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10 JUL 2003

HOUSE OF REPRESENTATIVES  
STANDING COMMITTEE ON  
AGRICULTURE, FISHERIES  
AND FORESTRY

**Inquiry into future water supplies  
for Australia's rural industries  
and communities**

**Murray Irrigation Limited  
Submission**

**June 2003**

## **Executive Summary**

Water policy is one of the most complex and challenging public policy issues facing governments. Any discussion about the role of the Commonwealth in water policy should be cognisant that irrigated agriculture today is based on a long history of controversy and debate with associated legislation and regulation and State control.

Murray Irrigation Limited argues the role of the Commonwealth in relation to future water supplies for rural and regional communities is in the following areas:

- To provide leadership, leverage and a financial commitment to develop binding agreements between the Commonwealth and State governments on issues relating to water management that are in the national interest and achieve a level playing field.
- To ensure State governments legislation, regulations and policies comply with these binding agreements.
- To ensure tax laws provide business with incentive to invest in improved water use efficiency and environmental initiatives.
- To fund research programs into areas where knowledge is incomplete for example the science underpinning environmental flows and the need for changed water policy.
- To ensure scientifically robust, unbiased monitoring and data collection programs are in place and maintained so that a valuable data set is established that informs decision making and measures the outcomes of changed management.

The Commonwealth also has a specific role in relation to the Murray Darling Basin. The Commonwealth should continue to support the operational role of the Murray Darling Basin Commission, River Murray Water. The Commonwealth should also ensure policy development co-ordinated through the Murray Darling Basin Commission has the following features;

- Effective negotiations between the State and the Commonwealth that resolve conflicts
- Effective communication with diverse basin communities and stakeholders that informs these negotiations.
- Efficient, fair and equitable coordination of water management between the States.
- Competent and comprehensive and consider the economic, environmental and social costs and benefits at a local and aggregated level.
- Long term monitoring strategies.
- Institutional arrangements that can support efficient and effective management of instruments to achieve improved environmental outcomes that are not biased towards or against one State.

The Commonwealth has an important role to ensure the integrity of this process and that those sectors of the community that are impacted by decisions are treated fairly.

Establishment of property rights to water is fundamental to most of the policy issues facing government. Property Rights issues must be satisfactorily resolved through the COAG agreements before governments pursue a more liberal trade in water entitlements and any further decisions are made about environmental flows for the Murray River. Any decision by governments, Commonwealth or State to interfere with water policy will have impacts and should only occur after rigorous and analyses. Any attenuation of irrigators' water rights should at least be based on just terms compensation. In the case Murray Darling Basin the starting point should be the 1995 Cap on diversions.

## **1. Introduction**

Water policy is one of the most complex and challenging public policy issues facing governments. Access to water is a pervasive issue that shapes the economic and social fabric of regions. Its importance to inland communities cannot be understated. Evidence that water contributes to the development and maintenance of rural communities and their associated industries is prevalent. Furthermore water has allowed rural communities based on irrigation to defy the trend of rural decline. A simple comparison of the communities in towns centred on irrigation versus dryland towns shows stark differences in population and services – schools, hospitals, banks etc.

The Commonwealth has and continues to be involved with water policy issues of major concern to Murray Irrigation and its shareholders, specifically Council of Australian Government (COAG) water reforms, the introduction of a Cap on water diversions from the Murray Darling Basin and more recently the Murray Darling Basin Ministerial Council Living Murray Initiative. Murray Irrigation welcomes the opportunity to present its views and concerns about the role of the Commonwealth in future water supplies.

Our views are based on more than 10 years applied management of an irrigation supply business in the southern Murray Darling Basin. Over this time there has been significant policy and institutional change in the NSW Murray. Both Commonwealth and State policies combined with irrigator demand for local ownership and control have driven these changes.

## **2. Background to Murray Irrigation**

### *2.1 The region and its people*

Murray Irrigation provides irrigation water and drainage services to over 2,400 farms owned by 1,600 family farm businesses in the southern Riverina. Our area of operation stretches over nearly 800,000ha of farm land just north of the Murray River.

A diverse range of agricultural products worth more than \$300 million at the farm gate are usually produced each year. Typically our area produces:

- 50% of Australia's rice crop
- 20% of NSW milk production
- 75% of NSW processing tomatoes
- 40% of NSW tomatoes

There is also a significant prime lamb and beef industry in the region, wool and some citrus and viticulture.

