergenerational farming trends (succession) • exit statistics
Other industry	<ul style="list-style-type: none"> • growth and decline in different industry sectors • linkages to other sectors and the associated flow-ons • productivity
Generic business	<ul style="list-style-type: none"> • constraints / barriers to running your business in the community (hard / soft infrastructure issues, population and skills issues) • support for business innovation / entrepreneurship in the community
Linkages to the MDBP	<ul style="list-style-type: none"> • Has the MDBP had any impact on: <ul style="list-style-type: none"> ○ investment in an industry ○ profit levels ○ employment • Has the MDBP had any effect on: <ul style="list-style-type: none"> ○ industry diversity in the community ○ overall business confidence in the community ○ employment opportunities in the community ○ income levels across the community

SOCIAL INDICATORS

The focus of data collection for this dimension is to source metrics that can be used to identify the:

- impacts and outcomes of specific social conditions; and
- the probable causes of the specific social conditions.

Key areas of concern have been selected for exploration from the definition below:

By "social impacts" we mean the consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society.⁴

The objective will be to uncover impacts on and outcomes for rural and regional communities, small towns and local government.

Many of the potential indicators listed could easily fall into a number of categories.

Impact area	Potential indicators
The ways in which people live	<ul style="list-style-type: none"> • demographic changes and the consequences of in / out migration on the community • Meeting aged care needs • Estimates of health and community wellbeing
The ways in which people work	<ul style="list-style-type: none"> • Unemployment • Ability to find enough hours of work • Ability to find work that matches my skills and education • Ability to fit work around other life priorities • Noticeable changes to business income (e.g. are people spending more, less or about the same locally?) • For those entirely or partially dependent on agricultural conditions for work/income: ability to diversify • Retirement (affordability)
The ways in which people and communities organise to meet their needs	<ul style="list-style-type: none"> • Key people leaving the community/new arrivals taking on leadership roles etc. • Ongoing viability of schools (attracting/retaining staff, numbers of students etc.) • Having somewhere to get help/support if life suddenly became very difficult (e.g., death of spouse, serious illness, loss of employment) • Access to welfare services • Access to specific health services • Level of unpaid care being performed

⁴ Interorganizational Committee on Principles and Guidelines for Social Impact Assessment, (2003). Principles and Guidelines for Social Impact Assessment in the USA. *Impact Assessment & Project Appraisal* 21(3), 233-270.

	<ul style="list-style-type: none"> • How often/far people have to travel to necessary services • Availability of key government services (e.g. Medicare, Centrelink) • Availability of Not-for-Profit welfare • Homelessness / access to housing • Level of volunteering
The ways in which people think of their society	<ul style="list-style-type: none"> • Crime and safety profile including family violence and other forms of 'less visible' crime/safety issues, changes in types of crime/safety issues occurring • Mental health and social wellbeing – as a direct response to events and environmental circumstances.
Linkages to the MDBP	<ul style="list-style-type: none"> • What are the most significant changes that have occurred in a community (positive and negative) over the last few years? • What have been the major drivers of these changes? • What are the most significant issues facing a community? • What have been the major causes of these issues?

RELATED NEED

A related project to map stakeholder, departmental and agency responsibilities specifically in the water delivery and management sector across the Basin and its various jurisdictions will be undertaken separately. The output of this project will be a navigable map of agencies and stakeholders that will equip community members to efficiently access the appropriate people and information as required.

9. PROJECT STEPS

The expected project steps for Stages 1 and 2 are outlined below.

STAGE 1: DEVELOP EVALUATION FRAMEWORK

The aim of this framework is to produce meaningful information that can be assessed at regular intervals to inform decision making and solution development.

The basis for developing the framework will be analysis performed according to the MDA regional structure, however, it is expected that the framework could be implemented at a much lower level.

The proposed project steps are outlined below.

