Practice Change Research

Milestone report for the Goulburn Broken Catchment Management Authority

A new framework to investigate how organisational relationships support natural resource policy implementation:

A case study of irrigation policy in the Shepparton Irrigation Region

December 2008

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Executive Summary

In Victoria, responsibility for developing and implementing natural resource policy is often shared among organisations. When responsibilities are shared, a web of dependencies is created among the organisations which need to be managed by each organisation if they are to fulfil their individual responsibilities (Kaine and Keeble 2007). This suggests that the management of relationships between organisations has a fundamental bearing on whether natural resource policy will be implemented successfully.

We developed the Relationship Choice Framework (RCF) by adapting Hunter's (2004) approach for outsourcing to reveal how relationships between organisations can be managed to support the implementation of natural resource policy. Using the RCF we can evaluate relationships between organisations from three dimensions: governance, strategy and workforce management. Each relationship dimension has characteristics that can be used to choose the most appropriate management responses for a given relationship.

To test the usefulness of the RCF we undertook a case study of the relationship between the Goulburn Broken Catchment Management Authority (GB CMA) and the Department of Sustainability and Environment's Sustainable Irrigation Program (DSE SIP) for irrigation policy in the Shepparton Irrigation Region. The case study findings are the focus of this report.

Summary of case study findings

The case study findings about the DSE SIP and GB CMA relationship are outlined and summarised in Table 1. We also outline our conclusions about the merits of the RCF and its usability beyond this project.

Dimension 1: Governance

We predicted that bilateral governance would best support the GB CMA and DSE SIP to implement irrigation policy together. Bilateral governance provided both organisations with the flexibility to make the necessary adjustments to transactions when required. Flexibility was considered necessary for the transactions that were uncertain at the outset. For the transactions that were customised like the development of irrigation development guidelines an arrangement that acknowledged the inter-dependencies between organisations provided

security against sunk costs and opportunism. Whilst the recurrent transactions like managing salinity credits (customised) and community engagement processes (non-specific) were predicted to fit within unified and market governance, we predicted bilateral governance would accommodate these transactions appropriately.

We confirmed bilateral governance was established between DSE SIP and the GB CMA. Characteristics of bilateral governance included: elaborate long-term contracts, an emphasis on regular interactions, acknowledgement of their inter-dependencies and contract flexibility in response to uncertainty. Whilst bilateral governance appeared suitable for transactions that could fit within market or unified governance, the organisations could consider if arrangements for these transactions could be adjusted to minimise administration costs.

Dimension 2: Strategy

Analysis of the strategic dimension of the relationship between DSE SIP and the GB CMA highlighted they shared activities that were either core or essential to create public value. For example implementation of the land and water management program is a core activity and high strategic priority for both organisations. Both organisations were exposed to strategic risks because they shared activities that were critical to their creation of public value. An example of a strategic risk is that access to the upstream (Minister) and downstream customers (landholders, community) which were shared by the organisations and therefore direct access was restricted. Customer intelligence is critical to their survival, thus management responses that transferred intelligence about each customer was essential. We predicted management responses would be established to protect both organisations interests.

Analysis of the relationship confirmed management responses were present to address the strategic risks of sharing core and essential activities. These responses included joint strategic planning, sharing critical information about customers through committees, and representing each others interests in public forums. These responses foster a strong interrelationship between the organisations and support them to align their strategic objectives to create public value for irrigation policy. One challenge organisations need to continue to manage is staff turn over in partner organisations. Because they rely on their specialist competencies to continue to create value, management responses between organisations to support staff retention are a priority.

Dimension 3: Workforce management

Analysis of the workforce management dimension revealed that the workforce of DSE SIP and the GB CMA consisted of technically skilled staff with specialist knowledge that was not easily substituted. Because staff competencies were not easily substituted and were a primary input to creating public value, we predicted the human resource management style for staff would be soft in style.

We confirmed the human resource management style used for staff in both organisations was soft in style. Evidence the soft style was present included long-term contracts for staff, involvement of staff in direction setting and decision-making, and opportunities were provided to staff for training and development. Also, a number of management responses were established that enabled staff from both organisations to work together, share intelligence and inform each others priorities and programs. We concluded that these management responses encouraged staff performance and fostered strong interrelationships between the organisations. The annual funding cycle and thus short term contracts for some staff reflects a hard style approach and may present challenges for retaining them.

Merits of the RCF

In our view the analysis of the relationship between DSE SIP and the GB CMA has proved useful for a number of reasons. We were able to predict the appropriate management responses for this relationship, which indicates the RCF shows promise as a tool to describe the relationship between organisations in a systematic and integrated manner.

The case study analysis provided documentation that critically characterises the strategic issues associated with organisations implementing natural resource policy together. The strategic dimension highlighted how tensions could arise between organisations as a result of their different responsibilities, and the importance of management responses that encourage the realignment of priorities when resolving differences over operational activities. The characterisation provides the rationale for practical management responses that constitute a partnership approach to the implementation of natural resource policy, at least in the case of irrigation policy in the SIR.

The case study findings demonstrated the usefulness of collecting this information. Data about the relationship dimensions could support a logically sound justification to stakeholders in the

authorising environment about how a partnership approach is critical to success in this instance.   The analysis also drew attention to the crucial role of staff in the creation of value of both organisations and the inter-dependencies of organisations on their respective specialists.

The analysis also revealed that the successful management of relationships between organisations jointly involved in implementing natural resource policy requires efforts that include the strategic and human resource dimensions of organisational relationships as well as the governance dimension. Hence, the analysis illustrated that much of the effort that goes into managing relationships is often not apparent in documents such as contracts. As argued by Hunter (2004) consideration of all three dimensions provides a fuller, richer and more accurate account of what the successful management of relationships between organisations can involve.

These considerations do support the proposition that the management of relationships between organisations has a crucial bearing on whether natural resource policy will be successfully implemented. The results presented here are promising and indicate that further investigation of the RCF is warranted.

Table 1 *Summary of DSE SIP and GB CMA relationship dimensions for irrigation policy for SIR*

DIMENSION	Strengths of management responses for the relationship	Examples of options to strengthen management responses
1. Governance *Bilateral arrangement*	❖ *Flexible arrangements for uncertain transactions (adapted in light of new information)* ❖ *Long term commitment to relationship acknowledged (important for customised transactions)* ❖ *Relationship between them is focus – encourage partnership approach/trust*	*Non specific transactions like reporting may not require same level of administration. Could consider whether market governance characteristics offers cost efficiencies to management these transactions.*
2. Strategy *Strategic risks high as share core and essential activities.*	❖ *Systems (planning) to align activities/priorities- planning* ❖ *Structures to transfer customer intelligence – committees, forums* ❖ *Representing each others interests – alignment of objectives* ❖ *Sharing staff*	*To protect the creation of value management responses to manage risk of staff turn over in partner organisation. staff e.g. staff managing salinity credits*
3. Workforce management *Human resource management style: Soft.* *Staff are specialists that underpin creation of public value*	❖ *Long term contracts for staff where possible* ❖ *Involved staff in direction setting & decision making* ❖ *Staff offered training & development* ❖ *Soft style extends to external staff e.g. mentor new staff in partner organisation*	*Annual funding cycle reflects hard style which may create challenges for staff retention*

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Introduction

In Victoria, responsibility for developing and implementing natural resource policy is often shared among organisations. When responsibilities are shared, a web of dependencies is created among the organisations which need to be managed by each organisation if they are to fulfil their individual responsibilities (Kaine and Keeble 2007). This suggests that the management of relationships between organisations has a fundamental bearing on whether natural resource policy will be implemented successfully.

Because we assumed the management of relationships had a fundamental bearing on policy implementation, we believed it was important to develop an approach to investigate this hypothesis. We developed the Relationship Choice Framework (RCF) by adapting Hunter's (2004) approach to outsourcing[1] to reveal how relationships between organisations can be managed to best support the implementation of natural resource policy. Hunter (2004) argued that the success of outsourcing depended on three organisational dimensions; governance, strategy and workforce management. These three dimensions are analysed using the RCF to predict potential sources of tension between organisations that implement natural resource policy together. Given the characteristics of the relationship dimensions, we then proposed management responses that would best support implementation of natural resource policy for a given relationship.

To test the usefulness of the RCF, we undertook a case study of the relationship between the Goulburn Broken Catchment Management Authority (GB CMA) and the Department of Sustainability and Environment's Sustainable Irrigation Program (DSE SIP) for irrigation policy in the Shepparton Irrigation Region (SIR). This relationship was considered by both organisations as a good example of cooperation for implementing of natural resource policy (GB CMA 2008, pers comms).