Significant amounts of this produce is processed within the region. Processing operations greatly enhance the value of our agricultural industries to the community, by providing many employment opportunities. In the case of rice a vertically integrated industry owned by the growers, value adding also benefits rice growers.

The region is home to 25,000 people and irrigated agriculture is vital to the local economy and community. It provides employment and drives demand for services.

## 2.2 *The business*

Murray Irrigation was formed in March 1995 when the NSW Government Murray Irrigation Districts were privatised and ownership transferred to irrigators. Each irrigator is a landowner is a shareholder in the company. Shares are held in proportion to the water entitlements held by each member.

Murray Irrigation has 10 company directors; including eight-elected irrigator directors and two directors with skills in engineering and finance. The business has an annual turnover of \$35 million and is a major employer with 120 permanent staff. We also extensively use local contractors.

We operate a gravity supplied off-river irrigation system that includes 3,300 kilometres of earthen supply channels and 1,100 kilometres of stormwater drainage channels. Our infrastructure is valued at \$500 million.

Murray Irrigation is closely linked with the State government through its licences, the Water Management Works Licence and Environment Protection licence. The company is subject to NSW and Murray Darling Basin water sharing arrangements.

Murray Irrigation shareholders are active participants in the annual water market, leading Australia in the development of annual water trade. Water is also traded permanently between shareholders and with farmers in the NSW Murray Valley.

Murray Irrigation runs a 24 hour water exchange for 10 months of the year as a service for our shareholders seeking to buy and sell annual water. Irrigators in the connected Murray Darling Basin can also access our exchange. In the 2001/02 irrigation season the exchange sold 69,397ML involving over \$2.6 million. With the drought and low water allocations increasing the price of water, the exchange traded 60,000ML in 2002/03 worth more than \$12 million.

## 2.3 *Natural Resource Management*

Murray Irrigation's Environment and Land and Water Management Plan sections are responsible for ensuring Murray Irrigation and its shareholders are using land and water management practices that will over the long-term result in a sustainable and productive irrigation area.

The corner stone of Murray Irrigation's environment program and licence compliance is the Murray Land and Water Management Plans. The plans are a leading example of how a genuine partnership between the community and government can address complex environmental, social and economic issues on a regional scale.

The Murray Plans involve a total investment of \$498 million over 30 years shared between the regional community (76%) and the State and Commonwealth governments (24%).

The Murray community have invested \$183 million supplemented by \$37 million in government support through the Natural Heritage Trust since 1995. There are four components to the plans which reflect the different geographic areas and farming operations.

Each plan is a coordinated package including:

- Education leading to better farming practices
- Adjustment from unsustainable farming systems
- Better irrigation water use; improved irrigation lay outs, technologies, recycling and fertiliser management.

### 3. Inquiry Terms of reference

#### 3.1 *The role of the Commonwealth in ensuring adequate and sustainable supply of water in rural and regional Australia.*

Any discussion about the role of the Commonwealth in ensuring adequate and sustainable water supplies in rural and regional Australia should be cognisant of the legal and cultural history associated with river management and tempered with a realistic understanding of State rights.

Legally water resource management is primarily a business of the States, not the Commonwealth, for example section 100 of the Constitution limits the role of the Commonwealth and section 51 assigns primary responsibility for water management to the States. In contrast financial powers are vested in the Commonwealth.

Access to water and management of the water resources of the Murray River have a long history of controversy and debate supported by legislation dating back to the mid 1880s (Murray Irrigation 1998). The priority for sharing and management water has been established through a legislative and regulatory process that has evolved over more than a century.

A significant starting point was the NSW Lyne Royal Commission established in 1884 which was closely concerned with the means by which waters in rivers, (and in particular the Murray) should be shared and whether the English riparian system should be continued. The Lyne Royal Commission led to the Water Rights Act (NSW) of 1896. Under this Act a water control policy was established: the Crown took to itself the use and control of water so as, generally speaking to be in a position to regulate the use and sharing of the waters. This approach taken in legislation was continued and enhanced through to the present day.

Irrigated agriculture in the Murray Darling Basin today and subsequent legislation and regulation is a consequence of this debate. Until recently governments, Commonwealth and State have actively encouraged irrigation development including funding of large irrigation infrastructure in the southern Murray Darling basin. Irrigators and their dependent communities have material, financial, social and psychological investments in the existing arrangements as a consequence of these policies.

