

Democratic Decentralization of Environmental Governance: Insights from Catchment Management in Australia

Pedro I. J. Fidelman¹

Post-doctoral Fellow
Centre for Sustainable Development (CDS/UnB)
University of Brasilia, Brazil

1. Introduction

Decentralization involves the formal transfer of powers from a central government to actors and institutions at lower levels in a political-administrative and territory hierarchy (e.g., Agrawal and Ribot, 1999; Ribot, 2002; Larson and Ribot, 2004). It includes different types of policy reforms aiming to shift powers from centralized to more localized institutions, such as sub-national units of administration, local government, the civil society and/or local user groups (Meinzen-Dick and Knox, 2001).

In Australia, approaches to environmental governance emphasizing participatory and decentralized forms of decision-making have been experienced over the last 15 years or so. Currently, such approaches provide the basis for considerable investment in natural resource management across the country (CoA, 2002). These governance “experiments” have been taking place in an institutional context that has been changing frequently and rapidly, as many states have, particularly in recent years, reviewed legislative and administrative arrangements for natural resource management (Pannell et al., 2004).

Catchment management – a watershed management initiative – is an example of moving decision-making for environmental governance from the State to the catchment (watershed) level. New South Wales (NWS) was the first State in Australia to adopt, in the late 1980s, catchment management as a state-wide statutory policy. Catchment management has since undergone a number of institutional changes. For example, Catchment Management Committees, which operated in the 1990s, were replaced by Catchment Management Boards in 2000, which in turn, have been replaced with

¹ Currently a Research Fellow with ITA Institute of Technology, Laboratorio de Geomatica, Divisao de Engenharia de Civil, Praça Marechal Eduardo Gomes 50, Vila das Acacias, CEP 12228-900, Sao Jose dos Campos- SP, Brazil, e-mail: pedro.fidelman@gmail.com

Catchment Management Authorities, in 2003. These institutional changes have often altered the structure and process of decision-making (e.g., the interests represented, the level of authority and power devolved, public participation etc.).

This paper analyses how institutional design and change have affected democratic decentralization over the history of catchment management in NSW. By building on Agrawal and Ribot's (1999) decentralization framework and Ostrom's IAD framework (2005), institutional arrangements (defined in terms of rules) and their effect on three major elements of decentralization (i.e., actors, powers and accountability) are examined.

2. Institutions, Actors, Powers and Accountability

Institutions are conceptualized in terms of the rules, norms, and strategies adopted by individuals operating within or across organizations (Ostrom, 1999). Institutions can be seen as sets of rules, which constrain and/or extend behavioral options available to individuals or organizations in a given setting (Kenney and Lord, 1999; Ostrom, 2005). Institutions are systems of rules, decision-making procedures, and programs that cause social practices, assign roles to participants in such practices, and guide interactions among occupants of relevant roles (Young, 2005). Institutions include, for example, catchment management bodies, as they can be defined by formal rules, such as statutes and regulations (e.g., the catchment management legislation, management strategies and plans) and informal norms, such as unwritten agreements and behavioral norms adopted by participants (Margerum and Born, 2000).

The rules that define institutions can be classified into seven broad categories (i.e., position, boundary, choice, aggregation, information, payoff and scope rules) (Ostrom and Crawford, 2005), and used to describe, analyze and compare environmental governance institutions (or any other institution). For the purpose of this study these rules are conceptualized as follow (Fidelman, 2006): (1) *Position* rules define the participants (individuals and/or organizations) and their roles in a decentralized institution; (2) *Boundary* rules define who is eligible to take part in this institution and how participants are selected; (3) *Choice* rules specify the powers assigned to the institution; (4) *Aggregation* rules refer to decision-making procedures, including arrangements to aggregate the preferences of the public and stakeholders into decision-making; (5) *Information* rules specify the arrangements for information exchange among participants, and between participants and other stakeholders, the public and other institutions; (6) *Payoff* rules refer to the incentives and disincentives in terms of resources (e.g., human resources and funding) available for the institution to exercise its authority; and (7) *Scope* rules define the geographic domain that can be affected by a decentralized institution.

