

# CSIRO Submission 12/441

## Inquiry into the National Water Commission Amendment Bill 2012

### Senate Standing Legislation Committee on Environment and Communications

**April 2012**

**Enquiries should be addressed to:**

Dr Sandra Oliver  
CSIRO Ministerial and Parliamentary Liaison  
PO Box 225, Dickson ACT 2612

**Main Submission Author:**

Dr Bill Young  
Director, CSIRO Water for a Healthy Country Flagship  
PO Box 1666, Canberra ACT 2601

## Summary points

- CSIRO acknowledges and supports the role of the National Water Commission (NWC) in providing critical, independent functions to guide water reform in Australia, including the NWC's role in facilitating collaborative efforts to improve the knowledge base in the water sector.
- CSIRO believes that there is a critical need for national coordination of a water knowledge agenda. As such, CSIRO supports the recommendation in the COAG review of the NWC that calls for continued contributions to 'knowledge leadership' in the water sector by NWC.
- CSIRO's view is that the NWC can usefully continue to contribute to knowledge brokerage in the water sector, in collaborative manner with other government agencies and research organisations. This would be best achieved by specifying knowledge brokerage as a core function of NWC in the Amendment Bill, in particular as it relates to the other core functions of the NWC.

## Introduction

The National Water Commission Amendment Bill 2012 presents the proposed changes to the National Water Commission Act 2004 and represents the Australian Government's response to the independent review of the National Water Commission (NWC) conducted by Dr David Rosalky in 2011.

At a summary level the review recommended the continuation of the NWC to continue to guide and oversee the implementation of the reforms articulated in the COAG National Water Initiative (NWI). The review recognized these reforms as being incomplete and as occurring in a complex environment. The review noted that the key elements of the reform yet to be implemented are technically and politically difficult, making the role of an independent body such as the NWC increasingly important.

The review concluded there are three core functions for the NWC that are required to progress future reform:

1. Monitoring and audit of reform activity
2. Assessments of reform activity
3. Knowledge leadership

Specifically, recommendation 14 of the review states:

*The function of 'knowledge leadership' should continue to focus on issues impacting on water reform. This should involve the selective commissioning of research and studies, coordination of pertinent information and research, public education through stakeholder forums, and public reporting. This function should encompass reform implementation nationally, including in the MDB. Priorities in project selection should be made after consultation with jurisdictions and non-government stakeholders.*

The NWC Amendment Bill 2012 seeks to define the core functions of the NWC as audit, assessment and monitoring of the water reform process. It does not include knowledge leadership as a specific core function of the NWC in guiding the reform process.

## The Role of Water Research

The importance of water research in guiding reform is recognized in clauses 98 to 101 of the NWI, which identify a number of areas in which significant knowledge and capacity building are needed for ongoing implementation of the NWI.

In recent decades, water research has played a role in guiding the national water reform journey. CSIRO provided a submission to the NWC review which highlighted the contribution that water research has made to the water sector, including:

- identifying the need for reform (such as for intercepting land uses and declining condition of aquatic ecosystems);

- informing evidence-based policy (such as the Sustainable Yields projects); and
- providing innovations to improve water management (such as water conservation in households and new hydrological models for river operations and planning).

Australia continues to need well-coordinated water research focused on agreed priorities. The water reform journey remains incomplete, as noted in the biennial assessments undertaken by the NWC, and many of the most difficult reforms will require improved understanding and innovation to be most effective.

The uncertainty of climate change and ecological outcomes from environmental water management, for example, mean that critical reforms such as the Murray-Darling Basin Plan must adopt an adaptive management approach to implementation guided by well-designed monitoring and evaluation programs and supported by relevant research. Urban water reform and regional water planning would similarly benefit from research and innovation.

