

**Intergovernmental Agreement on Implementing Water Reform in
the Murray Darling Basin**

June 2013

(Revised March 2017)
(Revised August 2019)

Intergovernmental Agreement on Implementing Water Reform in the Murray-Darling Basin

1 Preamble

- 1.1 This Agreement is an undertaking by the Commonwealth and the participating Murray-Darling Basin (Basin) State Governments¹, to build upon existing achievements by implementing in good faith the next tranche of water reforms to further improve the health of the Basin and secure a future for its communities.
- 1.2 The objective of this Agreement is to ensure that the Commonwealth led Basin water reforms, including the Basin Plan, are implemented in a cost effective manner to support the national interest of improving river and wetland health, putting water use on a sustainable footing, enhancing irrigation productivity, providing water for critical human needs, and providing farmers and communities with more confidence to plan for a future with less water.

2 Roles and responsibilities

- 2.1 The Parties agree to use their best endeavours to implement the Basin Plan and associated measures outlined in this Agreement and its schedules.
 - 2.2 The Commonwealth has committed to 'Bridge the Gap' between Baseline Diversion Limits (BDLs) and Sustainable Diversion Limits (SDLs) in the Basin Plan. As a result, it is intended that no water entitlements will be eroded or compulsorily acquired as a result of the Basin Plan.
 - 2.3 The Parties agree to cooperate in the implementation of the SDL Adjustment Mechanism in the Basin Plan as set out in the attached Protocol at Schedule 1.
 - 2.4 The Parties encourage the Commonwealth Environmental Water Holder (CEWH) to actively participate in the development of rules changes projects, where environmental outcomes are maintained or improved, to support the effectiveness of any agreed river operation rule or practice changes, including those that may underpin supply measures under the SDL Adjustment Mechanism. The Parties further encourage the CEWH to enter into long-term agreements with jurisdictions to support the above, noting the need for any agreements to be consistent with the CEWH's statutory obligations and the Environmental Watering Plan.
 - 2.5 The Parties agree to cooperate with the Murray-Darling Basin Authority (MDBA) in its preparation of the 'Constraints Management Strategy' to be completed within 12 months of the commencement of the Basin Plan.
- ¹ The Basin State governments are New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory.
- 2.6 The Parties agree to the implementation of environmental measures in the northern Basin as set out in Schedule 3 of this Agreement.

3 'Bridging the Gap'

- 3.1 The Commonwealth Water Recovery Strategy will outline implementation of the 'Bridging the Gap' commitment consistent with this Agreement. After taking into account the contribution from infrastructure projects and supply measures, the role of water entitlement purchase under the Strategy will be limited to the residual amount of water recovery required to bridge the gap by 2019.
- 3.2 The Commonwealth's Water Recovery Strategy will be reviewed in 2016 following the operation of the SDL adjustment mechanism, and as required thereafter. This allows the full potential for supply measure SDL offsets to be explored during the period up to 31 December 2015 to reduce the need for environmental water recovery. Consistent with 6.04, 6.05 and 7.18 of the Basin Plan, the Parties note that if the volume of SDL offsets is less than 650 GL, any shortfall in a jurisdiction's apportioned share of the 2750 GL water recovery target (after taking full account of their committed water recovery projects and their share of SDL offsets) can be purchased in that jurisdiction by the Commonwealth between 2016 and 2019. For such purchases, in each jurisdiction the Commonwealth will seek to acquire a reasonably balanced portfolio of entitlements, noting the Commonwealth's objectives of meeting the environment's needs in a range of water availability situations.
- 3.3 The Commonwealth agrees to periodically consult with Basin States through the BOC on progress in Bridging the Gap, including as part of the 2016 review of the Commonwealth Water Recovery Strategy, on any refinements to both this Agreement and the Commonwealth Water Recovery Strategy in response to measures approved through the SDL Adjustment Mechanism (supply and efficiency measures) and subsequent progress in their implementation.
- 3.4 To enable the Commonwealth Government to deliver on its 'Bridging the Gap' commitment by 1 July 2019, the Parties:
 - (a) reaffirm their continuing commitment to remove restrictions to trade in water in accordance with Basin Plan requirements and clause 4 (16) of Schedule 3 to the Water Act 2007 and commit to not introduce any measures that inhibit the Commonwealth's ability to 'Bridge the Gap';
 - (b) agree to facilitate in a timely and collaborative fashion the process for developing and implementing supply measures, including such measures initiated by States that are intended to Bridge the Gap;
 - (c) agree to process applications for water entitlement and allocation trades consistent with the service standards relating to trade processing times for State approval agencies;
 - (d) will, in regulated surface water systems, specify entitlements consistent with clauses 28 to 32 of the National Water Initiative within three years of this Agreement, unless otherwise agreed;
 - (e) will, in unregulated and groundwater systems where water recovery is required to 'Bridge the Gap', examine the feasibility, costs and benefits of specifying entitlements consistent with clauses 28 to 32 of the National Water Initiative within three years of this Agreement or at the next scheduled

statutory review of State Water Resource Plans, whichever is earlier, and implement as soon as practicable thereafter if shown to be of overall net benefit; and

- (f) agree to enable groundwater and overland flow recovery through market-based approaches whether or not these entitlements or licences are separate from land.

3.5 The Parties agree that planned and held environmental water can be used and managed together to achieve the best environmental outcomes. Except where otherwise agreed between the Commonwealth and relevant State(s) the Parties agree that they will not substitute held environmental water where planned environmental water would previously have been used to achieve environmental outcomes.

4 Surface Water SDL Adjustment Mechanism and constraints funding arrangements

4.1 The Commonwealth agrees to provide financial support for implementing measures under the SDL Adjustment Mechanism as set out in this Agreement.

4.2 The Commonwealth undertakes that supply measures that result in reducing the Basin wide SDL reduction amount by up to 650 GL, as agreed by the Murray-Darling Basin Ministerial Council and determined through the SDL adjustment mechanism, will be funded using funds originally allocated to water purchase, with total funding limited in aggregate to the cost of recovering the same amount of water through water purchase. For planning purposes, the total fund available for potential supply measures (including project development costs) will be based on a reference value of \$1900 per megalitre in long term average annual yield terms. The fund available to fund all approved supply measures will be based on a single final reference value set at the conclusion of 2014-15, in accordance with Schedule 2 of this Agreement.

4.3 Of the funding available under clause 4.2, the Parties note that the Commonwealth will provide funding over the years 2013-14 to 2015-16 to assist in the development of business cases for proposed supply measure projects. As set out in Clause 6 of Schedule 1, a total of \$34.5 million will be shared between New South Wales, Victoria and South Australia.

4.4 The Parties note that clause 4.2 does not preclude state-funded projects from being brought forward for assessment under the attached protocol at Schedule 1.

4.5 The Parties agree to take action to address physical, institutional and operational constraints, where approved through the inter-jurisdictional governance procedure for the SDL adjustment mechanism as set out in the attached protocol at Schedule 1, or where otherwise feasible and cost-effective to do so, to facilitate the delivery of environmental water.

4.6 The Commonwealth has committed a further \$1.58 billion to recover 450GL of environmental water with neutral or beneficial socio-economic impacts, and \$200 million to address physical, institutional and operational constraints, over ten years from 2014/15. The Commonwealth confirms that this financial

commitment is in addition to the commitment to 'Bridge the Gap' to 2750GL of held environmental water (or supply measures) by 2019.

- 4.7 The Commonwealth will consult closely with Basin States on the design of efficiency measure programs (including targeted volumes of water recovery and their regional distribution), and on arrangements for their subsequent delivery and implementation, with particular respect to arrangements to secure farm-level participation and the achievement of socio-economically neutral or beneficial outcomes.