Agrawal and Ribot (1999) suggest that political or democratic decentralization (referred hereafter as decentralization) involves three distinct dimensions: (1) actors in decentralization, (2) types of powers, and (3) accountability in decentralization. *Actors* in decentralization are individuals and/or organizations to whom powers are transferred. The nature of decentralization depends, to a large extent, on who are assigned with powers, and the accountability relations to which they are subject (Agrawal and Ribot, 1999). Decentralized environmental governance institutions are usually assigned with four *Types of Powers*, namely the powers to create rules and modify old ones, make decisions about how a particular resource or opportunity is to be used, implement and ensure compliance to the new or altered rules, and/or adjudicate disputes that arise in the effort to create rules and assure their compliance (Agrawal and Ribot, 1999). The key to realizing equity and efficiency in environmental governance is assigning institutions with meaningful and autonomous authority over the management of natural resources that are relevant to local populations (Agrawal and Ribot, 1999; Ribot, 2002). The transfer of powers require *Accountability*, i.e., sets of mechanism and sanctions that can be used to assure that policy outcomes are consistent with local needs, aspirations and the best public interests (Ribot, 2004). Decentralization emphasizes the importance of accountable representation of participants to local populations (e.g., Ribot, 2002; Larson and Ribot, 2004; Ribot, 2004). Such “downward accountability” can broaden participation and enhances the responsiveness of those directly participating in environmental governance institutions (Agrawal and Ribot, 1999).

In summary, decentralization takes place when powers and resources are transferred to institutions representative of, and accountable to, local populations (Agrawal and Ribot, 1999; Ribot, 2002), as a strategy of governance to facilitate power shifts closer to those who are most affected by the exercise of power (Agrawal and Ribot, 1999). By bringing decision-making closer and making it open and accountable to local populations, decentralization is believed to lead to increased equity and efficiency in environmental governance (Agrawal and Ribot, 1999; Ribot, 2002; Larson and Ribot, 2004). In this context, effective decentralization is defined by inclusive and accountable processes where local entities are empowered with meaningful discretionary authority over the management of natural resources that are relevant to local populations (Ribot, 2002, 2002).

3. Methods

The framework described in the previous section is used to examine how decentralized approaches to environmental governance can be affected by institutional design and change, in the context of Australia’s Catchment Management. This study used a case study research approach to undertake a comparative analysis of the arrangements experimented with over the history of the NSW catchment

management initiative (late 1980s-mid 00s). The analysis began at Time 0 (T_0), in the mid-1980s when catchment management was adopted as a state-wide policy in NSW; it then proceeded with the analysis of three successive points in time, characterized by institutional change: T_1 corresponds to the period following the legal institutionalization of catchment management with the enactment of the Catchment Management Act in 1989; T_2 is the time after the NSW Catchment Management Review when the Catchment Management Regulation 1999 was introduced; and T_3 the period subsequent to the NSW Natural Resource Management Reform that resulted in the Catchment Management Authorities Act 2003. Consequently, Catchment Management Committees, which operated in the 1990s were replaced by Catchment Management Boards in 2000, which in turn, have recently been replaced with Catchment Management Authorities (Table 1).

Table 1: Development of catchment management institutions in New South Wales.

LEVELS OF ANALYSIS	TIME (T)			
	Mid-1980s (T_0)	1989 (T_1)	1999 (T_2)	2003 (T_3)
Constitutional-choice	Adoption of Catchment Management as a State Policy	Catchment Management Act	Catchment Management Regulation	Catchment Management Authorities Act
Collective-choice	Emergence of first catchment management groups	Catchment Management Committees	Catchment Management Boards	Catchment Management Authorities
Operational-choice	Local groups, e.g., Landcare, Bushcare; resource users; government agencies; local government etc.			

Sources of information and data for this study included documentation and archival records (legislation, reports, meeting minutes etc.) and interviews and observations². Data collection and analysis followed the tradition of qualitative research methods (e.g., Miles and Huberman, 1994; Patton, 2002). In addition, this paper drew on Australian cases available in the literature (e.g., AACM, 1996; Margerum, 1996; Bellamy et al., 2002).

