USE OF THESIS

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Dividing the waters:
A critical analysis of law reform in
water allocation and management in Australia

A thesis submitted for the degree of Doctor of Philosophy
of The Australian National University

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LLB with First Class Honours (QUT)
LLB with Second Class, Upper Division Honours (University of Malaya)

May 2001
Statement of Original Authorship

The work contained in this thesis has not been previously submitted for a degree of diploma at any other higher educational institution. To the best of my knowledge and belief, the thesis contains no materials previously published or written by another person except where due reference is made.

Poh-Ling Tan

May 2001

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## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ABARE</td>
<td>Australian Bureau of Agricultural and Resource Economics</td>
</tr>
<tr>
<td>ACF</td>
<td>Australian Conservation Foundation</td>
</tr>
<tr>
<td>ANU</td>
<td>Australian National University</td>
</tr>
<tr>
<td>ANZECC</td>
<td>Australian and New Zealand Environment and Conservation Council</td>
</tr>
<tr>
<td>ARMCANZ</td>
<td>Agriculture and Resource Management Council of Australia and New Zealand</td>
</tr>
<tr>
<td>AWRC</td>
<td>Australian Water Research Council</td>
</tr>
<tr>
<td>AWWA</td>
<td>Australian Water and Wastewater Association</td>
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<tr>
<td>BE</td>
<td>Bulk Entitlement</td>
</tr>
<tr>
<td>BRC</td>
<td>Border Rivers Commission</td>
</tr>
<tr>
<td>CMA</td>
<td>Catchment Management Authorities</td>
</tr>
<tr>
<td>COAG</td>
<td>Council of Australian Governments</td>
</tr>
<tr>
<td>CRES</td>
<td>Centre for Resource and Environmental Studies</td>
</tr>
<tr>
<td>CNR</td>
<td>Victorian Department of Conservation and Natural Resources</td>
</tr>
<tr>
<td>DNR</td>
<td>Queensland Department of Natural Resources</td>
</tr>
<tr>
<td>DNRE</td>
<td>Victorian Department of Natural Resources and Environment</td>
</tr>
<tr>
<td>DPI</td>
<td>Queensland Department of Primary Industries</td>
</tr>
<tr>
<td>DWLC</td>
<td>New South Wales Department of Land and Water Resources</td>
</tr>
<tr>
<td>DWR</td>
<td>New South Wales Department of Water Resources</td>
</tr>
<tr>
<td>ECA</td>
<td>Environmental contingency allowance</td>
</tr>
<tr>
<td>EDO</td>
<td>Environmental Defenders Office</td>
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<tr>
<td>EPA</td>
<td>Environmental Protection Authority</td>
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<tr>
<td>EP&amp;A Act</td>
<td><em>Environmental Planning and Assessment Act</em> 1979 (NSW)</td>
</tr>
<tr>
<td>ESD</td>
<td>Ecologically Sustainable Development</td>
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<tr>
<td>FMIT</td>
<td>First Mildura Irrigation Trust</td>
</tr>
<tr>
<td>G-MW</td>
<td>Goulburn-Murray Water</td>
</tr>
<tr>
<td>GL</td>
<td>Gigalitres, one GL equals 1,000 megalitres</td>
</tr>
<tr>
<td>GMD</td>
<td>Goulburn Murray Irrigation District</td>
</tr>
<tr>
<td>GSM</td>
<td>Goulburn Simulation Model</td>
</tr>
<tr>
<td>IGAIE</td>
<td>Intergovernmental Agreement on the Environment</td>
</tr>
<tr>
<td>IRN</td>
<td>Inland Rivers Network</td>
</tr>
<tr>
<td>LWMP</td>
<td>Land and Water Management Plans</td>
</tr>
<tr>
<td>MDBC</td>
<td>Murray-Darling Basin Commission</td>
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<tr>
<td>MDBMC</td>
<td>Murray-Darling Basin Ministerial Council</td>
</tr>
<tr>
<td>ML</td>
<td>Megalitre</td>
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<tr>
<td>NCC</td>
<td>National Competition Council</td>
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<tr>
<td>NCP</td>
<td>National Competition Policy</td>
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<tr>
<td>NSWMPWS</td>
<td>New South Wales Parks and Wildlife Service</td>
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The end of the 1980s marked the close of development of public dams in most Australian states. It was the start of an era which recognised scarcity of water resources, economic issues related to water supply for irrigation and concerns over water use on the environment. Water needed to be reallocated from inefficient to ‘high-value’ use, and degraded land needed to be retired from irrigation. To do so, policy-makers gave a key role to market mechanisms. Water needed to be specified as a commodity for markets to work properly. Following policy made by the Council of Australian Governments in the mid 1990s, state governments started the reform of legislation to implement this radical policy change.

Based on a critical analysis of water law reform from 1989 to 1999, this thesis argues that a suite of legal mechanisms should be adopted in a new legal regime to guard against a failure to provide water for ecosystems. Three case studies were carried out in Queensland’s Lower Balonne sub-catchment, the Goulburn and Murray catchments in Victoria and NSW’s Lachlan catchment. The studies describe the role irrigation played in shaping water law, analyse conflict over sharing of floodplain flows, chart the specification of new property rights in water, and examine the formulation of environmental flows.

My research reveals that there were fundamental flaws in the pre-reform regulatory framework which allocated water through administrative means. First, the adoption of English common law concepts of water was inappropriate. Secondly, water bureaucrats failed to use their powers to protect consumptive use. Thirdly, provision of water for ecosystem needs was almost completely ignored. Finally the findings suggest the law was poorly implemented partly because of a culture of non-enforcement engendered by the influence of powerful groups over water allocation and management.

This thesis also reveals shortcomings in the reform measures. The concept of ‘property’ has not been well understood by policy-makers. While other legal systems have emphasised public property in rivers, Australian policy does not expressly address the issue. Hence setting up a market in water entrenches the interests of consumptive users.
who already consider their administrative rights de facto private property rights. Legal provisions elevate the concept of private property while water for ecosystems are public rights which are vague and difficult to enforce. Other findings relate to inappropriate specifications of bulk water property rights; inadequate provisions for restoring aquatic ecosystems; and incomplete organisational reform. Types of environmental allocations and the place of public involvement in water planning are discussed.

Several recommendations are made in the light of these findings. A framework for property rights should include an express recognition of public property, legal concepts should be relevant to Australian hydrological conditions, and legislation should expressly provide for restoration of ecosystems. The necessity of ongoing reform in the structure of state water agencies is debated. Finally, to overcome the culture of non-enforcement of law, the thesis calls for reform to include a range of substantive and procedural mechanisms to close the gap between the law and its implementation.

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"Your grace is sufficient for me ..." 2 Corinthians 12:9

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For Daniel’s devotion, Jonathan and Faith’s unconditional love.