We used the RCF to analyse and predict the relationship management responses that would best support DSE SIP and the GB CMA to implement irrigation policy together. The predicted management responses were then compared to the management responses already established to manage their relationship. This comparison enabled us to consider our research objectives:

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[1] Outsourcing occurs when an organisation decides to contract another party to provide and undertake activities previously undertaken within the organisation (Hunter 2004 p 1).

1. Does the management of relationships between organisations have a fundamental bearing on whether natural resource policy will be successfully implemented?

2. Therefore is further development of the RCF warranted i.e. could it be used to provide useful insights about how relationships between organisations could be managed to support policy implementation.

The case study findings are the focus of this report.

In the first section of the report we introduce the RCF and describe its theoretical underpinnings. We then outline our reasons for choosing a case study and the methods we used. Next, we provide the background to the case study and apply the RCF to analyse the dimensions of the relationship between DSE SIP and the GB CMA. We outline the RCF predictions and findings about the relationship dimensions. Finally, we describe the results of the comparisons which provide the basis for a discussion of the merits of the RCF. This discussion includes recommendations for future research directions.

This project was funded by the GB CMA as part of the National Action Plan for Salinity and Water Quality (NAP). This study contributed to the NAP priority of:

> *"Supporting partnerships between key stakeholders to meet sustainable objectives and increase the capacity of natural resource managers to make well informed decisions".*

(DSE 2005, 3.22)

Relationship Choices for Policy Implementation

Purpose of this section

In this section we describe the three dimensions of the Relationship Choice Framework. The three dimensions of organisational relationships we consider critical, governance, strategy, and workforce management, are described. The description includes an explanation of the sources of tension and consequent risks associated with each dimension; identification of management responses that can be taken to alleviate these tensions and reduce the risks; and identification of the characteristics that are used to predict when different management responses should be employed.

Relationship choices for policy implementation

Managers in organisations responsible for policy implementation develop ways, often intuitively, of anticipating and managing relationships with other organisations when they are required to work together. Because organisations are often required to work together we believed it would be useful to develop a systematic approach for identifying the kinds of tensions that can arise between organisations, the conditions under which those tensions are likely to arise, and how they may be managed, for policy managers.

Kaine and Keeble (2007) suggested that the way responsibilities for implementing natural resource policy are shared between organisations is similar, in principle, to outsourcing. They then argued that Hunter's (2004) multi-disciplinary approach to investigate and assess opportunities for outsourcing could be adapted to investigate how organisations may need to manage their relationships when they had to implement policy together. The attractiveness of Hunter's (2004) approach lay in his finding that three different dimensions of relationships critically influenced the success of outsourcing. It appeared these same three dimensions were likely to critically influence the success of relationships established between organisations to implement policy.

For this project we adapted Hunter's (2004) three relationship dimensions to identify key characteristics that may be used to predict management responses that will best support organisations who implement policy together. We have illustrated the RCF dimensions, characteristics and management responses in Figure 1.

Figure 1 Outline of the RCF dimensions and corresponding management responses

Relationship Dimensions

1. GOVERNANCE

Diagnose transaction characteristics:
Frequency:
☐ recurrent   ☐ occasional
Investment:
☐ non-specific   ☐ mixed   ☐ customised
Uncertainty:
☐ high   ☐ low

2. STRATEGY

Diagnose if activity characteristics shared are:
  ☐ core (high risk)
  ☐ essential (high risk)
  ☐ non-core (low risk)

3. WORKFORCE MANAGEMENT

Diagnose staff competencies & activity type:
Competencies:
☐ high   ☐ low
Activities
☐ routine   ☐ customised

MANAGEMENT RESPONSES

Choose *appropriate* governance arrangement for transactions
☐ Market
☐ Trilateral
☐ Bilateral
☐ Unified

If strategic risks present identify management responses to manage risks
☐ Structures
☐ Systems
☐ HR practices
☐ Conflict resolution

Choose *appropriate* human resource management style for staff
☐ Hard style
☐ Soft style

Dimension one: Governance

Here we have used the term governance to describe the arrangements between two organisations about:

1. what transactions occur between them; and

2. the rules that guide the way they behave towards each other in the exchange of transactions.

A transaction is an exchange of goods or services that occur between two organisations. For example, DSE SIP provided financial resources to the GB CMA in exchange for the GB CMA assisting landholders in the SIR to undertake whole farm plans. The whole farm plan is the good that is produced from the transaction.

We have used Williamson's (1996) transaction cost theory to identify how transaction characteristics differ. Once identified, transaction characteristics can guide the selection of governance arrangements that will best facilitate the exchange of transactions between organisations.

Transaction characteristics

Williamson (1996) showed transactions can be classified using three characteristics:

1. how customised the organisation's investment is to produce a transaction;

2. how frequently a transaction occurs; and

3. the level of uncertainty associated with the transaction being suitable for its proposed purpose (Williamson 1996).

Investment

Consider the first transaction characteristic - investment. To perform a transaction, organisations invest their resources to produce goods and services. Investment can include staff (human) and plant or equipment (physical). Using the whole farm plan example introduced earlier, the GB CMA invested in staff who had technical knowledge to develop plans with landholders. The GB CMA also provided financial incentives to landholders to encourage

them to undertake the plan. To achieve the agreed transaction for DSE SIP - whole farm plans, the GB CMA invested in staff and financial incentives.

Naturally these investments create a cost for the performing organisation, and the game is to keep these costs to a minimum! Williamson (1979) believed what determines how costly a transaction is depends on whether the investments organisations make to perform a transaction can be used for other transactions. He classified investments for transactions as non-specific, mixed and customised.

A non-specific investment for a transaction is considered cost effective, because the investment can be used for other transactions. For example staff that approved whole farm plans also undertook field days with landholders. Investment in staff could be transferred in this instance, thus it was a cost effective transaction. In contrast customised investments are more costly because they are used for one transaction only. The financial incentive for whole farm plans can was paid to one landholder. Once an incentive was paid to the landholder it could not be used for another transaction.

Customised investments are risky for the organisation performing the transaction because there is a greater potential loss should the transaction not be completed (i.e. a sunk cost). Examples of transactions that have been classified are in Table 2.

Frequency

The second transaction characteristic is the frequency with which an organisation undertakes the transaction. There are two types of frequencies occasional or recurrent (Williamson 1996). We proposed for natural resource policy transactions that occasional occur every 2-5 years and recurrent occur at least annually. To illustrate, river water quality is measured monthly and was classified as a recurrent transaction, the review of land and water management plans occurs every 5 years and was classified an occasional transaction. Recurrent transactions are more considered cost effective because the resources to undertake them are used repeatedly.

Uncertainty

The third characteristic for classifying transactions is the level of uncertainty associated with the transaction's suitability for its proposed purpose. If organisations must constantly review tasks and investments required to complete a transaction, costs accrue in terms of time and resources.

For example when a policy to reconfigure irrigation systems was introduced, organisations had to meet regularly to determine how the transaction could be implemented. Thus the more uncertain a transaction, the more likely costs will be incurred Williamson (1979, 1996).

In Table 2 you can see how transactions can be classified using the three transaction characteristics.

Table 2 Classification of transactions with policy examples

		INVESTMENT CHARACTERISTICS		
		NON SPECIFIC **all units are the same**	**MIXED** **Some tailoring for a given situation**	**CUSTOMISED** **Tailored specifically for a given situation**
FREQUENCY CHARACTERISTICS	**OCCASIONAL**	Purchasing standard equipment *Policy example*: Standard procedures for multi-year reporting to investors on agreed activities (format standardised)	Purchasing customised equipment *Policy example:* Development of a regional land and water management plan (plan format is standardised but the plan is customised for a geographic location)	Constructing a plant *Policy example:* Advice on the development of irrigation development guidelines (new policy customised for specific group)
	RECURRENT	Purchasing standard material *Policy example:* Monthly water quality monitoring in a river (monitoring indicators are standardised)	Purchasing customised material *Policy example:* Field days to communicate best practice to landholders (the process for field days is standardised, the content may be customised to suit landholder needs)	Site specific transfer of intermediate product across successive stages *Policy example:* Management of salinity impacts for a region-salinity credits (specialised knowledge for specific issue)

Adapted from Williamson (1979)

Types of governance

Governance is the arrangement between two organisations that guides interactions between them. Governance includes rules for the terms of engagement (contractual arrangements) such as how transactions will occur between the organisations, the tenure of the relationship (short or long term), and the management of disputes between them. There are four types of governance market, trilateral, bilateral; and unified (Williamson 1979).

<u>Market governance</u> involves a short-term exchange between organisations; the organisations remain independent of each other and disputes are dealt with by reference to third parties.

<u>Trilateral governance</u> is similar to market governance because it is short-term and disputes are dealt with by a third party, however organisations are semi-dependent for an agreed time.

