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NATURAL RESOURCE MANAGEMENT - AN EVALUATION MODEL

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ABSTRACT

In recent years, an improving understanding of the close relationships between land and water has resulted in emergence of the concept of integrated land and water management. This concept has resulted in management strategies that recognise the continuity in our environment. We need to manage what happens on the land to manage the water.

Land and water management strategies also need to recognise the long-term nature of resource management. Our efforts today in preserving and maintaining our environment will have major repercussions for future generations in terms of their quality of life.

The Water and Rivers Commission of Western Australia is a key player in integrated land and water management across Western Australia. The Commission's primary responsibilities are in the areas of water resources assessment, water allocation, water quality protection and waterways management.

As a water management agency, the Commission is required to operate in both the complex policy environment of Federal and State agencies as well as with the community in implementing that policy.

This paper covers a recent review by Helen Grzyb and Associates of the structural and operational arrangements involving the Commission, other agencies and the community in the Swan Avon catchment. The operating environment requires delivery of outreach services in an environment that involves conflicting and competing interests and value systems, limited resources, and high consequence problems.

The paper to be presented by Harry Ventriss and Helen Grzyb includes an evaluation of the contribution of community based organisations to improving catchment management and the impacts on water and discusses the issues encountered in implementing the review findings.

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BIOGRAPHIES

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Helen Grzyb, Director of Helen Grzyb and Associates has almost 25 years' experience in government and over 14 years experience in management, the last two years of this as a management consultant, which includes work in environmental areas. Helen is a Fellow of the Australian Institute of Management (and member of AIM's Advisory Council), a Chartered Member of the Australian Human Resources Institute, and a member of the Institute of Public Administration Australia, the Australian Customer Service Association, and the Australian Institute of Company Directors. Helen has a Graduate Diploma in Human Resource Development, and will graduate in 1999 from Curtin University with a Masters in Commerce, majoring in Human Resource Development.

Helen lead the project team from Helen Grzyb and Associates which was contracted by the Water and Rivers Commission to undertake an evaluation review of the Swan and Avon River Catchment Centres.

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Harry has qualifications in civil engineering from the University of Western Australia. He is currently Chairman of the Subcommittee on Water Resources, one of several committees under the national ministerial Agriculture and Resources Management Council Australian and New Zealand.

Harry has been very active for over ten years on the national water scene having been a member of a number of committees under the now superseded Australian Water Resources Council structure. Harry's work in the Water Authority from 1991 featured planning work including working with the community in development of an innovative approach to providing water for environmental purposes while meeting human needs. Subsequently, as Director Regional Services, Water and River Commission, he has had responsibilities for on-ground delivery of the Commission's services since its formation in January 1996. Among other areas, this responsibility includes the Avon River catchment area as well as that of the Swan River. Harry commissioned and project managed the evaluation review in 1998.

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INTRODUCTION

This paper discusses development and application of an evaluation model to review the organisational arrangements being applied to natural resource management in the Swan-Avon catchment in the south west of Western Australia.

Natural Resource Management

The management of natural resources depends on the effective coordination and integration of all State and local governments and the community and has been recognised as a strategic issue across Australia for over a decade. From a water perspective, the importance of this issue was formally recognised by the Council of Australian Governments (COAG) in 1994 in the Strategic Water Framework 1994 where an obligation was placed on all jurisdictions to amongst other things "... develop administrative arrangements and decision-making processes to ensure an integrated approach to natural resource management ..." and adopt "... an integrated catchment management approach to water resources management and set in place arrangements to consult with the representatives of local government and the wider community in individual catchments." (Council of Australian Governments, 1994). Implementation of this framework has been tied to tranche payments of several hundred million dollars to the States under the National Competition Policy as an incentive.

The intent of the integrated natural resources management (INRM)/integrated catchment management (ICM) approach is to achieve an holistic catchment based approach to natural resources management which arrests degradation and provides improved outcomes for sustainable resource use through effective cooperation between government agencies and the community.