4. Examining Environmental Governance: The NSW Catchment Management Experience

Catchment management is a watershed management initiative aimed at improving the coordinated use of land, water, vegetation and other natural resources on a watershed basis, emphasizing community participation and voluntary implementation. It is an example of moving decision-making for

² See Fidelman (2006) for detailed information on the data and methods used in this study.

environmental governance from the State³ to the catchment (watershed) level. Currently, similar approaches provide the basis for considerable investment in environmental governance across the country (CoA, 2002). These governance “experiments” have been taking place in a changing institutional context. In NSW, for instance, the arrangements that define the structure and process of catchment management decision-making (e.g., the interest represented, the level of authority and power devolved, community participation, geographic domain etc.) have varied over time (see annex 1), and are examined in this section in the light of decentralized environmental governance.

4.1 Position rules: representative vs. expert participation

Over time, participants in catchment management institutions have changed from being representatives of certain interest groups to comprise a small group of individuals with expertise in natural resource management. At T_1 and T_2 , participants in the Catchment Management Committees (CMCs) and Catchment Management Boards (CMBs) were representatives of selected stakeholder groups, such state and local government, environmental interests, resource users and the Aboriginal community. At T_3 , participation is less inclusive than T_1 and T_2 , as the Catchment Management Authorities (CMAs) comprise boards of non-ministerial office holders with expertise in areas related to natural resource management rather than representatives of particular interest groups.

CMAs lack participation of officials from state agencies and elected members of local government. This challenges one of the main purposes of collaborative efforts, which is bringing together different levels of government and agencies (and other non-government stakeholders) with overlapping jurisdictions to develop more coherent policies, by improving collaboration among those governments and agencies (Trachtenberg and Focht, 2005). In addition, the participation of democratically elected local authorities in decentralized forms of environmental governance is considered to be a systematic means of broad-based inclusion (Larson and Ribot, 2004), as these authorities may be more easily held accountable to local populations (e.g., Ribot, 2002; 2004).

Changes in position rules, in terms of numbers of participants, from over 20 members in the CMCs to between 5 and 7 members in the board of the CMAs have limited the number of actors that can directly take part in decision-making, and, consequently, further decreased the opportunities for inclusive participation.

³ In Australia, States and Territories have primary responsibility for environmental governance. Nevertheless, the Federal government has exerted significant influence through national programs jointly funded with State governments (e.g., the National Heritage Trust, National Action Plan for Salinity and Water Quality).

4.2 Boundary rules: membership vs. acquired attributes

The limitations in terms of inclusive and representative participation, discussed above, are related to the criteria and processes used for selecting participants to catchment management institutions. The criteria determining the eligibility to hold a position in these institutions have changed from conditions based on membership at T_1 and T_2 , to acquired attributes at T_3 .

At T_3 , the selection of participants on the basis of skills and knowledge can be argued on the grounds of efficiency (e.g., AACM, 1996). Selecting participants on the basis of skills and knowledge alone, however, contravenes inclusiveness, as the process is open only to those with the required knowledge and skills. It reduces the pool of eligible individuals who can potentially participate in catchment management institutions. Boundary rules have, therefore, become more exclusive over time.

Another important feature of boundary rules is their capacity to affect accountability of the participants in an institution. The selection process used in the NSW's catchment management allows for strong accountability to the government, as participants are appointed by the Minister through a process where the broader population have a very limited (if any) voice in the selection of participants. Upward accountability is important and desirable as the bulk of the investments available to catchment management institutions are from public funding. These institutions, however, need to be accountable not only to NSW and federal governments, but also to the catchment populations.

4.3 Choice rules: meaningful powers vs. autonomy

At T_1 and T_2 , the authority assigned to CMCs and CMBs, in particular, was very limited, as their roles were primarily advisory in nature. The committees and boards had, for instance, the "authority" to coordinate activities of catchment actors related to natural resource management, but were not authorized to control or direct the actions and activities of those actors (NSW, 1989). In addition, they lacked authority and powers to implement the plans they were required to develop under the legislation (NSW, 1989, 1999). Despite the lack of meaningful powers, CMCs were perceived to have had more freedom in determining their own operational structures and processes.

T_3 changes gave the CMAs considerably more authority and power, in relation to CMCs and CMBs, as they have, for instance, the authority to give effect to catchment plans, enter contracts and carry out any work relating to catchment activities (NSW, 2003). The ability to fund catchment management activities by providing loans, grants, subsidies and other financial assistance (NSW, 2003), may provide the means to influence certain individuals' and organizations' use and management of natural resources. In addition, CMAs have responsibilities over the certification of property vegetation plans and assessment of vegetation consent.

