

Challenges for Integrated Coastal Management in the Australian Federation

Understanding Intergovernmental Tension: A Case Study of South Australia

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Abstract

Prudent management of the coastal zone is of major importance given that competition for coastal resource use is being intensified by increasing population pressure and the impending impacts of climate change. Integrated Coastal Management (ICM) is internationally regarded as the best-practice approach for the planning and management of coastal resource use. ICM espouses effective integration between governing bodies. However, numerous Australian government inquiries and academic literature on coastal zone management have concluded that ICM has been difficult to implement in Australia, with intergovernmental integration particularly elusive. Whilst Australia's federal system of government has been implicated in this, studies have not explicitly addressed the nature of the relationship between Australian federalism and intergovernmental integration between the local, state and federal spheres. Thus, the aim of this study was to generate a theory as to why ICM, particularly intergovernmental integration, has been so difficult to implement in Australia.

The study, employing elements of grounded theory and comparative case study methodology, was designed to explore the relationship between federalism and intergovernmental integration based on the experiences of coastal managers and decision-makers responsible for coastal management 'on-the-ground'. Three natural resource management (NRM) case study regions in South Australia were selected: Eyre Peninsula, South East, and Adelaide & Mount Lofty Ranges. The nature of Australia's federal system of government and the functions and capacity of the three spheres – local, state and federal – were also explored via literature review and document analysis.

Primary data collection was accomplished via thirty three in-depth, semi-structured interviews with local government staff and elected representatives, NRM Board staff and SA government 'Department for Environment' staff with responsibilities for coastal management and/or decision-making. Interview questions revolved around interviewees' perceptions of the roles and responsibilities of each sphere of government; financial arrangements for funding coastal management; and the level of intergovernmental integration. Constant comparative analysis elicited themes from interview transcripts. Triangulation of interview data with secondary data obtained via literature review and document analysis verified interview data and scaffolded theory development.

Two prominent themes emerged from the analysis of participants' perceptions regarding the roles and responsibilities of the three spheres of government: disempowerment and intergovernmental tension. Synthesis of interview data with secondary data revealed two fundamental issues underpinning these themes at both the local and state level: 1) asymmetries in responsibility relative to capacity and 2) a lack of autonomy. Understanding of these issues was enhanced by examining the evolving role of the federal government within the Australian federation, whereby Australia's practice of fiscal federalism has resulted in fiscal centralisation characterised by a large vertical fiscal imbalance between the federal and state spheres and a comparative lack of fiscal autonomy at the state government level. Fiscal centralisation poses a significant barrier to the operation of effective cooperative federalism in Australia. Thus, this thesis theorises that fiscal centralisation is a significant barrier to meaningful integration between the spheres of government involved in coastal management in Australia.

Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Nicole Pelton

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Presentations and Publication

Conference presentations

Intergovernmental Relations in Australian Coastal Management: The Role of Federalism & Vertical Fiscal Imbalance.

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Understanding Intergovernmental Tension in Coastal Zone Management: Australian Federalism and Intergovernmental Relations in a South Australian Case Study.

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Understanding Intergovernmental Tension in the Coastal Zone: Federalism, Coastal Governance & Intergovernmental Relations in a South Australian Case Study.

South Australian Coastal Conference, Adelaide Sailing Club, 13th November 2015

Coastal Governance - A South Australian Case Study.

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Federalism and Coastal Governance in Australia (Poster).

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Book chapter

Harvey, N., Clarke, B., Pelton, N. and Mumford, T (2012) Evolution of sustainable coastal management and coastal adaptation to climate change. Chapter 4 in R Kenchington, L Stocker and D Wood, (Eds) *Sustainable Coastal Management and Climate Adaptation*, CSIRO Publishing (pp. 75-99).

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Abbreviations

ABS	Australian Bureau of Statistics
ALGA	Australian Local Government Association
CCA	Constant Comparative Analysis
CfOC	Caring for Our Country
CPB	Coast Protection Board
CQDAS	Computer-assisted Qualitative Data Analysis Software
DAP	Development Assessment Panel
DAC	Development Assessment Commission
DE	Department for Environment
DEH	Department for Environment and Heritage
DENR	Department for Environment and Natural Resources
DEWNR	Department for Environment, Water and Natural Resources
EEZ	Exclusive Economic Zone
EPLGA	Eyre Peninsula Local Government Association
FAG	Financial Assistance Grants
GST	Goods and Services Tax
GPP	General Purpose Payment
HORSCCWEA	House of Representatives Standing Committee on Climate Change, Water and the Arts
HORSCERA	House of Representatives Standing Committee on Environment, Recreation and the Arts
HORSECE	House of Representatives Standing Committee on Environment and Conservation
HORSEFPA	House of Representatives Standing Committee on Economics, Finance and Public Administration
ICM	Integrated Coastal Management
ICAM	Integrated Coastal Area Management
ICRM	Integrated Coastal Resource Management
ICZM	Integrated Coastal Zone Management
LG	Local Government
LGA	Local Government Area
LGASA	Local Government Association of South Australia
LOSC	Law of the Sea Convention
NCAP	National Coastal Action Plan
NAPSWQ	National Action Plan for Salinity and Water Quality
NGO	Non-governmental Organisation
NHT	Natural Heritage Trust
NR	Natural Resources
NRM	Natural Resource Management

OCS	Offshore Constitutional Settlement
RAC	Resource Assessment Commission
RDA	Regional Development Australia
SA	South Australia
SG	State Government
SoE	State of the Environment
SSP	Special (or Specific) Purpose Payment
UN	United Nations
UNCED	United Nations Conference on Environment and Development
VFI	Vertical Fiscal Imbalance

Chapter 1 Introduction

1.1 Study premise

Two months after commencement of this PhD on the broad topic of 'Coastal Governance and Integrated Coastal Management in Australia', the Australian government¹ released the findings of its House of Representatives inquiry into climate change and environmental impacts on coastal communities: *'Managing Our Coastal Zone In A Changing Climate: The Time To Act Is Now'* (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009). Its release had a significant impact on the formulation of this study. This was because of the realisation that almost thirty Commonwealth and state inquiries into issues related to coastal zone management in Australia preceded it and, despite recurrent expert recommendations for improving coastal resource management, significant problems remain. To illustrate this point, Table 1.1 summarises the key governance recommendations from the four most recent Commonwealth inquiries into Australian coastal zone management². The table shows that, despite recommendations for the implementation of various governance arrangements over repeated inquiries, few recommendations are implemented, and even fewer implemented recommendations are sustained. Rather ironically, over thirty years ago the HORSCEC 1980 report contained this rebuke:

The Committee believes that had Commonwealth Governments adopted and implemented recommendations made in previous reports, the need for this Inquiry may not have arisen (House of Representatives Standing Committee on Environment and Conservation 1980, p. 38).

All four reports from the Commonwealth inquiries advocate for a national approach to coastal zone management in Australia. The term 'national' is understood to mean the consideration of issues on a nation-wide scale, beyond jurisdictional boundaries. A 'national approach' thus refers to any policy, strategy or initiative that incorporates state and federal interests, and is cooperative and coordinated by nature of its agreed objectives, development and implementation. Central to the idea of a national approach is the concept of intergovernmental integration, whereby plans, policies and principles are agreed and coordinated between all spheres of government – local, regional, state and federal – involved in coastal management in Australia.

As depicted in Table 1.1, the key governance arrangements recommended by all four inquiries to fulfil a national approach comprise: a national coastal strategy, federal government integration with state governments, and federal financial assistance to state and local governments to support them in funding their coastal management responsibilities.

¹ The terms federal government, Commonwealth government and Australian government will be used interchangeably throughout this thesis. The term national government will not be used; rather, use of the term 'national' will be reserved to reflect the nation as a whole or the involvement of all spheres of government.

² See Appendix 1.1 for the Terms of Reference for each of these Inquiries.

Table 1.1 Recent Commonwealth inquiries into coastal zone management in Australia: Comparison of recommendations towards a national approach

✓ Institutional arrangement recommended; ★ Institutional arrangement implemented; ✖ Institutional arrangement not sustained. Adapted from Haward (1995b).

Year:	1980	1991	1993	2009
Title:	<i>Management of the Australian Coastal Zone</i>	<i>The Injured Coastline: Protection of the Coastal Environment</i>	<i>Coastal Zone Inquiry</i>	<i>Managing Our Coastal Zone in a Changing Climate</i>
Inquiry conducted by:	HORSCEC (House of Representatives Standing Committee on Environment and Conservation 1980)	HORSCERA (House of Representatives Standing Committee on Environment Recreation and the Arts 1991)	RAC (Resource Assessment Commission 1993)	HORSCCCWEA (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009, p. xiii)
National Coastal Policy / Strategy / Program	✓	✓ National Coastal Zone Management Strategy	✓★★ National Coastal Action Program	✓ National Coastal Zone Policy and Strategy
Commonwealth Coastal Zone Legislation		✓ Coastal Zone Management Act	✓ Coastal Resource Management Act	
Commonwealth Agency		✓ Environmental Protection Agency	✓ National Coastal Management Agency	✓ Coastal Zone Management Unit
Coastal Advisory Council			✓ National Coastal Consultative Council	✓★★ National Coasts and Climate Change Council
Ministerial Council	✓ Australian Coastal Management Council			✓ Coastal Zone Ministerial Council
Intergovernmental Agreement			✓	✓ Intergovernmental Agreement on the Coastal Zone
Integration of Commonwealth and State Management	✓	✓	✓★★ Coastcare	✓
Financial Assistance to State/Local Governments	✓	✓	✓★★ Coasts and Clean Seas	✓
Integration of Local Government		✓	✓★★ Coastcare	✓
Regional Basis to Management		✓	✓	✓
Community / Citizen Participation		✓	✓★★ Coastcare	✓

All four inquiries observed the need for better intergovernmental integration in terms of governance arrangements for coastal zone management. The HORSCEC 1980 report, noting similar recommendations from numerous previous inquiries, clearly asserted that national policies and objectives for coastal conservation and preservation were necessary. It stated that these should be developed in consultation with the states (House of Representatives Standing Committee on Environment and Conservation 1980, p. 38). Similarly, the HORSCERA 1991 report also called for integration across spheres of government (House of Representatives Standing Committee on Environment Recreation and the Arts 1991), while the RAC 1993 report noted the lack of integration of coastal management at different government levels and championed an Integrated Resource Management approach (Resource Assessment Commission 1993)³.