<u>Bilateral governance</u> involves long-term exchanges, where organisations acknowledge their interdependencies, and the responsibility for dispute resolution lies more with the organisations involved.

<u>Unified governance</u> involves undertaking transactions entirely within an organisation. This is the most flexible arrangement that can account for transaction adjustments, particularly as disputes are dealt with in house (minimising negotiation costs).

The four governance types and the types of transactions they suit are summarised in Table 3.

Table 3 Types of governance and suitability for different types of transactions

Governance Arrangement	Governance Characteristics	Transaction characteristics
Market Governance e.g. share market	- Market is the institutional framework for trading between buyers and sellers - Market price is the signal of costs and benefits of a transaction - Buyers and sellers act independently therefore a relationship between the organisations is unnecessary - Market provides a legal framework for protection against opportunism and disputes - Bureaucratic costs are minimal	Non specific transactions that are recurrent *Benefits:* Promotes efficient low transaction cost exchanges
Trilateral Governance e.g. medium-term contracting, reciprocal trading, franchising	- An agreed contract between two organisations for a defined period of time - Features a third party to regulate the relationship (arbitration) - Relationship is semi-dependent, as a partner is selected & acknowledged - Bureaucratic costs moderate	Occasional transactions that have mixed-customised properties *Benefits:* Contracts can be adapted in unpredictable situations (tolerance for misalignments) promotes flexibility to adjust transactions
Bilateral Governance e.g. Service level agreement, memorandum of understanding	- Long term contract - Organisations are equally dependent on each other, this is acknowledged - The relationship is critical to achieving the transaction - Contract guarantees greater co-operation between organisations and protection from risk of opportunism with customised investments - Agreement for transactions is flexible to accommodate uncertain transactions - Exchange costs are high due to administration of the relationship	Recurring transactions that are mixed *Benefits:* Promotes flexibility, protects against risk (sunk costs, opportunism) for uncertain customised transactions
Unified Governance e.g. intra-organisation transaction	- Vertical integration of the transaction, removed from the market and produced by a group within the organisation - saves costly contract adjustments - Disputes dealt with in house	Recurring transactions that are highly customised *Benefits* Most flexible form of governance which is important when the transaction is unpredictable and highly customised. Especially when threat of opportunism is high

Adapted from Williamson (1979)

Types of transactions and governance

Each type of governance facilitates different types of transactions. Generally, when transactions are predictable and investment is non specific, market and trilateral governance can facilitate low cost exchanges. In contrast, bilateral and unified governance better support regular exchanges for customised and uncertain transactions (Williamson 1979) because they offer security in commitment and flexibility to adapt to change. This minimises negotiation costs. The different types of governance are matched with different types of transaction characteristics in Table 4.

There are some simple rules that guide the choice of governance for transactions. When organisations customise their investment to perform a transaction there is strong pressure to complete the transaction because the costs incurred cannot be offset by using the investment for other transactions. In these circumstances, governance that acknowledges this dependency and offers protection by guaranteeing the commitment of the organisations to the transaction are most desirable. Hence, trilateral and bilateral governance are the preferred types of governance in these circumstances.

Uncertain transactions may require organisations to constantly review and adjust their investments to complete a transaction as new information comes to light. Hence, flexible governance that supports adjustments is desirable when transactions are uncertain. The relationship between the organisations becomes more important in these instances. In these circumstances it is best to select bilateral or unified governance.

Because investment for non-specific transactions is not customised and the transaction characteristics are certain, a relationship between the organisations is unnecessary to perform the transaction, a supplier could be anyone at the right price. For these transactions market governance is best. Market governance has relatively low transaction costs because the organisations do not need to enter negotiations to make adjustments to a transaction.

We believe Williamson's (1991) approach demonstrates the relative merits of classifying transactions to guide governance selection for organisations that implement natural resource policy together. Williamson's classifications form the first dimension of the RCF and are used to classify governance selection for natural resource policy transactions for a given situation.

Table 4 Types of governance and types of transactions

FREQUENCY CHARACTERISTICS how regularly the transaction is repeated		INVESTMENT CHARACTERISTICS Extent organisations invest to make the transaction possible		
		NON SPECIFIC all units are the same	**MIXED** Some tailoring for a given situation	**CUSTOMISED** Tailored specifically for a given situation
OCCASIONAL		**MARKET GOVERNANCE** Purchasing standard equipment *Policy example*: Procedures for multi-year reporting	**TRILATERAL** Purchasing customised equipment *Policy example:* Development of a regional land and water management plan	**GOVERNANCE** Constructing a plant *Policy example:* Advice on the development of irrigation development guidelines
RECURRENT		Purchasing standard material *Policy example:* Monthly water quality monitoring in a river	**BILATERAL GOVERNANCE** Purchasing customised material *Policy example:* Field days to communicate best practice to landholders	**UNIFIED GOVERNANCE** Site specific transfer of intermediate product across successive stages *Policy example:* Management of salinity impacts for a region-salinity credits

Adapted from Williamson (1979)

Dimension two: strategy

When organisations are jointly responsible for implementing policy, they may be required to share core activities in the sense that these activities are undertaken either jointly with, or entirely by, another organisation. In these circumstances, organisations must identify the type of risks that come with sharing core activities and formulate management responses to manage these risks (Kaine and Keeble 2007). Following Hunter (2004) we used corporate strategy theory (Porter 1985) to identify the organisational activities that are critical to the creation of value, the risks associated with sharing such activities, and the management responses to manage those risks.

Creating value for customers

The primary purpose of an organisation is to create value for its customers. Organisations use organisational strategy to establish how they create value for their customers. Deciding on a strategy involves matching the organisations internal capabilities (resources, assets, funds, competencies) with their external environment (e.g. customer needs, competitors, suppliers, substitutes). The resulting strategy forms a set of principles that direct the way an organisation's activities, structures, processes and resources are configured to maximise the creation of value for customers (Porter 1985).

Organisations in the public sector also create value for customers, however Alford (2004) and Stewart (2004) argued there is a complexity to government that imposes unique constraints on organisations in the public sector. First, they argue organisations in the public sector must balance the needs of two qualitatively different customers. One is the upstream customer which is the government who represents the public and provides the authority, direction and resources to the public organisation. Government is whom the public organisation creates value for by contributing to a public outcome. Examples of public outcomes are healthier rivers and waterways, road infrastructure that meets community needs, and ensuring the health and well being of citizens. The other public customer is the downstream customer, which is the group within the public that activities of the organisation directly influence to achieve the public outcome (Moore 2003, 1995; Johnson 2007). For example, landholders are encouraged to minimise nutrients leaving their farms and entering waterways. The landholders are the client the organisation aims to influence in this instance.

As another example, hospitals create value for government by contributing to the public outcome of a healthier, happier and more productive community by treating patients. The value the patient receives is improved personal health resulting from treatment. What is different here is organisations in the public sector must create value for both upstream and downstream customers to be successful, which can differ.

The argument made by Alford (2004) and Stewart (2004) is that because government is the principal source of income for public sector organisations, they have a major say in how public sector organisations can create value (Moore 1995). Therefore they direct the public sector value, and how resources are allocated to this value. Public sector organisations rely on government to legitimise their value whereas private sector organisations rely on the customer. Government can impose conditions on how organisations configure their resources, structures and processes. This limits the strategic choices organisations in the public sector may make.

The way government directs organisations to share responsibilities is an example of how government can impose conditions on how organisations configure their structures to achieve public value. Governments often require organisations in the public sector to share activities that are critical to them achieving a public value and so can be considered core activities (Kaine & Keeble 2007). There are risks associated with sharing core activities (Porter 1985) thus identifying the type of activities organisations share is important.

Types of value activities

Organisations achieve their strategic objectives by focusing their efforts on activities that are critical to the creation of value. According to Hunter (2004) the activities that are most critical to the creation of value are those which are valuable, rare, or difficult to imitate and provide the basis for the creation of value for the customer.

Porter (1985) classifies activities into three categories: core, essential and non-core. Core activities are the main priority for organisations because they are the source of the value the organisation creates for customers (Porter 1996). For example investing in doctors to treat patients in a hospital is a core activity. Essential activities are those activities which are an indispensable input to core activities thus they fundamentally support the creation of value. In this example an essential activity is a constant electricity supply to the hospital to maintain care at all time for patients. Essential activities should be given the same priority as core activities (Hitt *etal* 1996; Hunter 2004) because without them core activities would not be achieved. An

example of a non core activity is the supply of stationary for doctors to write prescriptions for patients. Non-core activities should be accorded secondary priority because they are not critical to the organisation's survival.