5 Managing water for the Environment

- 5.1 The Parties agree that their environmental water holders and managers will work collaboratively, in close consultation and where appropriate by agreement, in exercising their responsibilities in accordance with the Basin Plan Environmental Watering Plan, and have regard to the Basin annual environmental watering priorities, as prepared by the MDBA.
- 5.2 Except as otherwise agreed between the Commonwealth and the relevant State(s) to facilitate improved environmental watering, Basin States agree that the characteristics of licensed entitlements held for environmental use will not be enhanced or diminished relative to like entitlements held and used for other purposes. This includes that they will be subject to no less favourable conditions, including with respect to fees and charges, access to allocations, capacity to use, trade, and carryover, than like entitlements held for other purposes. The Parties note that any agreement to change the characteristics of licensed entitlements held for environmental use should not impact on another state's water availability, rights or entitlements under the Murray-Darling Basin Agreement unless agreed to by the affected state.
- 5.3 Therefore before entering into any agreement under clause 5.2 to change the characteristics of licensed entitlements where there is a reasonable likelihood of that agreement adversely impacting on water availability, rights or entitlements of another jurisdiction under the Murray-Darling Basin Agreement, the Parties to that agreement will inform the Basin Officials Committee of the proposal.
- 5.4 The Parties will work to facilitate the use of environmental water by protecting environmental water in-stream and on land, and in consideration of any associated third party impacts, where feasible and agreed by:
- (a) implementing measures, to enable the delivery of held environmental water in-stream through arrangements such as water shepherding to facilitate environmental flows;
 - (b) enabling further use of environmental water at multiple locations along the river, such as through return flow provisions;
 - (c) enabling river operators to deliver specified flow rates at particular locations to meet environmental water requirements within capacity constraints and as efficiently and effectively as possible;

- (d) working together to refine methods to accurately monitor, measure and account for environmental water use and return flows; and
- (e) implementing measures to enable environmental water to be used to supplement unregulated flows, while addressing third party impacts.

Note: Nothing precludes such eligible measures from being considered as supply measures under the SDL adjustment mechanism.

5.5 The Parties agree to establish mechanisms to coordinate planning, delivery and monitoring of environmental water.

6 Community assistance

6.1 The Parties note that a phased transition period to full commencement of SDLs from 1 July 2019, the Commonwealth's significant investment in irrigation modernisation, the operation of the SDL adjustment mechanism, and the Commonwealth's commitment to Bridge the Gap is assisting communities to manage adjustment pressures associated with Murray-Darling Basin water reform.

6.2 The Commonwealth is supporting communities in the Murray-Darling Basin to strengthen and diversify their economic base and adjust to a more sustainable water future. The Commonwealth government provides a range of supportive measures to assist communities including the new \$100 million Murray-Darling Basin Regional Economic Diversification Program. The Program will further support state projects for innovative, community driven, economic diversification projects that will stimulate employment and regional growth in partnership with state and local government. The Commonwealth will consult with Basin State governments on the details of the Program.

7 Implementation costs

7.1 The Commonwealth will provide financial support to the Basin States via the *National Partnership Agreement on Implementing Water Reform in the Murray-Darling Basin* (the NP). This is in recognition of the costs that Basin States will incur as a result of implementing the Basin Plan through activities including, but not limited to, preparing new Water Resource Plans consistent with the Basin Plan, new compliance and reporting requirements, and amending water trading rules to make them consistent with Basin Plan requirements.

Note: In accordance with the Intergovernmental Agreement on Federal Financial Relations (IGAFFR), payments to Basin States will be made based on performance against the NP milestones. The NP milestones will be based on the measures and objectives stated in the Basin Plan and this Agreement.

7.2 The Parties encourage the MDBA to enter into the agreements envisaged under Clause 1.12 of the Basin Plan, on the basis that the agreed implementation obligations are effective and efficient, streamlined and fit for purpose, and take into account the need to minimise implementation costs. As noted in section 1.12 (5) of the Basin Plan, entry into an agreement or a failure to enter into an agreement under this section does not affect the commencement or operation of the Basin Plan.

- 7.3 Basin States agree that financial support provided through the NP for State implementation payments under clause 7.1 replaces the *No Additional Net Costs* provision of the *Agreement on Murray-Darling Basin Reform* (2008) and any resulting liabilities under the *No Additional Net Costs* provision.
- 7.4 The Commonwealth will provide financial contributions to the relevant Basin States via a separate National Partnership to undertake activities in relation to Schedule 3 of this Agreement.

8 Community engagement

- 8.1 The Parties acknowledge the importance of local engagement and the responsibility of all Parties and the MDBA to facilitate community engagement.
- 8.2 The Parties agree to use existing Basin State frameworks and community based networks, including indigenous community networks, and other mechanisms as required to draw on expertise in the management of environmental water.
- 8.3 The Parties agree to build on these existing arrangements in order to strengthen the involvement of local communities in the implementation of the Basin Plan and associated water reform. In determining the necessity and appropriateness of changes, the Parties will consider the relevant requirements of participation in Basin environmental watering planning processes, and mechanisms to support transparency and accountability.

9 Investment in continuing science and new knowledge generation

- 9.1 The Parties agree to work together in developing new science and knowledge, including in regard to social and economic impacts, to support implementation of the Basin Plan.
- 9.2 The Parties note that the MDBA will make provision for appropriate resourcing to support the Northern Basin Scientific Work Program and specified groundwater reviews (section 6.06 of the Basin Plan refers), which will inform any future reviews of the SDLs and the Environmental Water Recovery Strategy for the Murray-Darling Basin. The Commonwealth will use its best endeavours to ensure \$3.8 million in funding is available for northern Basin scientific research.
- 9.3 The Commonwealth will fund environmental water research to enhance the knowledge and information basis for decisions around the management and use of environmental water holdings, and to inform the knowledge needs for future reviews of the Basin Plan and water recovery programs, including in the northern Basin.
- 9.4 The Parties and the MDBA agree to implement cost effective arrangements to enable the sharing of data, information and knowledge that will support both monitoring and evaluation. Consistent with the Council of Australian Governments (COAG) National Hydrologic Modelling Strategy, the Parties agree to continue their collaborative efforts to adopt and transition progressively to new interoperable hydrologic models of a sufficient quality and

consistency to support water resource planning and river operations across the Murray-Darling Basin and to enable MDBA to accredit water resource plans².

² The Parties note MDBA's intention to use Source IMS for this purpose, subject to its technical suitability for adoption.

10 Transition path to 2019

10.1 To facilitate a clear transition for Water Resource Plans from when the Basin Plan takes effect to when SDLs first take formal effect from 1 July 2019, the Parties agree:

- (a) that the Basin States will use their best endeavours to extend the operation of current transitional and interim Water Resource Plans until 30 June 2019, or such earlier date(s) as agreed between the Commonwealth and the relevant State; and
- (b) the Commonwealth will use its best endeavours to make a regulation under the Water Act to protect State Water Resource Plans to the extent of any inconsistency with the Basin Plan until a date to be agreed between the Commonwealth and the relevant State, recognising that Basin Plan trade rules will come into effect on 1 July 2014, or from the current expiry date for transitional and interim Water Resource Plans.

11 Risk assignment

11.1 The Parties note that under the risk assignment provisions in the Water Act and the Basin Plan, the Commonwealth is responsible only for risk obligations resulting from reductions or changes in reliability based on the difference between the BDL and the SDL, as enforced from 2019.

11.2 Subject to compliance with the 'Bridging the Gap' provisions of this Agreement, the obligation to 'Bridge the Gap', including through SDL compliance arrangements, will not at any point be passed from the Commonwealth to the States.

12 Effect and Operation of Agreement

12.1 The Parties note the respective standings of the *Murray-Darling Basin Agreement 2008* as a Schedule to the *Commonwealth Water Act 2007*, and the Basin Plan as a Legislative Instrument made under the same Act.

Commencement

12.2 The provisions of this Agreement will commence for each jurisdiction as it becomes a signatory to the Agreement.

Amendment to Agreement

- 12.3 This Agreement may be varied only by the unanimous agreement of all Parties to the Agreement.
- 12.4 The relevant Commonwealth Minister with portfolio responsibility for water is authorised to agree and amend this Agreement and any Schedules to this Agreement on behalf of the Commonwealth. Respective State and Territory Ministers with portfolio responsibility for water are authorised to agree and amend this Agreement and any Schedules to this Agreement on behalf of the relevant State or Territory.