The Western Australian Situation

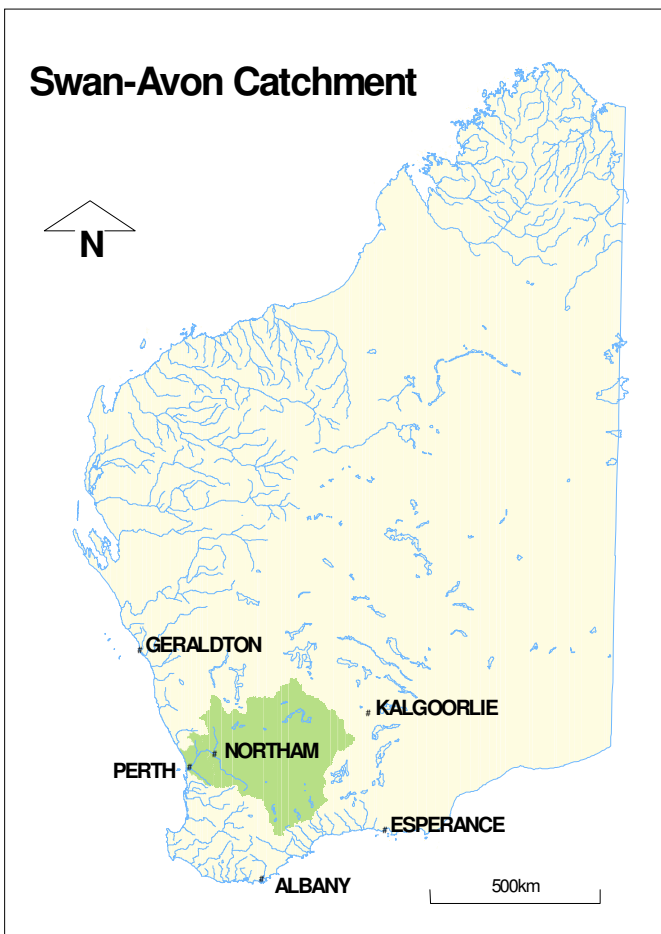
In Western Australia (WA), approaches to INRM and ICM have been in development since the early 1980s beginning with the formation of an Integrated Catchment Management Coordinating Group as a forum for State agencies to coordinate their activities and ensure that gaps and overlaps in responsibilities and activities could be properly addressed. Since then, the concept has developed with recognition of the importance of the wider community in developing solutions to the problem of resource degradation. A key demonstration of this is in the recognition that land use practices are the single most important impact on natural resources such as water, land and forests. Planning and regulation can address this to some degree, but the most effective influence comes from changing the behaviour of communities in the ways that they use and manage their land and the activities on them. Activities such as land clearing, riparian fencing and vegetation preservation/management, urban and rural fertiliser application practices, irrigation practices and urban storm and wastewater discharges all have a major part to play in the environmental impacts on our natural resources. These impacts particularly affect water, which acts as all-pervading transport medium for those impacts.

The Swan-Avon Catchment

The Swan-Avon River system in the south west of WA sits within a 126 226 km² catchment (larger than Tasmania) that drains water into the Swan and Canning Rivers. The Swan-Canning system forms the estuary around which the city of Perth, the State capital, is located. The Swan-Avon catchment area focuses on the continuous river, which comprises the Swan and Avon and is one of the great geophysical and economic regions of Australia. It encompasses the Perth metropolitan area, the major fresh

water catchment areas of the Darling Ranges and a vast and highly productive agricultural and mining region to the east. 75% of Western Australians live within this catchment which has an annual productive capacity of over \$2 billion.

The variety of urban and rural land uses in the catchment have brought substantial pressure to bear on its water resources, the results of which are ultimately reflected in the health of the Perth waterways. Cleaning up the Swan and Canning Rivers is the subject of a recently announced \$14m government action plan. The icon value of the Perth waterways to WA is extremely high



through the variety of activities centred on them, as well as in property values that reflect proximity to the resource. The problem is catchment-wide and the range of environmental problems is a serious threat to the prosperity, productivity and conservation values of the catchment. Nutrient contamination, erosion, sedimentation, degradation and loss of riparian environments are areas of major concern.

Two things are now widely accepted. Firstly, that land use systems developed in the early days of settlement are fundamentally unsustainable. Secondly, the problem is not simply owned by farmers or by industry or government - the whole community has benefited from the land use systems adopted in the past, the whole community is potentially threatened by its impacts. Therefore, the whole community must work together on the solutions.

To address the Swan-Avon system problems, the Swan Avon Integrated Catchment Management Program was developed in 1994 and the Swan Avon Integrated Catchment Management Coordinating

Group (SAICMCG) formed to manage the program. The program was the first regional initiative to protect and manage land and water resources in the State. SAICMCG was structured with two working groups to help the Coordinating Group get closer to problems and needs on the ground. The Swan Catchment Council¹ and Avon Working Groups were formed under the Coordinating Group, aligned to the urban and rural areas of the catchment respectively (SAICMG, 1997).