Consequently, in the interests of ensuring they can continue to create value for customers, organisations should only share or outsource activities that are not core or essential with other organisations, at least in principle (Hunter 2004). To share or outsource core or essential activities exposes organisations to strategic risks such as loss of competitive advantage, loss of internal capability, loss of access to market intelligence or loss of control over the consistency, quality and timeliness of products and services delivered by the organisation (Hunter 2004; Kaine and Keeble 2007). Hence, Porter (1985) recommends only sharing activities when it benefits the organisation's competitive advantage and the benefits outweigh the costs which include the cost of coordination, the cost of compromise and the cost of inflexibility.

Another risk associated with sharing core and essential activities concerns environmental and customer intelligence. For organisations to continue to create value they must constantly review their customer needs and the environmental conditions in which they operate (Wishart *etal* 1996). Hence access to intelligence about customer preferences and environmental factors is a critical input to an organisation's continued success. Especially if these factors change what is a core activity. If sharing core activities results in the organisation having restricted access to intelligence and they cannot respond to customer preferences or environmental intelligence, they are at risk. An example of environmental intelligence is substitute products or services or new competitors entering the market. In each of these instances, the organisation may end up producing an irrelevant product.

The degree of risk associated with having limited contact with customers and the environment depends on the predictability of change in the environment and the frequency which significant changes occur. In a stable environment change is infrequent and predictable. Consequently, organisations can anticipate likely changes and adjust activities accordingly. The risk associated with having limited information about changes in the environment is therefore likely to be relatively low when the environment is stable because managers can anticipate what adjustments are required.

In a dynamic environment change is more frequent and unpredictable. Consequently organisations cannot anticipate likely changes and adjust accordingly in a timely manner. The

risk associated with limited information about changes is likely to be high when the environment is dynamic because managers cannot anticipate what adjustments are required. Thus the more dynamic the environment the more crucial is the need to access environmental intelligence, including the preferences of customers.

When the environment is dynamic, and an organisation's contact with its customers only occurs through another organisation, systems for the rapid and comprehensive transfer of environmental intelligence are needed. In addition, organisations may also need to incorporate conditions in agreements that allow them to adjust activities to reflect changes in the environment in order that they can continue to create value for their customers.

These observations suggest that when organisations in the public sector are compelled to share or outsource core or essential activities then there are risks to all the organisations involved, and that these risks need to be managed. Using the RCF we classify activities and assess the level of risk associated with shared activities. For each organisation we determine the level of consistency in their strategic objectives and their priorities for the shared activities (Porter 1985). We also assess how stable the environment is and whether access to customer intelligence is restricted. In Table 5 we have classified the risks for shared activities and included examples.

Table 5 Strategic classification of organisational activities, risk and management responses

Activities shared between organisations	Level of risk associated with sharing core activities	Possible management responses
Core	HIGH hospitals doctors to care for patients	YES e.g. structures, systems, HR, conflict resolution
Essential	HIGH Constant supply of electricity to the hospital	YES Systems Conflict resolution
Non-core	LOW Stationary for doctors to write prescriptions	NOT ESSENTIAL Contracting

Adapted from Porter 1985

Management responses to manage risk

Porter (1985) suggested that organisations can choose among four categories of management responses to manage the risks when core or essential activities are shared (see Table 6). The four categories are:

1. management structures;

2. management systems;

3. human resource management; and

4. conflict management.

The purpose of these responses is to reinforce coordination and linkages between organisations to encourage the transfer of intelligence and alignment of priorities, therefore encouraging the achievement of core and essential activities that are shared.

First, management structures can be established to encourage collaboration and coordination between organisations. Management structures are temporary or permanent organisational entities that cut across organisational boundaries (Porter 1985). Examples include establishing inter-divisional taskforces to encourage intelligence sharing, committees focused on customer preferences and product information, and centralising groups responsible for core activities. Structures such as these are useful in situations when the environment is dynamic and intelligence needs regular review to adjust core and essential activities.

Second, establishing management systems that link functions across organisations can improve the transfer of information. For example joint strategic planning, budgeting and systems to coordinate delivery. Systems like joint planning also assist organisations to align their strategic priorities and support product quality. Systems such as these would be helpful in situations where core or essential activities are shared in a dynamic environment and quality and timeliness of products and services is critical to creating value.

Third, Porter (1985) recommends human resource management responses to facilitate cooperation between organisations that share activities. Examples include staff rotations between organisations to promote sharing knowledge among staff across organisations, staff education about the interrelationships between the organisations, and cross unit management

forums. Human resource management responses such as these could be helpful in reducing the risk of loosing capability in situations where core or essential activities are shared in a dynamic environment, particularly if there is high staff turnover.

Finally, establishing mechanisms for resolving conflict between organisations is essential in a dynamic environment (Porter 1985). Otherwise activities may be stalled resulting in losses. An example is senior support to resolve disputes.

In this section we established there are risks for organisations that share core and essential activities. Often public sector organisations are required to share core and essential activities and in these instances management responses to manage these risks are essential. For the RCF we use Porter's (1985) activity characteristics to classify activities that are shared for a given situation and determine the levels of risk and predict the appropriate management responses to manage identified risks.

Table 6 Management responses to manage risks when sharing core and essential activities

MANAGEMENT RESPONSES
Structures
Inter–divisional taskforces/focus committees
Group business units significant to competitive advantage
Inter-organisational committees with a focus on client & product information
Group executive chief strategic role for area to foster inter-relationships
Systems
Joint strategic planning
Coordinate management systems with cross business unit dimension like planning, control, budgeting
Coordinate strategy delivery (activities)
Appoint relationship champions to manage interrelationships
Communication strategy
Temporary taskforces to transfer information
HR Practices
Staff rotation to share knowledge and develop skill acquisition
Cross unit management forums & meetings
Promotion from within
Education on interrelationship concepts
Collective training across organisations
Conflict resolution
Unifying theme, senior support

Adapted from Porter 1985

Dimension three: workforce management

An organisation's workforce is fundamental to their success because staff turn organisational objectives into action (Hunter 2004). Hence choosing an effective workforce management style is fundamental to an organisation's success. When organisations share activities they also share workforces or staff. How staff are managed affects their performance (Legge 2005), thus workforce management styles can affect organisational performance. In this section we use Legge's (2005) human resource theory to reveal how workforce management styles can affect the performance of staff and their ability to achieve their objectives.

Human resource management styles

To begin with organisations have cultures. The culture of an organisation influences the choices managers make about their staff and also influences how staff respond to their managers, thereby influencing organisational performance. Barney (1986) described an organisation's culture as a complex set of values, symbols, beliefs and assumptions that define the way in which an organisation conducts its business. Organisations need to be aware of how the organisational culture informs their human resource management style and the effect this has on staff performance.

Legge (2005) described a human resource management style as a guiding set of principles which delineate the boundaries and direction of acceptable management actions in dealing with staff. Generally, the management of human resources follows one of two styles - hard or soft. Legge (2005) points out these styles are by no means mutually exclusive; in principle organisations can have a blend when this is appropriate.

If an organisation uses a hard management style there is close integration of human resource policies, systems and activities with the strategy of the organisation. In the hard style, human resources are viewed largely as a factor of production that can be rationally managed. Legge (2005) notes that the hard style treats human resources as passive with a focus on searching for labour with the appropriate skills at the right price. This style is commonly used when the tasks performed by the workforce are standardised and are routine. In these situations the workforce is usually semi-skilled or low-skilled, and these skills are easily transferred between staff or can be substituted by physical assets (e.g. automating production lines). The hard style is suitable where the workforce is considered an input rather than the source of the organisations value.

Organisations that use the hard style tend to have a cost minimisation focus towards the workforce i.e. keep staff costs as low as possible.

In contrast, an organisation that uses the soft human resource management style treats staff as valuable assets that, through their commitment, adaptability and high quality, are the source of value the organisation creates for its customers (Legge 2005). The soft style advocates participation, motivation and leadership which are believed to result in human development and improved performance. Typically, a workforce in this situation has specialised knowledge and is highly skilled. Workforces that rely on knowledge consist of staff that generate knowledge as an input, a medium and an output of their work (Legge 2005; Newell 2002), and this knowledge is essential to the organisation's success and creation of value. Legge (2005) described knowledge workers as esoteric, non-substitutable, global and analytical.

Highly skilled workforces have expectations about the way in which they should be treated and management styles that do not satisfy such expectations can have damaging effects on staff morale and performance. Popularly termed knowledge workers, O'Donohue *et al* (2007) found this type of worker expects to be treated as an asset to the organisation. Drucker (1999) claimed there were four key motivations for knowledge workers including personal growth, autonomy, task achievement and high financial rewards.