Dispute Resolution

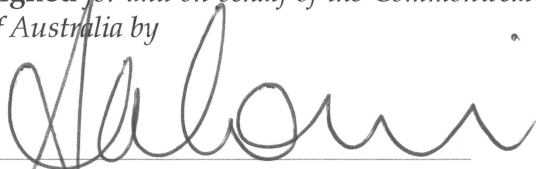
- 12.5 The Parties agree that if a dispute about this Agreement arises between the Parties it must be resolved expeditiously in accordance with the following:
- (a) the dispute will be referred to relevant Basin Officials Committee representatives as soon as practical,
 - (b) should the dispute still remain unresolved it will be referred to the Chief Executive of the relevant Commonwealth and Basin State agencies,
 - (c) if the matter remains unresolved it may be referred to relevant Ministers for resolution as soon as practical,
 - (d) if the matter continues to remain unresolved, it may be referred to the COAG for resolution as soon as practical.
- 12.6 In the event of a dispute, each party agrees to continue to perform its responsibilities under this Agreement (the IGA) other than:
- (a) the responsibility to make a payment of funds where that payment is the subject of a dispute under this clause; and
 - (b) the responsibility to meet the obligation that is the subject of the disputed payment of funds referred to in sub clause (a) and only to the extent commensurate with the payment in dispute.

Termination

- 12.7 If dispute resolution as outlined above is not successful, a Party to this Agreement may terminate their participation in the Agreement at any time by notifying all the other Parties in writing.
- 12.8 If a Party terminates its involvement in this Agreement, obligations to that Party under any Agreement made pursuant to this Agreement will cease to have effect.
- 12.9 Where termination would result in the withdrawal of Commonwealth funding under the NP or a related Project Agreement, the Parties must first engage in the dispute resolution process at clause 12.5 before funding is withdrawn.

The Parties have confirmed their commitment to this agreement as follows:

*Signed for and on behalf of the Commonwealth
of Australia by*

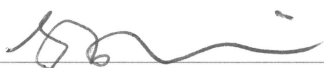


The Honourable Scott Morrison MP

Prime Minister of the Commonwealth of Australia

9 August 2019

*Signed for and on behalf of the
State of New South Wales by*



The Honourable Gladys Berejiklian MP

Premier of the State of New South Wales

9 August 2019

*Signed for and on behalf of the
State of Victoria by*



The Honourable Daniel Andrews MP

Premier of the State of Victoria

9 August 2019

*Signed for and on behalf of the
State of Queensland by*



The Honourable Anastacia Palaszczuk MP

Premier of the State of Queensland

9 August 2019

*Signed for and on behalf of the
State of South Australia by*

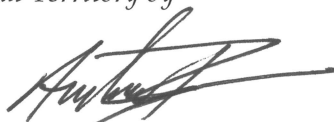


The Honourable Steven Marshall MP

Premier of the State of South Australia

9 August 2019

*Signed for and on behalf of the Australian
Capital Territory by*



Andrew Barr MLA

Chief Minister of the Australian Capital Territory

9 August 2019

**PROTOCOL FOR CONSIDERATION OF SURFACE WATER SUSTAINABLE
DIVERSION LIMIT (SDL) ADJUSTMENT MEASURES**

INTRODUCTION

1. This protocol sets out how the Parties intend to cooperate in the implementation of the SDL Adjustment Mechanism for surface water contained in the Basin Plan so as to agree to a package of measures that comprises those that address system constraints, supply measures and efficiency measures (as defined in the Basin Plan).
2. This protocol reflects the default approach, which will apply unless otherwise agreed. The Murray-Darling Basin Ministerial Council may, at any time, amend this protocol by unanimous agreement.
3. In this Protocol:
 - a) the term 'SDL adjustment measure' means a 'supply measure' or an 'efficiency measure';
 - b) the terms 'supply measure' and 'efficiency measure' have the same meaning as in the Basin Plan; and
 - c) the term 'constraint measure' means a measure which removes or addresses constraints as described in the Constraints Management Strategy made under the Basin Plan.
4. Commonwealth funding will be provided to implement approved constraint measures and SDL adjustment measures in accordance with section 4 of this Agreement.
5. The Parties recognise that in relation to Chapter 7 of the Basin Plan:
 - a) It is intended that measures agreed to be progressed under the Constraints Management Strategy will maximise the environmental benefits attainable through SDL supply and efficiency measures, noting that SDL adjustment measures and constraint measures may entail significant interdependencies;
 - b) Consideration and assessment of any proposed measure that would entail changes to river operational rules and/or practices, or amendment of the MDB Agreement, will require the support and assistance of other BOC-led processes as appropriate;
 - c) The process of assessing and agreeing all SDL adjustment and constraint measures and their final consideration and approval by the MDB Ministerial Council will take place within the phases contained in this protocol and the timeframes established by the Basin Plan for the notification of proposed

SDL adjustments. The Parties note that assessment processes may operate in parallel or as otherwise agreed to meet these timeframes; and

- d) Nothing in this protocol limits a party from pursuing measures to address constraints independently of the arrangements described in this protocol.
6. The Parties note that funding³ under clause 4.3 of the IGA is allocated as per the following breakdown:

Jurisdiction	Funding
New South Wales	\$17,407,308
Victoria	\$14,307,266
South Australia	\$2,785,426
Total	\$34,500,000

7. As a default, the total off-sets capacity available under the SDL Adjustment Mechanism (ie. up to 650 GL) will be apportioned in accordance with this funding ratio. At the finalisation of Phase 3 (30 June 2017) of this protocol, BOC will make a determination on the viability of all supply measure proposals. BOC will provide interim advice to the MDB Ministerial Council on the total off-sets volume and whether to re-confirm or vary the apportionment of the final agreed off-set volume to each jurisdiction. BOC will make a final apportionment decision in September 2017 (in consultation with the MDB Ministerial Council), based on a draft SDL adjustment determination by the MDBA.
8. The Parties note that while this initial apportionment is for planning purposes, Clause 3.2 of the IGA will inform the steps to be taken in the event that a party does not achieve its off-set target.
9. The allocation of funding enables a share of the off-sets available under the SDL Adjustment Mechanism to be made available for northern New South Wales.

³ The funding shares are based on an allocation of \$32.5m to the southern Basin and the balance of \$2.0m for the northern Basin. The funding ratio for the southern Basin component is based on the application of the percentage proportions of the southern Basin shared reduction amount outlined in Clause 6.05(3) of the Basin Plan, and amended to distribute the ACT's share between NSW, Victoria and South Australia on an equal basis.

WORK PROGRAM OF SDL ADJUSTMENT MEASURES

10. The Basin Officials Committee (BOC) and the Murray-Darling Basin Authority (MDBA) will develop and keep up to date a joint work program which identifies all SDL adjustment measures, identifying for each measure:
 - a) its stage of development, by reference to the assessment phases;
 - b) expected timing of progression through other phases;
 - c) potential for SDL effects, and the SDL resource units affected;
 - d) the relevant Parties for the project, by reference to the make-up of the Assessment Sub-Committee for that project.
11. Implementation of the package of constraint measures that will be pursued, consistent with the Constraints Management Strategy, will be included in the work program. The work program will be updated and tabled for adoption at each meeting of the MDB Ministerial Council, and subsequently published on the MDBA website.
12. The Parties note that completion of the Constraints Management Strategy under the Basin Plan, together with further assistance by the MDBA as required, will inform the subsequent development and assessment of priority constraints proposals prior to implementation.

