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The Murray-Darling Basin Agreement: An Illustration of the Benefits of Transboundary Water Management Strategies

Amanda J. Harvey, Roger Williams University

Australia is labeled as the driest continent on the Earth that supports human life. Water is scarce in this region of the world, and the environment and its inhabitants are suffering from the over use of available resources¹. The largest source of water in Australia is the Murray-Darling River Basin which covers 14% of the total area of the country and is home to 11% of the country's population². 70% of the crops needing irrigation in Australia get their nourishment from the waters of this basin. The area of the basin is determined by the outermost boundaries of the Murray and Darling River Basins combined. It includes the waters of the Murray, Darling, and Murrumbidgee Rivers which are the three largest in Australia. The basin is the fifteenth longest in the world³ and its area includes the states of New South Wales, Victoria, Queensland, South Australia, and the Australian Capital Territory⁴.

Managing an area of water so vast is a difficult undertaking. Efforts to formally manage the basin began in 1915 with the River Murray Waters Agreement. Progress toward the Agreement began in 1895 with pressure from a severe drought that lasted the next seven years⁵. These long-lasting dire conditions brought the colonies and states of Australia together to discuss putting an end to the drought. The Agreement, signed by all states in 1915, established the River Murray Commission which oversaw implementation of the terms of the Agreement⁶. The Agreement and Commission were at first weak bodies with few tasks and few areas to regulate, but were given the duty of constructing several water storage facilities and locks along the three rivers. Over time, and after proven successes, the Agreement was amended and the Commission became more powerful, obtaining a greater control over water quantity in the basin⁷. The most

¹ "River and catchments" *Commonwealth of Australia: Department of the Environment and Heritage*. July 2004. www.deh.gov.au/water/basins/; Internet.

² "Basin Statistics" *Murray-Darling Basin Commission*. 19 January 2006. www.mdbc.gov.au/about/basin_statistics; Internet.

³ "Murray-Darling Basin" *Commonwealth of Australia: Department of the Environment and Heritage*. December 2005. www.deh.gov.au/water/basins/murray-darling.html; Internet.

⁴ "Basin Statistics" 2006.

⁵ "A Brief History of the Murray-Darling Basin Agreement" *Murray-Darling Basin Commission*. May 2005. www.mdbc.gov.au/about/history_mdbc; Internet

⁶ Ibid.

⁷ Ibid.

significant change in power came in the 1960s when the Commission began, for the first time, testing water quality⁸. Further amendments after this time added to the Commission's powers the ability to regulate water quality in addition to water quantity, allowing it to encompass important facets of water management in the Murray-Darling Basin⁹.

In the 1980s, the strain on the basin became very noticeable. Although the powers of the Agreement and the Commission had increased over time, their powers were still too limited to make a significant enough impact to halt the degradation of the basin's resources. Each of the states had developed departments to protect the part of the river basin in their territory, but were failing due to the fact that the issues were largely transboundary¹⁰. No single governmental body could successfully take on the task of reforming existing water management strategies, or creating new ones that made significant impact¹¹. It became clear that an overarching institution was needed to best protect the resources that are so fragile in Australia. The year 1985 marked the first meeting on the road to establishing a new agreement for management of the basin¹². Following this meeting, two years of conferences and negotiations ensued between the states dependent on the basin, and the much anticipated result was the Murray-Darling Basin Agreement which laid the groundwork for the initiative to more successfully manage the water¹³.

This groundbreaking partnership between six signatories in Australia (Commonwealth of Australia, New South Wales, Victoria, Queensland, South Australia, and the Australian Capital Territory) became effective in 1992 and established itself as the "largest integrated catchment management program in the world...covering...an area of over one million square kilometers¹⁴." The new Agreement established within its verbiage the governing structure used to better manage the water of the basin. It is comprised of the decision-making body, or the Ministerial Council; the executive branch, or the Basin Commission; and the liaison between the Ministerial Council and the community, the Community Advisory Council¹⁵.

⁸ Ibid.

⁹ Ibid.

¹⁰ "A Brief History of the Murray-Darling Basin Agreement" 2005.

