

# INFLUENCE OF AUSTRALIAN AGRICULTURAL COUNCIL AND SUCCESSORS ON AUSTRALIAN AGRICULTURE, 1980-2014

## 3. Managing and Using Australia's Natural Resources for Agriculture

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# BIOGRAPHICAL NOTES



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## ABSTRACT

In 1927, the permanent heads of State and Commonwealth Departments responsible for agriculture and the Chief Executive of the then Council for Scientific and Industrial Research (CSIR) met as the Standing Committee on Agriculture (SCA) to define priorities and methods for cooperation in agricultural research. In 1935, its role was extended to generally promote the welfare and development of agricultural industries while advising the newly-created Australian Agricultural Council (AAC) of Ministers. By 1980, SCA and AAC were meeting conjointly every six months to deliberate by consensus on a wide range of policy issues. New Zealand became a full member in 1991 to become the Agricultural Council of Australia and New Zealand (ACANZ). Soon afterwards, this became the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ), meeting in parallel with the Australian and New Zealand Environment and Conservation Council (ANZECC). In 2001, these met together as the Primary Industries Ministerial Council (PIMC) and the Natural Resource Management Ministerial Council (NRMMC). In 2012, they became the separate Standing Council of Primary Industries (SCoPI) and Standing Council on Environment and Water (SCEW). Both were summarily abolished from within the Council of Australian Governments (COAG) subordinate Ministerial Councils structures in 2014. An Agricultural Ministers' Forum (AGMIN) was later established informally outside of COAG, with an Agricultural Senior Officials Committee (AGSOC)

subtending it. CSIRO and the Bureau of Meteorology were subsequently excluded from the structure in October 2015. CSIRO was no longer a regular member of the system whose origins dated back to its establishment by CSIR in 1927. The Ministerial Councils were responsible for developing policies that guided the evolution of Australian agriculture to complete on the world stage. This paper describes the processes used and the outcomes reached from discussions from 1980 governing the management and use of the natural resources upon which Australia's agriculture depends.

## INTRODUCTION

After their establishment, the Australian colonies were responsible for any regulation of agriculture. Having established colonial legislatures, their consequent policies developed independently of each other. The federation of the Australian colonies in 1901 through the *Commonwealth of Australia Constitution Act* resulted in the Commonwealth having powers for "Trade and commerce with other countries and among the States" [s. 51 (i)] and "external affairs" [s. 51 (xxix)]. Section 100 precluded the Commonwealth from "abridging the right of a State or its residents therein to the reasonable use of the waters of rivers for conservation or irrigation", while section 107 *inter alia* provided for powers, including those over agriculture, previously vested in colonies to continue with the States unless specifically vested in the Parliament of the Commonwealth. However, the Commonwealth has influenced some agricultural matters, primarily of state responsibility, by providing finance to the states to bring in common policies, a mechanism that became increasingly important in the latter part of the 20th century. The evolution of environmental, natural resources and water management policies affecting agriculture is described in this paper.

## COORDINATION OF POLICIES AT FEDERAL AND STATE LEVEL

The creation of the Council for Scientific and Industrial Research (CSIR – later Commonwealth Scientific and Industrial Research Organisation - CSIRO) in 1926 resulted from a need to bring the Commonwealth and States together to identify roles, responsibilities, priorities and methods for cooperation between them for agricultural research. A meeting of State Ministers of Agriculture on 23 May 1927 approved the establishment of a Standing Committee on Agriculture (SCA) comprising the Permanent Heads of the states' Departments of Agriculture plus the Chief Executive Officer of CSIR. This was extended in 1935 with a broader remit covering

quarantine, pests and diseases, the improvement of agricultural products and maintenance of high export grade standards as well as research and development and to generally function as a national body to promote the welfare and development of agricultural industries. It became responsible to a then newly-created Australian Agricultural Council (AAC) comprising the Federal Minister for Commerce and the State Ministers for Agriculture and served as a forum for developing Australia-wide internally consistent agricultural policies. The structure had no statutory basis. It operated by consensus as the main vehicle for Commonwealth-States policy coordination in agriculture (Cottingham 1985). New Zealand and Papua-New Guinea had observer status, but New Zealand became a full member in 1991 to form the Agricultural Council of Australia and New Zealand, (ACANZ).

Concerns first arose in the States about environmental impacts of agriculture during the early years of the 20th century, particularly about the need for soil conservation. Some areas were primarily affected by water erosion, while other areas developed wind erosion leading, for example, to passage of the South Australian *Sand Drift Act (1923)* which gave private landholders the right to take action against their neighbours if their land were threatened by drifting sand. Disasters largely created by wheat/fallow rotations and overgrazing of the 1930s exacerbated the water and wind erosion problems. In 1936, a special meeting of agricultural ministers from the states and the Commonwealth decided that each state should assess the problem in conjunction with CSIR and make recommendations (Tideman 1990). A Standing Committee on Soil Conservation was established comprising the heads of agencies responsible for soil conservation in the Commonwealth and States/Territories to provide advice to Australian Agricultural Council. Arrangements varied considerably. New South Wales established its Soil Conservation Service under the *Soil Conservation Act (NSW)* in 1938 with an unique capacity to undertake significant public works to address soil stability issues. Victoria established its Soil Conservation Board (later Soil Conservation Authority) in 1940. The function was incorporated into Departments of Agriculture/Primary Industries in other states except Tasmania where there were no special provisions. With a slight change of states' Ministerial representation from AAC, in 1986 the Australian Soil Conservation Council (ASCC) was established to act as an advisory body on soil conservation policy and ensure a coordinated national soil conservation effort between the Commonwealth and State Governments and other Ministerial councils involved

in resource conservation. The *modus operandi* of these ministerial councils has been described by Radcliffe (2020). The ASCC immediately established a review of States/Commonwealth activities in Soil Conservation, identifying the principal problems in each jurisdiction (DPIE 1987).

The Commonwealth had progressively ratified various international treaties and agreements relating to environment, conservation and heritage totalling sixty-eight by 1995 (State of Environment Advisory Council 1996). These provided an increasing constitutional basis for Commonwealth involvement in land management issues as well as its originally intended trade responsibilities. Early agreements and treaties with some potential to impact on agricultural land management included the *Convention on Wetlands of International Importance Especially as Waterfowl Habitat* (Ramsar Convention), 1971; *Convention Concerning the Protection of the World Cultural and Natural Heritage* (World Heritage Convention), 1972; *The Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES), 1976; *Convention for the Conservation of Migratory Species of Wild Animals* (Bonn Convention), 1979; *Agreement between the Government of Australia and the Government of Japan for the protection of migratory birds and birds in danger of extinction and their environment* (JAMBA), 1981; and the *Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of migratory birds and their environment* (CAMBA), 1988.