ASSESSMENTS OF CONSTRAINT MEASURES AND SDL ADJUSTMENT MEASURES

Establishment and operation of SDL Assessment Committee

13. The Basin Officials Committee (BOC) will establish an SDL Adjustment Assessment Committee (the Assessment Committee), comprising a representative(s) from each Basin jurisdiction, nominated by the jurisdiction's representative on the BOC, with the primary role of assessing proposed constraint measures and supply measures in accordance with the Protocol described herein. The Committee will observe the same operating rules as the BOC. The MDBA will participate on the Committee as a non-voting member.
14. The Parties agree that for the purpose of assessing individual measures beyond initial assessment (Phase 1 as described below and at **Table 1**), only relevant jurisdictions need be involved, and that the Assessment Committee should establish Sub-committees for this purpose made up of 'relevant jurisdictions' deemed to be as follows:
 - a) the Commonwealth and MDBA;
 - b) the proponent jurisdiction;

- c) any funding partner jurisdiction indicated by the proponent jurisdiction;
- d) in the case of the southern connected system, New South Wales, Victoria, the Australian Capital Territory and South Australia;
- e) in the case of the northern connected system shared SDL, New South Wales and Queensland; and
- f) in all cases, any other jurisdiction which considers it may be adversely impacted and/or its water use rights may be affected by the measure or resultant SDL change, and notifies its interest to the Assessment Committee following Phase 1.

The Assessment Committee will determine the operating rules for Sub-committees it establishes.

- 15. The Assessment Committee may choose to refer the task of assessing certain categories of projects to existing inter-jurisdictional committees, (rather than establish new Sub-committees), where suitably skilled committees already exist.
- 16. Proponent jurisdictions are responsible for ensuring consultation with relevant stakeholders in the identification and development of proposals, including finalisation of other relevant elements of proposals as they progress through the assessment phases.
- 17. Assessments by the Assessment Committee will be taken in accordance with the following steps:
 - a) The SDL Assessment Committee will consider all proposals received, and agree on appropriate sub-committees to conduct detailed assessment.
 - b) The Committee or sub-committee will review the proposal in accordance with the Assessment Guidelines and will record its advice and recommendations, including on rationale, regarding advancement of the proposal/s to the next phase of assessment. The Assessment Committee may request further information from the proponent or further advice on particular matters by the MDBA or others, as deemed appropriate to completing an assessment of the proposal.
 - c) The Committee will then submit its recommendations on the proposal(s) that are to progress to the next phase of assessment for consideration by BOC.

Assessment Guidelines

- 18. To guide the development and efficient progression of constraint measures and supply measures and to ensure consistency of approach to the assessment of such measures by the Assessment Committee and any Sub-committees of the Assessment Committee, Assessment Guidelines consistent with the adjustment

mechanism in the Basin Plan for each phase will be approved by the BOC and applied by those committees. The Assessment Guidelines will provide guidance on a range of matters including, but not limited to:

- a) initial, qualified assessment of the potential SDL adjustment associated with individual project proposals;
- b) the risk assessment framework that will be applied to individual measures and packages of measures, including consideration of third party impacts; and
- c) the method for assessing the rigour of costings.

19. The Assessment Committee will prepare Draft Guidelines for each phase of assessment for consideration by BOC.

Initiation of project proposals

20. Supply measures: Project proponents will provide the following information when presenting supply measures for assessment under this process:

- a) Estimates of the potential for any SDL adjustment, including notional apportionment to SDL resource units, environmental benefits and project cost, including advice about the proposed funding source(s) for the project;
- b) Details on the relationship of the project to other BOC-led processes and of any associated changes that may be required under the Murray-Darling Basin Agreement;
- c) Details of any proposed long term agreements either in place with the Commonwealth Environmental Water Holder (CEWH) or required to be established to underpin rule changes, consistent with the CEWH statutory obligations and the Environmental Watering Plan;
- d) An assessment of project risk, (including potential third party impacts, potential environmental impacts and potential interactions with other supply measures and constraints measures), and proposed approach to managing those risks;
- e) A project consultation and communications plan and the outcomes of any public consultation conducted over the measure(s);
- f) A summary of required planning and environmental approvals; and;
- g) A project assessment plan, project implementation plan and associated timelines.

21. Constraint measures: Development and prioritisation of constraint measures will be undertaken having regard to the Constraints Management Strategy. BOC

will require the following information to assist in setting priorities for constraint measures for assessment through this Protocol:

- a) An estimate of environmental cost and benefit and project cost, including advice about the proposed funding source for the project;
- b) A description of how the measure aligns with the Constraints Management Strategy;
- c) Details on the relationship of the project to other BOC-led processes, and of any associated changes that may be required under the Murray-Darling Basin Agreement;
- d) An assessment of project risk, (including potential third party and environmental impacts, and potential interactions with other measures), and proposed approach to managing those risks;
- e) A project consultation and communications plan and the outcomes of any public consultation conducted over the measure(s);
- f) A summary of required planning and environmental approvals; and;
- g) A project assessment plan, project implementation plan and associated timelines.

22. Efficiency measures: The Parties note that initiation of efficiency measure proposals will be subject to relevant program guidelines established by the funding jurisdiction. The Parties further note that efficiency measures may be considered at any time in accordance with **Table 1**.

Phasing of Assessments

23. The Parties agree that proposals comprising constraints measures or SDL adjustment measures will be subject to phased assessment as described below and detailed further at **Table 1**, (attached), with associated timelines to be sequenced to meet the requirements under the Basin Plan. The progress of proposals through the phases, and associated timing of their assessment, may vary depending upon the nature of the measure being assessed and by agreement of BOC. The Parties further agree that proposals may deliver outcomes across more than one type of measure.

24. The Parties agree a revised procedure (Figure 1) to enable completion of business case assessment in three broad tranches of for remaining supply and constraint measures being considered for the first and second notification. The revised timelines reflect recognition by BOC that many of the proposed measures are complex and require additional time for assessment to resolve outstanding business case issues.

25. Proposed measures that have already been subject to some form of assessment may be agreed by the BOC to commence the assessment process at the relevant next phase.
26. BOC may agree to assess particular measures in advance of the phases outlined at **Table 1**, and subject to approval by MDB Ministerial Council, to make decisions about whether or not such measures should proceed prior to consolidation of all measures as set out below. Subject to available funding, such an approach may be appropriate for those supply measures that result in relatively straightforward outcomes, such as reduced evaporative losses by changing operating rules and for priority constraint measures. Note that in the case of supply measures, the final adjustment amount associated with such measures could not be confirmed until operation of the SDL adjustment mechanism in 2017.
27. Without limiting the operation of clause 4.3 of the Agreement, for all measures, the proponent is responsible for securing the funds for preparing the proposal to the level required for the relevant phase of assessment.
28. **Phase 1 (Feasibility Study):** The objective of Phase 1 is to identify the measures most likely to achieve the most effective outcomes and that warrant consideration for development of a business case for assessment under Phase 2. Phase 1 will analyse and evaluate a proposed measure to determine if it (1) is technically feasible, (2) is feasible within the estimated cost, and (3) will achieve the stated outcome. Each constraint and supply measure proposal will be subject to this assessment by the Committee established in accordance with this protocol. The Committee will consider all Phase 1 reports and recommend to BOC those measures that should advance to Phase 2. Such recommendations may include advice about the treatment of proposed measures that cross types.

All Phase 1 Assessments are expected to have been completed by mid-2015 for first notification proposals and by 20 December 2016 for second notification proposals.

29. **Phase 2 (Business Case):** The business case forms the basis of advice for executive decision-making for an investment. It considers alternative solutions and identifies assumptions, benefits, costs and risks. It should provide a compelling case for investment in a preferred option. Each constraint and supply measure agreed to advance to Phase 2 will be assessed by the Committee (or sub-committee) established in accordance with this Protocol. Consistent with any agreed guidelines, the MDBA will be provided with an initial suite of proposed measures at the conclusion of Phase 2 for assessment without prejudice on potential benefits and dependencies between measures; indicative impact on the reduction amount and environmental outcomes; state water shares; and other States' water resources. The Committee will then consider all

phase 2 sub-committee reports and recommend to BOC those project proposals that should advance to Phase 3. Such recommendations may include advice about the treatment of proposed measures that cross types.