Whilst the federal government did establish a Commonwealth coastal policy (*Living on the Coast 1995*) in the wake of the RAC 1993 report, it was not a truly national policy due to its focus on federal government responsibilities in the coastal zone (Harvey 2016). In any case, it was abolished the following year by the incoming federal (Liberal National Coalition) government. The RAC 1993 report was also the instigator of the community participation program Coastcare. Federally funded through the Commonwealth Coasts and Clean Seas initiative, Coastcare was heralded as a triumph in terms of a national approach to coastal zone management in Australia, due to its involvement of the three spheres of government, as well as the community (Clarke 2003, 2008; Harvey, Clarke & Carvalho 2001). However, Coastcare has since been effectively dismantled and subsumed by Landcare, the general environmental program (Harvey, Rudd & Clarke 2008; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009).

Harvey and Caton (2010, p. 10), while acknowledging the progress made towards a national approach since the RAC Inquiry in 1993, lament the difficulty in obtaining such a goal:

Within the Australian system of cooperative federalism, the Commonwealth would need to obtain broad agreement, through the Council of Australian governments, to establish a national coastal policy or strategy. Given the complexity of the issues, the varied—and changing—attitudes of the states, and the low political profile of the organisation of coastal management, it is not surprising that an agreed national approach has yet to be established.

Propelled by the recommendations from the RAC Inquiry, the ‘National Cooperative Approach to Integrated Coastal Zone Management – Framework and Implementation Plan’ (Natural Resource Management Ministerial Council 2006) was devised. The Plan reflected the principles of Integrated Coastal Management (ICM)⁴, the internationally-accepted best practice approach to the planning and management of coastal areas and resource use (Cicin-Sain 1993; Cicin-Sain, Knecht & Fisk 1995; Ehler 2003; Moksness, Dahl & Støttrup 2013; Olsen 2003a; Sorensen 1993, 1997, 2002; Thia-Eng 1993). As a

³ It is relevant to note that the final RAC 1993 report featured two reports, a majority report and a dissenting minority report which reflected major differences of opinion between Commissioners.

⁴ Integrated Coastal Management (ICM) is also often referred to as Integrated Coastal Zone Management (ICZM), Integrated Coastal Resource Management (ICRM), Integrated Coastal and Ocean Management (ICOM) or Integrated Coastal Area Management (ICAM). This thesis will use the terms Integrated Coastal Management or ICM, except when directly quoting literature using the other variations.

framework for the governance of coastal land and resource use, ICM places an emphasis on integration of competing interests and resource uses across space, governance scale and sector (Cicin-Sain & Knecht 1998). Whilst the principles of ICM have been endorsed in the previous inquiries, the most recent Commonwealth inquiry, HORSCCWEA 2009, was the first to explicitly recommend the ICM model (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009, p. 15):

The Committee agrees that the ICZM principle is essential to encouraging a national cooperative approach to coastal zone management and a focus on the catchment-coastal-marine continuum.

The HORSCCWEA Inquiry in 2009 criticised the lack of impact of the 'National Cooperative Approach to Integrated Coastal Zone Management – Framework and Implementation Plan' due to "no new government investment or commitment, no ownership of issues, and no incentive or leadership from the Commonwealth" resulting in the agreement being largely "ignored" (Harvey 2016, p. 13). Many scholars of ICM have noted that the development of ICM plans is comparatively simpler than the implementation of them, resulting in what has been termed the 'implementation gap' (Bower, Ehler & Basta 1994; Clarke 2003; Crawford, Stanley Cobb & Friedman 1993; Nursey-Bray & Harvey 2013; Olsen 2003b). To this end, the HORSCCWEA 2009 report stressed the importance of a cooperative approach to coastal zone management, denoting Australia's failings in this aspect to date:

A cooperative approach to coastal zone management ... is urgently required in the coastal zone due to the potentially severe impacts of climate change on the coast, the continuing environmental degradation of the coast, and the current complex and fragmented governance arrangements for the coastal zone (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009, p. 244).

Given the repetition of these government inquiries, and the similarities regarding the issues described and recommendations made, two important deductions can be made: firstly, the recurrence of inquiries suggests the coastal zone is still being degraded and significant management problems still exist; and secondly, the recurrence of the same or similar recommendations means that recommendations are not being implemented or sustained. Therefore, it is reasonable to hypothesise that there may exist some systemic issue(s) preventing meaningful and sustained action in this area. The following section presents the aim of this study and the research questions devised in order to meet this aim.

1.2 Study aim and research questions

Based on the study premise described above, the broad aim of this study was to develop a theory to explain why intergovernmental integration, as endorsed by the ICM model, is so hard to achieve or sustain in Australia. This was achieved by exploring some of the key determinants in the success or failure of ICM implementation, including the nature of the prevailing political system, and the functions and relative strengths of the local, provincial, and central levels of government (Cicin-Sain & Knecht 1998), using a case study of South Australia (SA). The rationale behind the research design is explained in chapters two and three.

Issues regarding coastal governance arrangements, including the division of responsibilities for coastal management between the spheres of government and their associated capacity to fulfil these responsibilities, are explored. Interviews were conducted with representatives from those spheres of government responsible for coastal management within state government jurisdiction, in order to understand the different perspectives of these spheres and, in doing so, develop a theory grounded in empirical data. In order to meet the study objectives, the following research questions were devised:

- 1. What is the nature of local government in South Australia? From the local government perspective, what are the governance issues posed by Australian federalism?*
- 2. What is the nature of state government in South Australia? From the state government perspective, what are the governance issues posed by Australian federalism?*
- 3. What is the nature of the federal government in Australia? How does this relate to the local and state spheres?*
- 4. Considering the nature of Australian federalism, given the findings of this study, what are the implications for intergovernmental integration and the implementation of integrated coastal management in Australia?*

1.3 Thesis Organisation

To address the study aim and answer the research questions listed above, this thesis is organised into the following chapters.

Chapter 1: Introduction

Chapter One has introduced the issues which constituted the research problem and led to the conceptualisation of this research project, thus providing the broad aim of the study. The research questions were posed and the organisation of the thesis outlined.

Chapter 2: Integrated coastal management in the Australian federation – A case for exploration

Chapter Two provides the rationale for the research undertaken during this PhD. The chapter explains the importance of the coastal zone and the imperative for its prudent management. The current best-practice approach to coastal zone management, known as Integrated Coastal Management (ICM), is described. A review of the Australian coastal management literature focuses on what is known about the impact of Australia's federal system on governance arrangements for coastal zone management and the implementation of ICM, with a particular focus on the nature of intergovernmental integration. The chapter concludes by reiterating the study's aim and the research questions proposed to meet this aim.

Chapter 3: Research design

Chapter Three describes the research design employed in this study, including the methodology, methods and data analysis techniques employed as well as the range of verification strategies used. Chapter Three also clarifies the scope of the research.

Chapter 4: Coastal governance arrangements in South Australia

Chapter Four provides background information to the case study by outlining the coastal governance arrangements in place in the state of South Australia.

Chapter 5: Case study sites: Key characteristics and coastal management issues

Chapter Five provides a summary of the case study sites including key geographic, economic and demographic characteristics of the local government areas and natural resource management (NRM) regions studied. The chapter also describes the main coastal management issues facing each region, as derived from interviewees' perceptions and compared with secondary data, thus depicting the current status of coastal management issues within the case study sites.

Chapter 6: Coastal governance issues for local government: Results of a South Australian case study

Chapter Six describes the nature of local government in the context of coastal zone management, both in theory and in South Australian practice. Interview data from the case studies illustrate local government's perspective on the main issues with respect to coastal governance arrangements within the Australian federation.

Chapter 7: Coastal governance issues for state government: Results of a South Australian case study

Chapter Seven describes the nature of the state government in the context of coastal zone management, both in theory and in South Australian practice. Interview data from the case study illustrates the state government's perspective on the main issues with respect to coastal governance arrangements within the Australian federation.

Chapter 8: The role of the federal government in coastal governance and intergovernmental relations in Australia

Chapter Eight explores the nature of Australia's federal government and illustrates the evolution of the federal government since federation. In light of local and state government perceptions described in Chapters Six and Seven, this is analysed to explore the intergovernmental relationships between the three spheres of government.