Given the presence of a causal relationship between the human resource styles organisations choose for the workforce and their ability to realise their organisational objectives, organisations must choose a workforce management style that matches their workforce characteristics to ensure their human resource management is logically consistent with, and supportive of, organisational objectives (Legge 2005).

These considerations suggest that the management style that most suits a workforce can be inferred from the nature of the tasks a workforce is expected to perform and the competencies needed to complete those tasks (see Table 7). When an organisation relies on a highly skilled workforce to create value for customers the soft style is most likely to support performance. When workforce competencies are not critical to the creation of value by the organisation a hard style may be more suitable.

The choice of human resource management style has important implications for organisations that implement natural resource policy together. There is the potential for the achievement of policy objectives to be hindered by a conflict in styles when managers and staff from different

organisations attempt to work together. There may be a propensity to regard the staff of other organisations simply as suppliers of a product or service and, as a consequence, an inclination to believe the hard style of human resource management is the most appropriate style for these staff (Hunter 2004). This will put the successful implementation of policy at risk when external workforces are highly skilled and a critical source of value. In these situations there is a need to clarify the role of staff for each organisation, and to re-align management styles accordingly.

For the RCF we use workforce competencies and activity characteristics outlined in table 7 to predict the appropriate workforce management style for a given relationship.

Table 7 Classification of workforce competencies and human resource management styles

Competency Characteristics	HR management style	Management Style characteristics
• Skills require the application of knowledge and expertise that is non substitutable • Competencies are critical and specific to the organisation	Soft style (high commitment to staff because they underpin creation of value)	• Treat workforce with inclusiveness and trust • Offer job security, responsibility over design and productivity • Staff development (training and learning opportunities) • Commitment and reciprocity, staff satisfaction is important • Staff have autonomy and responsibility for their own productivity
• Skills standardised, semi to low skilled • Tasks routine, possibilities for substitution • Competencies are important but not critical to the organisation	Hard style (high commitment to financial performance in which staff are an input)	• Treat workforce as a factor of production to be rationally managed, skills at the right price • Incentives to encourage staff productivity (bonuses) • De-emphasise job security, short term contracts • Use internal labour markets

Based on Legge (2005) and O'Donohue (2007)

Case study application

Purpose of this section

In this section we introduce, describe and report on the application of the Relationship Choice Framework (RCF) in a case study. Our research objectives for the case study were to consider:

1. if the RCF worked;

2. if the analysis of relationship dimensions provided useful insights; and

3. if further development of the RCF was warranted.

The case study also provided a means of exploring our hypothesis that the management of relationships between organisations has a fundamental bearing on whether natural resource policy will be successfully developed and implemented.

To test the usefulness of the RCF, we undertook a case study of the relationship between the Goulburn Broken Catchment Management Authority (GB CMA) and the Department of Sustainability and Environment's Sustainable Irrigation Program (DSE SIP) for irrigation policy in the Shepparton Irrigation Region. We chose this relationship as our case study because it was a typical example of how organisations implement natural resource policy together in Australia (Kaine and Keeble 2007). Also both organisations considered this was a good relationship (GB CMA 2008, pers. comm.). Both organisations had implemented irrigation policy together for many years so there was ample documentation available to analyse. Finally, interview participants were available from DSE SIP and the GB CMA so it was possible to explore the relationship from the perspectives of both organisations, and so isolate similarities and differences in their perspectives.

In the next section we explain the methods we used to conduct the case study. We then describe the relationship between the GB CMA and DSE SIP with regard to implementing irrigation policy in the SIR. Next, we present the analysis of the relationship dimensions and make predictions about the management responses necessary to manage the risks associated with this relationship. We then compare these predictions to the management responses currently in place and conclude with a discussion about the merits of the RCF.

Methods

We chose to use a case study approach to explore the merits of the RCF because this method allows an intensive examination of the research problem within the richness of a real world setting and so allows the unique features of the case to be observed and fully explained (Bryman 2001).

The case study method involved the detailed analysis of documents that described the relationship as well as data collected and analysed from participant interviews. First, documents concerning irrigation policy in the SIR were analysed so that we could predict the management responses for the case study relationship. Documents analysed included organisational reports, strategy and policy documents, and irrigation program reports. These documents held relevant information about the governance, strategic and workforce management dimensions of the relationship between them and the context within which the relationship operated. Through analysis of these documents we could use the RCF to predict the management responses DSE SIP and the GB CMA might employ to cooperatively manage the risks involved in implementing irrigation policy together.

We then interviewed a key staff member from each organisation to deepen our understanding of the relationship between the organisations and identify the current management responses in place to support their relationship. Both interview participants had been directly involved in and responsible for development and implementation of irrigation policy in the SIR for more than three years.

Beyond DSE SIP and the GB CMA there are other organisations that implement irrigation policy programs and activities in the SIR. For the purposes of this case study we selected two of the primary organisations. Because this is the first trial of the RCF, we wanted to keep the case simple to observe if the dimensions and predictions were possible. This decision limited our analysis but was appropriate for the first trial of the RCF. In future trials we plan to include other organisations where appropriate.

Interviews were conducted by one of the researchers using a semi-structured approach similar to that used by Hunter (2004). The interviews were conducted over three sessions and consisted of a mix of structured questions based on the characterisations of the three relationship dimensions in the RCF and open-ended questions to assist interviewees to explore and

articulate their experiences (Grunert and Grunert 1995). We piloted the interview with a staff member from another organisation to clarify and refine questions. Some documents, such as contracts, were first mentioned by, and subsequently discussed with, participants during the interviews. Where possible, uncertainty concerning participants' recall of events or information was clarified using relevant documents.

The responses of participants were transcribed by the interviewer and the transcriptions were analysed using case and cross-case analysis (Patton 1990, Hunter 2004). We used the RCF relationship dimensions to group the responses. The participant responses to the structured questions enabled us to use the RCF to classify the governance, strategy and human resource dimensions of the relationship between the organisations, and to identify management responses that were established. The grouped responses to the open-ended questions were used to validate the characterisations of the dimensions and to verify the reasoning behind the management responses already established. The predicted management responses were compared to the actual management responses and from this analysis we drew some tentative conclusions about the merits and potential usefulness of the RCF.

Background

In this section we provide a brief outline of the institutional setting for natural resource policy to illustrate how responsibility for natural resource policy in Australia is typically shared among organisations.

The Australian system of government consists of three tiers federal, state and local. Each tier of government has responsibility for and sets and ratifies policy issues, proposals, bills and expenditure that are then actioned by appropriate government, semi-government and private organisations (Consadine 2005). This system creates overlapping responsibilities, roles and controls over resources, which requires organisations to work together to be successful in achieving policy objectives.

In Victoria, Catchment Management Authorities (CMAs) were established under the Victorian Catchment and Land Protection Act (1994) to co-ordinate the management of land and water resources for Victoria's catchment regions. CMA's also have legislative responsibilities under the Victorian Water Act (1989).

The GB CMA responsibilities for irrigation policy in the SIR are archetypal of the elaborate institutional environment within which organisations must operate as described. Responsibility for implementing irrigation policy in the SIR is shared between the GB CMA, water authorities (Goulburn-Murray Water), and government organisations including DPI and DSE, local government and the Environment Protection Authority (GB CMA 2003). The GB CMA relies on and is expected to encourage cooperation among these organisations to meet their responsibilities for irrigation policy. CMA responsibilities involve overseeing the implementation of Commonwealth and State investment in the regional natural resource programs (GB CMA 2006). To be successful in this role CMAs are required to:

> *'Promote the co-operation of persons and bodies involved in the management of land and water resources in the region in the preparation and implementation of the strategic and special area plans'*   *(CaLP Act 1994, 17).*

DSE SIP has specific responsibilities for overseeing policy development and investment (approximately $15 million per annum) to assist Victoria's six irrigation regions of which the SIR is one. The policy objective of DSE SIP is to minimise the undesirable impacts of irrigation (salinity, nutrients, biodiversity, and water losses) and support sustainable irrigation development (DSE 2005). The GB CMA receives financial resources from DSE SIP to undertake the following for the SIR:

1. **Implement regional programs** allocate state funding to programs that will enable the SIR to achieve irrigation policy objectives. Regional programs include a farm program, surface and sub-surface water management, river health and implementation program support. Responsibilities under the implementation program include maintaining relationships with several organisations as mentioned above.

2. **Community and stakeholder engagement** to determine priorities for irrigation policy in the SIR and subsequent investment, planning and implementation. Community engagement in the program participation, program planning and policy formation is considered critical to the progression of irrigation policy issues by the GB CMA and government.

3. **Contribute to policy and negotiate for key regional issues,** for example contributing to new irrigation development guidelines, and providing input to consideration of infrastructure reconfiguration. DSE SIP regularly requires policy

input from the GB CMA for the formulation, design and development of new policies and legislation.