This evaluation review involved many aspects of the operation and administration of INRM and ICM in the Swan-Avon through the Swan Catchment Centre (SCC) and the Avon Catchment Network (ACN). These facilities are important projects of the Swan Avon ICM Program and are managed by the Swan Catchment Council and Avon Working Group respectively.

THE PROBLEM

The Water and Rivers Commission is a relatively new agency, formed in 1996 following a restructuring of the institutional arrangements for management of water in WA. The agency has the primary role in managing the State's water resources, in terms of their quantity, quality, health and public amenity. It operates within a cluster of natural resource management agencies, in particular, Agriculture WA, the Department of Environmental Protection and the Department of Conservation and

Land Management. The Swan River Trust is an associated agency that has specific responsibility for the health and amenity of the Swan and Canning Rivers.

Management of natural resources in the Swan-Avon area involves a complex arrangement of both community and government interest bodies, groups and individuals who are significant stakeholders in ICM and who influence policy, priority setting and allocation of resources. These include approximately 13 Federal and State Government agencies, over 20 urban and rural local governments, together with a range of coordinating committees, interest groups and individuals, research organisations, local landcare and catchment groups, landowners as well as farmers and other primary producers. The complexity of this arrangement means that for the community involved in natural resource management, and catchment management in particular, there is a myriad of agencies to be aware of, systems to negotiate, and requirements and regulations to satisfy.

Within this strategic framework, the Commission has put in place a range of initiatives across the State to support management of the State's water resources, including catchment areas. These initiatives are designed to ensure that the State's rivers, groundwater, wetlands and estuaries are well managed, healthy, clean and productive in terms of the full range of community needs, including ecological and biodiversity protection. The initiatives are undertaken within a government/community partnership approach, and for ICM include interaction between a number of branches within the Commission, with other government agencies, as well as the community.

In entering into the further evolution of INRM/ICM in WA, the Commission saw the need to ensure that its relationship with the Swan-Avon ICM Program was properly understood. In particular, this required an evaluation of the operation of the Swan Catchment Centre and Avon Network Centre. The Commission engaged Helen Grzyb and Associates to review and report on the structural and operational arrangements that are in place under the Swan Avon ICM Program. The review was to consider the funding sources and disbursement of funds, the current financial situation, the efficiency of delivery of Commission support, and the form and location of the catchment centres. The review was to include an assessment of the return for costs and potential for further delivery. Consultation with all relevant stakeholders was seen as an essential part of the review methodology.

EVALUATION MODEL

Supervision of the project was through a panel comprising two Directors from the Water and Rivers Commission. The evaluation was undertaken by a three person project team from Helen Grzyb and Associates, with expertise in environmental policy, management, financial and social frameworks.

The key principles and values that drove the evaluation approach were:

- ❖ the need to undertake a consultative process;
- ❖ the philosophical values of the Water and Rivers Commission as the sponsoring organisation;
- ❖ sound financial management principles;
- ❖ a customer service orientation;
- ❖ recognition of the sensitivity and conflict surrounding environmental issues;
- ❖ the need to support and allow time for management groups to adapt to any new management arrangements; and
- ❖ to improve the rate of successful implementation of recommendations by providing an optimum environment for ownership of both the process and the outcomes.

An extensive array of documents was used as research for the evaluation review. These were analysed and synthesised as part of the review process. Elements of the review approach were to:

- ❖ review available documentation and analyse;

- ❖ develop consultation and assessment frameworks;
- ❖ finalise consultation strategy;
- ❖ undertake consultations;
- ❖ undertake financial examinations;
- ❖ analyse and synthesise findings;
- ❖ undertake assessments; and
- ❖ make recommendations.

The review was undertaken during the period from April 1998 to August 1998. It was approached with the philosophy that consultation with stakeholders was to be an essential component. The approach allowed for a range of consultation strategies to be utilised – face to face meetings, focus groups or telephone contacts. The option chosen was to be appropriate to the consultation purpose and to reflect the interests of the stakeholder. Approximately 50 people were consulted for input into the review.

Consistent with the project philosophy, there was consultation with various stakeholders at all steps of the project. The draft review report was provided to stakeholders, briefing sessions held and comments and feedback sought to contribute to the final report.

The evaluation review methodology broadly followed research principles, and initially was found to be robust and appropriate. However, as the project evolved, it became clear that the methodology required amendment to reflect the culture and frameworks in place in the natural resource management area.

