



**Australian Experience in Internal Negotiations &  
Consensus Building for Water Rights, Uses and Allocations –  
Lessons for Developing a Long Term Strategy for Iraq**

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## AUSTRALIAN EXPERIENCE IN INTERNAL NEGOTIATIONS AND CONSENSUS BUILDING FOR WATER RIGHTS, USES AND ALLOCATIONS – LESSONS FOR DEVELOPING A LONG TERM STRATEGY FOR IRAQ

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### Abstract

Australian water management policies and laws have in the last twelve years embraced concepts of regionalism using biophysical units and community participation to make hard water allocation, use and licensing conditions. This change from an introspective State focus was prompted by drought, algal blooms and community agitation and Audit of Australian water resources which showed that many surface and groundwater systems were over-allocated (Audit 2000). 168 of Australia's 538 groundwater management units are close to being over-allocated, and 161 are over-used the same applies for surface water.

This paper identifies a sequence of four historical water management paradigms in the Australian Federation. The first two are of long duration (160 years) and set the scene for the recent two from 1950 onwards. The progression over the first two paradigms was from free access to water and indeed government provision of infrastructure toward greater regulation and formalism in State based laws and policies. The second two paradigms recognise the environmental impact of water use and since 1990's there has been a marked increase in integrated policies and laws at the State level. The major State organisations, institutions, policies, laws and how these interact with community expectations will be outlined and ways of achieving reform. The paper will also show examples of the ways consensus has been built in various regional water allocation bodies and how the water planning processes of each State have achieved consensus to reallocated historically over-allocated systems.

### 1.0 Federal – State Relations over Water Legal Power.

Australia has long standing examples of intra State agreements to share water including the Murray Darling Basin Commission and the Border ranges agreement (*see Figure 1*). However, the period from 1994 marks a real change in emphasis and even these bodies now have more power to achieve environmentally sustainable water use. Australia was Federated 1901, with section 100 of the federal constitution providing that the power over water was to remain with the States. The former colonies viewed water as a key stumbling block to Federation and hence extracted a prohibition clause in the new constitution.

The powers of the new entity were listed in Section 51 and these were broad in that they covered 39 areas including trade and commerce. The powers of such a new entity would be construed widely (Crawford 1991). It was because of the wide construction of section 51 that the States insisted on section 100 being inserted as follows:

*The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the rights of the State or of the residents therein to the reasonable use of waters of rivers from conservation or irrigation.*

The parliamentary debates reveal that section 100 was inserted because New South Wales, Victoria and South Australia feared that Commonwealth Laws under section 51 might affect their common

interest in water for irrigation (Lane 1986). The contest was really between the Commonwealth power over water for navigation and the State desire to use the water for irrigation. The object of the section is thus two fold: 1. to limit section 51, and; 2 to limit the inherent paramountcy of the Commonwealth navigation power (Quick and Garran 1976).

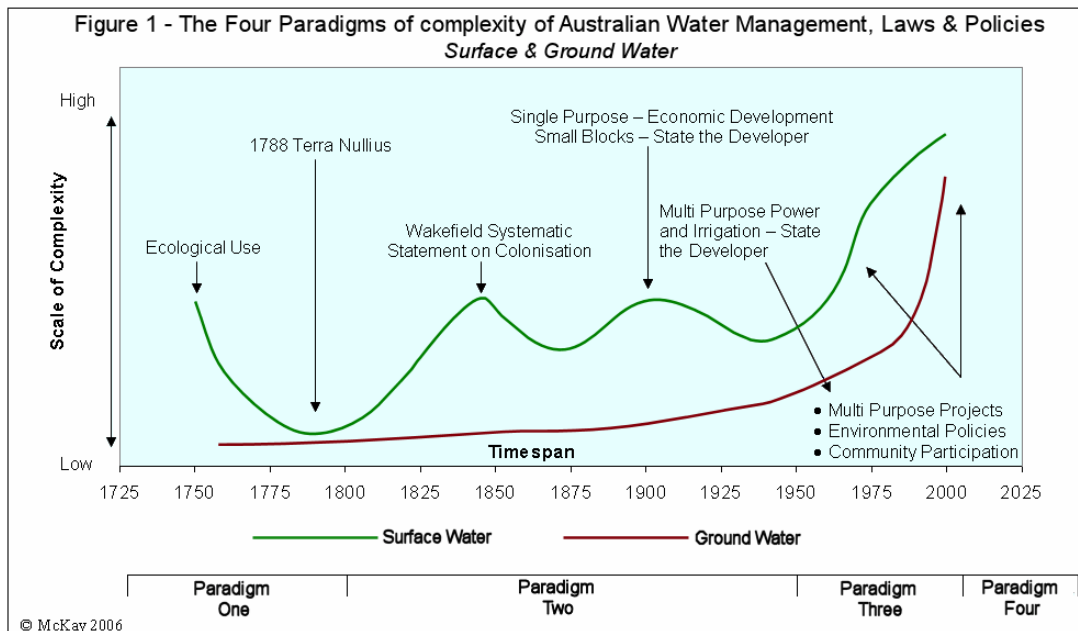
As a consequence of Section 100, the States have – for much of the last century - created their own laws, polices and organisations without reference to their neighbouring States.

## 2.0 The four paradigms of the exercise of State power

Paradigm 1 (pre 1800) is where the common law of England applied to Australia and included with the right to surface water the *concept of reasonable user*. Groundwater use in that period was not so restricted

Paradigm 2 (1800 – 1950) was characterized by the vesting of the common law rights to water in specific licenses given to farmers with *no duties of reasonable user*, just a duty to comply with the terms defined under the license. During this phase, the Constitution was drafted on the condition (section 100) that water remained under the control of the States and each State then used that control to foster development. The grant or licensing system was created in each State for both surface and groundwater with the rights to the use, flow and control of the water embodied in licenses. These licenses conferred entitlements on users. These entitlements were not property rights in a legal sense as they were not freely transferable. The farmers viewed the license as a right and, in Paradigm 3 and 4 when the allocations were changed there was much community angst about loss of “rights”.