**Any decision by governments, Commonwealth or State to interfere with water policy will have impacts and should only occur after rigorous and analyses. Any attenuation of irrigators water rights should at least be based on just terms compensation. In the case Murray Darling Basin the starting point should be the 1995 Cap on diversions.**

*What is the Commonwealth's role?*

Murray Irrigation is concerned an increasingly centralist approach to water management is being considered by the Commonwealth and encouraged by groups such as the Wentworth Group. Murray Irrigation does not support a centralist approach or think it is realistic solution. Murray Irrigation considers the responsibility of the Commonwealth should be to improve the quality of debate, to improve relationships with the States and with other key stakeholders and develop effective agreements between the States and the Commonwealth capable of delivering a mixture of social, economic and environmental outcomes at a regional and national level.

Murray Irrigation argues the Commonwealth's role in relation to future water supplies for rural and regional communities is in the following areas:

- To provide leadership, leverage and a financial commitment to develop binding agreements between the Commonwealth and State governments on issues relating to water management that are in the national interest and achieve a level playing field.
- To ensure State governments legislation, regulations and policies comply with these binding agreements.
- To ensure tax laws provide business with incentives to encourage investment in improved water use efficiency and environmental initiatives.
- To fund research programs into areas where knowledge is incomplete for example the science underpinning environmental flows and the need for changed water policy.
- To ensure scientifically robust, unbiased monitoring and data collection programs are in place and maintained so that a valuable data set is established that informs decision making and measures the outcomes of changed management.

Furthermore the Commonwealth's role in relation to the Murray Darling Basin is particularly important and requires closer attention because of the importance of a co-ordinated approach to natural resource management to the national interest.

The purpose of the Murray Darling Basin Agreement 1992 is to promote and co-ordinate effective planning and management for the equitable efficient and sustainable use of the water, land and other environmental resources of the Murray Darling Basin (Murray Darling Basin Agreement 1992). The Ministerial Council being a political forum has the power to make decisions for the basin as a whole. However, resolutions of the Council require a unanimous vote.

The consensus decision making model of the Ministerial Council results in significant challenges and opportunities. Murray Irrigation recognises the continuation of State responsibility for water management and considers the role of the Commonwealth is to provide leadership and to facilitate the negotiation process between the States to resolve conflict. Murray Irrigation argues that whilst the Murray Darling Basin Commission (MDBC) and its associated processes are not without fault, they provide an important support mechanism that focuses on the basin. The Commonwealth's attention should focus on the ways operation of the Ministerial Council and the Commission could be improved. Broadly the MDBC has two functions an operational role through River Murray Water and a policy and co-ordination role.

In relation to the MDBC's operational role continued support for River Murray Water and management of MDBC storages is crucial to ensuring adequate future water supplies. Having said this, the operations of River Murray Water should be subject to regulation to ensure their operations are efficient.

In relation to policy and coordination in the Murray Darling Basin the Commonwealth's role is to ensure:

- Effective negotiations between the States to resolve issues of conflict.
- Effective communication with the diverse basin communities and to ensure this information becomes part of any Commonwealth and State discussions.
- Efficient, equitable and fair coordination of water management between the States.
- Analyses associated with introduction of new policies are competent, comprehensive and consider the economic, environmental and social costs and benefits at both a local and aggregated level.
- Effective, long term monitoring strategies are in place in the Murray Darling Basin that measure water diversions and measure appropriate parameters that reflect river health and water quality of the Murray River.
- Environmental water allocations are managed efficiently to achieve improved environmental outcomes.
- The outcomes of environmental water allocations are monitored and the results reported.

**The Commonwealth has an important role to ensure the integrity of this process and that those sectors of the community that are impacted by decisions are treated fairly.**

#### *Leadership leverage and financial commitment*

Murray Irrigation argues the Council of Australian Governments (COAG) negotiations in relation to water reform are central to the Commonwealth's role in water supply.

COAG agreements and their associated payments to the States is the primary vehicle for the Commonwealth to influence State actions. The Commonwealth has a fundamental role to work with the States and stakeholders to establish the principles and actions for inclusion in the COAG agreements that respect the interests of the States and their respective communities. Murray Irrigation recognises this is a difficult task and requires the Commonwealth has sufficient competency and linkages with key stakeholders and regional communities to inform their negotiations with the States.

An important issue for the Commonwealth to be aware of is, as a consequence of the current COAG water reforms and the drive for separation of the regulator from the operator of water supply businesses is that a significant amount of knowledge of the issues confronting water users is no longer within the government sector. Rather it is located in industry and private irrigation companies.