These international commitments coincided with increased public expectations and government policies towards the management of natural resources, including use of land and the management of native vegetation. South Australia had abruptly instituted controls on land clearing for further agriculture in 1983, reinforced by the *Native Vegetation Management Act 1985* (Tideman 1990). Conservation was now being managed consultatively through the Council of Nature Conservation Ministers ("CONCOM") whose policy discussions increasingly interfaced with those of their agricultural portfolio colleagues.

At a Heads of Government meeting on 11 May 1992, later formalised as the Council of Australian Governments (COAG), the Prime Minister, State Premiers, Territory Chief Ministers and the President of the Australian Local Government Association agreed to release a draft *National Strategy on Ecologically Sustainable Development* (ESD Steering Committee 1992). Governments began to restructure portfolios to give greater policy focus to conserving the natural environment. By this time, the



Australian Soil Conservation Council and the Australian Water Resources Council were meeting separately but conjunctively at the same time and location. Subsequently the recently re-named Agricultural Council of Australia and New Zealand was replaced by a new Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ), which brought together ministers responsible for agriculture, soil conservation, water resources and rural adjustment. The subordinate standing committee structure was revised to aggregate the former Standing Committees on Agriculture (which had held 150 meetings since its inception), Soil Conservation (which had held 57 meetings), Rural Adjustment and that of the Australian Water Resources Council into the Standing Committee on Agriculture and Resource Management (SCARM) (ARMCANZ 1993). Environment Ministers met in the Australian and New Zealand Environment and Conservation Council (ANZECC) whose interests sometimes overlapped with ARMCANZ.

In 1994, the *National Environmental Protection Council Act 1994 (C'wealth)* established the National Environmental Protection (Ministerial) Council to develop National Environment Protection Measures (NEPMs) and review the implementation of these measures in the States and Territories.

The increasing awareness of the need to better conserve Australia's natural resources was reflected in a further reconstruction in 2001 of the intergovernmental arrangements for policy development, with the creating of a Natural Resources Management Ministerial Council (NRMMC) with its complementary NRM Standing Committee (NRMSC) of officials. Agricultural policies were taken into a more specific Primary Industries Ministerial Council (PIMC) supported by the Primary Industries Standing Committee (PISC). The Environment Protection and Heritage Council (EPHC) also met in conjunction with the other two ministerial councils, but also met independently as the statutory National Environment Protection Council. The three councils collaboratively pursued common interests such as policies involving water. The revised ministerial councils and their subordinate bodies are shown in Figure 1.

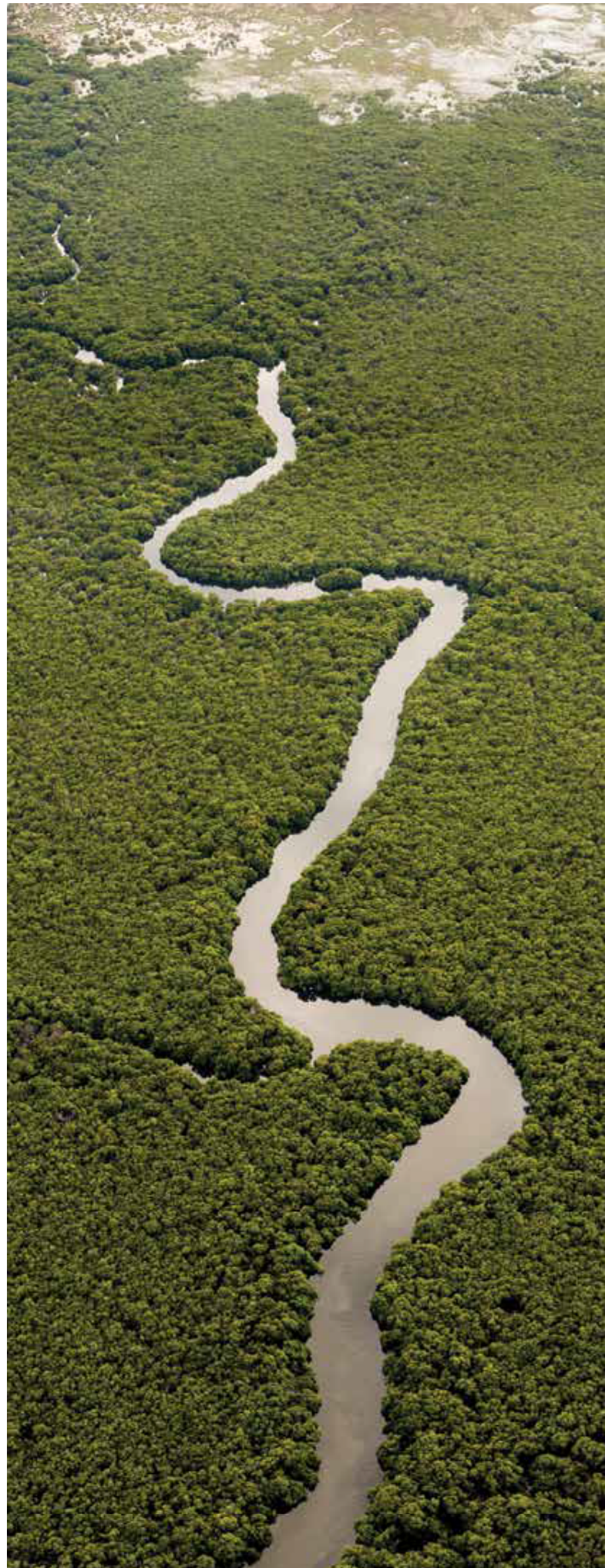
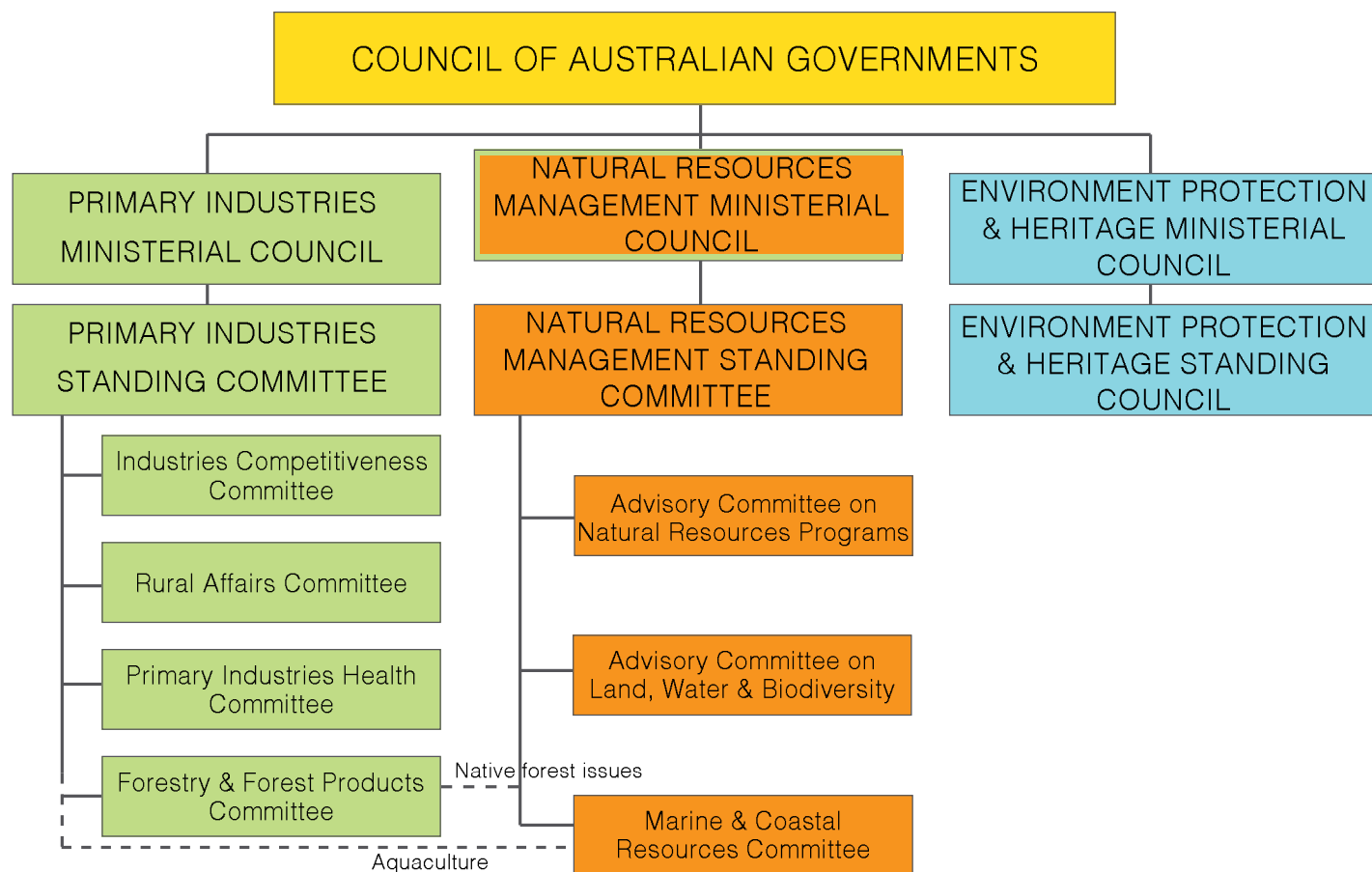