Document Analysis

In this section we present our analysis of the relationship between DSE SIP and the GB CMA. We used the RCF to predict the management responses that would best support their implementation of irrigation policy together. The analysis was based on data contained in relevant documents.

Dimension one: governance

The implementation of irrigation policy in the SIR involved many kinds of transactions exchanged between DSE SIP and the GB CMA. Examples of our classification of some of these transactions using Williamson (1996) are presented in Table 8. Inspection of Table 8 reveals that both organisations' investments for transactions fall into all three investment types. The type of investments both organisations made was predominantly in staff with specialist knowledge. Staff investment is typically customised because staff who undertook the transactions had knowledge specific to the irrigation program. For example the staff member that managed salinity credits had knowledge that could not be easily transferred to another staff member, therefore was a customised investment. In contrast skills for reporting were standardised, most staff members could perform this type of transaction.

The transactions for the SIR irrigation program are mixed in frequency. There were transactions that occurred frequently (within 12 months) and there were also transactions that occurred occasionally. Such an example is the revision of land and water management plan which occurred every five years.

Analysis of the documentation revealed that there were some transactions that were adjusted over time because the content of the transactions was uncertain. Such an example was the transaction for designing new irrigation development guidelines. This transaction required both organisations to develop an understanding of the purpose and content of the guidelines, conduct investigations into, and reach decisions about, the planning designs and processes. These types of transactions required regular re-evaluation and adjustment until the content of the transaction became more certain. Consequently these organisations must be in regular contact to make the appropriate adjustments to such transactions.

Table 8 Classification of transactions that occur between the GB CMA and DSE SIP

		INVESTMENT CHARACTERISTICS		
		NON SPECIFIC	**MIXED**	**CUSTOMISED**
FREQUENCY CHARACTERISTICS	**OCCASIONAL**	**MARKET** Reporting on SIR outputs for a multi-year state funding initiative (e.g. Water Smart Farms)	**TRILATERAL** Development of the Shepparton Irrigation Land and Water Management Plan	**GOVERNANCE** GB CMA advised DSE on the development of irrigation development guidelines.
	RECURRENT	Process for approving whole farm plans, financial incentives Processes used for co-ordinating community engagement processes for the SIR program	**BILATERAL GOVERNANCE** Specialist advice to landholders for the surface water management program Construction of re-use systems, auto irrigation systems, & groundwater pumps on farms in the SIR	**UNIFIED GOVERNANCE** Management of salinity impacts of the SIR e.g. salinity credits for State and National requirements

Clearly, different kinds of transactions occurred between the GB CMA and the DSE SIP. However, because there was a proportion of transactions classified as uncertain both organisations needed a governance arrangement that supported regular interactions between them that provides adequate flexibility to adjust transactions. Because both organisations must make customised investments for some transactions, the governance arrangements needs to affirm their commitment to each other. This reduced the risk of opportunism and sunk costs for both organisations.

For this reason we concluded that bilateral governance would best support the GB CMA and DSE SIP to work together. Whilst Williamson's (1979) theory suggests that recurring customised transactions are better undertaken internally, because government shares the responsibilities between organisations, unified governance was not possible (undertaken internal to the organisation). A bilateral governance arrangement is the next best alternative for these transactions because both organisations must acknowledge a longer term commitment. Also the structure of the arrangement provides flexibility to adjust transactions and meet regularly to resolve differences. Thus mitigating risks associated with sharing these transactions.

Notice too that the non-specific transaction investments like reporting require market governance, i.e. the relationship is not essential to exchange this transaction. Whilst this is possible in principle, these transactions can be included within the bilateral governance rather than under a separate governance arrangements. However there may be potential for these transactions to be 'over administrated'.

If bilateral governance was established between DSE SIP and the GB CMA, we would expect to see management responses that promoted regular interaction between the organisations, flexible long-term contracts, and structures for resolving disputes between them.

Dimension two: strategy

The GB CMA performs activities for DSE SIP that were critical to their creation of public value for irrigation policy. In short, the GB CMA is responsible for implementing activities (such as education, regulation and incentive programs) to achieve the policy objectives of DSE SIP. In addition, the GB CMA provides DSE SIP with customer and community intelligence which influences the strategic priorities of DSE SIP. The GB CMA and its regional partners (e.g. DPI) have direct contact with irrigators who are the down-stream customers of DSE SIP. Given these considerations, we concluded that the GB CMA undertakes core activities for DSE SIP.

DSE SIP provides financial resources to the GB CMA to undertake the agreed activities and programs for irrigation policy in the SIR. These resources enabled the GB CMA to create value for the Victorian government by developing and implementing programs that support DSE SIP and GB CMA policy priorities for irrigation policy in the SIR. The GB CMA also ensured there was a co-ordinated and co-operative approach by those involved in the management of land and water resources broadly in the SIR.

Because core activities are undertaken by the GB CMA and partners, they retain critical intelligence about the customer and the environment; DSE's access to this critical information may be restricted. Also for example DSE SIP has primary access to the upstream customer for both organisations; the Minister for Environment and Sustainability. This meant DSE SIP played a critical role in the transmission of community needs and preferences to the Minister, therefore influenced priority setting for the investment of State funds in natural resource management. Given these considerations, we concluded that the DSE SIP also undertakes core activities for the GB CMA. We have included examples of activity classification for this relationship in Table 9.

Both DSE SIP and the GB CMA are exposed to a high level of risk because they share activities that are core to their creation of public value for irrigation. Possible risks include loss of competitive advantage, loss of internal capability, loss of market intelligence and loss of control over the consistency, quality and timeliness of products and services delivered by the partner organisation (Hunter 2004; Kaine and Keeble 2007).

Finally in addition, the environment in which the two organisations operate can be dynamic with new, complex, often inter-related, policy issues emerging from time to time in the SIR. In this environment development and implementation is not immediately straightforward and requires regular review and adaptation of activities. This meant their priorities and objectives needed to be re-evaluated regularly to ensure the activities meet customer needs (both upstream and downstream). Examples of activities that have been dynamic initially include the modernisation of irrigation infrastructure, concerns of water scarcity, and drought management and recovery. This suggests that the gathering and sharing of customer and environmental intelligence is a crucial activity for both organisations to adjust their priorities and programs and continue to create public value. This further supports our conclusion that both organisations perform core and essential activities on behalf of each other.

Because there were risks to both organisations creation of value because they shared core activities, which was further compounded by a dynamic operating environment at times, we would expect both organisations to employ management responses to manage risks. Management responses we expect to be present are joint strategic planning to support the alignment of their strategic priorities and joint business planning to ensure coordination of resourcing and activities. We also expected committees to be established to share environmental intelligence and customer preferences.

Table 9 Examples of Strategic classification of organisational activities, risk and management responses

Activities shared between organisations	Level of risk associated with sharing core activities	Possible management responses
Core	HIGH Implementation of land and water management program	YES e.g. structures, systems, HR, conflict resolution
Essential	HIGH Review of land and water management program	YES Systems Conflict resolution
Non-core	LOW Stationary supplier for reporting	NO Contracting

Adapted from Porter 1985

Dimension three: workforce management

Many of the activities undertaken for irrigation policy in the SIR require staff to have specialist knowledge. Examples include knowledge of customer and client preferences, extensive familiarity with SIR geographic and farm contexts, and expertise in policy design and development (see Table 10). Specialist skills require time to develop, are specific to a subject, customer or stakeholder, and are not easily transferable between individuals or within and between organisations. We classified the workforce for irrigation policy in the SIR as highly competent.

Because the workforce is spread across organisations, each organisation is dependent on the other to achieve their objectives. For example, DSE SIP relies on GB CMA staff with community engagement and program development skills to work with the GB community to inform programs. We established earlier that organisations are sharing core activities, and staff are the primary investment to undertake irrigation policy in the SIR, so we can assume the workforce is critical to both organisations' success. If the appropriate human resource management style is not used by either of these organisations, there are risks to workforce performance and achieving their irrigation policy objectives.

Consequently, we predicted a soft style

to human resource management would be used by both organisations. We expect then, that the GB CMA and DSE SIP would treat staff as assets and use responses to promote performance and encourage commitment to the organisation among staff. Such responses might include providing job security through long term contracts, offering opportunities for development, and involving staff in decision-making.

Table 10 Examples of staff competencies for implementing irrigation policy in the SIR

Organisation	Workforce competency characteristics that contribute to core organisational objectives
DSE SIP	• Specialist knowledge about state policy priorities and processes • Regional relationship specialists • Relationship with Minister and broader DSE
GB CMA SIR	• Community relationships and running community processes • Strategic direction setting and planning for GB • Staff informed strategies and programs, policy priorities and forums • Regional knowledge • Facilitated implementation of DSE SIP irrigation policy activities

Results

In this section we present the findings from testing the RCF predictions about the management responses that will best support the GB CMA and DSE SIP to implement irrigation policy together in the SIR. The RCF predictions were tested by conducting interviews with a key staff member from each organisation.