Figure 1 - The Relative policy Complexity of the 4 Paradigms



**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

The third Paradigm (1950 - 2002) arose within each State with greater attempts to achieve multi purpose developments and reached a peak in 1994 with the first round of Commonwealth inspired reforms. These reforms required private sector participation in water supply. Requires water and land to be separated to create markets and required that all water uses be tested to see if they are environmentally sustainable and All State governments agreed to comply with this. Under Paradigm 3 (and indeed as a result of the development pressure in paradigm 1 and 2) there were no local regional bodies administering allocation. Each grower was given an allocation directly from a centralized State agency that was generally based in the capital city. In many cases the growers knew from local knowledge that their allocations were too large.<sup>1</sup> There were, however, isolated instances of communities working collaboratively to reduce allocations. For example, in Pioneer Valley Queensland there were pumping restrictions and the installation of meters from 1992. In Bundaberg and upper Condamine there was an annual allocation system in place from 1989 with incentives for more efficient on-farm usage. In South Australia, irrigation of salt tolerant species occurred through a voluntary scheme involving monitoring and a 35% reduction in allocation. In Tintinara, a cost sharing scheme was devised to subsidize the lowering of Stock and Domestic wells. (McKay JM, Diwakara H and S Barnett 2006)

The final Paradigm dates from 2002 and is led by the Federal Government insisting on Regional delivery of NRM through 56 State constituted bodies and some harmonization of underlying laws (See *Tables 1 and 2*). The primary instrument for achieving harmonization has been the National Water Initiative 2004. This Initiative used coercive Federal power through section 96 to reward States with funding if they achieved components of a grand plan of 80 sub components.

Some of the key subcomponents will be discussed later, but they are water sharing plans and changing allocation of water to a share of the consumptive pool. The later gives farmers an annually determined right to a share of both surface and ground water. The sharing process aims to achieve Environmentally Sustainable Development (ESD) and the amount of water is determined by a local water plan which is drafted by the local NRM Board (see Table for details of the names and structures of these). This phase ESD and indeed NRM is legally challenging and innovative in that it requires unique laws and institutions and administrative arrangements. Among the challenges is that each State uses a slightly different definition of these. In Western Australia NRM is "*Ecologically Sustainable management of land, water and air and biodiversity for the maintenance of the State for the benefit of existing and future generations, and for the maintenance of life support capability of the biosphere. It does not include mineral resources, but does include coastal and marine resources up to the three nautical mile limit.*

The imposition of laws to achieve ESD is a result of societal pressures, bio diversity catastrophes and drought and has been imposed on the organization by the law in order for the organisations to maintain its legitimacy with some influential sectors of modern Australian society. (Extract from McKay 2007)<sup>2</sup>

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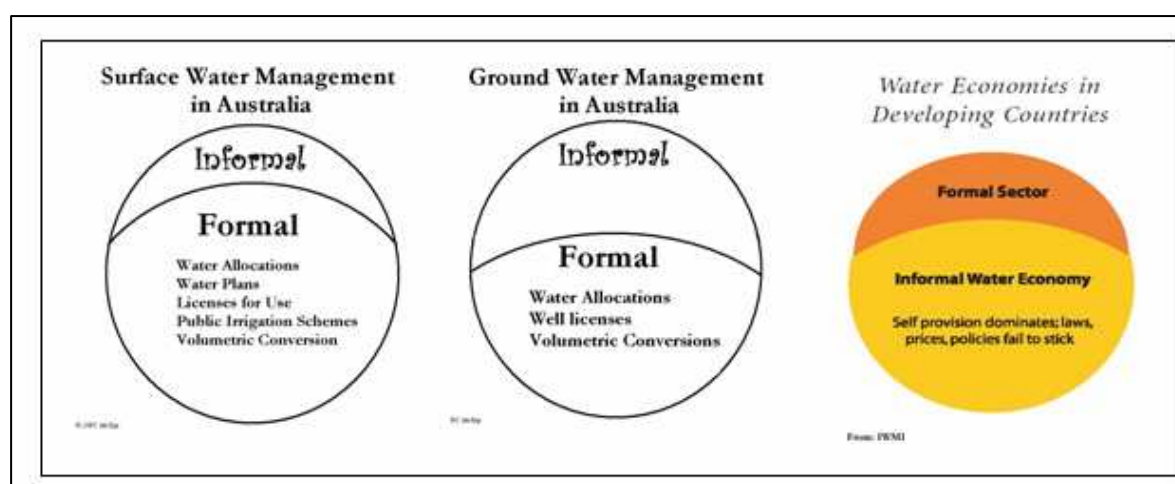
<sup>1</sup> Pers comm. John Hamperson at Australian Bureau of Agricultural economics conference Canberra 2007

<sup>2</sup> The Prime Minister John Howard recently announced on 25 January 2007, that he would like the States to refer power over water to the Federal government. This was because the old way of managing the Murray Darling basin was out of date and the current trajectory of water use and management in Australia is not sustainable see newspaper report My bold plan to save our water The Weekly Times Jan 31 2007 p16 quoting the Prime Minister Hon John Howard MP

In summary, Australia has highly formalised systems for water management that rely on laws, on water allocation and use and enforcement of water plans. Recently these systems have had an added requirement that they must operate at regional levels and this adds more complexity. The Governance requirements of each State impose obligations of transparency and fairness.

In contrast, the system in developing countries is less formalised and theft of water is generally a huge problem. This chart illustrates the relative levels of formality the examples used by IWMI are from South Asia. One of the outcomes of this meeting it to be able to examine the formal and informal sectors in Iraq and outline some policy suggestions.

**Figure 2 - summary of the formality of Australia's water management regimes compared to developing countries**



### 3.0 Paradigm 3 Examples of Consensus Building through Increased Federal Interventions and Intra State Agreements

Despite section 100, the Commonwealth has intervened in State water management through section 96 of the Constitution which gives the Commonwealth power to grant financial assistance to the States contingent on specified conditions being met. In this context the emergence of salinity problems was identified as a key issue, especially along the River Murray. In 1978 the Commonwealth passed the *National Water Resources Financial Assistance Act* which funded a broad range of works aiming to conserve water and mitigate salinity and floods, particularly in the Murray-Darling Basin.

