

Lessons from Australia's Intra-Country Transboundary Rivers Governance

By John Dore

Australia is a federation of 25 million people and a pre-Covid-19 GDP of \$1.4 trillion. In practice, state and federal governments have to work together. Australia also has a highly variable climate and hydrology. Increasingly irregular rainfall and high rates of evaporation result in the lowest run-off among inhabited continents.

The Murray Darling Basin (MDB) covers nearly 400,000 square miles of south-eastern Australia, twice the land area of Thailand. It contains the largest and most complex river system in Australia, with 50,000 miles of rivers, many of which are connected. The MDB includes 16 internationally significant wetlands, 35 endangered species and 98 different species of waterbirds. First Nations people have lived in what we now call the MDB for over 50,000 years and the basin contains many sacred and spiritually significant sites. The MDB has been the site of most Australian transboundary water governance experiences, with 6 governments involved: Federal, four states, and one territory—the Australian Capital Territory (ACT).

For about 160 years there have been agreements and plans about how much water can be used from the River Murray and the Basin as a whole. Over the decades more and more water was being extracted. The health of the Murray Darling system was in decline.

The water was over-allocated. Twenty-five years ago the MDB cap on surface water diversions was introduced, and thereafter annual auditing of compliance with the cap was commenced. It became obvious that further significant changes were needed to the water law, water allocation, and water use practices. A devastating drought from 1997-2009 catalyzed community and political action. This led to a 2007 National Plan for Water Security and the Commonwealth Water Act (2007).

Australia's Water Act is an ambitious piece of legislation that seeks to return water allocations in the MDB to sustainable levels and to coordinate planning and decision-making at the Basin level.

The Act established the Murray–Darling Basin Authority (MDBA) that was given responsibility to: prepare, implement, and review an integrated Basin Plan; operate the River Murray system and efficiently deliver water; measure, monitor, and record the quality and quantity of the Basin's water resources; support research; advise the Minister; provide water information to facilitate water trading; and engage and educate the community.

The MDBA is responsible for assessing and monitoring Basin state compliance with Sustainable Diversion Limits (SDLs) by towns, communities, industry, and farmers. Limits are being set for 29 surface water areas and 80 groundwater areas across the Basin.

John Dore, Lead Water Specialist, Australian Department of Foreign Affairs and Trade, Singapore, explains that: “Australia’s Water Act is an ambitious piece of legislation that seeks to return water allocations in the Murray Darling Basin to sustainable levels and to coordinate planning and decision-making at the Basin level.”

The aim of the plan is to bring the basin back to good health, while continuing to support farming and other industries for the benefit of the Australian community. It took five years to develop and agree to a plan to manage the basin as a whole, connected system. For surface water, the Basin Plan requires, on average, a reduction of 2,750 gigaliters (GL) of water used for consumption annually across the basin.

Underpinning the Basin Plan, under preparation, are 33 sub-basin water resource plans (WRPs) for surface water and groundwater. These will be legally binding. WRPs must contain: evidence of compliance with SDLs and water trade rules; protection of water for the environment, water quality and salinity objectives; First Nations values and uses; measuring and monitoring; and, arrangements for extreme weather events.

The Murray–Darling Basin Plan, in place since 2012, and backed by \$9 billion, is one of Australia's most scrutinized pieces of public policy. Since 2012, the overall average water take is down from ~14,000 GL/year to ~11,000 GL/year. Water extractions in the Basin are capped (now to a lower level than previously) and new enterprises can only be established if they purchase existing water entitlements from others. There is no net additional water extraction as a result of such trades. Problems remain, however, including with water accounting and compliance; ecosystem health (as evidenced by recent fish kills); community support and maintaining inter-jurisdiction political buy-in. These are all areas that we recognize as requiring further attention and improvement.

Water entitlements yielding an average of 2,000 GL per year have been acquired for the environment by the federal government, via a combination of government buybacks and infrastructure modernization. There is an additional ~1,000 GL per year of environmental water. This is a substantial transfer of water from the consumptive pool. It is the largest re-direction of water to the environment in any large river basin in the world. The Commonwealth Environmental Water Holder (CEWH, created by the Water Act 2007), in concert with relevant state government agencies, now routinely and competently deliver these secure water entitlements. Over the past four years, Commonwealth and other environmental water has been used in more than 750 planned watering events to improve the health of rivers and wetlands.

In September 2020, the MDBA has committed to a new range of initiatives to further boost transparency and collaboration. These include: increasing communications about river operations; using new engagement methods tailored to suit local communities; boosting the diversity of MDBA consultative committees; and splitting out the MDBA compliance role to a separate statutory authority.

In conclusion, years of over-allocation degraded the ecosystem and climate change is making the recovery task even harder. Climate change projections indicate a small increase in total rainfall in the northern Basin is likely, however, decreasing winter and spring rainfall is consistently predicted for the southern Basin. However, of the many large transboundary water basins in the world grappling with water scarcity and conflict between users, only the Murray-Darling Basin has a strong rules-based order, including clearly defined water entitlements, a cap on extractions, a large environmental water reserve, substantial (but imperfect) transparency, and a systematic audit process. For these reasons, when it comes to the complicated business of sharing water between competing interests, basin managers from around the world look to Australia to observe a functioning example of work-in-progress.

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