Dimension one: governance

In the interviews, when asked which type of governance arrangement reflected their current arrangement, both participants selected bilateral governance. The participants viewed the relationship was long term. This view was reflected in planning documents like the SIR land and water management plan which described a twenty-year commitment to implementing irrigation policy objectives in the SIR.

Both participants described speaking and meeting regularly to manage the transactions between them. A variety of structures had been established to facilitate interaction between the organisations including scheduled recurrent meetings, regular reporting, committee representation, and phone contact at least weekly.

There was an elaborate set of documents that outlined the contractual arrangements between DSE SIP and the GB CMA (see Table 11). These documents describe, in great detail, how each organisation is to behave in their interactions and the transactions and associated goods and services that were exchanged. In these documents both organisations acknowledged they were dependent on each other to meet their responsibilities. Both interview participants stated that a strong partnership between the organisations was critical to their success.

Whilst there was comprehensive and documented agreement about the content of transactions, the interview participants confirmed that their governance arrangements also provided them with the flexibility to adjust transactions when necessary. Long term planning targets and annual transactions were reviewed regularly to account for uncertainties. For example, annual whole farm plan targets were reviewed to account for seasonal demand by landholders throughout the year. Flexibility to adjust transactions was considered important by both participants, particularly for those transactions that they were more uncertain of, or required customised investment.

Table 10 Evidence of the governance arrangements between DSE SIP and GB CMA

Document Type	Description	Governance Characteristics
Documents to define roles & responsibilities	1. *Legislative arrangements CaLP act, Water Act & Murray Darling Basin Salinity Management Strategy. State roles and responsibilities for organisations outlined* 2. *Service Level Agreement (SLA) with all organisations contracted to the GB CMA to undertake irrigation policy activities which outlined roles & responsibilities. Also a Memorandum of Understanding was used for regional partners e.g. DPI* 3. *Terms of reference for GB CMA technical committees.* 4. *Partnership communication documents outlined organisations roles and encouraged a partnership approach for program implementation.*	• *Acknowledged the dependencies of both organisations.* • *Cooperation/partnerships highlighted as a key to success.* • *Roles and functions for each organisation were clearly defined* • *Detailed work plans, reporting were ratified by both organisations.* • *Many committees established including cross organisational representation to ensure specialist intelligence shared.* • *Flexibility for adapting transactions built into SLA and RCIP and annual planning.*
Planning	1. *Regional catchment strategies had 30 year timeframes: outlined justification for investment on basis of natural resource policy objectives including irrigation. For state and federal governments, encompassed all stakeholders.* 2. *Land and Water Management Plans outlined specific targets and programs to achieve policy objectives (every 5 years).* 3. *Annual planning - Regional Catchment Investment Planning. Details programs and specific outputs for programs, projects and resources. These outputs could be adjusted on a quarterly basis.*	

Both participants believed the degree of trust that was present between staff between the organisations was a key factor that supported this flexibility.

The long term nature of the relationship, acknowledgement of dependencies, the emphasis on regular interactions and flexibility to adjust transactions are indicative of a bilateral governance arrangement. We concluded governance between DSE SIP and the GB CMA was bilateral. Transactions that suited other governance types were accounted for within the bilateral governance, however consideration could be given to ensuring these transactions were not over administrated as a result.

Dimension two: strategy

The interview participants confirmed that their organisations shared activities with each other that were considered critical to the creation of public value for irrigation policy. They also acknowledged that, as a result, they were dependent on each other to be successful. Interview participants identified a range of management responses they used to manage the risks associated with sharing core and essential activities (see Table 12). For example, to ensure the alignment of strategic priorities management responses such as joint planning and budgeting, detailed reporting and funding structures had been created. In addition, relationship managers were appointed in both organisations to foster strong interrelationships between the organisations which assisted the transfer of environmental and customer intelligence. These systems and structures reinforced the coordination of activities between the organisations and provided them the opportunity to align their strategic objectives.

Structures were established to support intelligence transfer including inter-organisation committees like the DSE SIP quarterly meeting and technical committees for regional programs. The interview participants indicated that these structures enabled both organisations to monitor intelligence and identify and respond to any significant changes when they arose.

One challenge organisations need to continue to manage is staff turn over in partner organisations that undertake core activities. Because they rely on their specialist competencies to continue to create value, management responses between organisations to support staff retention and intelligence sharing are a priority.

We concluded that both organisations had established a number of management responses to

manage the risks associated with sharing core and essential activities. These management responses were designed to foster a strong interrelationship and support the creation of public value by both organisations and were consistent with the responses advocated by Porter (1985) and others.

Table 12 Management responses used by DSE and GB CMA for shared activities

RESPONSE TYPE	DSE SIP & GB CMA MANAGEMENT RESPONSES
Structure	• *DSE lead quarterly meeting to discuss program progress and policy updates (informed activities and strategic objectives)* • *GB CMA had technical committees (focused on activities) to support joint decision making, communication and intelligence sharing with partners* • *In the GB CMA organisations that undertook irrigation activities were situated in the same location which promoted interaction*
Systems	• *There was an elaborate planning system that is coordinated between all organisations and stakeholders to reach agreement about progress to action strategic priorities* • *DSE SIP, GB CMA and other partners worked together to implement agreed policy priorities which were ratified in contracts, policy and investment guidelines and agreed project specifications* • *Joint budgeting and outputs (Regional Catchment Investment Process), independent audits supported consistency and quality* • *Specific taskforces & committees were appointed when new policy activities emerged*
HR Practices	• *Both organisations had appointed relationship champions to manage interrelationships, seek specialist input for issues of strategic importance* • *DSE seconded staff to share information & input information for critical issues* • *Provided forums for staff learning about new environments* • *Most staff in DSE SIP had previously been employed regionally*
Conflict resolution	• *Both organisations had internal and external mechanisms to promote resolution. (Ministers, CEOs, and executive support)*

Dimension three: workforce management

The interview participants confirmed that to implement irrigation policy for the SIR staff must have specialised skills and knowledge, and these skills were distributed across both organisations and other partners like DPI and GMW. They acknowledged how important staff competencies were if they were to achieve their objectives and meeting their respective responsibilities. Hence, the RCF prediction that the workforce shared across the organisations underpinned their creation of public value for irrigation policy was confirmed.

The participants indicated that a soft style to workforce management was adopted by both organisations, and the approach extended to each others staff where possible. For example, both organisations offered flexible employment conditions for staff, provided training and development opportunities, and involved staff in direction setting through consultative processes. Also, where possible, both the GB CMA and DSE SIP included staff from both organisations in consultative processes to set strategic priorities. A number of management responses had been implemented to enable staff to work together, share intelligence and inform each other's programs and responsibilities (see Table 13).

While both organisations primarily used a soft style, a characteristic of the hard style was also apparent through interview data. An example was that much of the external funding for programs in the GB CMA was allocated annually. This limited the capacity of the GB CMA to offer staff long-term contracts. This could create obstacles to retaining staff which could have implications for performance. This was considered a critical strategic threat because it took time to develop staff with specialist skills and they were not easily replaced.

A summary of the findings for the three relationship dimensions is outlined in Table 14.

Table 13 Evidence of soft style used by DSE SIP and GB CMA for their workforce

Organisation	Characteristics of soft style approach
DSE SIP	***Between organisations*** • *Valued engagement and involvement of staff across organisations.* • *High level of trust that commitments by other organisations would be delivered (reciprocity).* • *Encouraged informal communication with regional staff. Encourage an open door policy.* • *Encouraged staff from other organisations to alert them of problems early.* • *Built a work environment where DSE SIP staff had responsibility for particular regions.* • *Involved other organisations in DSE SIP activities and decision-making because they have critical information and conduct critical activities.* ***Within organisation*** • *Tried to provide flexibility – part time maternity leave, time in lieu.* • *Tried to retain staff, encouraged HR to support staff promotions.* • *Provided staff ongoing contracts.* • *Gave staff responsibility was seen as important.* • *Training and development opportunities provided.*
GB CMA	***Between organisations*** • *Could be a mentor for new DSE SIP staff.* • *Implemented a stakeholder strategy to ensure a partnership approach with all organisations supports performance and implementation.* • *Project managers with other organisations were expected to manage their staff.* • *Provided regular development opportunities for staff* • *Staff were used to inform GB CMA regional strategies and programs.* ***Within organisation*** • *All partner organisations and contractors were on roll-over contracts. This enabled the GB CMA to achieve workforce flexibility if there were cut backs.* • *GB CMA staff numbers were kept to a minimum to manage resource constraints.* • *There were 3-year fixed contracts for staff at the GB CMA.* • *Resources were made available for staff training and development.*