Chapter 9: A theory on Australian federalism, intergovernmental integration and ICM

Chapter Nine synthesises the results from the local, state, and federal analyses to reflect on the relative strengths of the three spheres of government and the nature of the

Australian federation. Chapter Nine explicates the theory derived through these analyses, in order to explain the difficulty implementing ICM in Australia to date.

Chapter 10: Conclusion

Chapter Ten concludes the thesis by providing an overview of the study premise, main findings and the theory generated, and the implications of this theory for the future of Australian coastal management.

Chapter 2 Integrated Coastal Management in the Australian federation: A case for exploration

2.1 Chapter overview

Chapter Two provides the rationale for the research undertaken during this PhD. This chapter explains the importance of the coastal zone, both in a global context and in Australia's case, providing the imperative for its prudent management. The current best-practice approach to the management of human use of coastal resources, known as Integrated Coastal Management (ICM), is described. A review of the Australian coastal management literature focuses on what is known about the impact of Australia's federal system on governance arrangements for coastal zone management and the implementation of ICM. The chapter concludes by reiterating the study's aim and the research questions proposed to meet the study aim.

2.2 The Coast: Definitions, importance, threats and imperative for management

The edge of the sea is a strange and beautiful place. All through the long history of Earth it has been an area of unrest where waves have broken heavily against the land, where the tides have pressed forward over the continents, receded, and then returned. For no two successive days is the shoreline precisely the same. Not only do the tides advance and retreat in their eternal rhythms, but the level of the sea itself is never at rest. It rises or falls as the glaciers melt or grow, as the floor of the deep ocean basins shifts under its increasing load of sediments, or as the Earth's crust along the continental margins warps up or down in adjustment to strain and tension. Today a little more land may belong to the sea, tomorrow a little less.

Always the edge of the sea remains an elusive and indefinable boundary
(Carson 1955, p. 1).

2.2.1 What is the coast?

Broadly speaking, the coast is defined as the interface between the land and the sea. In this place, the mix of interactions between physical, chemical and biological processes makes for an extraordinarily complex and dynamic environmental system (Bourman, Murray-Wallace & Harvey 2016). Due to this complexity and dynamism, there is no universal definition for the coastal zone. This coastal process-related definition of the coastal zone, offered by Sorensen and McCreary (1990), is often quoted (Cambers 2001, p. 1; Clark 1995, p. 1; Harvey & Caton 2010, p. 14; Hinrichsen 1999, p. 2; Korakandy 2005, p. 108):

... that part of the land affected by its proximity to the sea and that part of the ocean affected by its proximity to the land ... an area in which processes depending on the interaction between land and sea are most intense.

In a purely physical sense, the coastal zone always comprises intertidal and supratidal zones, including floodplains, mangroves, wetlands and salt ponds, beaches, dunes and fringing coral reefs (Cambers 2001; Clark 1995). In an holistic sense, the coastal zone

should be considered to include “the land, seabed, marine waters, terrestrial waters and aquifers, atmosphere above, and associated areas of vegetation, animal habitat, and human activity” (Creary 2003, p. 6). While it is widely accepted that the coast comprises the transition zone where the sea meets the land, a key question for management is: how far seaward and how far landward does the coastal zone extend? Accordingly, institutional definitions of the coastal zone vary depending on the management need, subject area or ecosystem under consideration (Harvey & Caton 2010). Table 2.1 provides a sample of definitions from various institutional sources, used to delineate the coastal zone for their main purpose.

Table 2.1 Definitions of the coastal zone

Table depicting the various definitions of the coastal zone, depending on the purpose for which the coastal zone is being defined.

Source	Definition
LOICZ Science Plan	Extending from the coastal plains to the outer edge of the continental shelves, approximately matching the region that has been alternately flooded and exposed during the sea-level fluctuations of the late Quaternary period (International Geosphere-Biosphere Program 1993).
Commonwealth Coastal Policy 1995	For the purpose of the actions of the Commonwealth, the boundaries of the coastal zone are considered to extend as far inland and as far seaward as necessary to achieve the Coastal Policy objectives, with a primary focus on the land-sea interface (Commonwealth of Australia 1995).
South Australian Government (Coast Protection Act, 1972)	All land that is— (a) within the mean high water mark and the mean low water mark on the seashore at spring tides; or (b) above and within one hundred metres of that mean high water mark; or (c) below and within three nautical miles of that mean low water mark; or (d) within any estuary, inlet, river, creek, bay or lake and subject to the ebb and flow of the tide; or (e) declared by regulation to constitute part of the coast for the purposes of this Act (Government of South Australia 2015).

Five main zones in the coastal-marine spectrum have been identified:

- inland areas, which affect the oceans mainly via rivers and non-point sources of pollution;
- coastal lands – wetlands, marshes, mangroves, swamps, flood plains, beaches, dunes, wave-cut platforms, cliffs, rock ledges and escarpments, and associated environment, where human activity is concentrated and directly affects adjacent waters;
- coastal waters – generally estuaries, rivers, streams, lagoons, and nearshore waters, sea bed and reef, where the effects of land-based activities are dominant;
- offshore waters – mainly out to the edge of national jurisdiction (200 nautical miles offshore); and
- high seas – beyond the limit of national jurisdiction (Cicin-Sain & Knecht 1998, p. 43; Creary 2003, p. 6).

For the purposes of this study, the main zones under consideration are inland areas and coastal lands, and to a lesser extent coastal waters, corresponding to the majority of areas under state government jurisdiction in Australia.

2.2.2 Importance of the coast

Earth is said to be a coastal planet; 71 per cent of the planet surface is water and the remaining 29 per cent land, with the two environments interacting along the world's 1.6 million kilometre (km) coastline (Martínez et al. 2007, p. 255). Given the vastness of coastal systems around the world, it is little wonder that they are areas of both high ecological significance, and fundamental social and economic importance to human civilisation.

The coastal zone is a particularly special environmental system due to the richness and diversity of the ecosystems it supports. On a global scale, coastal ecosystems contain a high percentage of the world's biodiversity, especially because coasts are home to two of the richest ecosystems of the world: tropical rainforests and coral reefs (Martínez et al. 2007). Furthermore, the coastal estuarine mix of freshwater and saltwater is home to some of the world's most productive habitats (Clark 1995).

Aside from its intrinsic ecological value, the coastal zone is home to a large proportion of the human population. In 2003, 41 per cent of the world's population lived in the coastal zone, and the majority of coastal countries have 80-100 per cent of their populations living within 100 km of the coastline (Martínez et al. 2007). A more recent estimate is that 60 per cent of the world's population lives within 60 km of the coast and, taking into account the current growth rate, this is projected to reach 75 per cent within 20 years (Moksness, Dahl & Støttrup 2013). Furthermore, near-coast population density is three times higher than the global average, with populations concentrated within 5 km of the coastline, and densities highest at elevations lower than 20 m (Small & Nicholls 2003). The social importance of the coastal zone is attributed to its aesthetic beauty, accessibility, and the number and availability of goods and services it is capable of providing.

Coastal zones have been centres of human activity for millennia. Civilisations have relied on coasts for goods (such as food; salt; minerals and oil resources; and construction materials in the form of sand, rock, lime and wood) and services (such as shoreline protection against extreme events, like storms and hurricanes; the storage and cycling of nutrients; sustaining biodiversity; and water capture). Coasts also provide areas for leisure, recreation and tourism, and enable commerce through the trade of goods via ports (Martínez et al. 2007). Of growing importance to economic activity are the coastal tourism and aquaculture sectors (Moksness, Dahl & Støttrup 2013). In terms of overall economic importance, the value of goods and services provided by the coastal zone is high. Martínez et al. (2007, p. 269) have calculated the total value, or Ecosystem Service Product (ESP), provided by coastal ecosystems of the world to be at least 77 per cent of global ecosystem-service value⁵.

⁵ Martínez et al. (2007, p. 261) calculate the Ecosystem Service Product (ESP) of coastal ecosystems up to 100 km inland of the coastline. The authors opted for a relatively wide inland boundary in recognition of the significance of terrestrial ecosystems to the overall functioning and value of the coastal zone. ESP is calculated as the total value provided by the services and products specific to the ecosystem type, where assigned values were applied using Costanza *et al.*'s (1997) existing methodology estimating individuals' "willingness to pay" for an ecosystem service.

2.2.2.1 The Australian coastal zone

Australia has the fourth longest coastline in the world. At 66,530 km, it is smaller only than Canada (265,253 km), the United States (133,312 km) and the Russian Federation (110,310 km) (Martínez et al. 2007). This figure differs to the official length of Australia's coastline, as stated in the 1996 State of the Environment report, to be 69,630 km (Australia State of the Environment Committee 1996). As Harvey and Caton (2010) note, different methods of calculating coastline lengths, as well as the inclusion or exclusion of offshore islands, will produce different results. The other commonly-quoted estimation of the length of Australia's coastline is in the range of 36,000-37,000 km (Haward 1995b; Norman 2009b).

Australia's coastline is the longest ice-free coastline of any nation (Haward 1995b) and features an incredible number and array of biophysical environments, from "the largest coral reef system in the world to huge expanses of dune and cliff systems" (Kay & Lester 1997, p. 266). The ecological, social and economic importance of Australia's coastal zone is recognised in the opening paragraph of the HORSCCWEA 2009 report, which states that "Australia's coastal zone is a significant national environmental asset that is also fundamentally important to our lifestyle and economy" (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009, p. 1).