The relative empowerment of CMAs may have been accompanied by somewhat limited autonomy and flexibility to exercise such authority and powers, as these institutions are required to comply with procedures that are aligned with and reinforce government powers. Government control and direction are manifest, for example, in the increased requirements in terms of reporting and auditing of organization performance and finances, and, consequently, the establishment of strong accountability of CMAs to the government.

4.4 Aggregation rules: open vs. expert decision-making

At T_1 and T_2 , aggregation rules in terms of arrangements for aggregating the preferences of catchment actors, particularly across different institutions was primarily achieved by direct participation of representatives from different stakeholder groups in the CMCs and CMBs. At T_3 , aggregating such preferences is limited, as the boards of the CMAs, as discussed above, comprise expertise in natural resources management, lacking direct participation of representatives from stakeholder groups. Without participants who are representatives of a range of interests with different stakes in a problem, it is not possible to have face-to-face discussion, negotiation, agreement and commitment between catchment actors (at the board level).

4.5 Information rules: participatory vs. traditional approaches

The institutions analyzed presented similar arrangements for communication and interaction between participants and catchment stakeholders and populations. At T_1 , however, the CMCs were perceived as being relatively more active in communicating and interacting with actors. In the Illawarra CMC, for instance, the members represented the committee in a number of other committees, panels, groups and councils; the committee organized several seminars, fora and workshops; produced and distributed a number of publications; prepared articles to newspapers and magazines, and at one stage had a monthly segment on catchment management on the radio. At T_2 and T_3 , given the complex and demanding tasks in meeting the priorities, targets and requirements of the regional natural resource management model, the capacity of catchment management institutions have been limited to establish effective information rules. Despite the efforts to consult with catchment actors and the population in general, these rules have been perceived to be similar to traditional approaches undertaken in less participatory initiatives, where consultations have, in many cases, figured primarily as a single centralized mechanism. From the review of meeting minutes, it was noted, for example, that participants considered the consultations undertaken by the Southern CMB as time consuming and ineffective. The consultations undertaken during the development of the Catchment Action Plan for

the Southern Rivers CMA, had a total attendance of only 374 people (SRCMA, 2005) (i.e., 0.07 % of the 500,000 people in the region).

Information rules in terms of reporting and monitoring institution activities and performance have become more systematic over time. At T_1 , CMCs lacked clear and systematic reporting and monitoring arrangements, particularly in relation to government funding (AACM, 1996). Nevertheless, CMCs were regarded, in general, as able to manage and account for the funding received (AACM, 1996). T_2 and, in particular, T_3 changes introduced systematic reporting and auditing arrangements to CMBs and CMAs. CMAs, for example, are required to produce a number of reports and plans in relation to their policies, programs and procedures. These reports and plans are subject to recommendation and/or approval by other entities. CMAs are also subject to external financial and performance audits. These reporting, monitoring and auditing processes aim to ensure that state and federal government priorities are met, and that stronger accountability within the organization, and to central governments, is in place.

The emphasis on upward accountability of CMAs has not been matched, however, by mechanisms to ensure downward accountability. Though reports and information on catchment management institutions are, in general, made public through the internet, for example, there have been limited mechanisms (if any) for catchment populations to sanction participants in these institutions if they perceive their choices are not being considered in decision-making. Systematic mechanisms to hold these institutions accountable to catchment populations have been overlooked.

It is essential to have some form of mechanism to hold catchment management institutions accountable, especially when they are managing and expending public money. The challenge is to find a balance so that the autonomy and flexibility of the institutions are not compromised. It is also important to devise and employ mechanisms that allow for monitoring the institution in terms of its ability to facilitate collaborative processes and outcomes, rather than its ability to produce immediate on-ground outcomes only.

4.6 Payoff rules: limited resources vs. contingent expenditures

At T_1 and T_2 , catchment management institutions were characterized by limited staff and funding. The level of financial resources was perceived as inadequate to support the activities and projects of CMCs and CMBs (AACM and CWPR, 1995; AACM, 1996; ICMC, 1998; SCMB, 2003). Martin et al. (1992) comment that the state government wished to shift responsibility for environmental governance to regional populations but seemed to be unwilling to supply the resources needed. Changes at T_3 , involved the increase in resources from state and federal government allocated to catchment

management institutions. In contrast to CMCs and CMBs, the CMAs employ their own team of staff and may receive triennial investments of the order of tens of millions dollars (e.g., SRCMA, n.d.). Furthermore, CMAs have, to some extent, more funding certainty as they are provided with 3-year indicative allocations to plan activities accordingly (DIPNR, 2004).