Traditionally, evaluations in this area reflect the dominant paradigm of the people working in it - scientific and technical. Previous reviews and related reports over many decades tended to look at quantitative indicators of performance and outcomes. There was a clear expectation by the audience waiting for the review report, to see more of these indicators which were part of their conceptual framework - eg levels of water environmental health indicators such as levels of nitrogen in rivers and streams, levels of phosphorus, oxygen.

The evaluation outcomes which the team developed were strongly focussed around roles and responsibilities, social and organisational systems, and the real elements of sociologically based partnerships between government and community. As a result, it became apparent that the evaluation team had an additional task to blend the outcomes within this framework, and then sell these to the stakeholders. The project supervisors provided strong support for this approach, and were keen for stakeholders to have the opportunity to work through issues that were unfamiliar to them.

This task became in reality a change management process, with the team working with stakeholders to raise awareness of social systems inherent in the natural resource management area, to recognise the value of these, and also, more importantly for successfully implementing the changes required, to recognise at an individual level, their fragility and need for nurturing. In terms of the principles of adult learning, the review was just a pin point in the process of individuals learning about a different paradigm, and hopefully becoming motivated to include elements of the paradigm in their repertoire of thinking and behaviours with their colleagues.

It was a paradox that in an area that has a plethora of scientific resources and has traditionally focussed on hard quantitative analysis, there is a high level of need for the soft qualitative and "humanistic" management.

The recommendations arising from the review included "hard" actions such as clarifying roles and responsibilities between governmental stakeholders and appropriate resource contributions, "soft" areas such as developing a human resource strategy

that recognises the high level and value of voluntary community resources and provides direction for its sustenance and development, and the continual common factor of evaluations and reviews - improving communications.

The recommendations made as a result of the evaluation were consistent with and supported the principles of community coordinated catchment management. The overall thrust of the recommendations was the development and further refinement of existing structures and processes with the aim of operationalising these principles to develop further the strategic partnership between Government and community and achieving better outcomes in the management of the Swan and Avon catchments.

RESULTS

The purpose of the evaluation report was primarily to identify and highlight aspects of the SCC and ACN that can be improved upon so that effectiveness, efficiency and utilisation are maximised. In doing so, the report tended to focus on those areas where the potential for further enhancement and development have been identified and for which various strategies are proposed. These points were made within a broader context - that of well established services which have since their inception, been valued components in the management of our river systems. The aim was of the report to build on this existing foundation to further improve performance and ensure that the Swan-Avon Integrated Catchment Management (ICM) initiative continues to be effective.

The approach to the review has taken into account the very strong partnership linkages on which ICM is based. Therefore, in terms of measuring the effectiveness of the SCC and ACN the focus has been on the interrelationships and coordination between the various partners in ICM in the Swan-Avon. It is a credit to the officers of the agencies and the community members of the relevant groups involved that the process of contributing to the review has itself resulted in further enhancement of the ICM coordination framework.

The report provided details of the structural and operational arrangements that were in place under the Swan Avon Integrated Catchment Management Program, the funding sources and disbursements of funds, the current financial situation, and the form and location of the catchment centres in the Swan and Avon.

In reviewing the efficiency of delivery of Commission support, it was identified that the Water and Rivers Commission provides both direct and indirect (in kind) support to the SCC and in kind support is provided to the ACN. Provision of direct support to the SCC requires streamlining as the current arrangements involve staff (who are funded by the Commission) having more than one line of direct reporting. Provision of in kind support requires more transparency as accurate estimates of this support proved very difficult to establish. Partnership agreements on the amount and type of in kind support are needed.

The review found that the SCC and ACN have achieved many positive outcomes since they were established. They have been instrumental in supporting an impressive number of projects to become established in their respective regions and in attracting funding to the State to support a wide variety of catchment management initiatives. Customer feedback indicates that the community values the Centre and Network and what they are achieving. On this basis it could be said that in general terms, the Water and Rivers Commission, for relatively small investment (combined direct and in-kind funding of to SCC and ACN of \$156,730 per annum), is getting some good returns for its money.

Details of the range of services provided to the community were provided, together with more detailed suggestions on mechanisms to enhance service delivery. The review sought some customer views on the services provided by the resource centres and suggestions for future direction. The views were wide ranging and a more detailed customer survey was recommended.

A more detailed assessment of the value for money would be possible in the situation where Water and Rivers Commission and the Centre and Network had entered into partnership agreements which clearly stated the funding arrangements, specified objectives and desired outcomes and agreed performance measures.