In Murray Irrigation's opinion the effectiveness of Commonwealth forums such as the Water Chief Executive Officers Group and many of the MDBC groups and committees is diminished because of changes in the water sector of the last 10 years. Providing structured opportunities that bring the expertise that now resides within water supply companies into Commonwealth and State discussions is an important role for the Commonwealth.

### *Binding agreements*

The Commonwealth has the important task of developing with the States agreements of sufficient detail that implementation by the States does not result in vastly different impacts on individuals within States. This involves the unenviable task of translating principles into actions whilst not eroding the independence and rights of the States. The Murray Darling Basin Agreement is an example of how decisions have been articulated in detail.

Agreements also need to articulate timeframes, responsibilities and actions. Performance against the agreements must be reported and wherever possible performance should be reported quantitatively not just qualitatively.

### *Tax laws*

The apparent need to provide more water to the Murray River for environmental flows and the decision by governments to increase environmental flows in the Snowy River is causing demand for recapitalisation of irrigated agriculture and irrigation supply infrastructure. There is interest in the public sector in innovative ways of investing in water recovery.

Murray Irrigation argues the Commonwealth has an important role ensure that its tax laws provide appropriate incentives to encourage investment in improved technology and water recovery. In this case tax law needs to consider treatment of contributions from government to private companies and investments and or donations by private enterprise.

Murray Irrigation's experience as a private company and recipient of government payments for asset maintenance and renewal and Land and Water Management funding for environmental initiatives is that current taxation law will result in contributions from government being treated as income. Murray Irrigation also understands that the joint government enterprise established by government to invest in water for the Snowy and Murray River is confronting difficulties because of tax law (David Harriss pers. comm., June 2003).

### *Research funding and data collection*

Commonwealth funding of research is an important area of public policy. The Commonwealth has a responsibility to fund research in a number of areas of national interest. It has a critical role in funding high quality, unbiased scientific research that helps inform decision makers. Murray Irrigation is concerned that current scientific research lacks discipline and is increasingly compromised by environmental advocacy, where the scientists are unable to separate their personal views and values from the views expressed in their research. The Wentworth Group and its recent highly publicised Communiqué of opinions about water and vegetation is an example of our concern, two members of the Wentworth Group are senior researchers with the CSIRO.

Availability of robust information is essential to a sound decision making process. The Commonwealth has an important role to ensure monitoring and data collection programs are in place and continue to be funded. Data collection and monitoring programs must be scientifically robust. Data collection and monitoring of changed management will be increasingly important.



### **3.2 Commonwealth policies and programs, in rural and regional Australia that could underpin stability of storage and supply of water for domestic consumption and other purposes**

The Australian water industry uses international standards for dams and dam safety. These standards are exceptionally high. In NSW the costs of increasing dam safety to this standard is partly met by irrigators.

NSW Murray water conservation policy and assured releases from the Snowy Hydro Scheme mean that water supply for domestic and industrial consumption is very secure. For example in the NSW Murray high security licence holders have the full water entitlement available in 2003/04 after 24 months of record low dam inflows. This water entitlement will meet irrigation demand for permanent horticultural plantings and all urban and industrial requirements in the NSW Murray.

Commonwealth policies concerned with introducing environmental flows must consider the impact of environmental flow policies and rules on water security over a range of years, not just average impacts modelled over a long term sequence. Flows that provide significant environmental outcomes are likely to reduce water security, not just the volume available.

### **3.3 The effect of Commonwealth policies and programs on current and future water use in rural Australia**

As previously stated Commonwealth and State legislation, regulations and policies of water resource development, closer settlement and controlled marketing arrangements for agricultural products have had lasting impacts on current water use. This includes passing of the Snowy Mountains Hydro-electric Power Act (Comm) 1949 which resulted in the construction of the Snowy Mountains Hydro-electric Scheme.

The 1990s and the COAG water reforms marked a shift in water resource policy from active encouragement of water conservation to recognition that water whilst a renewable resource was a finite resource. In February 1994, COAG adopted a strategic framework for water reform that covers natural resource management including comprehensive water allocations and entitlements, environmental flows, pricing, more rigorous approaches to future investment, trading in water entitlements, institutional reform and improved public consultation ([www.ncc.gov.au](http://www.ncc.gov.au)).