T_2 and, in particular, T_3 changes resulted also in more targeted and strategic approach to investments. Under the Natural Heritage Trust Bilateral Agreement, for example, CMBs and CMAs were required to develop ranked investment strategies, as well as comply with expenditure requirements, such as commitment limits (CoA, 2003; DIPNR, 2004). Government funds are, therefore, to be used for activities that are in conformity with the objectives of the corresponding funding program (DIPNR, 2004), which have a critical influence on the level and type of activities undertaken in a catchment (Bellamy et al., 2002). The political nature of the funding has, therefore, influenced the power relations within a catchment, as it has shifted the focus from local projects to a more strategic regional approach, with emphasis upon on-ground outcomes (Bellamy et al., 2002). Over-dependence by catchment management institutions on government funding, and the attached requirements and priorities for expenditures, has obvious implications for the autonomy, flexibility and sustainability of the CMAs. Without alternative sources, there is a risk that their activities will be largely limited by the political nature of government funding.

4.7 Scope rules: local vs. regional scales

The geographical domain of the institutions analyzed has shifted from more localized to regional scales. At T_1 , the area of operation of many CMCs covered mostly discrete catchment areas. The NSW catchment management review concluded that the scale of those CMCs was too small to benefit from economies of scale or to achieve strategic focus (AACM, 1996; Anonymous, n.d.). In addition, operating primarily on a small-project basis, CMCs were, in many cases, said to address the symptoms rather than the causes of natural resource management issues. The area of catchment management institutions has, accordingly, been enlarged, at T_2 and T_3 , to encompass large regional areas. The Southern Rivers CMA, for example, encompassed an area which was once the responsibility of 6 CMCs. With many CMBs and, subsequently, CMAs operating over larger areas, issues and government priorities, such as biodiversity and vegetation management would be addressed at a more appropriate scale.

The amalgamation of the CMCs areas into larger catchment entities was perceived by some participants as challenging to the sense of local identity, which recognized the particular circumstances of the catchment. In addition, questions have been raised on the capacity of the broader and strategic focus to consider the management of local resources, as opposed to the detailed and locally focused

work of the CMCs. Enlarging the geographic domain raises naturally the chances of overlooking local problems, as the potential complexity that large areas encompass may mean that not all issues and interactions can be taken into account (Blomquist and Schlager, 2005).

Change in the geographic domain also affects the distribution of power (Ribot, 2004; Lebel, Garden, and Imamura, 2005). Scale choices can be used as a means of inclusion or exclusion, as they alter the access to resources and decision-making, and, consequently, determine the relevant actors to be part of the process (Lebel, Garden, and Imamura, 2005). In this context, the enlargement of the geographic domain of the institutions analyzed suggests that powers have been moved away from local arenas. While the principle of “subsidiarity” calls for decisions over environmental governance to be made at the lowest possible political-administrative level – the level closer to those affected by decision-making –, such principle is, in general, not followed in environmental governance decentralization (Ribot, 2004).

The scope rules change can affect other institutional rules, such as choice, aggregation, information and payoff rules. A broader geographic domain entails choices available to catchment management institutions to apply to larger spatial areas, and affect outcomes of regional, state and local significance. On the other hand, larger areas of operation can pose challenges to: achieving accountable and representative participation of potentially more diverse populations and stakeholders; communicating and interacting with these populations and stakeholders; and, aggregating their preferences into decision-making. In terms of accountability, representation and participation, some political or administrative jurisdictions may be too large to be considered local (Ribot, 2004). Furthermore, a larger geographical domain for catchment management institutions increases the demand for human and financial resources to carry out actions and activities, affecting thus payoff rules.

5. Concluding Remarks

Despite the variations across the history of catchment management in NSW, institutional arrangements affecting actors, powers and accountability were characterized by constraints and have been limited facilitating democratic decentralization. In many cases, institutional change reinforced the constraints to decentralization, such as those associated with stakeholder and citizen engagement, levels of authority and powers transferred, and autonomy and flexibility of catchment management institutions. The paper demonstrates an emerging trend in terms of institutional arrangements in NSW, where these arrangements have evolved towards deconcentration (i.e., an administrative form of decentralization).