#### 3.1 Murray Darling Basin commission as an example of co operative federalism

The Murray - Darling Basin region covers more than 1,000,000 square kilometers (14%) of Australia unevenly spread over the five jurisdictions of Queensland (QLD), New South Wales (NSW), Australian Capital Territory (ACT), Victoria (VIC) and South Australia (SA). The water resources of the Murray and Darling Rivers have been the subject of an innovative (albeit underpowered) inter-jurisdictional water sharing agreement since 1915. In light of the State based power, the process for the development and operation of this agreement comprised a Council of State Ministers agreeing on legislation and then seeking its approval by State Parliaments.

**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

The current Murray-Darling Basin Agreement was signed by NSW, VIC and SA in 1992 with QLD agreeing in 1996 and the ACT in 1998. The Agreement covers all natural resources management and, amongst other goals, works to reduce the salinity impacts of river water use for irrigation. In relation to water sharing, the States first agree on how much water to keep in an unallocated reserve and how much to allocate to each State's account. Each State then decides how much water to keep on their account and how much to allocate to growers and the policies are also State driven. There are policy differences between the States, in NSW irrigators can carry forward unused water allocations to the next year. The other States do not allow this and this has caused problems for intra- State trading.

In the light of an Audit Report of 1995 an interim Cap on water use by farmers (MDBC,1995) was imposed in June 1995 and this limited the amount of water able to be diverted for consumptive uses to the quantum diverted on 30 June 1994. There was an independent review of equity issues and this Cap was made permanent for NSW, VIC and SA from 1<sup>st</sup> July, 1997. This has been heralded as one of the most important decisions ever made in Australian water history (Blackmore 2000).

The Cap aims to restrain further increases in water diversions but it does not constrain new developments, provided the water for them is obtained by using water more efficiently or by purchasing water from existing developments.

Under the Cap arrangements, each State is required to monitor and report to the Murray-Darling Basin Commission (MDBC) on diversions, water entitlements announced, allocations, trading of water within, to and from the State and report on compliance with the target. The State must also report on measures undertaken or proposed to ensure that the water taken does not exceed the annual diversion target for every ensuing year. The MDBC appoints an Independent Audit Group (IAG) which annually audits the performance of each State Government and reports. (IAG Reports annual). There is also power to order a special audit if:

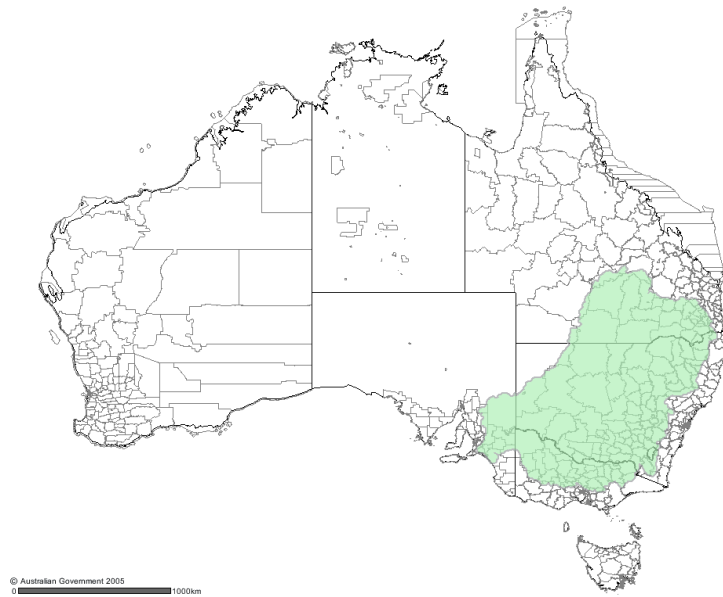
- The diversion for water supply to metropolitan Adelaide has exceeded 650GL, or
- The cumulative debit recorded in the Register exceeds 20% of the annual average for a particular river.

Many special audits have been conducted on the basis of the latter power.

In 1999, the MDBC commissioned a review of the operations of the Cap and drew three main conclusions. First, the Cap had supported the Ministerial Councils' aim of achieving the ecological sustainability of the Basin's river systems. Second, while the Cap does not necessarily provide for a sustainable basin ecosystem, its implementation had been the essential first step in achieving this goal. Third, without the Cap there would have been a significantly increased risk that the environmental degradation of rivers systems would have been worse (MDBC 1999).

There are various legal dimensions to the Cap. However, one of the most pressing is that the Cap required State level implementation, but the Commonwealth Government has no power to mandate that the States financially resource the compliance work.

The Independent Audit Reports provide a vehicle for each State to voice concerns about the actions of other States. A key concern of SA has always been that NSW has exceeded its Cap in a number of rivers; notably, the Border Rivers, Wider, Lachlan and the Baron Darling. Further concerns in 2000/01 were that NSW had not finalized its Cap compliance through an independent verification process and SA remained concerned about "NSW's ability to bring diversions back into balance with Cap limits into the future" (IAG 2002).



**Map 1 - MDBC Area with Local Government Boundaries**

In 2000/01 the IAG paid special attention to activities in NSW and made a number of recommendations and conducted Special Audits of the Naomi, Lachlan, Baron-Darling and lower Darling Rivers. The IAG established that the long-term diversion Caps had been exceeded in these valleys. The NSW government broadly argued that any violation of the Cap had been caused by poor quality data and the state reportedly assigned additional resources over the 2001/2003 period to resolve these problems. Interestingly, while the IAG recommended a major commitment of resources in each jurisdiction to improve data quality, NSW only agreed to commit to continual improvement of data collection.

### **3.2 Great Artesian Basin co operative agreement**

Emerging problems with groundwater also prompted individual State governments to co-operate to undo some of the legacy of the open access of uncapped bores. Four state governments created a scheme to cap bores in the Great Artesian Basin (GAB) and hence restore pressure. The area was mined by more than 4000 flowing bores. By 1990, 1000 of these had stopped flowing. The major use of the water is for livestock as the dissolved minerals make it too salty for other purposes. The main concern in the Artesian Basin has been the loss of pressure, which is itself dependent on the drawing of water from nearby bores as the lateral movement of water is very slow.