In April 1995 the COAG water reforms were linked to National Competition Payments of \$4.9 billion to the states over seven years (National Competition Council 2000). The COAG policy which broadly speaking has increased the cost of water to users and placed limits on the quantity available has provided water users, including water supply companies with clear signals to optimise their water use efficiency. Because of the combination of water reforms including the introduction of the Cap on water diversions in the Murray Darling Basin in 1995 and a series of very dry years since the mid 1990s Murray Irrigation is of the view that water efficiency savings that are currently economic have either been implemented or are being implemented. This conclusion is supported by Giles (2003), who goes on to say increasing environmental flows beyond some hundreds of gigalitres will have nationally significant opportunity costs measured in billions of dollars rather than millions.

The following table ranks the success of some of the COAG water reforms from Murray Irrigation's perspective.

| COAG Water Reform   | Success & impacts  |
|---|--|
| <b>Institutional reform</b><br><i>Separation of operator from and regulator</i> | √ √ √<br>Improved efficiency<br>Public reporting of performance including environmental management   |
| <b>Pricing – full cost recovery</b>   | √ √ √<br>Increased transparency<br>Increased bulk water charges<br>Independent Pricing & Regulatory Tribunal   |
| <b>Water allocations and entitlements</b>                                       | √<br>Water Management Act 200 (NSW)<br>10 year water sharing plan – no certainty after 10 years<br>Reduces average diversions compared to the Murray Darling Basin Cap by 3.8%<br>Enhanced allocation for Barmah/Millewa forest  |
| <b>Trading in water allocations</b>   | √<br>Different rules (effectively trade barriers), supported by the State Governments between connected valleys<br>Trade has been encouraged without adequately considering the impact on the environment of trade<br>Governments are incompetent at addressing the daily flow access issues associated with the current trade |
| <b>Consultation and public education</b>  | √<br>Committee members appointed by Government not considered representative<br>Large government membership<br>Central policy over riding local committee recommendations<br>Frustrated by data, communication and resourcing issues   |

Murray Irrigation and its shareholders are not satisfied with the property right to water that has been provided to irrigators through the Water Management Act and the statutory water sharing plans. The legislative regime introduced by NSW and accepted by the National Competition Council involves a review of water entitlements every 10 years and the possibility of Ministerial intervention at any time.

Irrigators argue that NSW's legislation does not provide the certainty required by farm businesses to operate. The National Australia Bank has recently indicated their concern with uncertainty of water entitlement tenure and its effect on financing arrangements for the rural sector (Carroll 2003).

Establishment of property rights to water is fundamental to most of the issues arising from COAG water reforms and more recently the Living Murray Initiative. The property rights issues must be more satisfactorily resolved before governments pursue increased environmental flows and a more liberal trading in water entitlements. Commonwealth policy in relation to water access rights will influence water supply for other uses. The following section is an extract from NSW Irrigators' Council policy property rights to water that has been endorsed by Murray Irrigation.

## Extract from NSWIC Paper

### "Water, reform, security and management – unravelling the rhetoric."

Property rights and responsibilities are given expression through law (common or legislation), custom or tradition. The Productivity Commission has defined four main characteristics of an efficient property rights system:

- ❑ *Universality – all resources are privately owned and all entitlements (rights over how they can be used) are completely specified; and*
- ❑ *Exclusivity – all benefits and costs that result from owning and using the resource only accrue to the owner, either directly or indirectly by sale to others; and*
- ❑ *Transferability – all property rights are transferable from one owner to another in a voluntary exchange; and*
- ❑ *Enforceability – property rights are secure from involuntary seizure or encroachment.*<sup>1</sup>

In varying degrees, all "property rights" result in the conferral of three qualities (or capacities):

- ❑ a management power; and
- ❑ an ability to receive income or benefits; and
- ❑ an ability to sell or alienate the interest.

The degree to which these three qualities are evident in a particular property right depends on the mix of fundamental characteristics that the particular property right contains.

Recent work by Sheehan<sup>2</sup> has identified six defining characteristics of water rights based on work by Scott,<sup>3</sup>. Scott describes a test for property rights which relies upon the identification of a minimum of six fundamental characteristics which he asserts to be present in any property right as follows:

***Duration*** - indicating the period usually in years that the property right is held, and hence represents a profit or saving to the holder.

***Flexibility*** - a property right should be susceptible to modification and/or alteration. In the context of water property rights, this aspect will almost certainly be a product of the particular regional circumstances within which the water entitlement and use occurs (including climatic variability and system constraints).