Despite the constrained arrangements, the CMCs were the institutions that best reflected the principles of decentralization, whereas the CMAs largely conform to those of deconcentration. Deconcentration is a form of administrative decentralization by which responsibilities are transferred to local/regional branches of the central government, such as regional offices of state government agencies (Agrawal and Ribot, 1999; Ribot, 2002, 2002). These entities are local/regional administrative extensions of the central state, which may have some downward accountability built into their functions, but the primarily responsibility is to central government (Ribot, 2002).

In this regard, deconcentration is not very different from decentralization to statutory authorities whose members are “hand-picked” by, and upwardly accountable to the Minister. Deconcentration is a weak form of decentralization, as deconcentrated institutions lack some of the local accountability that theorists believe is key to make decentralization work (Ribot, 2004). As demonstrated in other environmental governance initiatives (e.g., Ribot, 2002, 2004), if CMAs are not downwardly accountable to catchment populations, as they seem to be to the Minister, decentralization will not result in more effective, equal and democratic environmental governance. Whereas the CMAs, as agents of the NSW and federal governments, may have the capability to deliver more, particularly in terms of on-ground outcomes (to certain individuals, groups and sectors), the current arrangements are, however, unlikely to produce the presumed benefits of decentralization and public participation.

There are many challenges and complexities surrounding the development and implementation of catchment management in NSW⁴. The choice about who participate and how, how and to whom participants should be accountable, and the geographic domain of catchment management institutions are some examples. Many of these challenges and complexities have arisen as the NSW initiative seemed to be seeking simultaneously disparate, even contradictory goals, which might be, nevertheless, equally important to the resolution of problems in the context of environmental governance. These goals include inclusiveness and accountability, expert and open decision-making, bureaucracy and responsiveness. How to deal with these challenges, complexities and paradoxes, inherent to decentralization, represent an important issue for further research, if environmental governance policies are to be better designed and implemented in a more democratic form.

⁴ Despite the challenges, it is important to note that catchment management institutions have produced some positive outcomes (which were not explored in this paper), such as promoting environmental awareness and education, engaging some sectors of community and industry, and working in collaboration with other organizations and local groups.

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Annex 1: Institutional changes in the NSW Catchment Management Initiative.

RULES	CATCHMENT MANAGEMENT INSTITUTIONS		
	CATCHMENT MANAGEMENT COMMITTEES (T_1)	CATCHMENT MANAGEMENT BOARDS (T_2)	CATCHMENT MANAGEMENT AUTHORITIES (T_3)
Position	<ul style="list-style-type: none"> • 20 members (average). 	<ul style="list-style-type: none"> • 17 members (approx.). 	<ul style="list-style-type: none"> • 5-7 members.
Boundary	<ul style="list-style-type: none"> • Ministerial appointment of stakeholder representatives: <ol style="list-style-type: none"> (a) land users or landholders within the catchment area, who were to constitute the majority of the members; (b) persons who in the responsible Minister's opinion had an interest in environmental matters within the catchment area, (c) persons selected from a panel of 2 or more persons nominated by local government authorities within the catchment area; (d) persons who were officers of government departments or authorities having responsibility for natural resource use or management within the catchment area; (e) in the case of a catchment area that was part of a water catchment system extending into another state or a territory, persons who were officers of government departments or authorities of the relevant state or territory having responsibility for natural resource use or management in that part of the water catchment system within the other state or territory. 	<ul style="list-style-type: none"> • Representation from the Aboriginal community was introduced. 	<ul style="list-style-type: none"> • Ministerial appointment on the basis of skills and knowledge related to natural resource management, in areas such as: <ol style="list-style-type: none"> (a) primary production, (b) environmental, social and economic analysis, (c) state and local government administration, (d) negotiation and consultation, (e) business administration, (f) community leadership, (g) biodiversity conservation, (h) cultural heritage, and (i) water quality.

Annex 2: Continued.