From a global perspective, Australia's aquatic coastal ecosystems rank among the highest in terms of the proportions of sea grasses, coral reefs, and mangroves, while Australia's terrestrial coastal ecosystems rank highly for their size, diversity, and also the area of unaltered natural ecosystems (Martínez et al. 2007). In 2003, the Australian coastal zone was calculated to be populated by 17.69 million people, or 89.8 per cent of the country's population (Martínez et al. 2007, p. 262). This is comparable to other figures quoted: 86 per cent by Norman (2009b); 80 per cent by House of Representatives Standing Committee on Climate Change Water Environment and the Arts (2009); and 85 per cent by Gurran, Norman and Hamin (2013). Though sparse in population relative to many other coastlines around the world, the Australian coastal zone is home to all major population centres, except the land-locked capital city of Canberra (Kay & Lester 1997). In terms of economic importance, the ESP of Australia's natural coastal ecosystems (terrestrial and aquatic combined) is calculated to be US\$312,875 million, while the value of Australia's human-modified coastal ecosystems (semi-altered and altered combined) is in the range of US\$3309.82 million⁶.

However, despite its profound importance to the Australian economy and way of life, this significant national asset remains at risk of serious degradation due to the cumulative impacts of human activity in the coastal zone (Australian State of the Environment Committee 2006; Harvey & Caton 2010; Martínez et al. 2007; Thia-Eng 1993). Thus, while Australia fares comparatively well on a global scale in terms of having among the highest percentages of natural (unmodified) coastal ecosystems (Martínez et al. 2007), Australia's economic reliance on these intact natural ecosystems should not be underestimated.

⁶ Martínez et al. (2007, p. 256) define natural ecosystems as locations with minimal human intervention; semi-altered ecosystems have a mosaic of natural and human-altered ecosystems (e.g. croplands and urbanisations); and fully-altered ecosystems as those fully covered by urban development and croplands.

2.2.3 Threats and imperative for management

The previous section illustrated the importance and value of the functional integrity of coastal ecosystems, and their provision of goods and services ranging from production to protection. However, coastal zones around the world – and the ecological, social and economic value they provide – are under increasing threat from human activity and the impending impacts of climate change (Moksness, Dahl & Støttrup 2013). In Australia, the independent report to the Australian government on the state of the environment (SoE) in 2011 identified three principle drivers as having a significant impact on the coastal environment: climate change, population growth and economic growth (Australian State of the Environment Committee 2011). In order to manage the impacts of these drivers within the coastal zone, an appropriate governance response is required. As defined by Olsen (2003a, p. 15):

Management is the process by which human and material resources are harnessed to achieve a known goal within a known institutional structure. ... Governance, on the other hand, sets the stage in which management occurs by defining—or redefining—the fundamental objectives, policies, laws and institutions by which societal issues are addressed. ... During the Anthropocene, the urgent need to redirect the forces of change in coastal ecosystems and promote stewardship of these critically important areas is most often a challenge of governance rather than of management.

There have been numerous government inquiries and independent scientific reports into coastal management in Australia and the state of coastal ecosystems. Many have reported degraded coastal assets due to poor catchment and coastal land-use management and planning practice, and have implicated ineffective governance arrangements as a critical factor in these outcomes (Australian State of the Environment Committee 2001, 2006, 2011; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; House of Representatives Standing Committee on Environment and Conservation 1980; House of Representatives Standing Committee on Environment Recreation and the Arts 1991; Resource Assessment Commission 1993). Table 2.2 outlines the issues relating to coastal governance that have been identified in the last three SoE reports. These comments support the study premise outlined in the Introduction. Furthermore, a chapter was dedicated solely to ‘Coasts’ for the first time in the history of Australian SoE reporting in 2011, signalling a change in the conception of coasts:

The State of the Environment Committee preparing this report considered that the unique characteristics of coastal environments, the strong focus on coasts in Australian culture and settlement patterns, and the growing concern about the convergence of social, economic and environmental issues around our coasts warranted a chapter discussing the key issues (Australian State of the Environment Committee 2011, p. 850).

With pressures becoming intensified due to population growth and the impending impacts of climate change, there is a strong imperative for improved governance arrangements for planning and sustainable management of coastal zone areas and resource use (Australian State of the Environment Committee 2011; Gurrán, Norman & Hamín 2013; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; Norman 2009b). The next section will define the concept of governance as applied in this study, and summarise traditional approaches to the

management of the various interrelated and competing aspects of coastal resource use. This will lead into a discussion on the current best practice approach, known as Integrated Coastal Management (ICM).

Table 2.2 Australian State of the Environment Reports: Issues with coastal governance

Source: Australian State of the Environment Committee (2001, 2006, 2011)

SoE 2001	“There is clearly still a need for a nationally applicable Coastal Zone Policy to be developed to further assist in reducing the fragmentation of effort to manage the coastal zone and associated coastal waters. This issue was highlighted by a House of Representatives report in 1991, which said: ‘The absence of a national perspective towards the entire Australian coastline could lead to national interests being undervalued or even lost for future generations, as the existing ad hoc, hodge-podge pattern of development slowly nibbles away at a precious and beautiful resource, the natural coastline’.”
SoE 2006	“The overall conclusion that can be drawn from this analysis is that in 2006, most, if not all, of the issues identified and assessed in both the 1996 and the 2001 national State of the Environment reports still remain to be resolved. Some issues have changed in importance, but all have been foreshadowed in earlier state of the environment reports. This calls into question the effectiveness of Australia’s responses to identified key national problems that afflict coastal and marine ecosystems, and particularly the reforms in governance that are required to enable a move away from short-term and sectoral management towards a more systematic, integrated and planned approach to managing coast and ocean issues.”
SoE 2011	“Two major uncertainties that are likely to determine the future of Australia’s coasts are: <ul style="list-style-type: none"> • how government and governance arrangements develop (especially whether cooperative and strategic approaches to managing coastal resources can be developed that are effective over the same spatial scales as the challenges) • how extreme and rapid the effects of climate change are on coastal Australia.”

2.3 Governance for effective coastal management

Prudent coastal management is necessitated by the economic value associated with the goods and services provided by the coastal zone, together with the escalating risk of deterioration of coastal ecosystems due to human activity, increasing population pressure, and vulnerability created by climate change. However, governance of the coastal zone is exceedingly complex due to the dynamic nature of the biophysical features of the land-sea interface, coupled with the competitive nature of the multiple-use resources, and the existence of discrete governmental units of management founded on administrative rather than ecosystem-based boundaries (Ballinger 2015; Harvey & Caton 2010). Of paramount importance to the way we govern human use of coastal areas and resources is the understanding that this system is in a state of constant flux (Bourman, Murray-Wallace & Harvey 2016). The task of coastal governance is particularly complicated, as Clark (1995, pp. 1-2) notes, because the land-sea interface is:

... the place where agency authority changes abruptly, where storms hit, where waterfront development locates, where boats make their landfalls, and where some of the richest aquatic habitat is found. It is also the place where terrestrial-type planning and resource management programs are at their weakest.

As there are many different definitions of governance and an extensive and diverse literature dealing with the concept, the next section will briefly clarify how the concept of governance has been approached and applied in this study.

2.3.1 Governance defined

The term ‘governance’ has been used widely in government and non-government organisation (NGO) literature, and is the subject of much debate and theory in multiple disciplines of academic literature (Bevir 2007, 2011). Whilst the term has been in use since the nineteenth century, the definition of the concept is continually evolving; hence, there is little consensus regarding its definition (UN Economic and Social Council 2006). It is thus important to define what is meant by the term in the context of this study.

Throughout this thesis, governance is conceptualised and applied in its most general sense, which is concerned with “theories and issues of social coordination and the nature of all patterns of rule” (Bevir 2011). In this study, governance is best understood as referring to:

National political systems and international political relations and their functioning in relation to law, public administration and democratic participation of key stakeholders and the public at large. It is about the interaction between institutions in all sectors, that must set goals and cooperate in achieving them and creating an orderly framework for action—not only at the global level, but also at regional, national and local levels, all of which could contribute to (or undermine) achievement in management of the commons (Carley & Christie 2000, p. 18).

It is relevant to understand governance as also comprising “lateral and inter-institutional relations in administration” (UN Economic and Social Council 2006, p. 2). In a broad sense, the concept of governance used in this thesis encompasses informal processes and power relations which interact with formal processes, such as goal setting, the development of institutional structures, and everyday practice. In this context, it is appropriate to envisage governance as a “process through which diverse elements of a society wield power and authority” (Ehler 2003, p. 335). While it is recognised that international bodies, civil society, the market and the private sector all play a role in the process of governance, the main focus of this study is the role of the Australian national and sub-national governments, and the interactions between these levels of government which serve to achieve, or undermine, the goal of sustainable coastal development and resource use.

According to Olsen (2003a, p. iix):

Effective governance systems are what create the preconditions for achieving sustainable environmental and social benefits. We have learned that good coastal governance functions best when it exists as part of a nested system—that is, one that operates simultaneously at scales ranging from the local to the global.

However, as described in the Introduction, this type of nested (or integrated) governance has been difficult to achieve in Australia. Furthermore, effective coastal governance regimes have also been difficult to implement internationally (Ibrahim & Ghoneim 2013; Mee 2012; O’Hagan & Ballinger 2010; Portman et al. 2012; Shipman & Stojanovic 2007).

The next section highlights the issues related to poorly integrated governance with respect to traditional approaches to coastal land and resource management.