***Exclusivity*** – being the inverse of the number of holders of the same or similar property right. Clearly, a reduction in the exclusivity will reduce the profit or saving enjoyed by the holder.

***Quality of Title*** - the descending level of security as the tenure falls away from the optimum of notional freehold.

***Transferability*** - the measurement of the market for the sale or leasing of the particular property right. A high value indicates that the demand reaches well beyond the original acquiring group, and that the mere creation of a market and hence tradeability in itself enhances the value of the particular property right.

***Divisibility*** - the property right may be capable of being shared between a number of holders over one territory or the territory itself maybe subdivided and each new part held separately. In the context of water property rights, there will be limits to divisibility of access and usage, beyond which the right becomes degraded, almost certainly uneconomic, and devalued.

<sup>1</sup> Arentino *et.al. op. cit.*, p. 11

<sup>2</sup> Sheehan, J. *Advice on Water Property Rights – A Report Prepared for the NSW Irrigators Council* November 2000

<sup>3</sup> Scott, A *Evolution of Individual Transferable Quotas as a Distinct Class of Property Right* edited version of a paper presented at the NATO Conference on rights-based fishing, Reykjavik, June 1988 and the APPAM Conference, Seattle, January 1989.

Importantly, all six characteristics are required to define the right. Scott shows how when just four of these characteristics are varied, the worth of a particular property right can change.

ARMCANZ considers that a 'property right' exists

*"...when the community supports and protects the exclusive use and enjoyment of an entitlement and allows that entitlement to be traded or passed to others."*<sup>4</sup>

**In practical terms, the NSWIC<sup>5</sup> takes the view that a property right will have been established when:-**

- Fixed shares of the resource are issued with defined yield and reliability of supply.**
- Just terms acquisition is triggered when access to, or reliability of supply of these shares are in any way diminished other than through seasonal variability (or long-term climate change).**
- The legislation compels exploration of all other community investment/savings options before resorting to just terms acquisition.**
- Shares are treated in the same manner as real property.**
- Shares can be used as collateral to secure financial dealings.**
- The ability to transfer is part of the right and the rights to transfer are defined.**

#### **Fixed shares and defined reliabilities**

Irrigators manage their investments within the uncertainty created by seasonal conditions. Water availability varies from season to season as climatic conditions change. Through a long history of data collection and improved hydrologic modelling capability, such uncertainty can be theoretically described with reasonable accuracy. Certainly, there is sufficient accuracy to be able to define a regime of water availability that derives from any given set of management rules.

The system that is being proposed for NSW is capable of meeting this requirement within the parameters of the WSPs. With defined environmental flow and access rules, fixed shares of the available resource can be issued and a description of the characteristics of these shares described. For example, in the Murray Valley, the modelling which underpins the proposed Water Sharing Plan identifies an average yield of 84.5% and a reliability of supply of 56%. That is, a licence holder with 1000 shares can expect an average availability of 845ML of water and approximately 6 chances in 10 of receiving a full entitlement of 1000 ML of water. The distribution of yield and reliability is also critical – dealing in averages sometimes clouds the real impacts experienced in non-average years.

The critical requirement missing from the current NSW system is the link between the "share certificate" (access licence) and the expectations of supply (against this certificate) as dictated by the WSP. In other words, just looking at the share certificate does not in itself describe expectations of supply, which has become the critical indicator of licence value.

Expectations of supply are not only measured in volumetric terms (i.e. allocation as a percentage of entitlement) but also the 'ability to extract' is closely connected to the security of the allocation, particularly in relation to the operation of the marketplace. There may well be system constraints that prevent a volume of water being extracted from a particular location at a particular point in time (e.g. the Barmah-Millewa choke on the Murray or the Tumut River in terms of the Murrumbidgee system) and this will also have implications on the hierarchy of security as outlined in The Act.

In terms of the "property right" both volume (i.e. a share of the available water) and extraction rate (i.e. a share of the flow rate) will need to be defined.

<sup>4</sup> ARMCANZ *Water Allocations and Entitlement: A National Framework for Implementation of Property Rights in Water*, Task Force on COAG Water Reform Occasional Paper Number 1, Canberra 1995, p. 4

<sup>5</sup> NSW Irrigators' Council (2000) *"The Blue Paper"*

The NSW Government is currently developing Regulations that will establish a register for water titles. The Register must be cross-referenced to WSPs and the plans themselves must provide details on yield and reliability relationships.