1. Establish Steering Committee for the project
2. Develop a methodology for establishing effects of the Basin Plan versus other factors.
3. Review existing compilations of social and economic profiles to identify recommended data sources.
4. Agree on indicators in a participatory process with key stakeholders, starting with peak stakeholders drawn from across the Basin, then applying into the pilot region, pilot region process in which we do analysis.
5. Conduct an interactive workshop in which stakeholders apply the methodology, identifying the extent to which the Plan versus other factors is contributing to change in social and economic indicators
6. Develop socio-economic neutrality applied assessment framework

STAGE 2: DEVELOP GENERIC IMPLEMENTATION METHODOLOGY & REPORT TEMPLATE

This stage develops a generic methodology for collecting and analysing the data to produce usable information. It is expected that this generic methodology will be customised for each region in which it is applied.

The proposed project steps are outlined below.

1. Develop a detailed data collection methodology, including:
 - a. For primary data: sampling methodology, target interest groups, key stakeholders, mode of survey / interview, questionnaire / interview guidelines, analysis needs, resourcing required, cost.
 - b. For secondary data: data sources, timing of data collection, analysis needs, resourcing required, cost.
 - c. Data collection schedule.
 - d. Development of specifications for a data repository / portal to house the data collected, such that it is accessible to the MDA community and can be used to fulfil a range of needs. Extending the use of the data collected will increase the returns on the initial investment.
2. Develop a reporting template which will identify:
 - a. how the data elements captured will be assessed to formulate overall findings for each region;
 - b. how recommendations will be developed; and
 - c. how the information will be presented.

NEXT STEPS

Once stages 1 and 2 of the project are complete, the MDA will be in a position to test the framework and gather further lived experience case notes and local data by conducting the workshops within the pilot regions. These workshops will allow the project steering committee and regional stakeholders to:

- assess the value of the desktop data captured; and
- allow for refinement to the framework to optimise processes going forward.

It is expected that this process will deliver an evaluation framework that is pragmatic and repeatable; and produces meaningful data to inform decision making processes and identify regional economic development opportunities.

10. PROJECT PROPOSAL

The MDA will partner with or contract the Commonwealth Science and Industry Research Organisation (CSIRO) and the University of Canberra (UC) to undertake the research components outlined in stages 1 and 2 of the Project Terms of Reference.

Project management

Teleconferences and face to face meetings with the steering committee will be scheduled at important project junctures as follows:

Throughout the project, regular email and telephone communications will be used to keep both the MDA project management team and the steering committee up to date on project progress.

Steering Committee responsibilities

Throughout the project, the steering committee will:

- approve the project plan and schedule;
- provide advice on areas of focus for indicator development;
- approve final list of indicators to be discussed with broader reference group;
- approve materials to be presented to broader reference group;
- provide comment on the draft evaluation framework, including data collection methodology and planned reporting outputs; and
- approve the final evaluation framework, including data collection methodology and planned reporting outputs.

Presentations to the broader reference group

- Meetings will be scheduled to align to two of the regular face to face meetings that MDA holds with its members annually.
- Meetings will be held in both the north and south of the Basin in order to enable and encourage attendance from all MDA regions. For costing purposes, tentative locations have been selected as Echuca, VIC and Canberra, ACT.
- There may be a need to provide additional materials and opportunity for discussion through regular monthly meetings with members, held through video-conference.

DELIVERABLES

The deliverables from each stage of the project are outlined below.

Stage 1	A finalised list of indicators to be collected / measured including data sources.
Stage 2	Draft and final evaluation framework, including data collection methodology, socio-economic neutrality assessment framework, and planned reporting outputs.
Stage 3	Conduct workshops in the Pilot regions
Stage 4	Customised implementation plan
Stage 5	<ul style="list-style-type: none"> • Execute Pilot implementation <ul style="list-style-type: none"> ○ Draft regional evaluation report ○ Feedback from regional stakeholders ○ Revision of framework if necessary ○ Final regional evaluation report ○ Development of actionable recommendations ○ Decisions made and solutions developed are informed by the Evaluation report

The MDA/CSIRO project management team will:

- manage stakeholder engagement
- invite suitable representatives to sit on the steering committee;
- invite suitable stakeholders and experts to join the broader reference group;
- facilitate the meetings with the broader reference group;
- manage the collection of feedback from members of the broader reference group in a reasonable timeframe; and
- make available any reports of existing studies on Basin Plan impacts or changes occurring across the Basin that the organisation holds.