Depending on the complexity of the proposal and the significance of outstanding business case issues, Phase 2 Assessments for first and second notification projects are expected to be completed in three broad tranches: mid-February 2017, mid-March 2017; or mid-April 2017. It is expected that SDLAAC will resolve issues for each tranche of projects by the middle of the respective month to enable a formal BOC decision by the end of each month.

- 30. Phase 3 (Confirmation):** For all constraint, supply and efficiency measures, each project agreed to advance through Phase 3 will require confirmation by the proponent as described in **Table 1** to allow it to be considered for inclusion by BOC in the proposed package of agreed measures. A key feature of Phase 3 is that the proponent will be able to demonstrate that funding for the measure is agreed in principle, with final funding arrangements subject to confirmation of outcomes associated with the measure through operation of the SDL adjustment mechanism.

When each project has been confirmed, the proponent will inform the MDBA of the necessary details as described in **Table 1**.

All phases for first and second notification projects will be completed by 30 June 2017.

Consolidation of adjustment measures for submission to the MDBA

- 31.** On receipt of confirmation for proposed adjustment measures, the MDBA will advise BOC of the expected outcome of these on the SDLs (their apportionment to SDL resource units), and of any environmental or other consequences that may affect the formal assessment of the project under the adjustment mechanism.
- 32.** On considering MDBA advice, BOC will finalise the package of proposed adjustment measures, including the proposed apportionment to SDL resource units, and incorporating those already approved under paragraph 26, for approval by Ministerial Council and submission to MDBA for consideration under the Basin Plan. BOC will first determine the package of constraints measures, and then determine the package of proposed adjustment measures. The Parties agree to progress the package in accordance with **Figure 1**.
- a) In finalising the package of proposed supply contributions and any apportionment of these pursuant to clause 7.18 of the Basin Plan, the BOC will take into consideration any other actions or inactions of any member that may affect the final supply contribution, with the objective that no BOC

member is disadvantaged in this process as the result of such actions or inactions of any other BOC member.

33. BOC will then submit the finalised packages of constraints measures and proposed adjustment measures (comprising both the first and second notifications) to the MDB Ministerial Council for endorsement before notifying the MDBA by 30 June 2017 . The MDBA must formally operate the SDL adjustment mechanism by 15 December 2017.

GOVERNANCE ARRANGEMENTS

Ministerial Council, Basin Officials Committee (BOC) and Jurisdiction Roles

34. Oversight of jurisdictional responsibilities associated with the development of constraint management measures and proposed SDL adjustment measures rests with the MDB Ministerial Council, as advised by the BOC, consistent with the roles of those bodies under the *Water Act 2007* and the MDB Agreement 2008.
35. In particular the BOC will:
- a) decide which of the proposals recommended by the Assessment Committee will progress to the next phase of assessment, including advice on any agreed changes to the notional apportionment to SDL resource units;
 - b) decide by exception which of the projects may be identified as Tranche 2 or Tranche 3 projects;
 - c) seek to reach agreement on an effective package of constraints-relaxation and SDL adjustment measures within the timeframes outlined in this protocol;
 - d) provide a report to each meeting of the Ministerial Council on progress with the work program of SDL adjustment measures and constraint relaxation including the potential for associated changes to SDLs.

Murray Darling Basin Authority

36. The Parties note that under the Basin Plan and this Protocol, the MDBA is responsible for:
- a) Preparing the Constraints Management Strategy in consultation with jurisdictions within the timeframe envisaged by the Basin Plan;
 - b) Advising BOC on the Assessment Guidelines described at paragraph 18 in consultation with jurisdictions;
 - c) Participating in the Assessment Committee as a non-voting member;
 - d) Assisting the Assessment Committee in assessing the feasibility of proposals to remove or relax constraints and SDL adjustment proposals in

consultation with the SDL Adjustment Assessment Committee, including through:

- i. maintaining a register of all proposed SDL adjustment measures;
 - ii. assessing the potential dependencies and/or interactions between different proposals;
 - iii. having regard to relevant MDB Ministerial Council programs and reviews, including those associated with the MDB Agreement;
 - iv. providing advice to inform states' decisions on the attribution of SDL adjustments between catchments or water resource plan areas;
 - v. assessing any potential impacts on State water shares or water resources; and
 - vi. providing secretariat support to the SDL Adjustment Assessment Committee and sub-committees.
- e) consolidating the BOC-agreed package of measures and providing advice to BOC and the Ministerial Council about the SDL adjustment associated with the measures; and any dependencies between the package of measures and other relevant activities; and
- f) operation of the SDL adjustment mechanism as set out in the Basin Plan.

Table 1: Phases of assessment for Constraint Measures and SDL Adjustment Measures

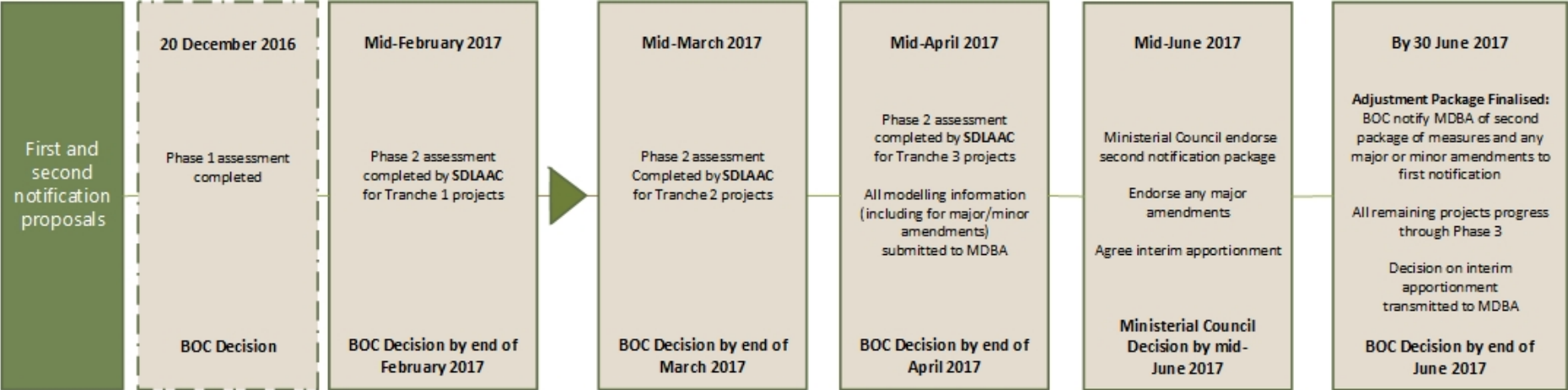
Measure	Phase 1 Feasibility	Phase 2 Business Case	Phase 3 Confirmation	SDLAM Operation	Phase 4 Implementation
First and second notification proposals:	Completed by: mid-2015 (first notification) 1 December 2016 (second notification)	Completed by: Tranche 1 projects: mid-February 2017 Tranche 2 projects: mid-March 2017 Tranche 3 projects : mid-April 2017	Completed by: 30 June 2017	15 December 2017	Completed by 2024 Outside Protocol
Objective	To identify projects most likely to achieve the most effective outcomes and that warrant consideration for development of a business case for assessment under Phase 2. Assessment via an analysis and evaluation of a proposed measure to determine if it (1) is technically feasible, (2) is feasible within the estimated cost, and (3) will achieve the stated outcome.	Forms the basis of advice for due diligence and executive decision making for an investment. It considers alternative solutions and identifies assumptions, benefits, costs and risks. It should provide a compelling case for investment in the preferred option.	Confirmation by the Parties to allow proposal to be considered for inclusion by BOC in the package of agreed measures.	Formal operation of the SDL adjustment mechanism.	Finalise funding agreements, design and implementation of measures.
Constraint relaxation / removal measures	Proponent to include: <ul style="list-style-type: none">whether the proposed measure is a constraint measure or a supply measure or have elements of both.estimate of total financial cost. Where an infrastructure measure is proposed this should be based on preliminary infrastructure designs.assessment of potential risks and likely third party impactsadvice on any proposed funding arrangements.	Proponent to provide a Business Case that provides: <ul style="list-style-type: none">ecological rationale, preliminary salinity & cultural heritage assessment. It is assumed that any modelling, such as digital elevation modelling and hydraulic modelling, necessary to confirm impact on the constraint will be completed.detailed estimate of financial cost and advice of proposed funding arrangements. Where an infrastructure measure is proposed this should be based on more detailed infrastructure designs.advice on the process for securing any necessary landholder agreement;	Confirmation that proponent has provided: <ul style="list-style-type: none">evidence that funding has been secured in-principle subject to MDB Ministerial Council approvalfinal advice that a process for dealing with any necessary landholder agreement is underway;final advice of the changes to environmental water delivery made possible by the projectevidence that all works approvals, environmental approvals, cultural heritage management plans and other regulatory requirements are in trainfinal advice that any necessary amendments to the MDB	For each measure, proponent to provide milestone reporting to the funding entity that includes: <ul style="list-style-type: none">delivery against final cost estimate. Where an infrastructure measure is proposed this should be based on more detailed infrastructure design.advice that any necessary landholder agreement is being/has been securedadvice that works approvals, environmental approvals, cultural heritage management plans and other regulatory	