The Great Artesian Basin Rehabilitation Program started in 1989 and aims to encourage the capping of bores and the piping of water. The program is funded by the Commonwealth and States. The cost sharing scheme for bore capping and pipes work in NSW and QLD involves an 80% contribution by State/Commonwealth governments and a 20% investment by growers. In SA, the capping program operates in only one area with State and Commonwealth providing all funding. The take up of the program was slow: of the 1380 uncontrolled bores in 1989 only 250 were repaired by 1997. Subsequently, the Great Artesian Basin Consultative Council was established to manage the GAB and consists of groundwater users, industry, local government, traditional owners, conservation groups and governments. Funding for this entity is shared equally between NSW, QLD and SA.

#### **4.0 Paradigm 3 the Outcomes of the CoAG Reforms and the Beginning of Regional Consensus Building in Each State**

The Council of Australian Governments (CoAG) is a body comprised of State and Federal Ministers who meet to change policies and laws on key issues. The outcome of the National competition policy (which included the part or full sale of several public enterprises) created a pool of funds. Using these funds the States were 'encouraged' to adopt national water protocols by restricting access to the pool of funds to those States that had complied with the CoAG reforms.

The reforms of 1994 have thus created much change and resulted in the privatizing and corporatising of water supply businesses under State laws. The reforms insisted that each State ensure that future water projects were based on ESD principles in conjunction with much more private sector participation and community involvement in water planning at a regional level. (See Table 1)

In November 2000, the Council of Australian Governments (CoAG) agreed to a regional model for the delivery of the National Action Plan on Salinity and Drainage (NAP). Following this, the NRM Ministerial Council adopted a regional delivery model for funding of environmental activities at a regional level, leading to the integrated implementation of both programs based on regional needs.

The principal driver underpinning the regional delivery model for NRM is to *'harness the capacity of those closest to the problem on the ground', building on local knowledge, experience and expertise and enabling flexible and responsive solutions to local NRM challenges.* (Senate of Australia 2000 see <http://WWW.APH.GOV, AU/SENATE/COMMITTEE>)

The key features of the regional delivery model include:

- the development of a framework that sets out the respective NRM roles for Commonwealth, state/territory and local governments and the community;
- a shift from funding of individual projects to funding outcomes determined through regional NRM strategic planning;
- devolution of decision-making to a regional level – that is, a dispersed rather than centralist approach that allows for flexible decision-making tailored to local conditions and needs;
- introduction of national standards and targets to guide and provide direction for investment in NRM;
- a comprehensive accreditation, monitoring and evaluation framework to achieve consistent and acceptable standards of program delivery; and
- encouragement of community capacity building through involvement in local NRM.

A total of 56 NRM regions have been established across Australia. The boundaries for each region were agreed to by Federal, State, and Territory governments.

#### **5.0 Paradigm 4 Regional Delivery Models and the Legacy of State Power.**

The States still have power to decide the shape of the laws and the organisations administering them. Table 2 below shows the range in types of NRM regional bodies and also the number and types of water supply businesses in each State. The form of a regional body is crucial as to whether it can overcome the local political considerations and achieve its aims. In 1975 Irving discussed this in relation to the USA...

**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

*"Under most circumstances, an integrated comprehensive treatment of water resources cannot be organised within the framework of a single integrated agency. Too many values are at Stake in relation to too many different communities of interest.*

*Where interests are conflicting and there is no agreement on goals the necessary for cooperation and co-ordination cannot be created by establishing an organisation. ....Cannot sidestep political considerations by granting a regional organisation more formal authority. Where there are fragmented and conflicting interests with their own resources of power and authority, then decisions are going to be made by a process of negotiation and consensus building not by a fiat of regional agency."*

Irving suggested 3 types of regional water authorities existed in the US in 1975, these were Grass roots, Consortium of State governors and equal Federal and State power. In Australia, there is greater complexity with four types of intra State regional bodies at the State level as described in Table 1 below:

- Confederation of Emergent groups (no skill base for board members) with no Statutory duties;
- Confederation of Emergent groups (no skill base for board members) with Statutory duties;
- Skill based board with no statutory duties; and
- Skill based with statutory duties.

In addition, there are Federal State bodies such as MDBC and GAB and also two examples of Consortium between two States to manage groundwater SA and Victoria Border Ranges Agreement and one between Queensland and NSW.

**Table 1 - The Organisational Structure of Regional NRM Bodies Who Draft Water Allocation, Use and Sharing Plans and the Water Supply Businesses in Each Australian State**

State	Date of formation - number at 2007 - Type of regional body	WSB types <sup>3</sup>
NSW	<p><b>2003 - 13</b> - Catchment management authorities, create water plans. Locally driven with board reporting to minister and the primary means to deliver funding from the NSW and federal government and help land managers restore the environment of the state.</p> <p>Each board has a chair and 6 members selected on a skill base with a small team of professional staff.</p> <ul style="list-style-type: none"> <li>• <b>Skill based with statutory duties</b></li> </ul>	9 types with 74 bodies
VIC	<p><b>1994 – 10</b> - Victorian Catchment Management Council (VCAT) is the peak advisory body and facilitates and integrates framework. It has its own act and uses the water act 1989. VCAT prepares regional strategy guidelines for the Minister which is applied by the Catchment Management Authorities (CMA's). Each CMA needs to liaise with community, industry, environmental organisations state and federal agencies.</p> <ul style="list-style-type: none"> <li>• <b>Confederation of emergent groups (no skill base for board members) with statutory duties</b></li> </ul>	2 types of 23 bodies
QLD	<p><b>2000-15</b> - not established by legislation but called regional NRM groups (RNRMG). These all differ vastly from each other in terms of corporate structure, stakeholder interests and their stage in planning and implementation of NRM activities. There is a collective of RNRMG consisting of the chairs and CEOs of the 15 which co ordinates a strategic approach to NRM issues across regional boundaries. The collective sits outside government and is funded by the regional bodies and some Commonwealth NHT/NHT funding.</p> <ul style="list-style-type: none"> <li>• <b>Confederation of emergent groups( no skill base for board members) with no statutory duties</b></li> </ul>	7 types with 115 bodies

<sup>3</sup> There are 14 major types some are fully private such as some Irrigation companies Coleambally in NSW where the assets were transferred. Others are Government owned enterprises and are often used as cash cows by the relevant State Government see “My Bold Plan to save our Water”, *Weekly Times* National newspaper Jan 31 2007 p 16. quote from Prime Minister’s speech.