RULES	CATCHMENT MANAGEMENT COMMITTEES (T_1)	CATCHMENT MANAGEMENT BOARDS (T_2)	CATCHMENT MANAGEMENT AUTHORITIES (T_3)
Choice	<ul style="list-style-type: none"> • Advisory roles: • to promote and coordinate the implementation of total catchment management policies and programs, • to advise on and coordinate the natural resource management activities of authorities, groups and individuals, • to identify catchment needs and prepare strategies for implementation, • to coordinate the preparation of programs for funding, • to monitor, evaluate and report on progress and performance of total catchment management strategies and programs, • to provide a forum for resolving natural resource conflicts and issues, and • to facilitate research into the cause, effect and resolution of natural resource issues. 	<ul style="list-style-type: none"> • Advisory roles: • to identify opportunities, problems and threats associated with the use of natural resources, • to identify first order objectives and targets for the management of natural resources, • to develop management options, strategies and actions to address the identified objectives and targets, • to assist in developing a greater understanding within the community of the issues identified and action required, and • to initiate proposals for projects to achieve those functions and assess projects submitted for funding having regard to targets identified by the Board. 	<ul style="list-style-type: none"> • Advisory, operational and governing roles: • to develop and implements catchment action plans, • to provide financial assistance for the purposes of the catchment activities, • to enter contracts or do any work for the purposes of the catchment activities, • to assist landholders to further the objectives of its catchment action plan, • to provide educational and training courses and materials in connection with natural resource management, and • to carry other functions under other Acts, such as assess vegetation consents, manage community involvement in water plans among others.
Aggregation <i>Aggregation Arrangements</i>	<ul style="list-style-type: none"> • Through direct participation of selected actors • Aggregation mechanisms such as <i>ad hoc</i> forums, working groups and sub-committees. 	-- no major change --	<ul style="list-style-type: none"> • Aggregation mechanisms such as <i>ad hoc</i> forums, working groups and sub-committees.

Annex 3: Continued.

RULES	CATCHMENT MANAGEMENT COMMITTEES (T_1)	CATCHMENT MANAGEMENT BOARDS (T_2)	CATCHMENT MANAGEMENT AUTHORITIES (T_3)
Information			
<i>Communication & Interaction</i>	<ul style="list-style-type: none"> • Regular meetings • Public and stakeholders forums • Public consultation • Duplicate membership in other natural resource management institutions • Personal and professional networks • Submissions • Exchange of meeting minutes, newsletters, reports etc. 	-- no major change --	-- no major change --
<i>Reporting & Monitoring</i>	<ul style="list-style-type: none"> • Annual Reports • Catchment strategies. 	<ul style="list-style-type: none"> • Annual Reports • Catchment Blueprints • Corporate Plans. 	<ul style="list-style-type: none"> • Annual Reports • Catchment Action Plans • Annual Implementation Programs • Investment Strategies • Financial and Performance Audits.
Payoff			
<i>Staff & Support</i>	<ul style="list-style-type: none"> • NSW DLWC provided limited staff (usually a full- or part-time coordinator) and other support. 	-- no major change --	<ul style="list-style-type: none"> • Own team of staff • DIPNR to provide corporate services support
<i>Funding</i>	<ul style="list-style-type: none"> • Limited investments from local, state and federal government sources 	<ul style="list-style-type: none"> • Limited investments from State and federal sources 	<ul style="list-style-type: none"> • (Relatively) Considerable investments from State and federal sources

Annex 4: Continued.

RULES	CATCHMENT MANAGEMENT COMMITTEES (T_1)	CATCHMENT MANAGEMENT BOARDS (T_2)	CATCHMENT MANAGEMENT AUTHORITIES (T_3)
Scope			
<i>Geographic Domain*</i>	<ul style="list-style-type: none"> • Mostly discrete catchments or sub-catchments. 	<ul style="list-style-type: none"> • Regional catchments areas. 	<ul style="list-style-type: none"> • Large regional catchment areas.
<i>Functional Scope</i>	<ul style="list-style-type: none"> • The coordinated and sustainable use and management of land, water, vegetation and other natural resources on a water catchment basis so as to balance resource utilisation and conservation. 	-- no major change --	<ul style="list-style-type: none"> • Natural resource management defined as matters relating to the management of natural resources, such as water, salinity, soil, biodiversity, coastal protection, marine environment, forestry, and particularly native vegetation.

* East of the Great Dividing Range (GDR); no major change for inland catchments west of the GDR.