Figure 1. Relationship of Ministerial Councils and their main subordinate bodies to the Council of Australian Governments (NLWRA 2002)



Additional changes were initiated when, following an independent review by Dr Allan Hawke, the COAG agreed in April 2010 to further reform the ministerial council system. The Environment related and Agricultural Councils (NRMMC, EPHC and PISC) had their remits withdrawn and were replaced by the Standing Council on Primary Industries (SCoPI) and the Standing Council on Environment and Water (SCEW). The aim was to see a fundamental shift towards a council system focussed on strategic national priorities and new ways for COAG and its councils to identify and address issues of national significance. It agreed to establish 23 Ministerial Councils which would all come into operation by 30 June 2011 (Lundie 2011). During this restructuring, CSIRO was eliminated from the SCEW subordinate body of officials.

However, most of the revised structure was swept away on 13 December 2013 when COAG abolished fourteen of the Standing Ministerial Councils including those for Primary Industries, and for Environment and Water, noting a keenness to focus on a few national priorities and that too much bureaucracy and red tape had grown up around COAG (Abbott 2014). The National Environment Protection Council, which has a statutory base, is one of those that remained. A Murray Darling Basin Ministerial Council encompassing the Basin states and the ACT continues to oversee the implementation of the Basin Plan. An Agricultural Ministers' Forum (AGMIN) was later established outside of COAG with an Agricultural Senior Officials Committee (AGSOC) subtending it, meeting on an *ad hoc* basis. CSIRO and the Bureau of Meteorology were subsequently excluded from that structure in October 2015. CSIRO, which had contributed its breadth of scientific expertise, was no longer a regular member of the Standing Committee system whose origins dated back to its establishment by CSIR in 1927.

### ***Natural Resource Management***

Recognising growing community concern about soil conservation and the need to address its problems, the Australian Soil Conservation Council (ASCC) had been created and met for the first time in January 1986. As most Ministers responsible for soil conservation also attended AAC, the meetings were held congruently. The Commonwealth had already been investing in the National Soil Conservation Program (NSCP) from 1983. It was recognised that an objective review of land degradation in Australia would need to be undertaken, for which a standardised methodology would have to be developed. The first meeting of the ASCC was addressed by representatives of the National Farmers Federation (NFF) and the Australian Conservation Foundation (ACF).

Ministers saw that their endeavours in soil conservation would have to be developed in consultation with other Ministerial Councils including those for Energy, Forestry, Water Resources, Conservation and Planning. Subsequently, Ministers were presented with a draft *National Soil Conservation Strategy*, but for which an action plan was required. The final strategy was signed by Ministers in 1989. Ministers also noted that agricultural drought assistance programs, which could keep stock longer on the land, had a potential to exacerbate soil degradation. They were advised of a newly developing program in rural Victoria called "Landcare". Attention was also drawn to increasing concern about "the greenhouse effect" on the earth's surface, though the notion of global warming had not yet been explored.