**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

<b>SA</b>	<p><b>2004-11</b> - called Natural Resources Management Boards but exiting from 1997 as catchment management boards. These boards have a power to collect an NRM levy which is struck on the value of the land in urban areas and the amount of water used for farmers. The boards are skill based selections of all stakeholders in a region and need and there is the NRM council that advises the minister on the actions of the boards.</p> <ul style="list-style-type: none"> <li>• <b>Skill based with statutory duties</b></li> </ul>	1 type 7 bodies
<b>WA</b>	<p>6 - 2001 - regional catchment councils (non statutory) and NRM council. The council co ordinates the delivery of NAP and NHT actions and fosters a consultative approach to ensure broad community involvement in NRM policy development. The local groups co ordinate the efforts of smaller more localised community groups and so the membership rules vary but Generally include community members, state agency officers and local government.</p> <ul style="list-style-type: none"> <li>• <b>Skill based board with no statutory duties</b></li> </ul>	5 types 22 bodies

Sources: McKay 2005, 2006, 2007a and Gray and McKay 2006 for columns 3. Columns 1 and 2 come from original interpretation of the legislation and policy documents for this paper.

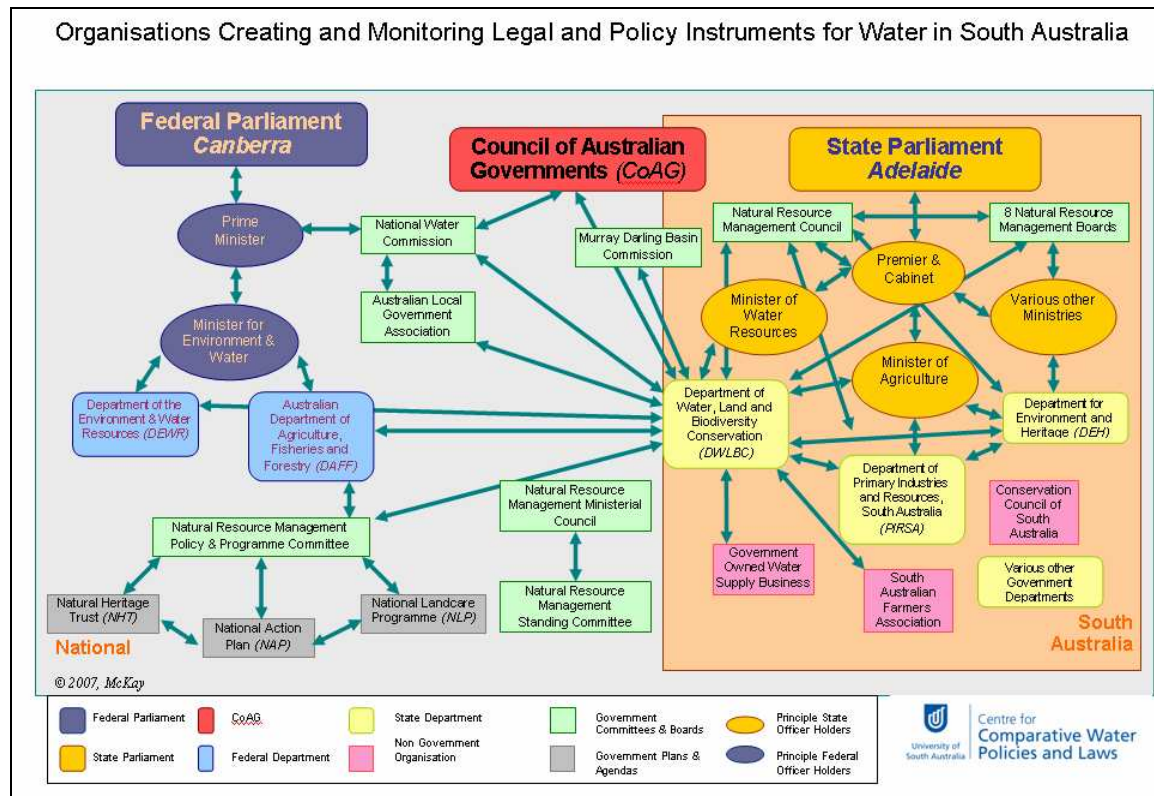
[http://www.unisa.edu.au/waterpolicylaw/projects/corporate\\_governance.asp](http://www.unisa.edu.au/waterpolicylaw/projects/corporate_governance.asp)

NRM is natural resource management and this includes water. NAP is National Action Plan for Salinity and Drainage (Federal funding) and NHT is National Heritage Trust funding also supplied through the Federal Government.

Previous international research has described how organisational form has a great influence on achievements of any policy (North 1990, Young 2000). The policy to achieve ESD is of course coercive on each organisation as it is part of the law of each State. However as shown above there is a wide diversity between and within the States and a huge underlying complexity in the delivery of water through Water Supply businesses.

In a study of the CEO's of the major Australian Water Supply Businesses only one third considered they were able to achieve ESD.(McKay 2007a). The main barrier was under resourcing of the WSB. In addition each State must now have an independent regulator for price and the environment and the placement of these in the former institutional framework of each State has proved troublesome.

**Figure 3 - representation of organizational chart for the Federal and South Australian Governments in delivering regional NRM with water plans setting out water allocations use and shares**



## 6.0 Paradigm 4 - The National Water Initiative Process

In light of the complexity and lack of coherence between jurisdictions, CoAG announced a second series of major reforms, known as the National Water Initiative (NWI) in 2004. The NWI is also a product of the CoAG process and aims to achieve national compatibility in the markets, regulatory and planning schemes to achieve sustainable management of Surface and groundwater. The NWI Agreement was signed by all governments at the 29 June 2004 Council of Australian Governments meeting with the exceptions of Tasmania and Western Australia who subsequently signed in mid 2005 (Thomson 2005) and early 2006, respectively.

The NWI specifies that consumptive use of water requires a water access entitlement to be described in legislation as a perpetual share of the consumptive pool of a water resource (NWI paragraph 28). The NWI represents a shared commitment by the Australian Commonwealth Government and State/Territory governments to ESD principles inasmuch as it recognizes:

- The continuing national imperative to increase the productivity and efficiency of Australia's water use;
- The need to service rural and urban communities; and
- Ensuring the health of river and groundwater systems, including by establishing clear pathways to return all systems to environmentally sustainable levels of extraction (paragraph 5, NWI).