Measure	Phase 1 Feasibility	Phase 2 Business Case	Phase 3 Confirmation	SDLAM Operation	Phase 4 Implementation
First and second notification proposals:	<p>Completed by: mid-2015 (first notification)</p> <p>1 December 2016 (second notification)</p> <ul style="list-style-type: none"> identification of likely changes required to river operation rules/practice or amendment to the MDB Agreement identification of possible changes required to state legislation or water sharing frameworks, and where the consent of another jurisdiction is required to do this. 	<p>Completed by:</p> <p>Tranche 1 projects: mid-February 2017</p> <p>Tranche 2 projects: mid-March 2017</p> <p>Tranche 3 projects : mid-April 2017</p> <ul style="list-style-type: none"> a detailed communications and consultation strategy advice of the changes to environmental water delivery made possible by the project. It is assumed that hydraulic modelling would be required. detailed assessment of required changes to river operation rules/practice or amendment to the MDB Agreement detailed assessment of required changes to state legislation or water sharing frameworks identification of risks including unintended environmental outcomes and any third party impacts details of interrelated constraint measures 	<p>Completed by: 30 June 2017</p> <p>Agreement, the River Murray System Objectives and Outcomes Document, existing MDB or jurisdiction water sharing arrangements, policy, and/or legislation are in train.</p>	<p>15 December 2017</p>	<p>Completed by 2024 Outside Protocol</p> <p>requirements are being or have been secured</p> <ul style="list-style-type: none"> advice on the progress/completion of necessary changes to river operation rules/practice or amendment to the MDB Agreement and the timeframe for delivery advice on progress/completion of required changes to state legislation or water sharing frameworks advice on implementation of risk mitigation strategy for third party impacts and unintended environmental outcomes
Supply measures	<p>Proponent to include:</p> <ul style="list-style-type: none"> estimate of total financial cost based on preliminary infrastructure designs qualitative estimate of potential for SDL adjustment including the surface water SDL resource 	<p>Proponent to provide a Business Case that provides:</p> <ul style="list-style-type: none"> provide ecological rationale, preliminary salinity & cultural heritage assessment. It is assumed that any modelling, such as digital elevation modelling and hydraulic modelling, necessary to determine 	<p>Confirmation that proponent has provided:</p> <ul style="list-style-type: none"> evidence that funding has been secured in-principle subject to MDB Ministerial Council approval and operation of the SDLAM. final estimate on the proposed SDL adjustment including the surface 	<p>On receipt of confirmation for all adjustment measures, the MDBA will advise BOC of the expected outcome of these on the SDLs.</p> <p>BOC will then submit the finalised packages of constraints measures and</p>	<p>For each measure, proponent to provide milestone reporting to the funding entity that includes:</p> <ul style="list-style-type: none"> delivery against final cost estimate based on final infrastructure design advice on realisation of SDL adjustment

Measure	Phase 1 Feasibility	Phase 2 Business Case	Phase 3 Confirmation	SDLAM Operation	Phase 4 Implementation
First and second notification proposals:	<p>Completed by: mid-2015 (first notification)</p> <p>1 December 2016 (second notification)</p> <p>units affected by the measure</p> <ul style="list-style-type: none"> preliminary assessment of links to other measures (e.g. is the SDL adjustment volume of this measure enhanced or reduced by other measures?) assessment of potential risks and likely third party impacts advice on any proposed funding arrangements. identification of possible changes required to river operation rules/practice or amendment to the MDB Agreement identification of possible changes required to state legislation or water sharing frameworks, and where the consent of another jurisdiction is required to do this. 	<p>Completed by: Tranche 1 projects: mid-February 2017 Tranche 2 projects: mid-March 2017 Tranche 3 projects : mid-April 2017</p> <p>the proposed SDL adjustment will be completed.</p> <ul style="list-style-type: none"> a detailed estimate of financial cost based on more detailed infrastructure designs and advice of proposed funding arrangements a detailed estimate of potential SDL adjustment including the surface water SDL resource units affected by the measure detailed assessment of links to other supply measures (e.g. is the SDL adjustment volume of this measure enhanced or reduced by other measures?) advice of the changes to environmental water delivery made possible by the project. It is assumed that hydraulic modelling would be required. detailed assessment of required changes to river operation rules/practice or amendment to the MDB Agreement detailed assessment of required changes to state legislation or water sharing frameworks 	<p>Completed by: 30 June 2017</p> <p>water SDL resource units affected by the measure</p> <ul style="list-style-type: none"> confirmation of links to other supply measures (e.g. is the SDL adjustment volume of this measure enhanced or reduced by other measures?) final advice of the changes to environmental water delivery made possible by the project evidence that all works approvals, environmental approvals, cultural heritage management plans and other regulatory requirements are in train final advice that any necessary amendments to the MDB Agreement, the River Murray System Objectives and Outcomes Document, existing MDB or jurisdiction water sharing arrangements, policy, and/or legislation are in train final advice on risks including unintended environmental outcomes and any third party 	<p>15 December 2017</p> <p>proposed adjustment measures to the MDB Ministerial Council for approval and then to the MDBA for formal operation of the SDL adjustment mechanism.</p>	<p>Completed by 2024 Outside Protocol</p> <ul style="list-style-type: none"> advice that works approvals, environmental approvals, cultural heritage management plans and other regulatory requirements are being or have been secured advice on the progress/completion of necessary changes to river operation rules/practice or amendment to the MDB Agreement and the timeframe for delivery advice on progress/completion of required changes to state legislation or water sharing frameworks advice on implementation of risk mitigation strategy for third party impacts and unintended environmental outcomes

Measure	Phase 1 Feasibility	Phase 2 Business Case	Phase 3 Confirmation	SDLAM Operation	Phase 4 Implementation
First and second notification proposals:	Completed by: mid-2015 (first notification) 1 December 2016 (second notification)	Completed by: Tranche 1 projects: mid-February 2017 Tranche 2 projects: mid-March 2017 Tranche 3 projects : mid-April 2017 <ul style="list-style-type: none">a detailed communications and consultation strategyidentification of risks including unintended environmental outcomes and any third party impacts;details of interrelated constraint measures	Completed by: 30 June 2017 impacts and any risk management actions	15 December 2017	Completed by 2024 Outside Protocol
Efficiency measures	Not applicable as efficiency measures will be subject to the guidelines for program expenditure	Not applicable as efficiency measures will be subject to the guidelines for program expenditure	Proponent to provide (at any time prior to 30 April 2017) details of the proposed program(s) for delivering efficiency measures including: <ul style="list-style-type: none">advice on proposed funding arrangements.the volume of water estimated to be recovered through the efficiency measurethe surface water SDL resource units affected by the measuredetails of any related constraint measures; the date on which the measure entered into operation, or by which it will enter into operation.	On receipt of confirmation for all adjustment measures, the MDBA will advise BOC of the expected outcome of these on the SDLs. BOC will then submit the finalised packages of constraints measures and proposed adjustment measures to the MDB Ministerial Council for approval and then to the MDBA for formal operation of the SDL adjustment mechanism.	Annual review of water recovery in consultation with relevant jurisdictions

Figure 1: SDL Adjustment – Revised Assessment Procedure



Determination of a single final reference value in 2015

A calculation will be conducted at the conclusion of 2014-15 to determine the final reference value that the Commonwealth will apply to approved supply measures.