In February 1989, the National Farmers' Federation and the Australian Conservation Foundation made a joint proposal to the Prime Minister to develop a National Year and Decade of Landcare from 1990, seeking \$340 million over ten years based on the Victorian experience. Following development between some Standing Committee on Soil Conservation participants of more specific proposals encompassing land capability, land and water audit, property planning and capacity building, the Prime Minister agreed to the suggestion and announced it in July 1989 (Toyne and Farley 2000), coinciding with an ASCC meeting at which the two organisations' CEOs jointly presented to Ministers. This led to a collaborative approach between the Commonwealth and States/Territories to a much-expanded NSCP funding based on plans prepared for the following Decade of Landcare. The States/Territories were to take up Community Landcare Support programs as soon as possible with the aim of having 750 Landcare groups in place by 1992 (1400 was the actual achievement). Advice on priorities and programs was provided to the Federal Minister by the *Soil Conservation Advisory Committee* established under the *Soil Conservation (Financial Assistance) Act 1985 (C'wealth)* and comprising community, departmental and ASCC representatives. It may be noted that the ASCC had a parallel responsibility to directly advise the Commonwealth Minister. A process of establishing a National Land Capability Assessment, to be completed by 1996, was set in train. Landcare Australia Ltd was established to promote community awareness and secure sponsorship for the program. Taxation concessions congruent with Landcare principles were to assist with treatment of land degradation. Monitoring networks were established to assess changes in salinity, rangeland condition, and later soil structure, water erosion and





acidification. The *National Soil Conservation Strategy* was published (ASCC 1988). There appears to have been an expectation that private enterprise would take on many of the field-based soil conservation activities that were disappearing under state department restructuring towards broader “environmentalisation” of soil conservation in natural resource management programs, but this did not occur (Hannam 2003).

During the early 1990s, Australia was increasingly involved with non-binding international treaties and conventions potentially affecting land management. *Agenda 21* (the 1992 United Nations Conference on Environment and Development) required the international community to address environmental issues. The adoption of the precautionary principle was one of its important aspects. The *United Nations Framework Convention on Climate Change 1992* (the “Kyoto Protocol”) encompassed the Australian cropping and livestock industries in its accounting of emissions and removals (sequestration) in greenhouse gas inventories. The “Protocol” was signed in 1998 but not ratified until 2007. The *Convention on Biological Diversity (CBD)*, 1993 was aimed at the conservation of biological diversity while allowing its sustainable use. Upon the advice of the restructured Ministerial Councils including ARMCANZ, the Australian Government and the State/Territory Governments agreed to the *National Strategy for the Conservation of Australia’s Biodiversity*, with primary focus on the effective identification, conservation and management of Australia’s indigenous biodiversity and its underpinning natural resources. The *United Nations Convention to Combat Desertification 1994* was oriented to those countries experiencing serious drought and/or desertification, particularly in Africa. The consequent Australian obligations for the various international treaties impacted on the policy issues being discussed between the Commonwealth and States/Territories at ARMCANZ meetings.

In 1991, SCARM established the National Collaborative Project on Indicators for Sustainable Agriculture, initially with a discussion paper (SCARM 1993). It ultimately concluded that while agricultural production was rising, there were real concerns about the sector’s ability to sustain its resource base (SCARM 1998)

In 1996, Ministers discussed the Commonwealth's intention to set up the Natural Heritage Trust (NHT) to help restore and conserve Australia's environment and natural resources. The *Natural Heritage Trust of Australia Act 1997 (C'wealth)* established the program administered by a Ministerial Board comprising the Minister for the Environment and Heritage and the Minister for Agriculture, Fisheries and Forestry. It was initially devoted to a National Vegetation Initiative; the Murray Darling 2001 Project; the National Reserve System; the Coasts and Clean Seas Initiative and the National Land and Water Resources Audit (NLWRA). In 1998, Ministers discussed the inclusion of national indicators for sustainable agriculture in the NLWRA. The Audit was initially a \$29.4 million NHT Program to provide nationwide assessments of Australia's land, vegetation and water resources to support sustainable development. Audit reports covered assessments of Landscape Health (NLWRA 2001); Water Resources; Dryland Salinity; Native Vegetation; Rangelands which formed the basis for the Australian Collaborative Rangelands Information System (ACRIS); Agriculture; Rivers and Estuaries; Biodiversity; an information database; and the relationship between Australians and Natural Resource Management. The Audit was supported by its own website (Vaile 1999).

Saline land degradation became evident in the early 1980s in many areas cleared of native vegetation for cropping and annual pastures. This led to a report *Salting of non-irrigated land in Australia* commissioned by the Standing Committee on Soil Conservation which had reported to AAC. A following report *Dryland salinity and its impact on rural industries and the landscape* (PMSEIC 1998) drew attention to the national dimension of the problem and the need for effective coordinated government action through the COAG framework. In August 1999, ARMCANZ took the lead in this process. It reviewed processes for incorporation in a national *Natural Resource Management (NRM) Strategy* which among other aspects, encompassed ecologically sustainable development recognising ecosystem processes and was to be undertaken by a partnership between government, communities, industry and individuals, with clear and agreed roles and responsibilities. Relative contributions were to reflect the private and public costs incurred and the benefits derived. Programs were to be consistent and aligned within and between all levels of government, based on best available science and experience. There

was to be continued investment in science and innovation, while recognising the rights and aspirations of indigenous people and their connection to natural resources. At a COAG meeting in November 2000, the Natural Heritage Trust program was extended a further seven years until 2007 to encompass a new \$700m Commonwealth investment (NHT2), matched by the States/Territories, for the National Action Plan for Salinity and Water Quality (NAPSWQ). Projects were based on community planning and participation, linked where appropriate to catchment management. The plan included capacity building for communities and landholders to assist them to develop and implement integrated catchment/regional plans. ARMCANZ aimed to ensure that NRM issues were addressed in ways that would ensure there was no halt to rural development, had support from communities, did not involve heavy-handed or excessive regulation and delivered the best outcomes for agricultural industries and rural communities. Actions were to maximise individual flexibility and choice. Commonwealth support was later extended by providing funding directly to regional and catchment organisations for Landcare, Bushcare, Rivercare and Coastcare. Funding required the signing of partnership agreements between the Commonwealth, States and Territories and regional organisations.

The States/Territories developed integrated catchment/regional management plans prepared with the community, recognising the relationship between land and water resource management. These plans were accredited and their investments approved jointly by governments. The plans covered 56 regions (Figure 2) including twenty that were highly affected by salinity and deteriorating water quality. Community Forum meetings were held between the representatives (usually the chairs) of these groups, often involving a two-hour meeting with Ministers immediately before a meeting of the, by then, Natural Resource Management Ministerial Council (NRMMC).