These attributes reflect the Brundland declaration in Rio.

The NWI is a comprehensive reform agreement containing objectives, outcomes and agreed actions to be undertaken by governments across eight inter-related elements of water management covering:

**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

- water access entitlements and planning
- water markets and trading
- best practice water pricing
- integrated management of water for environmental and other public benefit outcomes
- water resource accounting
- urban water reform
- knowledge and capacity building, and;
- Community partnerships and adjustment.

Key areas for attention were the Murray Darling Basin agreement (paragraph14) and the policy that the States adopt a common lexicon of water terms (paragraph 17).

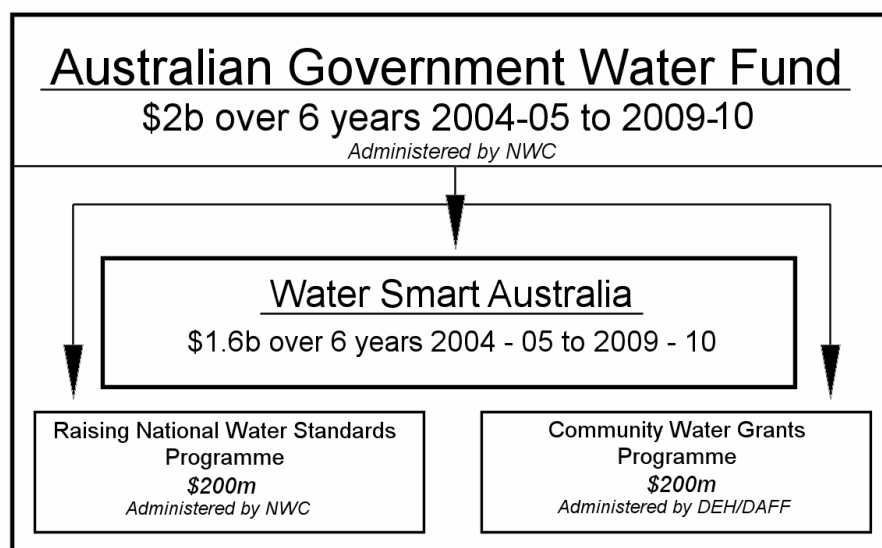
Just under half of the NWI's 70 or so actions involve national actions or other action by governments working together. This reflects not just the emphasis in the Agreement on greater national compatibility in the way Australia measures, plans for, prices, and trades water. It also represents a greater level of cooperation between governments to achieve this end. This process will be driven by the new National Water Commission and the \$2 billion over 6 years to be invested through the Australian Water Fund.

The National Water Commission is established under Commonwealth Government legislation (i.e. the *National Water Commission Act 2004*). It is an independent statutory authority reporting to the Prime Minister and, on some water reform matters, through the Prime Minister to CoAG .

The Commission consists of seven Commissioners – four (including the chairman) nominated by the Commonwealth Government, and three nominated jointly by the states and territories. Unique among Australian intergovernmental institutions, Commissioners are appointed for their expertise in a range of water-related fields (including freshwater ecology, hydrology, resource economics, and public sector management) rather than as representatives of sectoral or government interests. The Commission is supported by a small staff of just over 40. (See figure 4)

The National Water Commission has three main functions:

- Assess governments' progress in implementing the NWI (e.g. through biennial assessments of progress commencing in 2006-07);
- Help governments to implement the NWI (e.g. by acting as lead facilitator on certain actions under the NWI such as nationally compatible registers of water entitlements and trades, and nationally consistent approaches to pricing); and
- administer two programs under the Australian Government Water Fund (including recommending projects for decision by the Australian Government on financial assistance from the Water Smart Australia program and the Raising National Water Standards program) ( Thompson 2005)



Source: Thompson 2005 (NWI Website)

**Figure 4 - The Australian Government Water Fund (AGWF)**

All State governments have been engaged in writing Implementation plans and are required to submit them in the order of the Clauses set out in the Commonwealth agreement. The first two issues are review of River Murray agreement and development of the harmonized lexicon of words. All jurisdictions have agreed to review the agreement and all are developing a lexicon of words in their various Acts see Table 1.

Table 2 below summarizes the key aspect of the conversion of water entitlements into a perpetual share of the resource and the water planning process.

### 6.1 Water plans specifying a share of the resource.

Table2 below summarizes the key aspect of the conversion of water entitlements into a perpetual share of the resource and the water planning process.

**Table 2 - NWI Implementation Perpetual Share and Water Plans in Three States**

State	Actions
South Australia	<i>Natural Resources Management Act 2004.</i> The aim of this act is to achieve ecologically sustainable development by establishing an integrated scheme to promote the use and management of Natural resources. State Natural resources Plan and regional NRM plans included detailed water allocation plans that define the consumptive and non consumptive use for each Catchment. Plans reviewed every 5 years and the schedule of review times has been published (SA Government 2005) and devised with consultation of the community.

**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

Victoria	<p>Victoria has committed over \$900 million AUS to 110 initiatives to sustain and manage water at every stage of its cycle from Source to consumption, conservation and recycling. Specific initiatives include protection and legal rights given to stressed rivers and groundwater, pricing of water to encourage people to use it more wisely, permanently save urban water, secure water for farms through pioneering water allocation and trading systems and improve monitoring and reporting of water quality.</p> <p>The incorporation of water access entitlement as a perpetual share of the consumptive pool to be completed by end 2006. Bill <i>Water (Resource Management)</i> drafted. To <i>amend Water Act 1998</i>.</p> <p>Creation of water shares, delivery shares and water use licenses. Water access entitlement will be defined in districts so that individual farmers will have a tradable share of the resource</p> <p>Victoria's NWI Implementation Plan 2006</p>
New South Wales	<p>The process to implement the entitlement framework will be completed by end 2006. NSW had 31 regions where water was over allocated and has devised plans to share the water with the environment between users. The plans are available on <a href="http://www.dipnr.nsw.gov.au">www.dipnr.nsw.gov.au</a>. Plans for the remaining areas are expected to be completed by end 2006.</p> <p>The Water Management act 2000 section 5(3) requires first priority to protection of the environment and second to basic landholder rights.</p> <p>Environmental rights have been defined for 31 and groundwater plans and unregulated rivers will be complete by 2006 and 2008.</p> <p>New south Wales allowed irrigators to carry forward unused water to the next season and this was a major stumbling block to intra State trade.</p> <p>NSW Implementation Plan for the NWI 2006 Government of NSW</p>

Sources various NWI Implementation plans as required under Clause 8 of the COAG, [www.nwc.gov.au](http://www.nwc.gov.au) .

