

ABSTRACT

International Perspectives on Sustainable Planning and River Basin Management

by

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This paper summarizes a case study of selected river basin management organisations and practices, a case study¹ involving an Australian water utility (Water Corporation of Western Australia) and commentary by a US water utility (SJWD Water District). The paper will provide a brief overview of planning and management practises in the Southeast (Georgia, North Carolina, Alabama and Florida,) and how these compare to state-wide water planning and management practises in South Carolina.

The demands on our river basins are increasing in the Southeastern United States. Demands have escalated in the past 10 years and created regional issues such as the Federal court ruling on stated purposes for Lake Lanier (Atlanta), Chattahoochee River water allocation issues between Alabama and Georgia, Savannah River wasteload allocation disagreements between Georgia and South Carolina, Catawba-Pee Dee River interbasin transfer rights disputes between South Carolina and North Carolina.

Many of these same issues have been played out in other parts of the world. Some states and provincial governments have been successful at moving to a different form of river basin management in order to reconcile the increasing demands and competing interests on these finite resources.

In many cases the drivers for organising some form of basin level management are issues such as pollution, allocation, flooding, drought or scarcity. Successful river basin management aims to reconcile the supply and competing demand for water through structural and non-structural measures, to ensure that the watershed retains its capacity to meet competing needs, and to steer water use in directions that are economically productive, socially equitable and environmentally sustainable. It is advantageous to concentrate the management on a hydrographically coherent region such as a river basin or catchment as the key actors in the basin are physically dependent upon each other through the relationship to water.

Various interests become more collaborative and less competing for this limited resource when introduced to organized basin management. Also, the activities related to water management, such as planning, allocation, protection, management, and cost recovery can become more equitable. Finally, the benefits of proper decision-making and management are readily felt by those depending on the basin's water, and this increases the chances that management will be more accountable and the resource will be optimized.

Over the past 20 years the Global Development Agencies (GDAs), principally the ADB and World Bank, have been developing approaches and guidelines for Integrated Water Resources Management (IWRM) based on river basin boundaries. This approach has taken worldwide best practice and incorporated inputs from internationally renowned water resources planners, economists, environmentalists, and sociologists as advisors, consultants and technical project managers. On setting out the principles of IWRM, the agencies have worked with the government of developing member countries (DMCs) to guide the necessary policy, legal and institutional reforms whilst taking on board best practices and cultural norms already adopted by each country.

Integrated water management, by definition, means a cross-sectoral approach towards the manifold uses of the water resource, and the environment that regenerates the resource in the watershed. The very existence of a basin organization, or even of a council with stakeholder representation, facilitates this integrative approach.²

¹ Hawkins et al, Multi-Water Utility Concepts For Collie Basin, internal report for Water Corporation Of Western Australia by Black & Veatch, March 2009.

² Alaerts et al, Integrated Water Management at the River Basin Level, Water Week 2003 – World Bank

This paper presents a review of 17 successful basin management organizations throughout the world and the participating institutional arrangements. These arrangements represent only a few of the hundreds of organizations actively involved in basin management. These organizations were in many cases were formed out of conflict. For example, river basin organisations such as the Fraser Basin Council and Ruhrverband came about due to fragmented jurisdictions and lack of communication between the many agencies in controlling a worsening environmental situation. The need was further heightened by community pressure groups concerned at river quality and wanting recreational activities that required a clean river.

International Case Studies - 17 Institutional Arrangements

USA

1. Delaware River Basin Commission, States of Pennsylvania, New Jersey, New York and Delaware
2. Florida Water Management Districts, State of Florida
3. Jacksonville Electric Authority, Jacksonville, Florida
4. The River Basin Commissions, State of Texas
5. The River Authorities, State of Texas
6. Central Arizona Project, State of Arizona
7. Salt River Project, State of Arizona
8. Western Regional Water Commission, State of Nevada

Canada

9. Fraser Basin Council, British Columbia

Europe

10. Welsh Water (Dŵr Cymru), UK
11. Ruhrverband (Ruhr River Association), Germany

South Africa

12. Upper Vaal Catchment Management Agency

Australia

13. Murray-Darling Basin Commission
14. Catchment Management Authorities, New South Wales
15. West Gippsland Catchment Management Agency, Victoria

International Agencies and Utilities

16. GDA/World Bank Approach to IWRM, Cimanuk Basin, Indonesia
17. Veolia Water and Subsidiary United Water in Adelaide

This paper will provide a summary of characteristics of successful river basins management arrangements and, the application of these characteristics on the Southeast United States, especially South Carolina.