The final reference value will be a 6 year trimmed volume weighted average price calculated using market trade data from state government water registers from 2009-10 to 2014-15. The final reference value will be calculated in megalitres of long term average annual yield (ML LTAAY) terms using the LTAAY factors agreed by the Murray-Darling Basin Ministerial Council. This methodology is based upon that used by the National Water Commission in the Australian Water Markets Reports.

The calculation will use the price and volume information for registered water entitlement trades in each catchment of the southern connected Basin. The data set which will be used to calculate the final reference value will draw on market trade data from state government water registers from 2009-10 to 2014-15. It will be created by:

- a) Removing any trades with a reported price less than \$10/ML or greater than \$10,000/ML, or with a zero volume from the dataset.
- b) If there are less than 10 remaining trades of an entitlement class in a catchment, these trades will also be removed from the dataset.
- c) Calculating the average price and the standard deviation from trades remaining in the dataset for each entitlement class in each catchment. Trades with a price that deviates by more than two standard deviations from the average price for its entitlement class will then be removed from the dataset.
- d) For each trade remaining in the dataset, convert the volume to ML LTAAY and calculate the value of each trade.
- e) Pool the remaining trade data for each entitlement class in each catchment into a single dataset.
- f) Using the pooled data, calculate the volume weighted average price (\$/ML LTAAY). The volume weighted average price is calculated as the sum of the value of all trades divided by the sum of the total LTAAY volume.

This method is used to ensure that small volume trades do not disproportionately influence the calculation while still drawing on a representative set of prices for years of above, below, and average water availability.

The calculation will be undertaken in a transparent manner by Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) or an independent consultant commissioned by DSEWPaC. The data and the basis of the calculations will be made available to the Parties.

IMPLEMENTATION OF MEASURES TO IMPROVE ENVIRONMENTAL OUTCOMES IN THE NORTHERN MURRAY–DARLING BASIN

INTRODUCTION

Objective of the Schedule

1. Activities under this Schedule are intended to contribute to achieving the IGA objective to support the national interest of improving river and wetland health.
2. In July 2018, the outcomes of the Northern Basin Review were implemented in the *Basin Plan Amendment Instrument (No. 1) 2018*. These were a net 70 gigalitre increase in sustainable diversion limits in the northern Basin, and commitments from the Commonwealth, Queensland and NSW governments to a series of environmental measures (referred to as 'toolkit' measures), that will deliver improved environmental outcomes through methods which are complementary to, but do not rely solely on environmental flows.
3. In response to the recommendations of the Northern Basin Review undertaken by the Murray Darling Basin Authority (the Authority), this Schedule sets out how the Commonwealth, New South Wales and Queensland governments intend to implement the toolkit measures to maximise environmental outcomes in the northern Basin. The environmental measures are to be implemented by 30 June 2024.
4. The environmental measures intended to be implemented under this Schedule are set out in Appendix A and comprise:
 - a) Targeted recovery of water;
 - b) Protection of environmental flows;
 - c) Event-based mechanisms, including temporary trade by event, options for pumping into wetland sites, and store and release of environmental water;
 - d) Improved coordination of environmental flows;
 - e) Removal of constraints in the Gwydir catchment; and
 - f) Environmental works and measures to promote fish or broader ecological health.
5. The Parties agree that if any negative impacts are identified on triple bottom line outcomes in the southern Basin arising from the Northern Basin Review they will be considered by the Authority and addressed as part of any review of the Basin Plan under section 50 of the *Water Act 2007*.

IMPLEMENTATION OF ENVIRONMENTAL MEASURES

Commonwealth Funding

6. The Commonwealth will make available an estimated total financial contribution to New South Wales and Queensland of up to \$180 million (GST exclusive) for approved projects associated with the implementation of relevant environmental measures in respect of this Schedule. Any ongoing costs related to the approved projects (such as monitoring and evaluation and operation and maintenance costs) will be the responsibility of the relevant State, unless otherwise agreed in relation to individual environmental measures.
7. The Commonwealth will make available an estimated total financial contribution to New South Wales and Queensland of up to 8% of the total amount available to undertake project feasibility assessments. The Commonwealth, New South Wales and Queensland will enter into a National Partnership under the Federal Financial Relations framework to support delivery of projects by facilitating funding. The way in which the Commonwealth, New South Wales and Queensland intend to co-operate in the implementation of the Commonwealth funded environmental measures will be included in the National Partnership.
8. The Authority, in consultation with Commonwealth, New South Wales and Queensland technical experts, will develop a framework of ecological criteria to prioritise proposals according to the ability to deliver maximum environmental outcomes in the northern Murray-Darling Basin. The ecological prioritisation framework will be provided to the Northern Basin Project Group for agreement. Independent expertise will be utilised to assess the ecological merits of proposals (using the framework) to identify priority projects to proceed to business case development.

Governance arrangements

9. The Commonwealth is responsible for:
 - a) establishing and supporting the interjurisdictional Northern Basin Project Group, noting that the terms of reference for the group are to be agreed by the Commonwealth, New South Wales and Queensland;
 - b) participating in the Northern Basin Project Group, including twice yearly reporting on progress to the Murray-Darling Basin Ministerial Council and the Basin Officials Committee (BOC) on the implementation and identified risks of relevant environmental measures at Appendix A;
 - c) the final assessment, prioritisation and approval of the projects to be funded, utilising technical expertise including the Authority and the Commonwealth Environmental Water Office, and in consultation with New South Wales and Queensland;

- d) providing a financial contribution to New South Wales and Queensland for approved projects associated with the implementation of relevant environmental measures in respect of this Schedule; and
- e) providing a report to the BOC and the Murray Darling Basin Ministerial Council on the outcomes of the prioritisation, assessment and decision-making process.

10. New South Wales and Queensland are responsible for:

- a) participating in the Northern Basin Project Group, including reporting progress on the implementation of the suite of environmental measures at Appendix A;
- b) ensuring project proposals are developed for prioritisation, assessment and approval by the Commonwealth in accordance with the process set out in clause 8 above;
- c) identifying and planning for ongoing costs for approved projects (such as operation and maintenance costs);
- d) ensuring that delivery partners for environmental works in the northern Basin are required to give preference to Indigenous enterprises and local suppliers and employment, and encourage the use of Indigenous and local labour where possible, in accordance with State preference policies; and
- e) facilitating stakeholder engagement and consultation in the development and implementation of projects, including consultation with South Australia and Victoria regarding any downstream impacts.

11. The Commonwealth, New South Wales and Queensland agree to be jointly responsible for:

- a) implementing a suite of environmental measures as outlined in Appendix A, in a way that is consistent with broader commitments relating to the Basin Plan, including the Basin Compliance Compact and the package of implementation initiatives confirmed by the Commonwealth on 7 May 2018;
- b) cooperating to implement projects approved for Commonwealth funding;
- c) developing a work program for the implementation of environmental measures in Appendix A, to be progressed through the Northern Basin Project Group. The work program will be published on the Authority's (or other suitable) website/s and updated periodically;
- d) cooperating with and supporting the work of the independent Northern Basin Commissioner (and successor positions, including the interim and statutory

Inspector General of Murray Darling Basin Water Resources) as it relates to activities under this Schedule; and

- e) being transparent in undertaking the processes and decisions related to the implementation of the measures and collaborating on public communication amongst themselves and with the Authority.

12. The Commonwealth, New South Wales and Queensland acknowledge and agree that the performance and delivery of approved projects is subject to New South Wales and Queensland receiving an agreed financial contribution from the Commonwealth.