In most States and Territories, the conversion of existing water entitlements into share-based entitlements as required under the NWI is still underway. For example, in QLD and NSW, conversion of entitlements is occurring only when water plans are completed for catchments and groundwater

**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

management areas – these water plans establish the available consumptive pool of the water resource. (Table 2).

In South Australia, the process of deciding the consumptive use of water started in 2005. This was preceded by a long standing process to convert Irrigation equivalent allocations of water to farmers to volumes a process called volumetric conversion. All water users have been allocated a volumetric allocation including the environment and all significant water resources are being transformed into a volumetric allocation for all purposes. (SA Government 2005, NWI- South Australian Implementation Plan). Of late a major initiative has come out of the South east regional development Board in South Australia. This has been to insist that forestry plantations (both hard and soft wood) obtain an allocation of water. That means they need to buy the water from other users and hence the interception of rainfall by forests is now a key issue in water planning process. Obtaining this determination required extensive local lobbying and negotiation as the forestry industry has previously been unimpeded in their ability to plant. However the aquifer was being drawn down in many areas and this was imposing costs on growers of hay, Lucerne and wines to deepen their wells.

The NWI also requires that water provided to meet environmental and other public benefits is to have statutory recognition, and have at least the same degree of security as water access entitlements for consumptive use (NWI paragraph 35). This is to ensure that water for environmental outcomes is not made less secure in the wake of greater security for consumptive water entitlements.

There is one example of the use of administrative law to challenge elements of the Water Planning process. At present, Australia wide there are very few water plans. The plans in NSW have been described as "contentious," with dissenting views noted in the drafts. In addition it was reported that the task of finding consensus between groups unaccustomed to doing business in that way has been arduous. The most critical challenge was the assumption that local communities could negotiate new water sharing arrangements, which would improve environmental outcomes although they diminish the reliability of other water entitlements (Martin 2002)

In NSW, the case of *Murrumbidgee Groundwater Preservation Association v. Minister for Natural Resources* was about validity of a water plan. The Murrumbidgee Association challenged the plan on many grounds using administrative law. Administrative law deals with procedural fairness and the grounds alleged were:

- extraneous purpose of the Minister in making the plan that was to avoid the community drafted plan,
- the formula for reserving waters for the environment contained a mathematical impossibility,
- uncertainty of timing of operation of the plan, and;
- The imposition of uniform reductions in water allocation was irrational.

The area involved was within the power of the Minister to draft a Groundwater plan himself. The plan addresses sustainable management of groundwater and identified limits on extraction; the overall aim of the plan was to reduce actual use over 10 years to the annual average recharge less a quantity preserved for the environment. Groundwater users were subject to pro rata reductions of entitlements over a 10 year period. All users were to be entitled by year nine to only 52 percent of their original entitlements. There were adjustment mechanisms such as the creation of a market in access licenses and supplementary water access licenses.

All of the grounds for appeal were dismissed. The grounds were dealt with as follows;

- Extraneous purpose. The Appellant alleged that the Minister made the plan to avoid the notification, public exhibition and considerations as required under a plan made by a management committee. It was held that the power to establish a management committee to draft a plan is discretionary and a plan formulated by the Minister is valid.
- The literal construction of the clause did provide an absurd result, so the court applied a purposive construction
- The timing was considered to be capable of being certain and so valid
- The case here was based on the facts that it was irrational to treat the groundwater source as a single body of water, as aquifer recharge was site specific and that an activity in one area will result in changed conditions elsewhere. Historically, the groundwater system was managed in zones since in some areas use of entitlements would be unsustainable. The argument applied the precautionary principle to protect the resource in the absence of scientific data. The single system was argued to be irrational as it was not based on water availability. However, the court upheld the pro rata reduction on the grounds that the court has a confined role and it was for the Minister to balance the desired environmental outcome and the chosen method of achieving it with the beneficial and adverse social and economic consequences.

## **6.2 Clear Assignment of Risk for Changes in Water Allocation**

As noted above, the creation of share-based water access entitlements establishes a secure right to access the water resource. In the NWI, governments have also committed to establish a level of security around the size of the consumptive pool of water which entitlement holders can access. To this end, the NWI establishes a framework for assigning the risks of future reductions in the availability of water for consumptive use (NWI paragraphs 46-51).

## **6.3 Efficient Water Markets**

At present, there are a range of institutional barriers to the trade of permanent water entitlements out of many irrigation districts in Australia – either in the form of trading rules, policies governing public irrigation authorities, or policies contained in the memoranda and articles of association of some private irrigation corporations (notably in NSW). The NSW government has required the three major irrigation corporations to allow trade beyond their borders into and out of the regions.

Governments – including those in the southern Murray-Darling Basin (NSW, VIC and SA) – are taking steps to free up trade out of their irrigation areas. Initially, trade out of each irrigation area is intended to be enabled up to four percent of each area's total water entitlement. This measured step is provided in the NWI in order to help manage concerns about the adjustment of regions to trade, and to enable the National Water Commission to monitor the socio-economic impacts of trade.

Expansion of water trade will also rely heavily on reducing the transaction costs of trades. In particular, the NWI requires compatible water registers between states and other compatible institutional arrangements in order to enhance trading opportunities.

## **6.4 Improved Water Pricing Policies**

There have been significant improvements in water pricing arrangements since the 1994 COAG water reform framework. These include:

THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO

- Institutional separation of water service providers (e.g. urban and rural water suppliers) from water regulation and planning bodies;
- Establishment of independent bodies for reviewing water pricing or price-setting processes in every state and territory; and
- A move to consumption-based pricing aimed at full cost recovery in almost all major metropolitan centers.