The report provides a detailed summary of the financial situation of the Centre and Network as well as that of the Swan Catchment Council and Avon Working Group. The summary at Table 1 highlights the significant resources allocated to these groups from a number of sources.

Table 1: Allocation and sources of funds for natural resource management in the Swan-Avon catchment

FUNDING SOURCE	SCC	ACN	Swan Catchment Council	Avon Working Group	SAICMCG	TOTAL
Natural Heritage Trust						
Direct Funding	171 980	211 322		50 823		434 125
Water and Rivers Commission						
Direct Funding	69 730		41 440			111 170
'In kind' support	62 000	25 000		15 000		102 000
Dept of Environmental Protection						
Direct Funding	103 040		25 960			129 000
Agriculture WA						
Direct Funding		50 000		33 000	11 000	94 000
'In kind' Support			30 000	46 822	46 046	122 868
Working Group members						
'In kind' Support			180 000	147 000		327 000
TOTAL	406 750	286 322	277 400	292 645	57 046	1 320 163

From (Grzyb, 1998).

The review identified the need for better accountability arrangements and budget and performance management in both the centres.

Current NHT funding for the services may not continue and alternative sources of funding for the SCC and ACN have been suggested, including corporate sponsorship and local government partnerships.

Research together with extensive discussions with stakeholders while undertaking the review has lead to a number of recommendations for the Swan-Avon ICM. The extensive numbers of these reflect the complex operating environment for integrated catchment management in the Swan-Avon.

The recommendations have been designed to further develop the SCC and ACN and their parent bodies, the SWG and the AWG in their role as critical interfaces in the government and community partnership on integrated catchment management in the Swan-Avon.

Further refinement and focus of these significant groups and their supporting structures and processes will ensure that the desired biophysical, social and economic outcomes of their work can in fact come to fruition.

CURRENT SITUATION

Because of the review, several specific initiatives have been pursued. Others that have been supported by the review have also progressed. The Commission has produced a statement of its intentions with the outcomes of the review most of which are in various stages of implementation.

A framework for integrated natural resources management has been developed to draft form and was close to being formally agreed to by Chief Executives at the time of writing. The framework has the purpose of articulating the principles for government to engage with community groups who deal with natural resource management at the regional level, and to recognise their strategies, in order to guide both the agencies and the community. It will also provide the framework for coordination and integration of the approach to natural resource management by the four key agencies.

A draft generic partnership agreement has been developed to achieve coordinated catchment management, expressly for partnerships between regional groups and the State government agencies. The agreement commits provision of Government support, leadership and coordination of Government involvement, while the regional group commits to rationalising, linking and coordinating the inputs of all the relevant community groups in the subject area.

A survey and analysis of community attitudes to the effectiveness and operation of the catchment centres was being commissioned at the time of writing. The preliminary results are expected to be available by the end of September 1999.

Responsibility for the administration of the Swan Catchment Centre has been passed from Head Office control to inclusion into the regional structure within the Water and Rivers Commission, primarily to provide closer links with the on-ground activities of the Commission rather than integrating only at the policy level.

The arrangements between the Commission and Agriculture WA for funding support for the Avon Catchment Network have been clarified and put on a basis consistent with lead agency concepts.

The Commission has developed its approach to strategic planning and expects to have a first-cut strategic plan by the end of 1999.

REFLECTIONS

The proposal to undertake the review created a relatively high degree of nervousness with the community people associated with the two working groups and to some lesser degree with the staff in the catchment centres. The review was perceived as a threat in terms of potentially rationalising the arrangements and involvement of the Water and Rivers Commission in catchment management, with the possible withdrawal of support for the catchment centres.

In reflecting on the situation with the catchment centres now, the need for individuals to be provided with time and tools to assist them to adapt and adjust to changing circumstances and paradigms has been proven. Stakeholders who had violent objections to suggestions of change from the evaluation report have had time to consider the substance of these and to find a place for various improvements in their approach and style.

Through the course of the review, relationships between community leaders and senior Commission staff were measurably improved as it became clearer that there was no sinister intent, and the process was allowing their involvement and ensuring that all the relevant issues were brought into focus.

The process of consultation involved in preparing the report and finalising the recommendations was instrumental in achieving this outcome.

As noted in the EVALUATION MODEL section, the review resulted in partial implementation of a desirable change management process within the complexity of the relationships between the key participants.

¹ The Swan Catchment Council was originally formed as the Swan Working Group and changed its name in 1998.

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