Implementation Plan for Measures to Improve Environmental Outcomes in the Northern Murray-Darling Basin

A work program to deliver measures to improve environmental outcomes in the northern Murray-Darling Basin (known as 'toolkit' measures) is outlined below.

Note: Subject to the prioritisation of proposals and available funding, the Commonwealth will make available funding to NSW and Queensland for approved projects associated with measures 2, 4, 5 and 6 below. A prioritisation framework of ecological criteria was agreed by the Basin Officials Committee in May 2019.

Measure	Outcomes sought	Agreement to achieve outcomes
1. Undertake targeted recovery of water	The aim of this measure is to achieve water recovery in a way that improves environmental outcomes into Narran Lakes, Lower Balonne and Culgoa floodplains and the Barwon-Darling River but avoids, minimises or mitigates any adverse socio-economic impacts of the recovery.	<p>The Commonwealth Department with policy responsibility for water (the Commonwealth Department), in consultation with relevant states, the Commonwealth Environmental Water Office (CEWO) and the Murray Darling Basin Authority (MDBA), will continue to recover water through targeted purchase and investments in water-saving infrastructure to meet northern Murray-Darling Basin Plan water recovery targets in ways that improve environmental outcomes whilst minimising or avoiding any adverse socio-economic impacts.</p> <p>The Commonwealth Department will work with Queensland and NSW to ensure any further remaining water recovery is targeted in nature and consistent with the approach in the southern Basin.</p> <p>Timeframe: Consistent with Basin Plan implementation across the Basin, the Commonwealth will continue to recover water to bridge the remaining gap through targeted water recovery, to ensure new sustainable diversion limits are reached.</p>

		<p>The Commonwealth Department will continue to report monthly on progress towards the water recovery targets. By second half 2020, the CEWO to provide a report giving examples of how the water recovered is helping to achieve the environmental outcomes sought by this measure.</p>
2. Protection of environmental flows	<p>The aim of this measure is to improve outcomes in the northern Murray-Darling Basin to allow held environmental water to remain in-stream to be used for environmental outcomes enhancing low flows and fresh flows, particularly in the unregulated systems, where adverse impacts on other entitlement holders are mitigated by states and unintended gains avoided.</p> <p>In the Queensland Condamine-Balonne system, the outcome sought is the introduction of management arrangements that recognise and protect additional flows through the Lower Balonne resulting from water recovery upstream of Beardmore Dam.</p>	<p>Queensland agrees to work with Lower Balonne water users to implement state water plan rules to protect environmental water that contributes to downstream environmental outcomes.</p> <p>Queensland will implement mechanisms in state water plans to protect environmental water in the Condamine-Balonne in consultation with local water users and Commonwealth agencies.</p> <p>NSW and the MDBA have developed a Head of Agency Agreement that sets out actions and timeframes for the development and implementation of relevant management arrangements.</p> <p>NSW in consultation with local water users and the Commonwealth in the northern Murray-Darling Basin (NSW) will progress solutions to better manage environmental water including (but not limited to nor prescribed as) actively managing held environmental water in-stream in the Barwon-Darling and relevant water sources in the lower Macquarie-Bogan and lower Gwydir unregulated water sharing plan areas.</p> <p>Note NSW is also developing additional solutions to better manage environmental water including (but not limited to nor prescribed as):</p> <ul style="list-style-type: none"> ○ better understand northern connectivity

	<p>In NSW Barwon-Darling and relevant water sources in the lower Macquarie-Bogan and lower Gwydir unregulated water sharing plan areas the outcome sought is the introduction of management arrangements that allow held environmental water recovered for the environment to remain in-stream for the environment.</p>	<ul style="list-style-type: none"> ○ managing resumption of flows in the Barwon-Darling after an extended dry period ○ limiting daily water take in the Barwon-Darling. <p>NSW will incorporate, where relevant and subject to consultation, any proposed options (new or revised rules or measures) into state water resource planning instruments. Where they are to be included in water resource plans they will be consistent with the framework provided in Chapter 10 of the Basin Plan.</p> <p>Queensland will work with NSW to develop a rigorous and transparent accounting method to calculate the contribution of held environmental water crossing the Queensland-NSW border and timing of contributions. Queensland and NSW will also work together on supporting operational protocols and procedures. Once finalised and agreed between NSW and Queensland, these could be incorporated in arrangements to actively manage held environmental water in-stream through the Barwon–Darling.</p> <p>Timeframe: Mechanisms to protect environmental flows are to be included in the water resource plans submitted for accreditation by 31 December 2019, and are to be in place and operating by end 2020.</p> <p>Accounting method supported by protocols and procedures for Queensland-to-NSW cross-border held environmental water will be in place and operating by end 2020.</p>
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		All projects that are assessed and approved for Commonwealth funding must have entered into operation by June 2024.
3. In addition to the measures adopted under (2) above, develop a broad-range of practical event based mechanisms that can be used by environmental water holders to meet important flow targets, including: temporary trade by event, options over pumping (contractual agreements) and store and release	The aim of this measure is to support the development of contractual and other mechanisms to complement the management of water for the environment, to benefit environmental outcomes in the northern Murray-Darling Basin.	<p>Queensland and NSW will work in partnership with the CEWO to develop a framework that enables the implementation of a broad-range of practical event based mechanisms to complement measures to support the effective management of water for the environment.</p> <p>This framework will consider water accounting and transparency, the effectiveness of commercial arrangements within state regulation, appropriate compliance, and the management of environmental and water quality risk.</p> <p>1. Timeframe: A work-plan for developing a suitable framework for event based mechanisms must be finalised by 31 December 2019.</p>
4. Promote the planning for, and delivery of, environmental water across the northern	Efficient and effective use of held environmental water across the Queensland and NSW border, and between northern tributaries and the Barwon-Darling.	The Commonwealth, NSW and Queensland will agree a mechanism for the coordination of planning and delivery of environmental water across the northern Murray-Darling Basin. It will build on existing mechanisms to engage the community (such as Environmental Water Advisory Groups in NSW). The mechanism may include an annual planning forum, and meetings or teleconferences during flow events.

Murray-Darling Basin		<p>The mechanism will bring together relevant holders of environmental water, river operators, Aboriginal representatives, irrigators, and other relevant parties.</p> <p>Timeframe: Draft terms of reference to be agreed by the parties by end 2019. The draft terms of reference will be consistent with the findings of the MDBA's joint governance review.</p> <p>All projects that are assessed and approved for Commonwealth funding must have entered into operation by June 2024.</p>
5. Removal of system constraints in the Gwydir catchment to improve flows reaching the Gwydir wetlands	To improve the environmental outcomes in the Gwydir wetlands by increasing the flows that can be delivered to key sites.	<p>NSW and Commonwealth agencies (MDBA and CEWO) will work in partnership to develop a business case to address constraints in the Gwydir system, based on the existing draft proposal developed by the NSW Office of Environment and Heritage. The draft business case will:</p> <ul style="list-style-type: none"> • set out a range of management options or configurations and the associated costs and environmental benefits of each • set out potential impacts on the environment and stakeholders and other water users, including impacts on connectivity flows to downstream water sources • be subject to community consultation and involve a clear expression of outcomes expected. <p>Timeframe: Revised Gwydir constraints project business case will be finalised by the second half 2020.</p>

		Any project that is assessed and approved for Commonwealth funding must have entered into operation by June 2024.
6. To target environmental works and measures to promote fish movement and habitat in the northern Murray-Darling Basin	To improve fish movement and habitat through the removal of barriers (e.g. weirs) and other activities to enhance native fish outcomes and other ecological outcomes.	<p>Subject to the prioritisation of proposals, available funding and Commonwealth Minister approval, the Commonwealth will provide funding to NSW and Queensland for approved projects associated with this measure.</p> <p>Timeframe: All projects for this measure that are assessed and approved for Commonwealth funding must have:</p> <ul style="list-style-type: none"> • business cases submitted to the Commonwealth Department in the second half 2020 • entered into operation by June 2024.