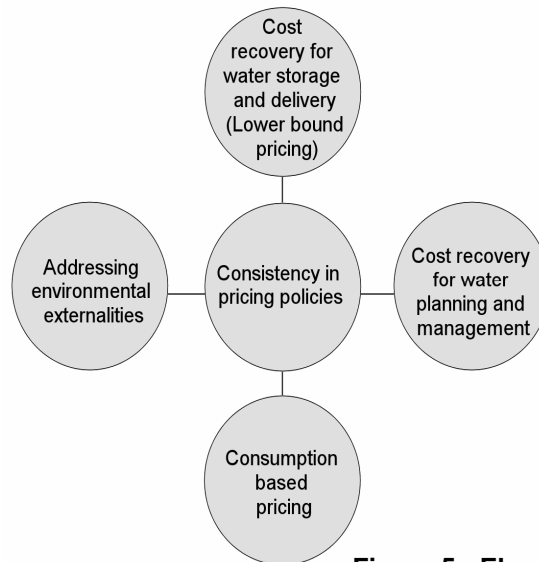


Figure 5 - Elements of Water Pricing Reform

In the NWI, governments have committed to continue with pricing reform, in particular:

- to continue movement to pricing which recovers the full costs of water storage and delivery for rural and regional systems;
- to continue movement to pricing which achieves a commercial return on assets (while avoiding monopoly rents) for metropolitan, rural and regional water storage and delivery;
- pricing which recovers a proportion of the costs of water resource management and planning – cost recovery for such activities to manage the consequences of commercial water extraction has become a legitimate proxy for more direct externality pricing in rural areas;
- nationally consistent benchmark reporting on the service quality and pricing of all water service providers; and
- Moving towards more nationally consistent approaches to pricing across all these areas (Thompson 2005).

Water pricing reform is currently a very active area for most State and Territory governments. The overall intent is to ensure that prices set by mechanisms other than the market (i.e. by governments, public/private water service providers, and/or independent pricing bodies) do not lead to perverse outcomes either in secondary water markets, or for water-related investment activity. This is critical to facilitating market based instruments as more prominent mechanisms for managing water in Australia.

## 6.5 Composition of Water Planning Committees

In Victoria, the purposes of the Victorian Act are set out in section 1, which states the triple bottom line requirements but also has the object to: “maximize community involvement in the making and implementation of arrangements relating to the use, conservation or management of water resources”.

**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

The Minister must make sure that, as far as possible, all relevant interests are fairly represented on the Committee. At least half must be owners or occupiers in the area concerned appointed after consultation by the Minister with bodies representative of those persons, any public authority directly affected must be represented and if the planning involves a farming area, then at least half of the committee must be farmers appointed by the Victorian Farmers Federation.

The objects of the South Australian Act are broad (section 6) and are to: “ensure the physical, economic and social well being of the State and facilitate the economic development of the State while protecting the entitlements of future generations and the ecosystems dependent on those resources”. The Minister appoints Committees and approves plans created by Catchments Water Management Boards in prescribed areas only. The relationship between the Catchments water plans and broader water allocation plans is weak. Community representatives are involved in both processes.

The Catchments Water plans give the power to impose levies. The Water Allocation plans must be consistent with the overall State Water Plan and must provide for the allocation of water on an equitable basis and in a sustainable manner. These plans bind the Minister. There has been some recent litigation in the Environment, Resources and Development Court, which suggests that the Minister does not have power to review or correct anomaly (*Strachan v Minister*) or require better information (*Elandes and Seidel v Minister*).

The Queensland Act gives the power to the Minister, who is advised by a Committee of locals and others in the preparation of water plans.

Community consultation in the evolution of water plans, is required by the Acts in rural communities, and is an active example of participatory democracy. However, the Acts are themselves deficient in identifying appropriate mechanisms and institutional frameworks for putting these processes in place.

## **6.6 The New Share of the Consumptive Pool Policy**

The interplay between the statements in the Water Acts and the general law principles of natural justice is likely to be an area of much litigation in the future. The upshot of the NWI is that any rural water user has a perpetual percentage share of water in defined resource and the quantum will be determined each year to account for the environment and then users.

## **7.0 Concluding Remarks**

The evolution of water law in Australia can be broadly classified into four distinct paradigms. (See Figure 1). The first Paradigm included rights to water for users and gave very little consideration to the environment. The second paradigm was the period of vesting water in allocation systems to widen the use of the water. This paradigm created the license or a mere claim on the water in law. However in the minds of the farmers they had a right to the water as water was rarely taken away. The groundwater systems were licensed as well. Rarely was the raw water charged for. This paradigm created the over-allocated systems especially in NSW. Indeed the State at this time used water as a development aid, it was a “magic pudding” (McKay 2002) allocated as though it would never run out as new dams could be built.

The third Paradigm community support for dams weakened and environmental issue came to the fore. Under CoAG 1994 imposed an obligation to include ESD in water allocation decisions as well as other market reforms to promote water trading. This was the time of community agitation over drought and Blue green algae. Stressed rivers were identified in many States and plans were made to alter allocation processes. There was considerable angst over loss of consumptive water rights and huge debates about compensation.

The fourth paradigm imposes a clear community driven water planning process with rule for the allocation of water for consumptive use. The direct outcome for the farmer is that previous allocated volumes of water are replaced by a percentage share of an annual sustainable yield of surface or ground-water source. Accordingly, irrigators (and other right holders) have a right to that share but the quantum varies annually. The annual quantum in each river system is decided by a process of water plans integrating scientific data with economic and social data as required to achieve ESD, as defined in the various acts. The processes are being developed with very few plans in each State and the processes and definitions in two of these have already been contested in NSW and VIC.

This final phase also reveals an expanded role for the Commonwealth government, despite section 100. This has manifested in considerable persuasion over the shaping of early CoAG reforms and the more recent NWI. Whilst this influence can undoubtedly be traced to the vertical fiscal imbalance that typifies Commonwealth-state relations, the future legal standing of these arrangements has yet to be fully tested.

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**THE FIRST CONFERENCE ON IRAQI VISION TO WATER ISSUES, THE ROAD TO 2050:  
IRAQI WATERS AMMAN, JORDAN 15<sup>TH</sup> TO 17<sup>TH</sup> MAY 2007-04-28 UNDP/ESCWA AND UNESCO**

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