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Water policy is not that simple

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The most recent attempt by Australian governments to bring order to the increasingly acrimonious debate about the future of Australia's water resources is the National Water Initiative (NWI) approved by the Council of Australian Governments in June 2004.

The NWI has been designed as a framework for the management of modified hydrological systems where there are competing social, cultural, economic and environmental priorities. But the NWI is not above the fray. It should be seen as just the latest episode in a long battle between contending groups for the control of the country's water resources.

Since the release of the NWI, most of the attention has been on its economic elements, but the policy will not be successful unless much more research is done to develop the biophysical knowledge and institutional capacity needed to make Australian water management sustainable. The NWI recognises that sustainability must be the first priority in principle but underestimates the complexity involved in achieving it.

The need to remedy this weakness is a responsibility and opportunity for institutions such as universities which have the resources and skills to assess major policy initiatives with more detachment from short-term economic and political priorities than most other sectors of society.

Recognising this need, the Australian National University recently launched its cross disciplinary, university-wide ANU Water Initiative.

Reaction to the NWI since it was released has focused mainly on its economic significance. This is understandable because it appears dominated by a determination to promote water markets. Most of the official commentary, provided at the time of the release of the NWI, concentrated on its supposed economic benefits and the bulk of the policy itself is taken up by material related to the establishment of water markets.

Similarly, when the Treasurer, Peter Costello, recently requested that the Productivity Commission undertake research to aid implementation of the NWI, his description strongly implied that it is primarily a policy designed to promote increased water trading.

Even a quick reading, however, shows the NWI is fundamentally a policy designed to achieve environmental sustainability. Although much of the NWI focuses on the promotion of economic activity, there are many sections that stress all water bodies, no matter what level of modification is accepted as the appropriate balance between production and the environment, must be maintained in, or restored to, an environmentally sustainable condition as the first priority of management.

Without management to achieve sustainability the resource will eventually be degraded to the point where it is no longer useful to anyone, including those groups whose interests are predominantly economic. That premise is fundamental to the NWI. In practice, however, and as bon mots such as "you can't be green if you are in the red" suggest, it is not widely accepted in rural Australia that sustainability must be achieved first before provision can be made for extractive demands.

But there is reason to be hopeful as many sections of the NWI make it explicit that environmental sustainability is the primary goal and not merely a desirable objective to be taken into account if and when production systems can afford the cost. When it comes to implementation, the core of the NWI is its requirement that all competing tensions - irrigation development, surface and groundwater interactions, the impact on stream volumes of new forms of dryland agriculture such as farm-forestry, the demands of expanding urban centres, Indigenous claims, tourism and recreation, environmental concerns, and most of all the need to achieve environmental sustainability - are to be resolved by the preparation of comprehensive water plans for all significant water bodies subject to significant modification.

Clause 23, in listing the aims of water plans, states that they are to "complete the return of all currently over-allocated or overused systems to environmentally sustainable levels of extraction". Clause 48 states that diverters should carry the risk of reduced supply caused by drought, regrowth after bushfire or climate change. Clause 49

explains that until 2014, diverters are to bear the costs of 'any reduction or less reliable allocation' that may result from the use of the best available science to determine an environmentally sustainable level of extractions.

Indicating that this is not meant to be merely an aspirational goal, Schedule A of the NWI sets out a demanding time table by which environmental sustainability must be achieved. The same order of priorities is present in a number of other sections of the NWI. This does not mean a return to pre-development conditions but it does require that water systems be in a stable environmental condition, not in a state of continuing decline as is the case in many Australian catchments, according to the National Land and Water Audit and a number of surveys of environmental conditions in the Murray-Darling Basin.

If sustainable management is to be achieved, however, there will need to be a mighty effort to stop it being swamped by interests focused on the benefits of water markets. Policies such as the NWI are unavoidably a pastiche of different influences.

In the development of the NWI, someone, somewhere, was able to argue strongly enough that they succeeded in getting environmental sustainability defined as the primary goal. But formal acknowledgement is not enough. It is crucial that researchers who understand the issues involved should make sure that this recognition is not lost amid the discussion of what is required to promote water trading.

The content of much of the discussion about the NWI since its release, however, shows that there is a real danger that this is happening. With a policy issue such as water there is a frequent demand that participants in the public debate should describe the issues in simple terms. A contrasting view is that it is more important to make people aware of their complexity.