### **The Need for Knowledge Brokering**

Under the NWC Act 2004, the NWC has been required to advise and make recommendations in relation to the Australian Water Fund (AWF). This fund had three main components: Water Smart Australia; Raising National Water Standards; and the Community Water Grants Program. NWC administered the first two of these. The NWC Amendment Bill 2012 would close the AWF Account and the NWC's specific ability to administer any AWF funds; it will however, enable the NWC to administer Australian Government funding programs that may be allocated to it in the future.

To-date the NWC has played a key role in knowledge brokerage. This role partly arose in association with its role in administering parts of the AWF, but need not be tied to administering any similar funding program. In addition to administering parts of the AWF, the NWC facilitated round-table discussions amongst stakeholders (include state agencies, research institutions and industry peak bodies) and produced accessible knowledge synthesis reports. More generally, the NWC sought to bring interested parties together to forge the required knowledge base and to build the capacity to tackle key technical and scientific water issues.

CSIRO's view is that there remains a critical need for national coordination of a water knowledge agenda. Currently, water research in Australia largely fragmented, ill-coordinated, often poorly linked into policy and poorly linked to the long-term need for new capability in the water sector (as observed by the NWC, the Australian Academy of Technological Science and Engineering and the Department of Sustainability, Environment, Water, Population and Communities among others). A National Water Science Strategy is required and the NWC is well-placed to continue to contribute to the development and future implementation of such a strategy.

The need for a National Water Science Strategy is widely accepted (as reflected in clause 101 of the NWI) and in the NWC 2008 recommendation that "COAG initiate a national water science strategy to guide science efforts in the water sector". In 2009 the NWC recommended that "jurisdictions collaborate in the development of national water science strategy" and mostly recently in its 2011 Biennial Assessment, the NWC reiterated its call for "a national science strategy, backed by sufficient investment to deliver the required capacity".

A national strategy for water science would guide research and development efforts over the coming decades. Such a strategy should include three main elements:

- (i) agreed national water knowledge priorities;
- (ii) research capability needs that point to necessary skills sets, relationships, geographies and infrastructure; and

- (iii) an implementation plan that ensures national coordination of water science investment and activity, and that establishes effective mechanisms to strengthen the interactions between science, policy, industry and the wider community. An important outcome of an appropriate implementation plan should be efficient and accountable public investment in research.

In 2009 COAG asked the Department of Sustainability, Environment, Water, Population and Communities to prepare a “national water knowledge and research strategy”. A draft has been prepared that could provide the basis for a more comprehensive national strategy based on broad consultation across all levels of government and the full spectrum of research institutions, industry and the wider community. The latest draft does not address several important aspects of the COAG Terms of Reference, including adoption, consultation and communication strategies, skills and capacity building requirements, governance options and investment models.

### **An Appropriate Role for the NWC**

Given the NWC’s history CSIRO believes it could contribute positively to a collaborative effort between governments and the research community to further develop and then implement a national water science strategy in support of the reform process. In particular, the NWC could provide a perspective into a national strategy on the specific knowledge needs required to support its audit and monitoring functions. The process of periodic assessment of reform progress lends itself to an adaptive management approach – with new knowledge emerging to inform water management as a result of monitoring the outcomes of the implementation of changes in policy and planning.

The cross-sector nature of water issues and the need for innovation and new capacity in the water sector mean a whole of government(s) industry and community response is appropriate, and similarly, given the distributed nature of relevant research capability across the innovation system, no single research organisation or institution has the mandate to articulate a research agenda or propose an implementation strategy. The recently developed National Framework for Australian Climate Change Science may provide a model; this was championed jointly by the Bureau of Meteorology and CSIRO and embraced by the Commonwealth Department of Climate Change and Energy Efficiency. In the case of water, government responsibilities are more distributed, as is the research effort, hence a different approach to the development of a national strategy is required.

A knowledge brokerage role for the NWC is not inconsistent with the breadth of the proposed subsections 7(1)b(iii) and 7(1)e, g, and i in the NWC Amendment Bill 2012. However, greater clarity and importance would be given to this role for NWC if “knowledge brokerage” were to be included as a core function of NWC in the Bill, in particular as it relates to the other core functions of the NWC.