2.3.2 The need for integrated governance: Failures of traditional approaches to coastal management

Historically, the approach to coastal management has been ad hoc, sectoral, reactive and protective in nature, due to its origin in response to coastal hazard damage (Harvey 2016; Harvey & Caton 2010). Technologically based in engineering, this type of ‘Development-Defend’ approach is underpinned by an anthropocentric philosophy of “working ‘against’ nature” and an “almost unquestioning reliance on technological fixes” (Ballinger 2015, p. 374). This creates a cycle of decision-making in which the vulnerability of populations and assets is perpetuated through further inappropriate development behind hard-defence structures, thus providing more impetus for protection works – and so the cycle continues (Ballinger 2015). Some of the largest problems with the use of traditional hard engineering approaches include the downstream effects caused by the structures’ interruption of natural coastal processes, the loss of sediment and beach amenity, and “coastal squeeze” because intertidal habitats cannot migrate landwards and are consequently “squeezed” against fixed hard defences (Ballinger 2015, p. 375). Given these failings, a more sophisticated approach capable of providing a framework for managing competing resources and tackling such multi-dimensional coastal problems is required (Ballinger 2015).

As indicated in the Introduction, Integrated Coastal Management (ICM) is one such framework for the integrated planning and management of coastal areas and resource use. Advocates of ICM emphasise the integrated governance aspect, which is argued to enable more balanced and sustainable outcomes, especially related to managing coastal risk (Ballinger 2015). As Ehler (2003, p. 335) notes:

What distinguishes “integrated coastal management” from “coastal management” or “coastal resource management” is the ability to create a governance system capable to manage multiple uses in an integrated way through the cooperation and coordination of government agencies at different level of authority and of different economic sectors.

Similarly, Sorensen (1993, p. 50) notes that ICM can be differentiated from other environmental planning and management initiatives in coastal zones by the presence of a systems perspective and multi-sectoral approach. The following section provides an overview of the concept of ICM as a framework for sustainable coastal development and resource use.

2.3.3 Integrated Coastal Management (ICM): A framework for sustainable development and resource use in the coastal zone

ICM is the internationally-accepted, best-practice model for managing human use, development and protection of coastal resources (Ballinger 2015; Cicin-Sain 1993; Cicin-Sain, Knecht & Fisk 1995; Harvey 2016; Javier 2015; Moksness, Dahl & Støttrup 2013; Olsen 2003a; Sorensen 2002; Thia-Eng 1993; Vallega 2013). The principle features of ICM – integration, participation and transparency – are promoted in search of solutions to many complex problems facing society today. As Olsen (2003a, p. 56) notes:

ICM is the approach called for by a wide range of international declarations and treaties on topics relevant to coastal areas—from wetlands, coral reef and biodiversity conservation, to adaptation to global climate change and sea level rise, to controlling land-based sources of marine pollution.

ICM has multiple significant goals, which include the sustainable development of coastal and marine areas; reducing vulnerability of coastal areas to natural hazards; and maintaining essential ecological processes, life-support systems and biological diversity in the coastal zone (Cicin-Sain 1993, p. 30). There are various definitions of the model, but all place an emphasis on the fact that it is a process, and it entails cooperation through the integration of competing interests and resource uses in the coastal zone. Sorensen (1993, p. 49) provides a commonly-used definition of ICM which was derived from discussions of international delegates at an ICM workshop in Charleston, USA in 1989:

A dynamic process in which a coordinated strategy is developed and updated for the allocation of environmental, social, cultural and institutional resources to achieve the conservation and sustainable multiple use of the coastal zone.

The main strength of ICM as a framework for sustainable coastal resource use is that it simultaneously incorporates the dynamism and interconnectedness of the physical land-sea environment with the complexity of the socio-cultural aspects of competing values and uses, and complicated institutional contexts. Championed by seminal author Cicin-Sain (1993, pp. 29-30), ICM is unique when compared to traditional methods of coastal management in its recognition of the exceptional nature and value of the coastal zone as the land-sea interface, taking into account that it:

- is a dynamic and frequently changing environment;
- comprises valuable ecosystems which require conservation to support their great productivity and biodiversity;
- is valuable to human populations for settlement, use and recreation;
- is a 'launching pad' for human activities in the marine space;
- is a finite resource for which there are multiple competing uses and therefore conflict; and
- is complex to manage because of the differential ownership and governance arrangements for the land and sea components of the coastal zone (such as public/private ownership of land with general-purpose government authorities, and public ownership of the ocean with single-purpose authorities governing management).

2.3.3.1 History of ICM

The concept of integrated management of coastal zones proliferated internationally between the 1970s and 1990s, with programs initiated or feasibility studies underway in all regions of the world (Sorensen 1993). The ICM model gained momentum in the 1990s due to international commitments made under the Declaration of the United Nations Conference on Environment and Development (UNCED) in 1992 in Rio de Janeiro (Kenchington & Crawford 1993). UNCED highlights the global imperative for an integrated

approach to management of coastal resources. Although a non-binding agreement, the 'Rio Declaration' augmented the previous 'Stockholm Declaration' of 1972 by adding such key principles as polluter pays; the precautionary principle; Environmental Impact Assessment; public participation; and inclusion of indigenous people and women (Harvey & Caton 2010). Implementation of the 'Rio Declaration' was progressed via Agenda 21, which was essentially an action plan for all levels of government to commit to and implement the new UNCED principles (Cicin-Sain 1993). Chapter 17 of Agenda 21 emphasises the importance of sustainable development of the oceans and coasts, given their critical role in supporting life and livelihoods (Cicin-Sain, Knecht & Fisk 1995). Agenda 21 commits signatories to the integrated management and sustainable development of coastal areas:

Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas, and the protection, rational use and development of their living resources (United Nations 1992).

The following sections outline the key characteristics of the ICM model and describe some of the key factors required for its successful implementation.

2.3.3.2 Key characteristics of ICM

ICM is characterised by an interdisciplinary and holistic approach to the coastal management which encompasses:

1. the ecosystem approach, whereby the ecosystem should be managed as a whole rather than as separate individual components (for example, the catchment-coast-ocean continuum);
2. sustainable development, where the goal is the long-term conservation of resources;
3. integration, whereby decision-making should be coordinated across space, sectors, disciplines and governments, and involve all stakeholders who may impact or be impacted by the coast; and
4. iteration, whereby ICM is considered to be a continuous and dynamic process and is specifically designed, monitored and adapted to the particular requirements of the nation, region or locale (Cicin-Sain & Knecht 1998; Harvey & Caton 2010; Sorensen 1993, 1997).

The next section outlines the multiple dimensions of ICM's central principle – integration – and defines it as it relates to the purpose of this research.

2.3.3.3 Integration: Putting the 'I' into 'ICM'

As implied by the name, the concept of integration is the foundation of the ICM model: "the coastal management system is built on the essential elements of integration and coordination throughout the entire program" (Thia-Eng 1993, p. 84). Accordingly, ICM promotes a focus on coordinated decision-making between various levels of government and broad consultation with all interest groups (Harvey & Caton 2010). Within the dimension of integration, the following key elements are fundamental to successful ICM practice.

(1) Integration among sectors

This refers to integration among coastal and marine sectors (e.g. industries, such as oil and gas development, fisheries, coastal tourism, port development; conservation, such as marine mammal and beach protection; and recreation) as well as between coastal and marine sectors, and land-based sectors that affect the coastal and ocean environment (such as agriculture, forestry, and mining). Inter-sectoral integration also implies conflict resolution among sectoral government agencies, which is integral to effective planning, and is often referred to as horizontal integration (Cicin-Sain 1993, p. 25; English 2003, p. 5; Harvey & Caton 2010, p. 6).

(2) Integration between the land and the water sides of the coastal zone

This refers to integration across the catchment-coast-marine continuum, where marine pollution has required an integrated approach to catchment management and environmental protection regulations (Cicin-Sain 1993, p. 25; English 2003, p. 6; Harvey & Caton 2010, p. 6).

(3) Integration among levels of government

Intergovernmental integration “helps to realize the variance in perspectives of different levels of government so as to facilitate harmony among national, provincial, and local governments in addressing public needs ... This harmony should help to coordinate development policies” (English 2003, p. 6). This is also often referred to as ‘vertical’ integration (Harvey & Caton 2010).

(4) Science-management integration

Science-management integration involves the sharing of knowledge and information among various disciplines (such as the natural sciences, social sciences, and engineering) and the sharing of information and data with other actors in the resource management process for monitoring, evaluation and adaptive management (Cicin-Sain 1993, p. 25; English 2003, p. 6; Harvey & Caton 2010, p. 6).

(5) International integration

“International integration focuses on minimizing and quelling international disputes over fishing activities, transboundary pollution, establishment of maritime boundaries, passage of ships, and other issues” (English 2003, p. 6).

The following section will serve to define what is meant by vertical and intergovernmental integration for the purpose of this study.

2.3.3.3.1 Defining vertical and intergovernmental integration in ICM

Derived from the prescriptions of Agenda 21, vertical integration refers to coordination between a wide spectrum of decision-making centres, including intergovernmental organisations at the supra-national level, governmental organisations, regional authorities, local authorities, economic associations and non-government organisations

(Vallega 2013). Effective integration would be characterised by cooperation between these different decision-making centres via “efficient top-down and bottom-up relationships” (Vallega 2013, p. 193).

