

Climate Change and Integrated Approach to Water Resource Management in the Murray-Darling Basin

47-116768 Erika ONAGI

Supervisor: Professor Mikiyasu NAKAYAMA

Department of International Studies

Keywords: transboundary rivers, negotiation, decision-making, top-down approach

1. Research Background

Climate change has raised concerns about the threat to water resource and increased international awareness of the importance of cross-border water resource management to confront such borderless problems. Integrated approach to water resource management for climate change is still new field of study to develop an effective management framework even in the developed countries.

This research presents one case study from the Murray-Darling Basin which has recently engaged to apply the Basin Plan as the primary objective of the Commonwealth Water Act 2007. The Basin Plan is the first case to introduce the integrated approach to water resource management in the Basin region (Connell, 2011). One of the major purposes of the Basin Plan is to restore long-term sustainable water quality and environmental development. The approach to this research is mainly literature review and analysis from the results of the several interviews that were undertaken during the field study at Canberra, Australia in September 2012.

2. Objectives

The main objectives of this research are (1) to analyze mechanism of the integrated approach to the water resource management in the region of the Murray-Darling Basin under the federal political system and (2) to examine how this federal political system affects the process of negotiation within the Basin Plan. This study also raises several questions in order to provide some lessons from the case study and suggest applicable implications to other situation of the transboundary river management.

3. The Basin Plan

This study aims to critically discuss the issues raised by the Basin Plan. In October 2010, the Murray-Darling

Basin Authority (MDBA) published *the Guide to the proposed Basin Plan*. This first attempt intended to help people understand the purpose of the Basin Plan before the formal consultation process starts. The release also provided opportunity for the public to present their opinions and interests and to give appropriate feedback to the MDBA. Yet, the Basin Plan has become a hot topic as well as a controversial issue.

4. Findings and Discussion

4.1. Integrated Approach and Federal Political System

Based on the literature review and results from the interviews, it appears that one of the changes made by the Basin Plan is the institutional framework of water resource management. Historically, there was a requirement to achieve a unanimous agreement among all government under decision-making process. Consequently, it often caused difficulty of having consensus on all governments and resulted in substantial delays in policy implementation. The Basin Plan enables Commonwealth government to set a top-down strategic approach to water resource management.

Introduction of the Basin Plan eventually changes balance of power among the Commonwealth government, state governments and other stakeholders in terms of water resource management. Since the foundation of the nation, Australia is under the federal political system: state governments are not subordinated authorities but have independent rights. This unique political system creates a complicated relationship between different levels of stakeholders, including each basin states.

Generally, the top-down strategy is likely to be suppressed the power of state governments due to centralized management and implementation. Yet, this approach is still of benefit to state governments that have opportunities to provide their local knowledge and

technical skills obtained from the past water reform experiences. In other words, although top-down approach has been adapted to the Basin Plan, the bottom-up is still necessary. Commonwealth government should carefully cooperate with basin states and local communities in order to replace their lack of the knowledge and to tackle with the borderless problem such as climate change.

4.2. Process of Preparation and Negotiation

The Commonwealth government and the MDBA missed right timing to engage with the public and communities during the early stage of preparation for the Basin Plan. When *the Guide to the proposed Basin Plan*, as the first draft Plan, was released, the public raised concern about reduction of water use from the Murray-Darling Basin. This is because the requirement of cutting water allocations and return to the river has significant impact on many people, especially farmers in that region insofar as agriculture is major industry. In addition, until the release of the first draft Plan, people hardly enabled to catch the information about the draft Plan (Wahlquist, 2011). Consequently, the protest against the Basin Plan gradually became a significant issue. It is important to provide clear and accurate information to the public and encourage participation of communities and people in the process of preparation.

In November 2012, the Basin Plan has passed into a law after longstanding difficulties and controversies with the basin states and local communities. In response to the voices of stakeholders including opponents, the MDBA revised the first draft Plan and new version put lower reduction target. It seemed that the quantity of water reduction from rivers is not the main point of this controversial discussion. As long as Commonwealth government decides to limit the use of water and no matter how hard they attempts to deal with the issue, the situation would remain the same as before or end up with deadlocked negotiation unless they find out an alternative way to solve the situation.

4.3. Sustainable Environment and Use of Water

Since new version of the Basin Plan emphasizes the importance of climate change and requires recovery of

sustainable water resource, environment has taken into a serious consideration throughout the assessment for future projection. The Commonwealth government and the MDBA have reinforced the importance of the environment during the negotiation to stimulate people's incentive and to have a consensus to conclude the negotiation.

5. Conclusion

Lessons learned from the case study would be implications of this research. First of all, under the leading of the Commonwealth government, it is necessary to take an advantage and cooperate with state governments in order to improve regionally specific information and values to encounter climate change impacts under the comprehensive networks among all basin states and stakeholders.

It is important to engage with the public and communities in the early stage of preparation and provide clear and accurate information to the public and encourage participation of communities and people in the process of preparation. Highlight priorities of the Plan, in this case, environment and sustainable water resource management is also another key aspect. To avoid deadlocked negotiation, discussing what is the best reasonable option is crucial point to stimulate incentive to have a consensus and end the negotiation.

6. References

- [1] Alexandra, J. 'Australia's landscapes in a changing climate - caution, hope, inspiration, and transformation'. *Crop & Pasture Science*. 2011, Vol. 63, pp. 215-231.
- [2] Connell, D. 'The Role of the Commonwealth Environmental Water Holder'. in Connell, D. & Grafton, R. Q (eds.). *Basin Future Water Reform in the Murray-Darling Basin*, ANU E Press. 2011, pp.327-338.
- [3] Wahlquist, A. 'The Media and the Guide to the Basin Plan'. in Connell D. & Grafton, R.Q (eds.). *Basin Futures Water Reform in the Murray Darling Basin*. ANU E Press. 2011, pp. 115-134.