Figure 2. Fifty-six Regional areas developed for natural resource management planning purposes.



From its research, the Cooperative Research Centre for Plant-based Management of Dryland Salinity advised that treatments required a specific understanding of mechanisms in the targeted areas, there were few perennial planting treatments that were profitable and that the NAPSWQ funds would only be able to serve a limited proportion of the problem. Careful targeting of investment was crucial and engineering solutions might be a key part of treatment. Ministers advised of successes through targeting using digital elevation models, preparing regional salinity hazard maps, strategic planting of tree species, and installation of riverine salt interception schemes.

Market Based Instruments (effectively competitive bids to undertake defined NRM projects to achieve specified outcomes) were introduced with seven pilot projects in the initial proposals.

*A National Strategy for the Management of Coastal Acid Sulfate Soils* (NWPASS 2000) and following work defined their distribution. Ministers were advised that the National Atlas for Acid Sulfate Soils had identified at least a doubling of the previously estimated extent of naturally occurring acid sulfate soils (to 95,000 sq km) including in major areas under pressure from population development on the coast. In the later 2000s, this issue generated greater awareness and responsiveness because of impacts of the Millennium drought drying out soils along the banks of the Murray-Darling river system

Plans were developed and discussed within the Ministerial Councils for a program entitled NHT3 to replace the NHT2 program ending in 2007, but in the event, a change of Federal government eventually resulted in a new program of discrete projects entitled "Caring for our Country". This provided \$2.250 billion over five years for natural resource management activities across six national priority areas, which integrated delivery of the Australian Government's previous natural resource management programs, including the Natural Heritage Trust, the National Landcare Program, the Environmental Stewardship Program and the Working on Country Indigenous Land and Sea Ranger program. In 2009-2010, \$293 million was provided for the 56 regional organisations, more than 1200 community groups and more than 12,000 landholders to protect and conserve Australia's natural resources - farming land, water, coasts, plants and animals. A total of \$26 million was provided for Landcare projects. A \$5 million program provided up to 500 grants of between \$5,000 and \$20,000 to support smaller, local projects run by groups such as Landcare and Coastcare. An assessment of the adoption of

sustainable farm practices found an improvement in trend over the period of the Caring for our Country program. Soil erosion occurring through ground cover being removed by tillage had been reduced by farmers adopting direct seeding technology and improving the management of ground cover and stubbles. Pastoralists were increasing the amount of ground cover, although more could be done to bring it up to a target of 70 per cent cover. Soil acidification was a major issue in higher rainfall areas, with about 20 percent of farmers trying to address it (Australian Government 2013).

The creation of a National Greenhouse Strategy meant that ARMCANZ had primary responsibility for implementing Measures 6.9 (Sustainable Agricultural Management Practices) and 7.5 (Methane from Wastewater) of Australia's *National Greenhouse Strategy* (NGS). Implementation plans promoted the use of sustainable agricultural management practices to deliver reductions in net greenhouse gas emissions in the areas of reducing energy use in agricultural production; conservation cropping; improved animal husbandry; manure management and the use biogas and other technologies by intensive animal industries. Use of alternative management practices to biomass burning were sought. Council agreed to adopt a nationally consistent carbon accounting standard developed by Standards Australia on an interim basis until June 2004. Council agreed on the need to identify areas with plantation potential and where revegetation would yield the greatest environmental benefit. Following a report *Climate Change Risk and Vulnerability* commissioned by the Australian Government (DEH 2005), in 2006 COAG asked the Natural Resources Management Ministerial Council to examine and report on the possible development of emissions intensity benchmarks and environmental management systems for agriculture combined with an increasing emphasis on the importance of adaptation strategies to address the consequences of climate change. The Ministerial Council then went on to establish a program of emissions intensity benchmarking in agriculture. By 2008, Ministers were being influenced by a Federal proposal for a cap-and-trade emissions policy. A review established that if agriculture, and forestry were included, there would be gains for forestry, but not the sheep, beef and dairy sectors which made up 91% of Australia's agricultural emissions and were highly emissions intensive. Options were that individual farmers could be made directly responsible for their emissions or, alternatively, the subsequent meat and milk processors could be given responsibility for their sectors' emissions (Firecone 2008).



The government decided to exclude agriculture from the Carbon Pollution Reduction Scheme (CPRS). A Carbon Farming Initiative commenced in December 2011 and included a Carbon Crediting Scheme, a Communications Program and a Biochar Capacity Building Program. Ultimately the CPRS did not continue

### **Water**

Water was historically under the policy aegis of the Australian Water Resources Council which had undertaken a review of Australia's water resources in 1985.

In 1992, in recognition of the need to better manage water resources as a significant component of natural resource management, governments through the newly created Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ) and Australian and New Zealand Environment and Conservation Council (ANZECC) Ministerial Councils, endorsed the development and implementation of the National Water Quality Management Strategy (NWQMS). The NWQMS involved governments jointly developing national water quality policies, processes, and guideline documents. The NWQMS currently comprises 22 guidelines (listed at Table 1), which are grouped into 5 categories, viz policy and principles (1–3); specific guidelines on water quality management and monitoring (4–10); treatment and management of sewage systems (11–15); industry guidelines (16–20); and managing risk in the use of recycled water (21–22) (Water Quality Australia 2019a). Soon afterwards, Ministers agreed that it would be timely to develop a NWQMS guideline based on existing and emerging science, addressing water quality issues associated with both coastal and inland acid sulfate soils. Responsibility passed from ARMCANZ, ANZECC, and the Ministerial Council of Forestry, Fisheries and Aquaculture to the newly created Natural Resources Management Ministerial Council (NRMMC) in 2001.