### **Just terms acquisition**

Water property rights must be secure from involuntary seizure or encroachment. From a NSW perspective, the *Land Acquisition (Just Terms Compensation) Act 1991 (NSW)* provides a legislative framework, which could accommodate provisions for compulsory water acquisition. This Act provides guidance in terms of process, valuation and dispute resolution, taking into account the asset value and income effects when determining the acquisition value, as detailed in Appendix 1.

Provision for compensation must be regarded as a last resort option but cannot be ignored in terms of accountability in the legislative process and equity for all stakeholders.

### **Innovative approaches to finding water**

Just terms acquisition, whilst fundamental to a water property rights system, must be regarded as the last resort option for resolving water sharing issues. Legislation should compel governments to first explore more innovative investment solutions, including, in order of priority:-

- system savings – investment in system and on-farm savings and inefficiencies,
- market schemes – voluntary market-based buyback where government either “stands” in the market or initiates reverse tender schemes,
- just terms acquisition – compulsory acquisition as described in section 0.

Investment decisions in each case must be based on a full assessment of the social, economic and environmental costs and benefits, a “Public Benefits Test”. Such a Public Benefits Test (PBT) would:

- provide an assessment of the full economic and administrative costs of all natural resource management and environmental proposals,
- provide an assessment of social and other benefits and costs arising from the proposal,
- identify those sections of the community that will incur the costs and those that will enjoy the benefits,
- demonstrate how the proposal generates a net public benefit for the community,
- demonstrate that no other viable options exist whereby the same net public benefit could be generated using non-regulatory options,
- include a change management process – a clearly defined strategy of implementation that includes a process of identifying and remediating costs at a community and individual level.

When exploring investment options the following principles should be considered as part of a comprehensive PBT:

- Maximum value for money - this is effectively described as the greatest possible yield of savings for the lowest financial outlay. It is not simply a case of comparing megalitres per dollar, since there will be differences between the associated yield of megalitres resulting from savings in losses, for example, versus yield resulting from purchase of shares, the former resulting in higher net gains to the environment.
- Additional environmental outcomes - where possible the works/schemes should seek to concurrently generate additional environmental outcomes. For example, the piping of “leaky” channel will not only create water savings for the river but also prevent further accessions to the water table and thus have more “localised” environmental outcomes.
- Additional socio-economic outcomes - where possible the works/schemes should seek to concurrently generate additional socio-economic outcomes. For example, creation of savings via conversion to high tech irrigation schemes for horticulture will result in additional productivity outcomes through improved quality control. Conversely, preferred options should

also be those that minimise socio-economic disruption and the need for consideration of adjustment issues.

Investment should be underpinned by government funding commitments but the legislation should also make provision for private-public investment partnerships where interest exists.

### **Shares treated like real property**

The best form of tenure for water rights would be a class of title issued under an amended *Real Property Act 1900 (NSW)*, strongly reminiscent of the Certificate of Title.

The *Real Property Act 1900 (NSW)* has been amended a number of times since the early 1960's to accommodate new forms of property rights, such as stratum, community titles, limited term strata title of Crown leaseholds. There appears little reason why "water property rights" could not be constructed within the framework of the *Real Property Act 1900 (NSW)*.<sup>6</sup>

### **Shares can be used to secure financial dealings**

It is recognised that both security and tradability require that the form of tenure is capable of acting as collateral for a mortgaged-based loan from banks or other financial institutions. From this line of reasoning, it can be concluded that the tenure must evidence qualities with which lenders are comfortable and familiar.

Lenders are familiar with loans, which in the main are secured by way of a mortgage over freehold land, specifically land which is held under the *Real Property Act 1900 (NSW)*. This enables a lender to have a registered first or second mortgage, or a caveat placed upon the public register of those land titles issued pursuant to that Act.

Tenure is unlimited in time, and guaranteed by the *Real Property Act 1900 (NSW)*. There is security of tenure at the highest level, and the sale or transfer of the property rights held under this form of title can readily occur subject only to a restriction that stamp duty and statutory charges be paid at the time of sale or transfer.

### **Transfer rights are defined**

Transferability, is the measurement of the market for the sale or leasing of the particular property right. A high value would indicate that the demand reaches well beyond the original acquiring group, and that the mere creation of a market and hence tradability in itself enhances the value of the particular property right. In the context of water property rights, this characteristic could also be referred to as tradability.