¹¹ "The Murray-Darling Basin Initiative – Overview" Murray-Darling Basin Commission. January 2006. www.mdbc.gov.au/about/murraydarling_basin_initiative_overview; Internet.

¹² "A Brief History of the Murray-Darling Basin Agreement" 2005.

¹³ Ibid.

¹⁴ "The Murray-Darling Basin Initiative – Overview" 2006.

¹⁵ Ibid.

The Ministerial Council includes representatives from each of the six governments involved in the Agreement¹⁶ and is described as the decision-making body responsible for providing the direction needed to implement the initiatives outlined in the Agreement. Three ministers from each participating government may sit on the Council. Specifically, the Council should determine major policy issues, and develop and sanction procedures for the use of water. This is the most powerful branch of the governing body and is able to make decisions that impact the entire basin¹⁷.

The Basin Commission is the executive branch of the body and is in charge of managing the lower Darling River and advising the Council on matters concerning the management of water in the basin. It is also responsible for coordinating the implementation of policies decided on by the Council and for obtaining the highest degree of success for those policies¹⁸. After implementation, the Commission is responsible for monitoring the progress of the policy and evaluating its successes and failures. The Commission is comprised of a president and two commissioners from each state. They meet four times each year and also work in conjunction with the six member governments¹⁹. This is the branch of the Murray-Darling Basin Agreement where the emphasis on government and community working together is most clearly observed. Through this cooperation, states are no longer working with their individual ends in mind, but instead work collectively with other states on extensive projects which will benefit the population on a much larger scale, and will sustain itself for a longer period of time. The emergence of transboundary problems in the basin made the development of such a water management strategy crucial²⁰.

The third branch brought to life by the Murray-Darling Water Basin Agreement is the Community Advisory Committee. This Committee is comprised of experts on issues of biodiversity and water management²¹. They provide the Council with advice with which to make their decision based on expertise and the point of view of the community. There are

¹⁶ Ibid.

¹⁷ "The Murray-Darling Basin Ministerial Council" *Murray-Darling Basin Commission*. September 2006. www.mdbc.gov.au/about/murraydarling_basin_ministerial_council

¹⁸ "The Murray-Darling Basin Commission" *Murray-Darling Basin Commission*. December 2005. www.mdbc.gov.au/about/murraydarling_basin_commission; Internet.

¹⁹ Ibid.

²⁰ Ibid.

²¹ "The Community Advisory Committee" *Murray-Darling Basin Commission*. October 2005. www.mdbc.gov.au/about/community_advisory_committee; Internet.

twenty members of this Committee and each are appointed to four year terms²². The Committee is also required to participate in the implementation of policies in the community, and assess the degree to which the policy effectively connects with the members of the community and gains their support. The Committee itself meets four times per year, and it also meets once a year with the Council, and several times per year with the Commission²³.

The Murray-Darling Basin Agreement has resulted in a model of success for intergovernmental institutional arrangements for the management of water resources. It has established a cooperative agreement to apportion water flows and development projects throughout the basin; a method for mutual success and diminishing of conflicts between the six participating states which each have a stake in the basin; and it has provided a prime example of integrated water resource management with new structures and relationships formed where there was previously tension²⁴. The Agreement has also resulted in quantifiable results, such as the reduction in salination of river water, and has also created a greater constancy in the amount of water taken from the basin for outside use with the Murray-Darling River Basin Cap²⁵. The Cap limits the water removed from the basin because it was observed that continued trends in the amount of water being consumed would have resulted in severe degradation and loss of resources from the basin. The Cap has forced people to make better use of the water they are allocated²⁶. It is no longer possible to use anymore water than what is absolutely necessary, and so the population becomes effective users of water. The Basin Cap has also led to much more water trading which has in turn also led to greater efficiency in water use as well as a greater ability for Australians to maintain their economy and their natural resources successfully²⁷.

The increased awareness about the scarcity of water in the area and the need to preserve the basin's resources is a success attributed largely to the high degree of community involvement

²² "The Community Advisory Committee" 2005.

²³ Ibid.