The process of defining water as an object of management is made extraordinarily difficult by its relationship with people and society. Pressure to treat it as a commodity that can be owned and managed is strong but widely resisted. While there is a demand that water entitlements should be seen as a form of property similar to leasehold land, a comparison between the two reveals profound differences. In broad terms land stays in one place and its physical dimensions can be defined. Water, however, is like the atmosphere. The air you breathed a minute ago is now being breathed by me. Should one of us be allowed to own it?

The tension between the idea of water as private property and water as a multi-use resource - both being appropriate in particular but different circumstances - is a major factor creating the complexity of many of the current disputes about water management. To be accepted, laws and regulations relevant to water management need to take account of the characteristics of water and the varying nature of the relationships that different people and interests have with it.

Given that water is essential for life, many people insist on defining access to it as a right. Although it has many characteristics often thought of as applicable to the "environment" it is an economic asset in some of its manifestations. Water is also integral to the religious and cultural identity of many people, ranging from Indigenous Australians and Hindus to Christians, devotees of Gaia and others who just like the view.

Any attempt to control and manage such an element is always going to be threatening for many groups, particularly those marginalised by efforts to give clearer entitlements to interests able to marshal the required political power.

Governments have not yet succeeded in establishing an effective institutional framework that will protect Australian hydrological systems from continuing degradation and reduction. Some indication of what is involved is provided by a description of the characteristics typical of environmental issues such as sustainable water management compiled by the policy analyst, Stephen Dovers.

Mr Dovers argues that these characteristics make environmental sustainability problems fundamentally different from other policy issues. They occur over much longer time scales and often cut across established administrative boundaries. Poorly defined but finite limits are a common feature that is difficult to take into account within economic systems that are committed to profit in the short term and indefinite growth. Environmental systems are frequently subject to thresholds that, once crossed, result in significant loss but which are hard to predict and difficult to reverse. Major policy changes are urgently needed but there is great uncertainty about their likely effects.

Even when successful the benefits can be very long term. Ecological interconnections are complex and poorly understood. Many impacts are cumulative and interact with each other and established patterns of action can suddenly produce very different results compared with the past. As the level of anthropogenic pressure grows, it is difficult to take account of emerging ethical and moral considerations. In addition, the sheer novelty of sustainability issues makes them difficult to handle within traditional modes of management and governance.

Much of the research being done to support implementation of the NWI is concentrating on the economic dimensions of the policy. That is not surprising because there are powerful interest groups who stand to gain financially from that investment.

For the NWI to be successful, however, much of the research need is elsewhere. First, it is essential that there be large scale investment in biophysical knowledge to improve our understanding of Australian hydrological systems in all their variety. Second, the NWI will stand or fall on the quality and capacity of the regional catchment management institutions and the regulatory and statutory framework established to develop the water plans that are its core process for reforming water management.

Neither of these priorities is spelt out in the NWI and it is not clear that governments recognise the dangers that are created by their absence. Someone, somewhere, will have to change that situation.

Funds for consultancies related to the implementation of the NWI are mainly being directed to the requirements of water markets and the installation and upgrading of infrastructure but much more needs to be done if the NWI is to succeed.

Water issues affect all sections of society. Committed individuals can make important contributions but in most cases they lack the capacity for substantial research. Universities, on the other hand, are among the very few institutions with the resources needed to generate a critical mass of high quality thinking about complex policy issues such as water. They are also one of the very few sectors that can discuss important public issues with a degree of economic and intellectual distance from the priorities of governments of the day.

The ANU and its research partners have established strengths across a broad spectrum of water-related issues, from global change, public health, policy analysis, environmental law, resource and environmental economics, indigenous and gender issues, through to hydrology, geochemistry and membrane technology which are applied over a wide range of temporal and spatial scales.

By linking the University's resources and those of its partners, the ANU Water Initiative will develop the knowledge and understanding of water systems - encompassing not just the economic aspects but also the institutional, legal, social, cultural and biophysical components - to provide the education necessary to change or improve practices, promote innovation, inform and support policy development and facilitate successful implementation.

The intellectual cornerstone of the water program at ANU is therefore strategic, problem-based integration of the issues connected with water, across the relevant disciplines and societal structures. The value of the program depends crucially on how well it contributes to the synthesis and accrual of knowledge for water systems, on how closely it works with the community to identify and solve problems, and on its ability to deliver practical decision-support tools based on sound understanding.

Without this kind of approach to complex environmental issues, the National Water Initiative and its subsequent water plans will suffer the same fate as previous efforts to manage this most precious of natural resources.

Daniel Connell has just submitted his PhD thesis undertaken at the Centre for Resource and Environmental Studies ANU. It examined the significance of the National Water Initiative for inter-jurisdictional water management in the Murray-Darling Basin.

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