



**Submission to Senate Standing Committee on Environment, Communications, and the Arts Committee Inquiry into Water Licences and Rights**

The Australian Wetlands and Rivers Centre, School of Biological, Earth and Environmental Sciences, University of NSW provides the following submission.

*a. the issuing, and sustainability of water licences under any government draft resource plans and water resource plans;*

1. There is good scientific evidence that most river systems in the Murray-Darling Basin are overallocated as a result of issuing too many entitlements that have not adequately recognized long-term environmental impacts.
2. This has resulted in considerable ecological degradation on most of the tributary rivers of the Murray-Darling Basin, in particular affecting downstream wetland systems that relied on overbank flows.
3. Many of these sites are areas within the protected area network and for which states have obligations for conservation and some for which the Australian Government and State Governments have international obligations under the Ramsar Convention (see below).
4. The policy and management of overland flow remains relatively poorly developed compared to other regulations for surface water. There is currently a draft floodplain harvesting policy in New South Wales which has remained in this state for almost a year. Within this, there were options identified for licensing of overland flow and possibly even trading it. Generally, there are issues related to how much flow is captured by overland flow works and how this relates to the Murray-Darling Basin Cap which was meant to cap diversions of water from rivers at 93/94 levels of development. The definition and identification of existing works in Queensland for diversion of flow remains an issue.
5. Stock and domestic flows have largely remained exempt from licensing and measurement. There is a need to understand what volumes are required and in

particular identify if there are more effective and sustainable ways of delivering this water to users. Currently some waterways have flows in them more often than would have occurred naturally, detrimentally affecting their ecology. Also there may be significant losses realized in delivery of stock and domestic flows to users. Options exist for piping or building of off-river storages that allow for delivery of stock and domestic flows during times of good flows and allowing rivers to dry up outside these periods as well as saving water for the river systems.

6. In many parts of Australia, use of water by mining industries may not be covered by water legislation and management. This needs to be addressed so all users in a catchment are treated equally under water management plans.
7. Water Resource Plans must adequately recognize the catchment context. In NSW many water resource plans are separately developed for the regulated part of the river. For example on the Murrumbidgee, there are separate plans for unregulated rivers, the main regulated river and also the major wetland system, the Lowbidgee. These need to be consolidated into one plan which may have to employ a hierarchy of nested plans underneath.
8. Water resource planning needs to be catchment based. This is particularly important for rivers flowing between states where there needs to be seamless management within one water sharing plan. For example there are separate plans for the Border Rivers, for the two sides of the border with different terminology and management, mainly for the same rivers. Water resource plans currently have to be made under state law, and thus can only apply within one jurisdiction. It is important that the Murray-Darling Basin Plan provide a catchment view even though water resource plans will be state based.

*b. the effect of relevant agreements and Commonwealth environmental legislation on the issuing of water licences, trading rights or further extraction of water from river systems;*

1. There is a need to ensure that water sharing plans adequately recognize the Ramsar obligations where these are applicable to a catchment as well as the dependence of downstream ecological assets.
2. Currently under the EPBC Act 1999, water plans are not recognized as a controlled action even though increased extraction or policies within a plan may affect matters of national significance (e.g. Ramsar sites). State water plans may also approve of a number of small actions that make up a significant cumulative impact on matters of national significance.
3. There is a difficulty in adequately assessing the effects of licensing or extraction on migratory birds for which the Australian government has bilateral and multilateral agreements. This would require more analysis of populations of migratory birds and a better understanding of their habitat requirements.
4. Sleeper licences may be activated through commitment to trade under the National

Water Initiative but if deemed unacceptable, there needs to be commitment to cancellation (e.g. Cooper Creek, Queensland).

*c. the collection, collation and analysis and dissemination of information about Australia's water resources, and the use of such information in the granting of water rights;*

1. There is a need for clear quantification of the quantity of water diverted for use. Currently such information is patchy, particularly for measuring overland flow or floodplain harvesting.
2. There is a need to identify interception works and how much water they take that may reduce reliability for users downstream and also take water that is the flow meant to be going to the environment.
3. There is a need for access by communities and governments to the latest scientific information for rivers. This includes biological data and publications. Currently only the hydrological and climate data are collected through the Bureau of Meteorology programs.
4. There is a need to better measure and analyse the impacts of water resource developments on ecosystems so that there is greater understanding of what aspects can and cannot be managed for.
5. There is a need for considerably more scientific investment into understanding the outcomes of environmental flows and predicting scenarios based on different management options that will be available to managers so the benefits or otherwise of environmental flows can be measured.
6. In granting water rights, there should be clear and transparent communication of the hydrological modelling of impacts. It is important in the process that the assumptions, uncertainties and results are transparently communicated. There is a long history of relatively little transparency in hydrological modeling used in water planning within jurisdictions.

*d. the issuing of water rights by the states in light of Commonwealth purchases of water rights;*

1. No further rights should be issues in a stressed river that affect current shares of water, given the significant evidence of environmental degradation and uncertainties of climate change impacts.
2. For all rivers, protection of environmental flows throughout the system is critical. Environmental flows are often only managed to the end of a system and when the leave that system, they become part of the available yield for a river.
3. On unregulated rivers, it is particularly important that 'shepherding' arrangements are put in place that ensure that water rights bought by the Commonwealth purchases are

allowed to flow down the system. This may require changes to rules in terms of thresholds to pump on some rivers in the Murray-Darling Basin.

*e. any other related matters.*

1. There is lack of understanding of the methods used for allocation announcements with different formulae used in different parts of the Murray-Darling Basin. This can potentially have a significant impact on water sharing.
2. In a drying climate, there remain considerable problems about the current water sharing arrangements within many plans within the Murray-Darling Basin. Many are 'turned-off' because of crises in water access. This essentially reflects a failure in their operation and may often affect the environmental share more than the extractive share. Furthermore, CSIRO modelling is indicating that, as conditions become drier, the relative impact on extractive and environmental shares is inequitable with the environmental share more greatly affected.

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