Table 1. National Water Quality Management Strategy Guidelines

NATIONAL WATER QUALITY MANAGEMENT STRATEGY GUIDELINES	
<i>Policies and process for water quality management</i>	
1	Water quality management - an outline of the policies - 1994
2	Policies and principles - a reference document - 1994
3	Implementation guidelines - 1998
<i>Water quality benchmarks</i>	
4	Australian and New Zealand guidelines for fresh and marine water quality - 2018
5	Australian Drinking Water Guidelines – Summary 2004
6	Australian drinking water guidelines - 2018
7	Australian guidelines for water quality monitoring and reporting - 2000
<i>Groundwater management</i>	
8	Guidelines for groundwater protection – 2013
<i>Diffuse and Point Sources</i>	
9	Rural land uses and water quality - a community resource document - 2000
10	Guidelines for urban stormwater management - 2000
<i>Guidelines for Sewerage Systems</i>	
11	Guidelines for sewerage systems - effluent management - 1997
12	Guidelines for sewerage systems - acceptance of trade waste (industrial waste) - 1994
13	Guidelines for sewerage systems - sludge (biosolids) management - 2004
14	Guidelines for sewerage systems - use of reclaimed water - 1999
15	Guidelines for sewerage systems - sewerage system overflows - 2004
<i>Effluent management</i>	
16a	Effluent management guidelines for dairy sheds - 1999
16b	Effluent management guidelines for dairy processing plants - 1999
17	Effluent management guidelines for intensive piggeries - 1995
18	Effluent management guidelines for aqueous wool scouring and carbonising - 1995
19	Effluent management guidelines for tanning and related industries in Australia - 1995
20	Effluent management guidelines for Australian wineries and distilleries - 1998
<i>Water Recycling</i>	
21	Australian guidelines for water recycling: managing health and environmental risks (Phase1) – 2006. the treatment of sewage effluent and greywater for non-drinking purposes (being reviewed 2020).
22	Australian guidelines for water recycling: managing health and environmental risks (Phase 2). Augmentation of drinking water supplies covering the treatment of sewage effluent and greywater for augmentation of drinking water supplies, Managed Aquifer Recharge and Stormwater (2008)

As a result of the report of the Working Group on Water Resource Policy (Neal 1993), monumental policy changes had been initiated through the 1994 COAG-agreed Water Reform Agenda under the umbrella of National Competition Policy principles (NCC 1998) which included incentive payments to the states in response to them having undertaken policy reforms. The Water Reform Agenda provided that water use should be at its most efficient and that environmental consequences could no longer be ignored. By world standards of the day, the COAG water reform framework represented ground breaking recognition of economic and market principles in water policy (Willett 2009). Land titles were separated from rights to water, with both becoming separately tradable. Water resource management was separated from the water supply functions which were to be transferred to identifiably separate commercial corporatised entities, albeit mostly were still government-owned. After considerable debate in NRMMC and other Ministerial Councils, policies were further developed in the 2004 COAG Intergovernmental Agreement on the National Water Initiative (NWI 2004). The agreement encompassed clauses on water entitlements, water markets and trading, water pricing, management of environmental water, water accounting, urban water, community partnerships and adjustment, and developing knowledge and skills. It had objectives of ensuring healthy, safe and reliable water supplies; increased domestic and commercial water use efficiency; facilitating water trading between and within the urban and rural sectors; encouraging innovation in water supply sourcing, treatment, storage and discharge; and achieving improved pricing for metropolitan water. The National Water Commission (NWC) was established in March 2005, initially attached to the Office of the Prime Minister, though later transferred to the portfolio of the Minister responsible for water resources. The NWC was an independent statutory body created to drive the national reform agenda and assist with the effective implementation of the NWI. It was abolished in 2014 on the recommendation of the then portfolio department which was required to find a Budget cut - money that would otherwise have had to be found within the department itself (Matthews 2018). The Standing Council for Primary Industries and the Standing Council for Environment and Water which had been created from PIMC and NRMMC following the Hawke Review of COAG Ministerial Council (Lundie 2011), were also summarily abolished in 2014.

## DISCUSSION

It is evident that over the past forty years, farmers have had a wider range of decision-making business options

to achieve specific outcomes, including more recently, the purchase of water to match crop demands after considering likely economic returns. Rural communities accepted the challenge to work together in conserving their natural environment, encouraged by Ministerially-supported programs. Some have waxed and waned. Soil conservation was initially driven by states' regulation, followed by a broader approach partly incentivised by funding from the Commonwealth through the National Soil Conservation Program. That was followed by heightened community participation through Landcare, which reached an apogee in the 1990s but required elaborately developed assessment processes evaluated by the Natural Resource Management Ministerial Council. The financial support from governments was crucial. The linkage between the Primary Industries and Environment portfolios via the Natural Heritage Trust following the joint ACF / NFF approach to the Prime Minister was a seminal development. However, the combined meetings of PIMC, NRMMC and EPHC with two or three lead ministers from each jurisdiction were rather difficult events when Ministers were dealing with a cross-cutting problem.

In recent years, the extent of commitment and investment into NRM seems to have been reduced. For example, the Australian Collaborative Rangeland Information System continued for some years after it was established as part of National Land and Water Resources Audit, but now seems to have expired. Little else has come out of the NLWRA despite an ultimate expenditure of \$37m to provide a framework for the long-term monitoring and assessment of the health and management of Australia's land and water resources. Other related areas such as the need to respond to global warming through the impact of energy use in agriculture, and recognising emissions management of soils, vegetation and ruminant livestock, scope for sequestration and adaptation to change have resulted in an indecisive policy stasis. The removal of the Commonwealth's science and meteorological agencies from participation in the Agricultural Senior Officers Committee (equivalent to the former Standing Committees) will not have facilitated recent deliberations.

The formal disbanding of the Primary Industries and Environment Ministerial Councils within COAG in 2014 has also resulted in loss of continuity for some earlier initiatives. There has been a loss of capacity to upgrade nationally significant Ministerial advisory achievements. For example, the NWQMS Effluent Management Guidelines contain the statement "These historical guidelines were developed under the National Water Quality Management Strategy (NWQMS) and are available for information purposes only. Information presented in

“ It is evident that over the past forty years, farmers have had a wider range of decision-making business options to achieve specific outcomes, including more recently, the purchase of water to match crop demands after considering likely economic returns.”

these guidelines may be outdated and may not represent currently recommended management practices. You are advised to contact your relevant jurisdictional agency for advice. There are currently no plans in place to update historical guidelines.” (Water Quality Australia 2019b). Similar statements are made about guidelines for rural water use and urban stormwater.