The property right may be capable of being shared between a number of holders over one territory or the territory itself may be subdivided and each new part held separately. It may also be possible for the holder to divide his right on the basis of seasons or in the case of fishing rights, on the basis of particular marine species.

In the context of water property rights, there will be limits to divisibility of access and usage, beyond which the right becomes degraded, almost certainly uneconomic, and devalued.<sup>7</sup>

<sup>6</sup> Sheehan, J *op. cit*

<sup>7</sup> *ibid*

### ***3.4 Commonwealth policies and programs that could address and balance the competing demands on water resources***

Commonwealth policies that could address and balance the competing demands on water resources are firstly through the COAG agreements in relation to water and secondly through the Living Murray initiative of the Murray Darling Basin Ministerial Council.

Section three of this submission outlined Murray Irrigation's views on COAG agreements and how the details within these agreements should be progressed with the State and other stakeholders. Section four and five describes Murray Irrigation's views about property rights.

The Living Murray is an example of how existing Commonwealth and State programs combine to balance competing demands on the Murray River. The Living Murray is an Initiative of the Murray Darling Basin Ministerial Council concerned with environmental flows and water quality objectives in the Murray River. The Ministerial Council's goal is to "create a health working river – one that assures us of continued prosperity, clean water and a flourishing environment," (MDBC 2002). The Ministerial Council has chosen three reference points to recover water for environmental flows, these reference points are 350GL, 750GL and 1,500GL.

The growing community unrest and concern about the Living Murray process clearly shows that the existing Commonwealth and State policies and programs are struggling to deal with the complexity of issues associated with changing the balance between irrigation and the environment in the Murray River. From Murray Irrigation's perspective the process to date is fragmented at both a State and Commonwealth level. Stakeholders are left confused about the process and isolated from it. Section three outlines Murray Irrigation's suggestions for improving the effectiveness of the Murray Darling Basin Commission (without creating the fourth state) and for improving the quality of debate associated with the Living Murray.

The most significant role of the Commonwealth is to put in place a framework for decision making based on knowledge and explicit disclosure of the trade offs that are made during the decision making process, even if it is a political decision. It is tempting for the Commonwealth to be involved in setting high order objectives which meet the interests of a wide cross section of stakeholders that in the harsh reality of implementation may not all be able to be achieved. In the case of the Living Murray the Commonwealth needs to improve the debate including defining more clearly what is meant by a "healthy working river." The debate needs to recognise that flow is only one tool for achieving environmental outcomes. The 15 Living Murray objectives for river health, environmental flow, water quality and human dimension as articulated the Living Murray (MDBC 2002) are unlikely to be simultaneous achievable. The Commonwealth needs to bring a co-ordinated approach that ensures that the tributaries to the Murray River contribute to addressing the environmental concerns in the Murray River. Without this co-ordinated approach the results will not be optimised.

Past experience is that the political process hides the tradeoffs and it is only, some time after the decision has been made that the full ramifications of the decision are released.



The heads of agreement by the Commonwealth, NSW and Victorian Government is an example of an agreement that purports to have no adverse impact on:

- Water entitlements for irrigation diversions
- Water for the environment in the Murray, Murrumbidgee and Goulburn Rivers and
- South Australian water security or water quality.

The Snowy heads of agreement is a vast improvement on previous environmental flow decisions because it commits both State and Commonwealth money towards finding the water for environmental flows. However, Murray Irrigation contends that implementation of the increased flows in the Snowy River will impact on the water available for irrigated agriculture and environmental flows in the Murray.

In addition the decision to allocate the 70GL of dedicated environmental flows for the Murray River to Snowy Hydro Ltd as above target water is ludicrous. Snowy Hydro Ltd will determine when this water is released. There will be no opportunity to coordinate its release to maximise environmental outcomes in the Murray.

***3.4 The adequacy of scientific research on the approaches required for adaptation to climate variability and better weather prediction, including reliability of forecasting systems and capacity to provide specialist forecasts.***

Murray Irrigation expertise does not extend to this area of the inquiry. Murray Irrigation would support increased scientific research into weather prediction and forecasting because, if successful, it will assist risk management.

Murray Irrigation and its shareholders extensively use information compiled by the MDBC and the Department of Infrastructure Planning and Natural Resources about water allocations and chances of improvements. The information is based on historical records. Further development of more sophisticated tools for combining stream flow and rainfall information to assist farmers manage risk would be beneficial.

Murray Irrigation strongly recommends that communication of successful research to key stakeholders is necessary and needs to be funded if the research is to be adopted.

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