EXPERIENCE AND CAPABILITY

The Murray Darling Association is a membership-based peak representative organisation representing local government and communities across the Murray Darling Basin.

Established in 1944, the MDA has a strong history steeped in the traditions and achievements of local government, working closely with communities and all levels of government to ensure the communities affected by the decisions of state and federal government have a clear and articulate voice at the table, informing the direction and realising the impact of those decisions.

The MDA executive management team, led by [Emma Bradbury \(CEO\)](#) will manage the project.

CSIRO Land and Water provides the science to underpin Australia's economic, social and environmental prosperity through stewardship of land and water resources ecosystems, and urban areas.

Through an integrated systems research approach CSIRO provides the information and technologies required by government, industry and the Australian and international communities to protect, restore, and manage natural and built environments.

CSIRO provides nationally trusted expertise to address Australia's national challenges and is increasingly supporting developed and developing nations respond to complex economic, social and environmental issues related to water, land, cities and ecosystems.

CSIRO will provide \$200,000.00 in kind to support science team dedicated to support this effort.

CSIRO will be sub-contracted by the MDA to undertake the desktop analysis and co-run the workshops. This will be led by [Dr Cathy Robinson](#) who has extensive science leadership and project management experience and has worked in the Basin over the past 10 years.

Associate Professor [Dr Jackie Schirmer](#) of the University of Canberra is an internationally recognised expert in social impact assessment, with multiple publications on this topic that have focused on improving socio-economic impact assessment methodologies to improve their rigour. Her work has focused in particular on assessing the impacts of changes in access to natural resources.

As part of this work, Dr Schirmer established the [Regional Wellbeing Survey](#), a national survey focused on Australia's rural and regional areas.

The Regional Wellbeing Survey has collected data from 13,000 people annually, including more than 7,000 living in the Basin.

This dataset is the largest available to have collected this type of information and can be used in conjunction with information from sources such as the ABS Census of Population and Housing, ABS Agricultural Census and others to assess social and economic effects of the Basin Plan.



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**HEALTH RESEARCH
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Cost Benefit Analysis for Water Allocation Social and Economic Impacts Assessment and Response Framework – Application BBRF65594

A1. Capital Costs - Please describe each item and ensure the figures are consistent with those in the Project Plan

This project will utilise existing infrastructure and resources, including office space, computer and administration assets embedded within the organisations of project participants.

A2. Operating Costs - Please describe each item and provide an explanation of how each item has been derived and estimated

Project stages

Project steering committee

The establishment of an effective, cohesive project steering committee is essential with a shared vision and a clear line of sight to a successful end-product is essential. Costs cover salary, travel, accommodation, and administration for the steering committee to meet 4 times face to face, and electronically as required across the duration of the project.

Develop Generic Implementation Methodology and Report template

Salaries. Data access

Regional engagement events

Costs include travel, salaries, catering, communications and engagement materials production and data access. Planning for two public engagement sessions per year in the pilot regions for the duration of the project, totalling 16 regional engagement events.

Impact framework development

Salaries.

Breakdown

Salaries	\$571,500
Travel and accommodation	\$95,000
Workshop Costs	\$40,000
Data access	\$40,000
Material production and distribution – communication and engagement	\$40,000
Total	\$786,500

B. Benefits - Direct Benefits - Please describe each item and provide an explanation of how each item has been derived and estimated

Introduction

Quantifying the economic benefits for this project is difficult given that the objective of the project is the development of a tool to do just that – a tool to assess and quantify the social, and the economic impacts of different variables across a significant footprint of the Australian community and economy. However, in acknowledging that – the following benefits are derived based on available facts and informed assumptions.