Intergovernmental agreements, often backed by new intergovernmental institutions, have a long history of expediting complex infrastructure reforms in Australia, by developing momentum, garnering support and moving the debate beyond narrow local confines (Infrastructure Australia 2010). Yet there has been a loss of momentum and commitment to the principles of the Intergovernmental Agreement on the National Water initiative, which had been subject to considerable positive international recognition. The National Water Commission completed four assessments of progress on the implementation of the NWI. The abolition of the National Water Commission as an independent adviser to oversee the implementation of the NWI and as originally perceived, to assess progress with the Murray Darling Basin Plan, was unfortunate. The continuing need for a replacement body such as a National Water Authority (AWA 2017) or statutory independent standing commission charged with audit and oversight powers in relation to land, water and the environment (Grafton *et al.* 2020) has since been recommended. The Productivity Commission (2017) noted some policy recidivism, considerable unfinished business and the need for a continuing audit of progress in water reform. It also observed that the Productivity Commission's work is not a substitute for the in-depth consideration given to environmental management arrangements carried out through the NWC's biennial Australian Environmental Water Management reviews in 2010, 2012 and 2014. While the implementation of the Basin Plan has been subject to a range of reviews by different entities, these had been limited to the MDB. The Murray Darling Basin Plan and even its objectives have been the subject of considerable community and governance debate.

The one area that has troubled Ministers throughout the past forty years and continues to do so, is what to do about drought and its effect on the natural environment. There is still a cry for assistance whenever drought appears. The long-promoted mantra towards greater self-sufficiency and better management expertise still holds today, but decision-making responses to drought are inevitably coloured by the

social and political ramifications of what options might be chosen. There remains a level of sympathy in the general community for the predicament faced by farmers.

From time to time, some Ministers have sought their ministerial councils to become more “strategic” in the issues they considered. There was a time in the 1990s when individual Ministers chose to make presentations on topics of their choice at the beginning of each meeting. While some subjects were quite significant, lack of formal agenda papers limited the attentiveness of others present and these arrangements eventually disappeared from the formal agendas. The Ministerial Councils were at their most effective when Ministers, no matter what their political persuasion, strived to reach a bi-partisan consensus on important issues facing the development of the nation's agriculture, supported by well-developed policy papers prepared by specialist groups and having been discussed with Ministers and grower representatives before arriving at the meeting. The processes were strengthened during the 1990s when the Ministers and all the support staff met collegiately and informally prior to the formal Ministerial Council meetings.

The efficiency of meetings was improved when agenda papers were able to be distributed electronically from about 2000. The meetings were also presented with significant, well researched reports. It is a concern is that with changing portfolio and departmental structures, many of these seminal reviews are not readily available. For example, the National Land and Water Resources Audit was provided with its own website ([www.nlwra.gov.au](http://www.nlwra.gov.au)) which is long defunct. Search engines have little success in finding major reports from this program. Some search reports show links from other programs such as the closed but still available Land and Water Australia site, but the links are broken. Similarly, the National Library of Australia's “Trove” site includes image grabs of the NLWRA website over a number of years, but most of the links evident on these views are also broken. Yet the material is available if you know to look in <http://nrmonline.nrm.gov.au/>, searchable, albeit arranged in a rather arbitrary order. Similarly, the Resolutions of Ministerial Council meetings are available in various major libraries, often as discontinuous series and not very easily accessible. Consideration should be given to reports released by Ministers being available on line and given a digital object identifier (DOI) code which is an unique alphanumeric string assigned by a registration agency (the International DOI Foundation) to identify content and provide a persistent link



to its location on the Internet, a practise now widely adopted in scientific publishing. Transparency of the outcomes of Ministerial deliberations is essential.

## CONCLUSION

There can be little doubt that a system that encouraged Federal and State/Territories governments to streamline and coordinate their activities in the national interest through consensus was an effective mechanism, though at times seemingly ponderous. The system was supported by the states' research agencies and by relatively independent Commonwealth agencies such as the Australian Bureau of Agricultural and Resource Economics and its successors, the Industries Assistance Commission, the National Competition Council, the National Water Commission and the Productivity Commission. Australian agriculture has continued to progress. Farmers have advanced the quality of their management of the natural resources on which their continued success depends. However, concern has been expressed in recent years that economic progress in agriculture has slowed. It is noted that the National Farmers Federation has initiated its own Decadal Plan to grow the value of Australian agriculture (NFF 2018). The widespread natural disasters, notably through the impact of fire on the natural environment, agricultural production and rural communities in the summer of 2020 and the need for the governments, States and Federal, to respond may well provide the opportunity to re-evaluate the current approach to natural resource management and the reduced attention given to it in recent years. Effectiveness of Commonwealth-States-Territories working relations may well merit further consideration. A collegiate Primary Industries Ministerial Council returned within the COAG Ministerial Council structure, able to interface with other portfolio ministerial councils, would strengthen that intent.

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## REFERENCES

- Abbott, T. (2014). *Letter to the Hon Barnaby Joyce, Minister of Agriculture and Chair, Standing Council on Primary Industries*, 14 February 2014, Canberra
- ARMCANZ (1993). *Agriculture and Resource Management Council of Australia and New Zealand - Record and Resolutions, First meeting, Alice Springs, 29 July 1993* (Department of Primary Industries and Energy, Canberra)
- ASCC (1988). *National Soil Conservation Strategy*. Australian Soil Conservation Council, AGPS, Canberra 22pp.
- Australian Government (2013). *Caring for our Country 2008-2013 Achievements Report: Synthesis. Independent summary to Caring for our Country*, Department of Sustainability, Environment, Water, Population and Communities and the Department of Agriculture, Fisheries and Forestry, Canberra. 2013. <http://www.nrm.gov.au/system/files/resources/96c5fc3f-87d7-4fd4-bce2-52314e5562a7/files/achieve-report-synthesis.pdf> (accessed 6 December 2019)
- AWA (2017) *Submission to the Productivity Commission's Draft Report National Water Reform*, Australian Water Association, Sydney, 31 October 2017. [https://www.pc.gov.au/\\_\\_data/assets/pdf\\_file/0016/217132/sub066-water-reform.pdf](https://www.pc.gov.au/__data/assets/pdf_file/0016/217132/sub066-water-reform.pdf) (accessed 9 December 2019)
- Cottingham, I. (1985) *Handbook to the Australian Agricultural Council* (3rd edn), Department of Primary Industry, Canberra
- DEH (2005) *Climate Change Risk and Vulnerability*, Report prepared by Allen Consulting for the Australian Greenhouse Office, Department of Environment and Heritage, Canberra <http://www.sfrpc.com/Climate%20Change/4.pdf> (accessed 5 September 2019)
- DPIE (1987). *First National Soil Conservation Report – February 1987*, Department of Primary Industries and Energy, Canberra, 24pp
- ESD Steering Committee (1992). *National Strategy for Ecologically Sustainable Development*. Council of Australian Governments, December 1992 <http://www.environment.gov.au/about-us/esd/publications/national-esd-strategy> (accessed 13 November 2019)
- Firecone (2008). *National Study on the Benefits and Costs of Including Agriculture, Forestry and Fisheries in an Emissions Trading Scheme - Measurement and Reporting Issues*. Final Report. Firecone Ventures Pty Ltd, Melbourne. 8 December 2008, 92pp. <http://www.farminstitute.org.au/LiteratureRetrieve.aspx?ID=47766> (accessed 5 September 2019)
- Grafton, R.Q., Colloff, M.J., Marshall, V. and Williams, J. (2020). Confronting a 'post-truth water world' in the Murray-Darling Basin, Australia. *Water Alternatives* 13(1): 1-28
- Hannam, I. (2003). Soil Conservation in Australia. *Journal of Soil and Water Conservation* 58 (6) 112A-115A
- Infrastructure Australia (2010). *Review of Urban Water Security Strategies*, Infrastructure Australia May 2010, Canberra. <https://www.>