Whilst recognising the influential role of supra-national organisations such as the United Nations in driving ICM uptake through international treaties and declarations, as well as the role of economic associations such as Regional Development Australia and many other non-government organisations, particularly within the environmental movement, this study will be focussing on the level of integration between the spheres of government within Australia responsible for planning and management in the coastal zone. For this reason, the term ‘intergovernmental integration’ will be used to distinguish it from the more comprehensive notion of ‘vertical integration’.

Elsewhere in the literature, intergovernmental integration is vaguely defined as integration among the different levels of government, in the recognition that national, state and local governments have different roles and perspectives (Cicin-Sain & Knecht 1998; Harvey & Caton 2010). It is fairly well-recognised that these differences “often pose problems in achieving harmonized policy development and implementation between national and sub-national levels” (Creary 2003, p. 17). As mentioned in the Introduction, it has been noted that the development of ICM plans is comparatively simpler than the implementation of them, resulting in what has been termed the ‘implementation gap’ (Bower, Ehler & Basta 1994; Clarke 2003; Crawford, Stanley Cobb & Friedman 1993; Nurse-Bray & Harvey 2013; Olsen 2003b). Thus, the next section focuses on the critical aspect of implementation, and its relationship with intergovernmental integration.

2.3.3.4 Implementing ICM

With regard to implementing the “ambitious, far-reaching and forward-looking” mandates of Agenda 21, some of the main challenges for countries looking to implement ICM are, as noted by Cicin-Sain (1993, p. 22), prioritisation, operationalisation, institutionalisation and funding:

Nations have to choose priorities among the large number of important actions that are called for regarding oceans and coasts; key concepts need to be further defined and operationalised; appropriate institutions and/or processes need to be strengthened or established; funding needs to be obtained and committed.

In terms of ICM governance, “governance refers to the structures and processes used to govern behaviour, both public and private, in the coastal area and the resources and activities it contains” (Ehler 2003, p. 335). Cicin-Sain, Knecht and Fisk (1995, p. 111) note the importance of implementing coordinating mechanisms within and between governments to achieve effective ICM governance:

Overcoming the sectoral and intergovernmental fragmentation that exists in today's coastal management efforts is a prime goal of ICM. Institutional mechanisms for effective coordination among various sectors active in the coastal zone and between the various levels of government operating in the coastal zone are fundamental to the strengthening and rationalization of the coastal management process. From the variety of available options, the coordination and harmonization mechanism must be tailored to fit the unique aspects of each particular national government setting.

However, according to Harvey and Caton (2010), the complexity of managing the dynamic physical nature of the land-sea interface and its conflicting uses has resulted in few examples of ICM best-practice to date. The next section discusses these challenges to implementation.

2.3.3.4.1 Challenges to implementation

As mentioned above, integrated governance for effective coastal zone management has been difficult to achieve internationally (Ibrahim & Ghoneim 2013; Mee 2012; O'Hagan & Ballinger 2010; Portman et al. 2012; Shipman & Stojanovic 2007).

There have been international attempts to develop guidelines for ICM, stressing the importance of strengthening and harmonising cross-sectoral management. While there are various approaches towards achieving ICM, most agree that horizontal and vertical integration and coordination must be part of any ICM attempt (Harvey & Caton 2010, p. 6).

While the ICM model espouses a governance system which enables and promotes coordination of decision-making to ensure the long-term conservation, development and productivity of the coastal zone, ICM is recognised as being difficult to achieve. According to Bower, Ehler and Basta (1994), attention must be given to:

- (1) effective institutional arrangements for continuous management,
- (2) new incentives, positive and negative, to induce changes that will fulfil desired objectives, and
- (3) creative means for financing ICZM over time (Creary 2003, p. 4).

If ICM is to be successfully implemented, variables affecting ICM implementation in each government setting need to be understood. Governance arrangements play a large role in determining the ability to coordinate and harmonise diverse and conflicting resource uses, thus influencing the effectiveness of coastal resource management. According to Cicin-Sain and Knecht (1998, p. 10), such variables include:

- Nature of the legal system;
- Nature of prevailing political system;
- Nature and strength of central government;
- Nature and function of provincial level of government;
- Nature and strength of local and community levels of government;
- Relative strengths of executive and legislative branches;
- Nature of government bureaucracy;
- Relative strengths of political parties and other interests;
- Private and public; and,
- Relative roles of local communities, non-governmental organizations, and major coastal stakeholders, including indigenous peoples.

For successful implementation of ICM, Cicin-Sain and Knecht (1998, p. 10) stress that “any government program must be adapted to these realities”. Furthermore, “a program’s ultimate success depends on building positive working partnerships among the various

levels of government and the sectoral programs active in the coastal zone” (Cicin-Sain & Knecht 1998, p. 10).

The success of ICM as a model for coastal resource management also relies on the development of capacity within the governance system to implement ICM. The following “various dimensions of capacity” are described by Cicin-Sain (1993, p. 34) to be:

- Legal and administrative capacity: e.g., to designate a coastal zone, to develop and carry out coastal plans, to regulate development in vulnerable zones, to designate areas of particular concern;
- Financial: adequate financial resources to carry out the planning and implementation of coastal management efforts;
- Technical: information gathering and monitoring of coastal/marine ecosystems and processes, patterns of human use, and assessments of the effectiveness of government coastal management programs. Establishment and maintenance of coastal database and information system;
- Human resources capacity: interdisciplinary training in social sciences (including law and planning), natural and physical sciences, and engineering. Also, raising of public awareness and understanding of the coastal ocean environment, and the problems and opportunities it offers.

In most cases, a combination of authorities operating at different scales are needed to implement an ICM program. Consideration of a government’s capacity is central to the question of which level of government should do what, and what types of institutions are required. The answers are largely dependent “on the type of political system present in a particular country and on the combination of institutions already in place” (Cicin-Sain 1993, p. 35).

As the type of political system will impact the implementation of the ICM model in a real-world setting, the focus will now shift to understanding the role of political systems in implementing ICM.

2.3.3.4.2 The role of political systems

In their global analysis of integrated coastal and ocean management, Cicin-Sain and Knecht (1998) stated that the broader political environment must be well-understood in order to design an appropriate ICM strategy. ICM must be tailored to a country's unique context:

The failure of ... 'copied' institutions ... has emphasized the need for careful tailoring and adaptation of institutional and management approaches to a country's specific historical, cultural, socio-economic, and political context (Cicin-Sain & Knecht 1998, p. 125).

Furthermore, the type of political system determines which level of government has authority for implementing ICM. In terms of understanding political systems for the purposes of effectively implementing ICM, it is important to consider the division of authority between national and subnational levels of government, and whether power and authority is concentrated at the national level, or shared between different levels of government (Cicin-Sain & Knecht 1998, p. 124). Since the responsibility for coastal zone management “rarely falls exclusively on one level of government”, it is also particularly important to understand the relative capacities of the various levels of government to implement ICM (Cicin-Sain & Knecht 1998, p. 140).

Therefore, a synopsis of the key characteristics of federalism and how coastal management is undertaken within the Australian federation is warranted. The next section provides a summary of the political theory underpinning federalism as a system of government, followed by an overview of the governance arrangements for coastal management in the Australian federation.

2.4 Theoretical foundations of federalism

Australia is a federal parliamentary democracy with a written Constitution outlining the separation of powers between the federal government and the states (Cicin-Sain & Knecht 1998, p. 347; Summers 2006). Thus, federalism is the political system in which ICM is to be implemented in Australia. While federalism is able to maintain “territorial differences within an overarching political system ... [it] seeks to provide the benefits of unity without sacrificing the advantages of local autonomy, community choice and diversity within a nation” (Wanna et al. 2009, p. 9). These concepts are foundational to federalism as a political theory:

Federalism is a theory developed and applied to allow for the centralization of various governmental functions, [and a] decentralization of other governmental functions in the sense that some remain with the states ... The basic conditions of federalism are of decentralized governmental powers, and those who wish to centralize any specific function need to justify themselves (Blank 2010, pp. 526-527).

The concept of sovereignty (or autonomy) is critical to the understanding of federalism as a power-sharing system. Federations are composed of two units of government: the constituent states and the federation. The constituent states are recognised as the foundational building blocks and their identity is protected constitutionally (Parkin & Summers 2006); thus “the autonomy of the constituent units is as legitimate as that of the nation as a whole” (Blank 2010, p. 529).

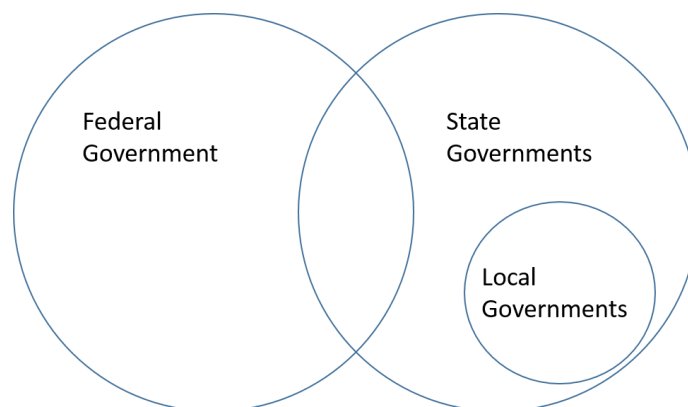


Figure 2.1 Federalism in theory

This figure depicts the theoretical lack of hierarchy between federal and state governments. The two jurisdictions share sovereignty over domains specified in the Constitution, while local governments are not constitutionally defined and exist purely at the discretion of their state governments. Adapted from Sansom (2002, p. 3).