Contribution of CSIRO

As indicated in the application, CSIRO has committed a co-investment of \$125,000. \$125,000

Contribution of University of Canberra

UC has provided an undertaking to contribute \$35,000 in-kind contribution of salaries for technical and support staff, and further in-kind in the form of access to extensive datasets developed of ABS, ABARES, and Regional Wellbeing Survey unit record data, documenting social and economic change in Basin Communities to LGA and sub-LGA level over the last 5 years.

Value of those data sets is approximately \$20,000, with additional value to the project in not having the re-engage stakeholders to develop the same information, addressing the material risk of stakeholder fatigue. \$55,000

Socio-economic analysis expertise

Contribution of socio-economic analysis expertise to expert workshops. Contribution valued at \$2000 per day for experts and \$1500 per day for policy and academic personnel – at least 5 personnel at 2 days each. \$20,000

Increased membership to the MDA

167 councils are eligible to apply for membership to the MDA. Available revenue from non-member councils is calculated at \$341,591 for the 2017/18 financial year. As a lead organisation for a project of this magnitude, and with the regional engagement opportunities that the project will provide, it is anticipated that approximately 80% of that potential would be converted to active membership. \$275,000 multiplied

Additional funding opportunities

Funding and delivery of this project will provide the MDA with the expertise, the experience, and the opportunity to attract further funding for minor and major projects. Conservative estimate would value that at \$250,000 p/a. \$250,000 multiplied

Regional engagement events \$10,000

Councils in the pilot regions have committed to provide support for community engagement events. This support typically includes provision of officer time, venue hire, catering, co-ordination, and community engagement/advertising.

Further, the events themselves are likely to attract destination visitation to the subject towns, making a small, but in some areas significant contribution to local economies.

At say \$1,250 per event, 4 x 4 regional engagements events will provide a benefit of \$10,000.

Support for targeted structural adjustment investments

Communities across the Murray Darling Basin currently invest tens of thousands of dollars in ‘go-it-alone’ socio-economic impact studies designed to support a proposition for structural adjustment funding, adjustment of water recovery targets, investments in projects and infrastructure, and more – only to have the data when applied to an alternate analysis process.

Cost to state governments, agencies and authorities, councils, and community groups for a regional socio-economic impact assessment may be estimated to range between \$40,000 - \$150,000.

This project will reduce cost of investing in these impact studies, by providing a structured framework and methodology that can deliver consistent and reliable analysis across Basin communities and sectors.

Further benefit in that the user of the tool (community/government/councils etc) will have ownership of process, and can develop accountable, reliable, and consistent socio-economic impacts analysis, reducing the cost to communities of social and political conflict.

Assumption: Use of the impact assessment framework may reduce the cost of assessment by 50%, while enhancing the value of the output beyond measure. If say 5 independent socio-economic impact assessments are undertaken each year across the Basin at an average of \$95,000, the saving is calculated at \$237,500 in a single year.

\$237,500
multiplied

Enhanced economic benefit of targeted project investment by the states

Similarly, governments are investing multi-millions of dollars in projects in the Murray Darling Basin without the benefit of consistent, technically reliable socio-economic impact assessments and calculable cost/benefit data sets.

Under the Murray Darling Basin Plan, the Sustainable Diversion Limit Adjustment Mechanism relies upon a suite of 37 projects to use water for the environment more efficiently, leaving more water in the system for industry and communities to use. These projects are the responsibility of their respective states to deliver.

The projects will be designed and implemented by Basin state governments in consultation with communities between 2019 and 2024, with a combined budget allocation of approximately \$1.5B to deliver the projects.

Availability of consistent, reliable data to underpin the business cases for each of the 37 proposed supply and efficiency projects. Estimating the cost to government of a detailed business case, including community consultation, data development, and reliable, trusted socio-economic impact assessment

\$1,850,000

conservatively at \$50k per project we estimate the value of this tool at \$1.85M over 6 years.

