ATSE

SUBMISSION TO THE

House of Representatives Standing Committee on the Environment and Energy Inquiry into the Management and Use of Commonwealth Environmental Water

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AUSTRALIAN ACADEMY OF
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The Australian Academy of Technology and Engineering (ATSE)[1] welcomes the opportunity to provide input to the House of Representatives Standing Committee on the Environment and Energy Inquiry into the management and use of Commonwealth environmental water.

Maximising the use of environmental water for the protection and restoration of environmental assets and considering innovative approaches for the use of environmental water

Credible science, founded on good data and clearly communicated, is a pre-requisite for industry and community support of bold public policy reforms. The Commonwealth Environmental Water Holder's (CEWH) role in managing environmental water is incredibly important, but also technically challenging because the science of environmental water management is relatively immature. High-quality research and development, and improved monitoring and evaluation are essential to improve the efficiency and effectiveness of environmental water programs and optimise the protection and restoration of Australia's environmental assets. Australia requires stable and adequate investment in strategic research and science to support improved environmental water management, solve its many unique water challenges, and to develop and maintain its expertise and research capacity.

The current level of research funding allocated to this area is very low. Especially in the context of: the public policy importance of the issue; the high level of public funds attached to environmental water management; and the immaturity of the relevant science. ATSE notes that the changing balance of water supply and demand (resulting from climate variability, climate change, demographic shifts and changes to government water policies over time) requires an adaptive management approach. Environmental water management is a challenge that demands continuous improvement. ATSE notes that many aspects of Australian ecosystems present challenges for optimising environmental water management that will be unique to Australia, and they will only be addressed through targeted local research.

ATSE commends the Australian Government's investment in knowledge creation through the Environmental Water Knowledge and Research (EWKR) project, but notes that this program is due to conclude in 2019. Given the immense value of the environmental water assets managed by the CEHW, ATSE recommends conducting a review of the EWKR project and considering follow-on arrangements of some kind to ensure the continuity of research and development activity in this area. ATSE is aware that a consortium of universities, led by the University of Canberra, have proposed a long-term strategic research agenda to assist agencies such as the CEWH and the Murray-Darling Basin Authority (MDBA) in making better use of their environmental water reserves.

The states also play a major role in environmental water delivery and have their own environmental water for which they develop local priorities and usage plans. The CEWH should work to ensure there

1 ATSE is an independent think tank that comprises the leaders in the fields of technology and engineering, who gain Fellowship to the Academy in a highly competitive process. ATSE is one of Australia's four national Learned Academies but uniquely its 800-strong Fellowship come from industry, government and research organisations, as well as academia. Our Fellowship develops trusted, informed and visionary views to persuade decision-makers to implement the most progressive policies on the development of technology for the betterment of Australia and its people. www.atse.org.au

is a collaborative approach that delivers Basin-wide objectives, incorporating local priorities and knowledge where feasible.

Monitoring and evaluating outcomes of the use of environmental water

Transparent monitoring and evaluation of outcomes from the use of environmental water is critically important to the effectiveness of the Commonwealth's investment in environmental water. The long-term success of the Basin Plan relies on maintaining community and political confidence in the program, and the community needs to have confidence that the procurement and use of environmental water is delivering its intended outcomes over time.

ATSE commends the CEWH's existing commitments to monitoring and evaluating the impact and efficacy of its water allocations to the environment. However, the 2016 State of the Environment report found that the resources allocated to water quality monitoring, analysis and reporting have reduced, and this has increased the risk of poor water resources management.[2] It has also become apparent that some northern parts of the Murray Darling Basin lack accurate stream flow data. This information is important to support sound research and water management decisions. ATSE is aware of promising new monitoring technologies being developed within Australian universities, the CSIRO and Geoscience Australia. Automated digital measurements, and monitoring using satellite and drone imagery offer great potential for improved monitoring.

It is essential that the CEWH and allied agencies such as the Murray Darling Basin Authority have adequate resources to undertake effective monitoring and evaluation activities incorporating the best available science and technology. A long-term commitment to monitoring and evaluation is necessary because ecosystems respond in complex ways to variable cycles of climate and water use.

ATSE recommends that the CEWH consider establishing a strategic relationship with the Bureau of Meteorology to leverage the Bureau's water information reporting service. The Bureau's National Water Account and other water resource reporting products could also be improved by more detailed information on environmental water management.

The resources of ATSE's Policy Team and Fellowship are available to assist the Committee in its inquiry. If you have any questions, please contact Dominic Banfield at [redacted] or [redacted].

[2] Argent RM (2017) Australia state of the environment 2016: inland water, independent report to the Australian Government Minister for the Environment and Energy, Australian Government Department of the Environment and Energy, Canberra.