In a federation, the division between the units of government is based on functions, not territory. A Constitution protects the division of powers between the two units (Blank 2010; Parkin & Summers 2006). In this way, sovereignty allows both units of government “a sphere of action immune from exterior intervention” (Blank 2010, p. 525). An important aspect of this autonomy is that “the constituent units must enjoy full (or near-full) discretion over their own populace and territory” and the constituent units can “divide themselves (or not) and control their internal affairs within a federation, without the intervention of the federation” (Blank 2010, pp. 525-526). Furthermore, as clearly depicted in Figure 2.1, the federal government should not be referred to as an “upper” level of government nor thought of as the top of a hierarchy⁷. As explained by Blank (2010, p. 524):

The functions of the federation are not inherently more important or more basic than those of the states; the federation does not metaphysically precede the states; nor is the federation a pre-condition of the states... If anything, many argue that the federal government is, by principle, weaker than the states and metaphysically inferior to them, since they are the foundations of the federation. ... Indeed, in many federal regimes, the states are vested with primary (or residual) powers, while the federal entity is vested only with specific and finite powers--those that are supposed to enable the functioning of the union as a whole.

Therefore, it is clear that federalism is designed to be a system in which the two units of government (i.e. state and federal) share power, since the most notable feature of a federal system is the preservation of each unit of government’s autonomy. However, as Blank (2010, p. 531) notes:

Simply stating that a system is (or should be) federal hardly tells one what the exact legal arrangements are (or should be) in any specific governmental function. What matters more is the way these legal (and political) mechanisms and structures operate in a concrete setting, how they are interpreted, and how they are adjudicated. And while it is crucial to observe the status quo from which it emerges, whether it is a unitary state deciding to splinter itself or whether these are sovereign states deciding to unite under a federal regime, it is more important to see the “career” of the scheme afterwards.

Thus, this thesis will explore the ‘career’ of federalism in Australia with respect to coastal zone management. The following section provides a brief overview of the theoretical aspects of the Australian federal system, followed by an outline of the roles and responsibilities of each sphere of government for coastal planning and management in Australia. The practical aspects of Australian federalism will be explored in more detail throughout the results and discussion chapters.

⁷ For this reason, the term ‘sphere’ is used throughout this thesis in preference to the terms ‘level’ or ‘tier’, which may imply a notion of hierarchy.

2.5 The Australian federation

In 1901, six British colonies united to form a federation called the Commonwealth of Australia⁸, modelled on the federal system of the United States. A concurrent and non-hierarchical written Constitution demarcated certain exclusive powers to the new federal government⁹. These were restricted to powers that made sense to be handled nationally, such as “naval and military defence, currency, coinage and legal tender, immigration and emigration and external affairs” (Parkin & Summers 2006, p. 52). The residual powers remained with the states, in line with the principle of subsidiarity. Subsidiarity is an important principle of government which says:

‘Governments need to delegate their powers, authorities, and duties to the smallest (or to the closest-to-the-citizens) jurisdiction that can efficiently perform them’ ... or ‘action should be taken at the lowest level of government at which particular objectives can adequately be achieved’ (Blank 2010, p. 533).

Hence, state responsibilities included public services and regulations which were most relevant, or ‘closest’, to the citizens: the provision of schools, hospitals and health centres, personal welfare services, police and correctional services, roads, commuter transport services, public housing, and emergency services; the provision and regulation of electricity, gas, water and sewerage infrastructure and services; the regulation of construction and retail trade; and city planning, environmental protection and ports (Parkin & Summers 2006, p. 52). The latter three responsibilities are of particular importance to coastal zone management. Due to the principles implied by a non-hierarchical and concurrent Constitution, some refer to the Australian system as ‘cooperative federalism’ (Harvey & Caton 2010; Huggett 1998; McQuestin & Woods 2010; Painter 1996; Wanna et al. 2009).

The Constitution also separated the federal government legislature from the judiciary. Of particular importance to this review is the role of the latter, the High Court, which was established by Section 71 of the Constitution as the highest court in the Australian judicial system. The High Court was established to act as an “umpire” in the federal system: namely, to interpret and apply the law of Australia; to hear cases of special federal significance, including challenges to the Constitutional validity of laws; and to decide on appeals from federal, state or territory courts (Parkin & Summers 2006, p. 53). “The High Court has the power to invalidate any laws, of either level of government, that it determines as outside the constitutional allocation of power to that government” (Parkin & Summers 2006, p. 53).

⁸ The Northern Territory was founded in 1911 and the Australian Capital Territory in 1909.

⁹ One of the key characteristics of a federal system is that it imposes checks on power. In the Australian system, amendments to the Constitution are difficult to obtain due to the consensus required at both the federal and state levels: an absolute majority in both houses of the federal Parliament (the House of Representatives and the Senate), and in terms of state referenda, support must equate to both a majority of states and a majority of votes cast (McLean 2004, p. 8). As such, any changes to the status quo are difficult to achieve.

2.5.1 Coastal management and the Australian federation: An overview

In Australia, coastal governance arrangements are essentially a product of the federal system of government; the roles and responsibilities for coastal management are variously divided between the federal government and the constituent state and territory governments, in line with the constitutional division of powers. As is their prerogative, state and territory governments delegate many responsibilities for coastal zone management to local governments. Accordingly, governance of the coastal zone in Australia is complicated. A convoluted array of federal and state or territory departments and agencies, local governments, and more recently regional bodies, are involved. The next sections provide a brief overview of coastal governance arrangements in the Australian federation. Figure 2.2 provides an example, from Victoria, of the range of jurisdictional boundaries that exist between federal, state and local governments across the catchment-coast-marine continuum, to be discussed below.

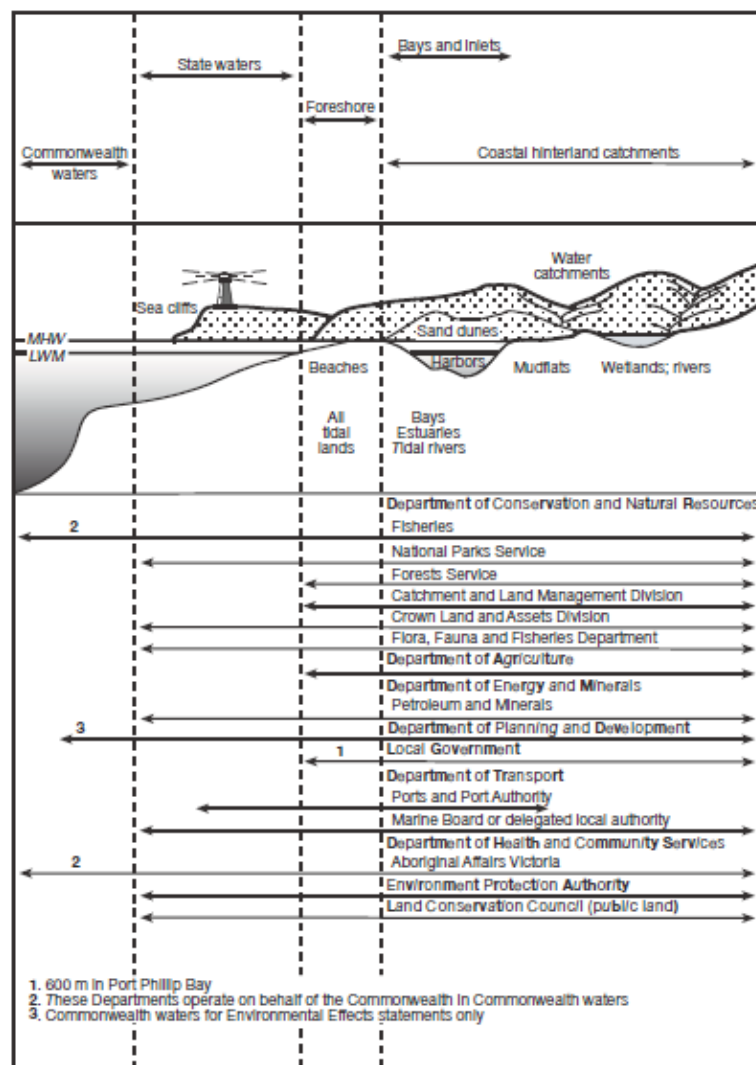


Figure 2.2 Jurisdictional boundaries across the catchment-coast-marine continuum

Schematic view of the zones of jurisdiction of Victorian state government agencies in 1993. Source: Harvey and Caton (2010, p. 219).

2.5.1.1 Commonwealth government

In terms of Constitutional heads of power, the federal government has sovereignty and jurisdiction over the Australian territorial sea from the low water mark. However, the 1980 Offshore Constitutional Settlement (OCS) negotiated that state governments have authority over marine areas up to three nautical miles offshore (Harvey & Caton 2010; Haward 1989).

Internationally, the Commonwealth government is the key negotiating actor and signatory to international policies and legislation affecting the conservation and management of ocean and coastal resources. The Commonwealth government is signatory to several important international environmental conventions which affect the management of the coastal zone. These include the Declaration of the United Nations Conference on Environment and Development (UNCED). As part of these obligations, Chapter 17 of Agenda 21 commits Australia to the integrated management and sustainable development of coastal areas:

Coastal states commit themselves to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction (United Nations 1992).