- infrastructureaustralia.gov.au/sites/default/files/2019-06/UrbanWaterSecurityReportForInfrastructureAustralia.pdf (accessed 9 December 2019)
- Lundie, R (2011). *Reform of Ministerial Councils*. Parliament of Australia 8 March 2011 [https://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/FlagPost/2011/March/Reform\\_of\\_Ministerial\\_Councils](https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/FlagPost/2011/March/Reform_of_Ministerial_Councils) (accessed 24 June 2019)
- Matthews, K. (2018). *Water Management in Australia - Time for a Re-Think*. The 2018 Peter Cullen Lecture, Canberra, 8 November 2018. <http://www.petercullentrust.org.au/2018/11/08/ken-matthews-ao-water-management-in-australia/> (accessed 9 December 2019)
- NCC (1998). *Compendium of National Competition Policy Agreements* Second Edition, National Competition Council, Melbourne July 1998 134pp <http://ncp.ncc.gov.au/docs/PIAg-001.pdf> (accessed 10 September 2019)
- Neal, E. (1993). *Report of the Working Group on Water Resource Policy to the Council of Australian Governments*. (Chair: Sir Eric Neal), 32pp
- NFF (2018). *2030 Roadmap - Australian Agriculture's Plan for a \$100 Billion Industry*. National Farmers' Federation, Canberra <https://www.nff.org.au/get/6175.pdf> (accessed 13 November 2019)
- NLWRA (2001). *Landscape Health in Australia - summary* (ed Gethin Morgan) National Land and Water Resources Audit, Canberra, 12pp. <http://nrmonline.nrm.gov.au/downloads/mql:893/content> (accessed 9 September 2019)
- NLWRA (2002). *Australia's Natural Resources 1997-2002 and beyond*. National Land and Water Resources Audit, Canberra, 141pp <http://nrmonline.nrm.gov.au/catalog/mql:1234> (accessed 9 September 2019)
- NWI (2004) *Intergovernmental Agreement on the National Water Initiative* <http://agriculture.gov.au/SiteCollectionDocuments/water/Intergovernmental-Agreement-on-a-national-water-initiative.pdf> (accessed 10 September 2019)
- NWPASS (2000). *National Strategy for the Management of Coastal Acid Sulfate Soils* Prepared by National Working Party on Acid Sulfate Soils for ARM CANZ, ANZECC and MCFFA, January 2000. NSW Agriculture, Wollongbar, 39pp <https://webarchive.nla.gov.au/awa/20040419084027/http://www.mincos.gov.au/pdf/natass.pdf> (accessed 9 September 2019)
- PMSEIC (1998). *Dryland Salinity and its Impacts on Rural Industries and the Landscape*. Second Meeting, 4 December 1998, Agenda Item 5 <https://www.chiefscientist.gov.au/wp-content/uploads/19981204-Dryland-Salinity-and-its-Impacts-on-Rural-Industries-and-the-Landscape.pdf> (accessed 4 September 2020)
- Productivity Commission (2017). *National Water Reform*, Productivity Commission inquiry Report no 87, 19 December 2017. Canberra. [https://www.pc.gov.au/\\_data/assets/pdf\\_file/0007/228175/water-reform.pdf](https://www.pc.gov.au/_data/assets/pdf_file/0007/228175/water-reform.pdf) (accessed 9 December 2019)
- Radcliffe, J.C. (2020) Influence of Australian Agricultural Council and Successors on Australian Agriculture, 1980-2014. 1. Operation, Marketing and Responses to the Risks of Farming. *Agricultural Science* 31(2):18-35
- SCARM (1993). *Sustainable Agriculture – Tracking the indicators for Australia and New Zealand*. Standing Committee on Agriculture and Resource Management Technical Report 51, CSIRO, Melbourne 62pp
- SCARM (1998). *Sustainable Agriculture – Assessing Australia's Recent Performance*. Standing Committee on Agriculture and Resource Management Technical Report 70, CSIRO, Melbourne 150pp
- State of Environment Advisory Council (1996). *Australia: State of the Environment 1996*. CSIRO Publishing, Melbourne <https://soe.environment.gov.au/sites/default/files/1996-soe.pdf?v=1487244614> (Accessed 4 September 2019)
- Tideman, A.F. (1990). *Half a century of Soil Conservation*. Department of Agriculture : Adelaide, 44pp
- Toyne, P and Farley, R (2000). *The Decade of Landcare; Looking Backward - Looking Forward*. Discussion Paper Number 30. The Australia Institute, Canberra, July 2000. [https://www.tai.org.au/sites/default/files/DP30\\_8.pdf](https://www.tai.org.au/sites/default/files/DP30_8.pdf) (accessed 30 August 2019)
- Vaile, M (1999). *National Land and Water Resources audit website launched*. Media Release Wednesday, April 28, 1999 MV63/99. <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id:%22media/pressrel/1594135%22> (accessed 2 September 2019)
- Water Quality Australia (2019a). *National Water Quality Management Strategy Guidelines*. <https://www.waterquality.gov.au/guidelines> (accessed 15 September 2019)
- Water Quality Australia (2019b) *Effluent Management Guidelines (historical guidelines)* <https://www.waterquality.gov.au/guidelines/effluent-management> (accessed 15 September 2019)
- Willett, E (2009). *Promoting efficient and effective water trading across the Murray-Darling Basin* Australian Economic Forum, 20 August 2009, Sydney (Australian Competition and Consumer Commission: Canberra) <https://www.accc.gov.au/speech/promoting-efficient-and-effective-water-trading-across-the-murray-darling-basin> (accessed 24 June 2019)