

## Natural resource management : building the case for civic participation in managing the environment

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**Introduction** Over recent years increasing attention has been paid to the changing attitude of communities to sustainable development , in particular natural resource management (NRM) . One of the recurring themes of this literature is the importance of an integrated approach to environmental management . This paper presents a project that developed an electronic NRM Community Capacity Assessment tool (the tool) to assist communities to rate the strength of their regional capacity to deliver NRM programs . The tool :1) Identifies ten elements of capacity that span across four types of capital ;2) Operationalises the elements of capacity using 61 statements and a set of social indicators linked to a four-point likert scale ;3) Generates both graphs and matrices to show the relative strength and importance of capacities as perceived by different community tiers , as well as how confident community groups were in responding to each capacity .

**Discussion** NRM worldwide has many different meanings and is a complex set of ideas and understandings difficult to define (Kilpatrick 2002 ; Stratford and Davidson 2002 ; Kilpatrick 2003) . Understandings and beliefs which underpin NRM range from being strongly conservation-based (Whelan and Lyons 2005 ; Gareau 2007) with the emphasis on protecting natural resources for their intrinsic , cultural and ecological value through to production-based values with their focus on ameliorating land degradation while successfully maintaining production outputs for economic benefit (Stratford and Davidson , 2002) . For example , pastoralists located in the north of South Australia perceive NRM from the perspective of maintaining sufficient pasture cover for their stock , whereas park managers in the same region consider NRM from the perspective of preserving or enhancing diversity of native plants and animals . Stratford and Davidson (2002) argue the interrelationships among such natural , economic and cultural resources are not well recognized because of the focus on economic capital .

**Methodology** The tool comprises a MS Access database containing ten capacities derived from research by rural sociologists (Webb & Curtis 2002 ; Fenton 2005 ; Cavaye 2005) which are assessed across all three tiers of community .

- 1) Engagement
- 2) Values
- 3) Governance
- 4) Networks and relationships
- 5) Strategic direction
- 6) Leadership
- 7) Human resources
- 8) Financial resources
- 9) Physical resources
- 10) Knowledge resources

Each capacity is operationalised using a set of statements which were individually presented in an electronic form and projected onto a screen for participants . The group was asked to respond to each statement on a likert scale from "1=Strongly Disagree" to "4=Strongly Agree" . All responses were reached through consensus-facilitation was important to ensure equal participation by all group members . Responses to each statement were guided by a series of indicators presented on a likert scale from "1=Strong Capacity" to "4=Needs Strengthening" . Each assessment group was also asked to rate the importance of each statement relative to delivering or adopting NRM within their region as well as how confident they were in responding to the statement .

**Conclusions** Benefits of such regional community participation and effective engagement in NRM have been described variously as better outcomes for the natural resources themselves through management at the local scale (Warburton 1998 ; Lawrence 2004 ; Bellamy et al . 2005 ; Lane et al . 2005) . Socially , there were benefits described as the empowerment of local communities through civic participation ,(Kellert et al . 2000 ; Cavaye 2004 ; Lane and McDonald 2005 ; Pero and Smith 2006) the generation of social capital (Coleman 1988 ; Stayner 2003 ; Putnam 2004) and the building of human capital (Putnam 1995 ; Portes 1998) and community capital (Cheers et al . 2002) . Importantly , the participant evaluation of the assessment process has confirmed the literature , affirming participants' capacity to articulate their strengths and weaknesses relative to their capacity to deliver or adopt NRM programs .

### Reference

Bellamy , J . T . Smith , B . Taylor and M . Walker (2005) . Regional natural resource management planning arrangements : Evaluating through the regional lens . An Occasional Symposium : Dimensions of Natural Resource Management Working Group . Queensland .