²⁴ Kemper, Karen; Dinar, Ariel; and Blomquist, William. "Institutional and Policy Analysis of River Basin Management Decentralization: The Principle of Managing Water Resources at the Lowest Appropriate Level – When and Why Does It (Not) Work in Practice?" The World Bank. May 2005: 9-11. http://siteresources.worldbank.org/INTSAREGTOPWATRES/Resources/Insti&Pol_Analysis_of_RBMDecent.pdf; Internet.

²⁵ "Integrated Water Resource Management in Australia: Case Studies – Outcomes Achieved."

Commonwealth of Australia: Department of Environment and Heritage. June 2004.

www.deh.gov.au/water/publications/case-studies/murray.html#outcomes; Internet.

²⁶ "Integrated Water Resource Management in Australia: Case Studies – The Murray-Darling Basin Cap."

²⁷ Ibid.

emphasized in the Agreement. The Agreement established the Human Dimension Program, which holding true to its name, infuses human thought processes and social interactions in the development of scientific and governmental policies about the environment²⁸. This makes the community much more receptive to the policies being implemented and much more enthusiastic about the cause for which the Murray-Darling Basin Agreement was established²⁹.

There are several lessons that can be learned from the Murray-Darling Basin Agreement and the initiative set in motion by the contract. The first being that it is indeed possible to successfully incorporate both community and government and benefit all those involved in the scheme. The intergovernmental aspect of the agreement not only brought the governments of the states participating together, but it also created much more interaction across borders³⁰. For example, citizens of one state who would have had no interaction with one another have now taken to water trading with one another across borders, and are actually encouraged to do so, which had not been the case in the past. It was also discovered that the Agreement gained the greatest amount of strength only after it had been signed by all of those states with a stake in the basin³¹. The Commonwealth of Australia, New South Wales, Victoria, and South Australia all signed in 1987, followed by Queensland in 1996, and lastly the Australian Capital Territory in 1998³². The power would then have been weakest from 1987-1996 when there were only four signatories, and two states still acting independently, trying to achieve their own goals for the basin. The greatest degree of power, then, would have initially arrived in 1998 with the signing of the remaining states, achieving a greater solidarity and thus, a cooperative power was formed³³.

Despite the successes that have come out of the Agreement in the last years, there have been some difficulties. First, with an intergovernmental organization everything is shared and in theory, shared equally. Although it is a hard concept to realize, it is a necessary part of having thorough and peaceful cooperation, and less conflict of interest. The Agreement seemed to have worked through all of these sharing issues, pleasing almost all of those involved, but there is still an issue of sharing costs. It is very difficult to devise a way to equally divide the cost of the many

²⁸ "Integrated Water Resource Management in Australia: Case Studies – Outcomes Achieved."

²⁹ *Ibid.*

³⁰ "Integrated Water Resource Management in Australia: Case Studies – Lessons Learned."

³¹ *Ibid.*

³² "The Murray-Darling Basin Initiative – Overview" 2006.

³³ "Integrated Water Resource Management in Australia: Case Studies – Lessons Learned."

projects underway and the many initiatives taken on, and so this remains an unsolved problem³⁴. Also an issue is the fact that the agreement emphasized sustainability, both in resources and in states having the ability to successfully maintain governing of the basin waters. The member states have made great strides in gaining the sustainability of resources, but not as far as their own financial sustainability. They are still entirely dependent on funds allocated to them by the federal government³⁵.

The ultimate test of the success of a project is the determination of whether or not it can be applied elsewhere. The Murray-Darling Basin initiatives and intergovernmental structure have successfully been implemented in the Lake Eyre Basin in Australia, thus making this model one that is not only able to be simulated, but one that is able to be successful in other areas³⁶. One may argue against this point by stating that the intergovernmental cooperation was successful in reproduction only because it was tried again in Australia, and with a similar cultural audience, but that argument is countered by the Australia Government Department of the Environment and Heritage which states that, "The skills and approaches being developed in the Murray-Darling have been used to assist the Mekong River Commission, Vietnam, through exchange of experience and high-level staff interaction³⁷."

³⁴ "Integrated Water Resource Management in Australia: Case Studies – Lessons Learned."

³⁵ Ibid.

³⁶ "Integrated Water Resource Management in Australia: Case Studies – Replicability."

³⁷ Ibid.