Way forward to deliver the Basin Plan on-time, in-full

One of the most significant challenges to delivering the Murray-Darling Basin Plan on-time and in-full is the social and political conflict over the social and economic impact of water recovery, and other activities undertaken in the implementation process.

This conflict, and its associated risk is further exacerbated by the lack of confidence that recovery of the 450GL 'up-water' can occur with neutral or beneficial socio-economic impact, or that provisions for assessing socio-economic neutrality under the Act provide for genuinely effective, fair, or equitable determination of neutral or beneficial socio-economic outcomes.

Assumption 1

\$1.5bn in public funding investment to acquire the 450LG up-water is at risk if

- a) Agreement cannot be reached between the states on a fair and equitable means to calculate socio-economic neutrality in the context of the Murray-Darling Basin Plan implementation, and
- b) Policy and project investment decisions are not underpinned by consistent, technically reliable socio-economic impact and calculable cost/benefit data sets.

The Murray Darling Basin Plan is a \$13bn investment by the Australian people, with a 12-year implementation phase. It is reasonable to calculate the cost of implementation of the Basin Plan at approximately \$1.08bn p/a over that time. 2018 is the half-way point in the implementation phase if the Plan.

Assumption 2

A significant portion of the \$13bn investment by the Australian people is at risk if

- a) The Basin Plan is not implemented, or
- b) Implementation of the Basin Plan fails to achieve its stated objective of balanced social, environmental, and economic benefits.

Stronger alignment between community needs and Basin Plan investment

Better evidence on socio-economic impacts will increase the certainty people have in their future, and increase investment in rural economies in the Murray-Darling Basin.

There is clear evidence that people and businesses that feel uncertain due to concern about socio-economic changes reduce their likelihood of investing in rural economies.

Greater certainty and agreement about socio-economic impacts, and reduced conflict resulting from clear understanding of the socio-economic impacts of the changing water availability will enable a more positive investment environment in local economies throughout the Basin, providing real economic benefit in terms of economic development.

Irrigators will be more confident to invest in farms due to greater confidence that Basin Plan actions will have neutral socio-economic impacts. This leads to better growth in agricultural production, which flows through to agricultural service industries and processors.

This data will also support sound investment in technology and innovation in water recovery projects that have socio-economic benefits in the forms of improved productivity gains in farms. For example, better ability to design planned water recovery actions to reduce negative socio-economic impacts and enhance positive socio-economic impacts. This targeted design can improve the socio-economic outcomes from the 450GL up-water investment

Enhanced social infrastructure

Reducing social conflict and increasing certainty in the future of rural communities has health and wellbeing benefits in the form of reduced levels of psychological distress in communities, which are associated with reduced costs to the health system.

Better community engagement

Communities across the Basin have expressed frustration and fatigue in response to engagement that they feel has not been considerate of or responsive to their respective contributions.

Further benefit in that the user of the tool (community/government/councils etc) will have ownership of process, and can develop accountable, reliable, and consistent socio-economic impacts analysis, reducing the cost to communities of social and political conflict.

Broader application

The development of this tool has significant indirect value by way of its application in other sectors and beyond the life of this project. Sectors for which this project will have significant values includes the coal seam gas industry, forestry, fisheries and many more.

NOTE: The benefits of this project to the Australian community in mitigating the risk in failing to deliver the Murray-Darling Basin Plan, or failing to achieve neutral or beneficial social and economic impacts in the required provisions of the Plan are incalculable.

Even a conservative valuation of the impact of this project at 1% of the unspent portion of the \$13B investment in the Basin Plan would deliver a breathtakingly high multiplier.

The same applies to the indirect benefits of the project noted above.

For that reason, we have not sought to calculate the value of those benefits, but note that they are significant, and on a scale to positively impact the national economy, and to ameliorate adverse economic impact of a like scale.