Table 14 *Summary of DSE SIP and GB CMA relationship dimensions for irrigation policy for SIR*

DIMENSION	Strengths of management responses for the relationship	Examples of options to strengthen management responses
1. Governance *Bilateral arrangement*	❖ *Flexible arrangements for uncertain transactions (adapted in light of new information)* ❖ *Long term commitment to relationship acknowledged (important for customised transactions)* ❖ *Relationship between them is focus – encourage partnership approach/trust*	*Non specific transactions like reporting may not require same level of administration. Could consider whether market governance characteristics offers cost efficiencies to management these transactions.*
2. Strategy *Strategic risks high as share core and essential activities.*	❖ *Systems (planning) to align activities/priorities- planning* ❖ *Structures to transfer customer intelligence – committees, forums* ❖ *Representing each others interests – alignment of objectives* ❖ *Sharing staff*	*To protect the creation of value management responses to manage risk of staff turn over in partner organisation. staff e.g. staff managing salinity credits*
3. Workforce management *Human resource management style: Soft.* *Staff are specialists that underpin creation of public value*	❖ *Long term contracts for staff where possible* ❖ *Involved staff in direction setting & decision making* ❖ *Staff offered training & development* ❖ *Soft style extends to external staff e.g. mentor new staff in partner organisation*	*Annual funding cycle reflects hard style which may create challenges for staff retention*

Discussion

In this report we analysed the three dimensions of the relationship established between the GB CMA and DSE SIP to implement irrigation policy in the SIR. The investigation involved using the RCF to analyse the characteristics of the governance, strategy and workforce management dimensions of the relationship between these two organisations. Based on the analysis predictions were made about the management responses the organisations might employ to manage these dimensions of their relationship. These predictions were then compared with the responses already established.

In our view this analysis proved useful for a number of reasons. First, by collecting information about the dimensions of governance, strategy and workforce management we were able to describe the relationship between DSE SIP and the GB CMA in a systematic and integrated manner. This means that both organisations can now present a logically sound justification that a partnership approach has been critical to their success for stakeholders in the authorising environment. In principle, the RCF could be used by the GB CMA and DSE SIP to consider and reflect on their relationships with other organisations. For example DSE SIP could use the RCF to evaluate their relationships with CMAs in other regions in regard to implementing irrigation policy and natural resource policy more broadly.

Second, the analysis has provided documentation that critically characterises the strategic issues associated with organisations implementing policy together. This characterisation provides the rationale for the practical management responses that constitute a partnership approach to implement natural resource policy, at least in regard to the implementation of irrigation policy in the SIR. Hence, the RCF also provides the basis for the GB CMA and DSE SIP to describe to their stakeholders the vital role that such management responses play in the implementation of irrigation policy in the SIR.

Third, the analysis of the strategic dimension of the RCF suggested how tensions could arise between DSE SIP and the GB CMA as a result of their different responsibilities. For example, DSE SIP creates value primarily for the upstream customer, the Minister, while the GB CMA creates value for the downstream customer, irrigators and community in the SIR. These customers may, at times, have quite different views on what would create value for them with respect to irrigation in the SIR. This separation of responsibilities helps to explain why the strategic priorities of the two organisations could differ and why differences might arise about

how irrigation policy in the SIR should be implemented. This analysis highlights the strategic importance of management responses that encourage the realignment of priorities to resolve differences over operational activities. Relatedly, the analysis of the strategic dimension also highlighted the importance of practical management responses for policy implementation like joint planning, consultation and information sharing by the two organisations.

Fourth, the analysis drew attention to the crucial role of staff in the creation of value by both organisations. The analysis revealed that the activities of both organisations required a workforce possessing specialised skills. Moreover, the analysis of the governance dimension revealed that many transactions involving the two organisations were highly customised. This not only emphasised the importance for both organisations to make adequate investments in staff skills and capabilities, it drew attention to the influence of the characteristics of the work force on the form of governance that should be employed, and the interdependencies created between them as a result. From a strategic perspective each organisation possessed a different set of skills. This reflected their respective roles in the implementation of policy and draws attention to the influence that human resource management in one organisation can have on the performance of the other and on the implementation of policy generally.

Fifth, the analysis revealed that successful relationships between organisations when organisations implement natural resource policy together requires management responses that account for the strategy and human resource dimensions as well as the governance dimension. Hence, the analysis illustrated that much of the effort that goes into managing relationships is often not apparent in documents such as contracts. As argued by Hunter (2004) consideration of all three dimensions provides a fuller, richer and more accurate account of what the successful management of relationships between organisations can involve.

These considerations do support the proposition that the management of relationships between organisations has a crucial bearing on whether natural resource policy will be successfully implemented. The results presented here are promising and indicate that further investigation of the RCF is warranted.

The methods used in this study could be improved in three important ways. First, the reliability of the results could be improved by interviewing a larger number of key participants of the case study relationship. Second, scales could be developed to provide more impartial responses of the characteristics of each of the relationship dimensions. This will enable us to be more

prescriptive in or predictions of the appropriate management responses. Third, procedures to shorten the interviews would be welcome. Measurement scales may also offer some relief in this regard.

To finalise this project we sought comment on the project findings and the final report from interview participants, stakeholders and committees involved in the irrigation program. We received valuable feedback which has shaped the final report and also the further development of the RCF. Some key points about further development included:

- Undertake a case study of a challenging relationship to contrast the irrigation case study findings;

- consider management responses for organisations that must shift from one governance type to another;

- explore challenges of managing workforce between organisations in more depth; and

- consider developing a decision making tool policy managers can use and incorporating RCF into training programs.

We will take these recommendations into consideration in the development of another trial of the RCF.

Conclusion

We have argued that the institutional environment in which natural resource policy is implemented means that organisations are often jointly responsible for successful implementation. This creates interdependencies between organisations that lead to significant strategic risks. Consequently, to succeed, these organisations must deploy a range of management responses relating to governance, strategy and workforce management to counter these risks.

In this report we have drawn on Hunter's (2004) approach to outsourcing to develop a RCF for analysing relationships between organisations on the three dimensions of governance, strategy and workforce management. We undertook this case study to undertake a preliminary assessment of the merits of the RCF for understanding how relationships between organisations can be managed to support policy implementation. We selected the relationship between DSE SIP and the GB CMA. These organisations are jointly responsible, along with a number of other organisations, for implementing irrigation policy in the SIR.

Analysis of the characteristics of the transactions that occurred between the GB CMA and DSE SIP suggested that bilateral governance would best support these organisations to implement irrigation policy together. Bilateral governance provided both organisations with the flexibility to make the adjustments necessary to successfully manage the critical, unpredictable, customised transactions that occurred between them. Evidence from participant interviews and documentation confirmed the presence of bilateral governance. Management responses included elaborate long-term contracts, an emphasis on regular interactions, acknowledgement of inter-dependencies and flexibility to adjust transactions.

Analysis of the strategic dimension of the relationship highlighted that each organisation conducted activities that were either core or essential activities for the other organisation. This exposed both organisations to strategic risks such as a critical dependency on the performance of the other organisation and restricted access to customer intelligence. Interviews with key participants confirmed the presence of management responses to manage these risks. These responses included joint strategic planning, sharing critical information about customers, and representing each others priorities in public forums. These responses fostered a strong interrelationship and supported both organisations in the creation of public value for implementation of irrigation policy.

Analysis of the workforce dimension revealed that the workforce of DSE SIP and the GB CMA was composed of technically skilled staff with specialist knowledge that was not easily replaced. This suggested that the staff in both organisations were a critical source of value and that human resource management should be of a soft style. Interviews with participants confirmed the presence of a soft style for both organisations. This conclusion was supported by management responses such as long-term contracts, involvement of staff in direction setting and decision-making and providing staff with training and development.

Also, where possible, both the GB CMA and DSE SIP involved each other's staff in processes to the set their strategic objectives. A number of management structures had been implemented to enable staff to work jointly, share intelligence and inform each others programs and responsibilities. We concluded that these management responses encourage better workforce performance and foster strong interrelationships between the organisations.

In conclusion, the results of this case study support the proposition that the management of relationships between organisations has a crucial bearing on whether natural resource policy will be successfully implemented. The results also indicated that the application of the RCF produced choices about management responses that were consistent with those deployed in an example of a successful relationship between two organisations that implement natural resource policy together. This suggests that the RCF shows promise as a means to systematically explore the characteristics of the governance, strategy and workforce dimensions of relationships between organisations and further investigation of the RCF is warranted.

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