Further to this, the federal government has an international obligation to assist in the implementation of integrated ocean and coastal zone management in Australia.

Each coastal State should consider establishing, or where necessary strengthening, appropriate coordinating mechanisms ... for integrated management and sustainable development of coastal and marine areas and their resources, at both the local and national levels (United Nations 1992).

Chapter 17 supplements and builds on the UN Convention on the Law of the Sea (LOSC) 1982, which Australia ratified in 1994 providing the Commonwealth with jurisdiction over a 200 nautical mile Exclusive Economic Zone (EEZ). The LOSC:

... delimits states' jurisdiction at sea, primarily with regard to resource use and navigation. This convention establishes conservation and management regimes for fisheries in exclusive economic zones. It imposes obligations to prevent, reduce and control marine pollution from land, the atmosphere, and vessels and from dumping. It also includes a regime for the enforcement of marine pollution laws (Harvey & Caton 2010, p. 207).

The federal government is also responsible for areas of international significance reflecting specific international agreements Australia is a party to. These include the World Heritage Convention (covering areas such as the Great Barrier Reef Marine Park) and Wetlands of International Importance in accordance with the Ramsar Convention (Harvey & Caton 2010). Also included are agreements on migratory birds (Japan-Australia migratory bird agreement; China-Australia migratory bird agreement), and some of these international obligations have been enshrined in Commonwealth, state and territory legislation (Natural Resource Management Ministerial Council 2006, p. 15).

Since the international drive toward sustainable development gained momentum in the 1990s, the federal government has taken a more active interest in coastal issues (Harvey 2016; Harvey & Caton 2010; Thom & Harvey 2000). This is also evidenced by a series of

inquiries into coastal zone management commissioned by the federal government. However, in terms of domestic responsibilities, the Commonwealth's role in the landward coastal zone is diminished by not having constitutional responsibility for the majority of planning and resource use in this jurisdiction. Nevertheless, the federal government plays a significant role through its various policy initiatives and provision of funding for Commonwealth environmental and natural resource management programs, which invariably impact local government, NRM and state government management within coastal zone (Clarke 2011; Harvey 2016).

2.5.1.2 State governments¹⁰

In terms of the Australian Constitution, the states maintained authority over any powers that were not exclusively centralised at the federal level. Hence, planning and management responsibilities in the coastal zone reside with the states (Harvey & Caton 2010). As mentioned above, the 1980 Offshore Constitutional Settlement agreement provides state governments with responsibility for marine areas up to three nautical miles offshore (Harvey & Caton 2010; Haward 1989).

Due to the Australian Constitution preserving the autonomy of the constituent state governments within the Australian federation, it is the responsibility of each state to determine how to meet their coastal management and planning responsibilities. Consequently, coastal governance arrangements in Australia vary considerably on a state-by-state basis. All states have enacted a range of legislation and other instruments to manage activity within the coastal zone (Clarke 2010; Harvey & Caton 2010). The diverse array of legislation, agencies and instruments which complicate comparisons between states have been discussed elsewhere (Australian Local Government Association 2006; Clarke 2003, 2010; Coastal Climate Change Advisory Committee 2010; Gurrán, Blakely & Squires 2007; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; LGASA 2003; Norman 2009a; Victorian Planning & Environmental Law Association 2010) and will not be the subject of this overview since this study elected to focus on the coastal governance system in one state: South Australia. The specific coastal governance arrangements in South Australia are outlined in Chapter Four.

With respect to federalism, Lazarow (2010, p. 146) contends that this has influenced the criticised inconsistency between coastal governance arrangements and coastal management initiatives on a national scale:

The strong position of the states with respect to the development of environmental policy compared to the role of the Commonwealth has created a situation whereby the coastal management programs in each of the states has developed at a different pace, under different pressures and with somewhat different legislative structures supporting coastal management programs.

However, it is well-recognised that while state governments have the constitutional power to govern the coast, there is limited funding for this specific purpose (Harvey &

¹⁰ For simplicity, herein the term 'state' will be used in lieu of 'states and territories' to describe the constituent units of the Australian federation.

Caton 2010). The RAC Inquiry found that state and local governments are responsible for 95 per cent of expenditure in the coastal zone (Huggett 1998, p. 42). However, due to the nature of state-federal financial arrangements in the Australian federation, the majority of revenue is collected by the federal government and distributed between the states, since state government own-source revenue is insufficient to cover the cost of state government outlays (Harvey & Caton 2010; Haward 1995b; Huggett 1998; Wescott 2009). Walker (1992) argues that due to their limited fiscal capacity, states have resorted to intensive natural resource development projects to build their income from own-source revenue; such decisions have ultimately resulted in environmental degradation, inflation and under-pricing of natural resources (cited in Cicin-Sain & Knecht 1998, p. 349). Further complicating attempts at implementing ICM is the sense of ownership over environmental management felt by state governments due to their constitutional authority over the matter. Interference by the Commonwealth has been reported as not welcome (Harvey 2016; Haward 1995b; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; Huggett 1998; Kay & Lester 1997; Resource Assessment Commission 1993).

2.5.1.3 Local government¹¹

In the Australian federation, local governments are enacted by state government legislation, hence their responsibilities with respect to coastal zone management are delegated by their respective state governments (Sansom 2009). Despite not being recognised in the Australian Constitution, local government is regarded as an integral part of the Australian federation due to its significant role in municipal governance and service delivery. With respect to coastal management, local government across Australia has been delegated many responsibilities, including local development planning, development assessment, public land management, stormwater management and drainage. Local government is also responsible for the day-to-day maintenance of beach access and facilities in their jurisdiction. In many cases, this includes significant coastal infrastructure such as jetties and boat ramps. Of all its responsibilities, local government's role in land-use planning and development decision-making in the coastal zone is a critical one (Harvey & Caton 2010). Similar to state governments, local governments are in a position of limited fiscal capacity, relying on state and federal government grants to cover a portion of their expenditure needs (Huggett 1998).

Based on these roles and responsibilities, the following section examines the Australian coastal management literature to understand what is known about the division of power and authority in Australia's federal system in the context of coastal management, and how scholars have proposed this to impact on the implementation of ICM.

2.6 ICM in Australia

The call for a national approach to coastal zone management in Australia, as detailed in the findings and recommendations of the Commonwealth inquiries described in the Introduction, is echoed in the Australian coastal management literature. With respect to

¹¹ The terms 'local government', 'local government areas' (or 'LGAs') and 'councils' will be used interchangeably throughout this thesis.

research considering the roles and responsibilities of the different levels of government, the prevailing discourse in the Australian coastal management literature is a call for increased federal government action and leadership (Abel et al. 2011; Clarke & Harvey 2013; Harvey 2016; Huggett 1998; Norman 2009b; Wescott 2006, 2009, 2012). However, within this body of literature, problems regarding inadequate governance arrangements related to the Australian federation are often cited, but are rarely the central focus.

Rather, the coastal governance literature in Australia has been predominantly issue-specific, rarely exploring the federalist foundations on which the governance arrangements for coastal management have been built. For example, literature often reflects assessments related to planning, coastal development or climate change adaptation, often from the perspective of local government (de Freitas, Smith & Stokes 2013; Gurrán, Blakely & Squires 2007; Gurrán, Hamín & Norman 2008; Harvey, Rudd & Clarke 2008; Harvey & Stocker 2015; Niven & Bardsley 2013; Norman 2009b; Nursey-Bray, Harvey & Smith 2016; Nursey-Bray & Shaw 2010; Stocker, Harvey & Metcalf 2016) or the role of law (Bell & Baker-Jones 2014; Bonyhady 2010; O'Donnell 2016; Rothwell 1996; Thom 2004).

Otherwise, the context of the research is focused around how to manage threats to the coastal zone such as impacts from climate change and population pressure, through improved integration. Aspects of integration that have been explored include: horizontal/sectoral integration (Harvey, Rudd & Clarke 2008; Morcom & Harvey 2002; Norman 2009b), science-policy integration (Clarke et al. 2013; Clarke, Tually & Scott 2016; Mumford & Harvey 2014; Nursey-Bray & Harvey 2013; Nursey-Bray et al. 2014; Scott & Harvey 2016; Smith et al. 2009; Stocker et al. 2010), or vertical integration, including community participation (Clarke 2003, 2008; Harvey, Clarke & Carvalho 2001; Wescott 1998, 2004; Wescott & Fitzsimons 2011).

It is reasonably well-recognised that the constitutional division of powers and the relative financial dominance of the federal government in the Australian federation create problems for resource management (Cicin-Sain & Knecht 1998; Coffey & Vodden 2012; Harvey & Caton 2010; Haward 1995b; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; Huggett 1998; Kay & Lester 1997; Resource Assessment Commission 1993; Wescott 2009). However, the implications of the underlying federal structure of government in Australia for the implementation of ICM has rarely been explicitly examined. Since Cicin-Sain and Knecht (1998) assert that understanding key aspects of the political system is fundamental to resolving impediments to the successful implementation of ICM, the following section presents a case advocating further examination in this direction.

2.6.1 The role of federalism

Due to the multi-level nature of federal democracies, the dimension of intergovernmental integration between different spheres of government is important. In a federation, the dimension of governmental integration is important both 'vertically', as in between different spheres of government, and 'horizontally', as in between different agencies within a sphere of government. For effective ICM, policy and practice should be

integrated between and within governments in the federal system (Haward & VanderZwaag 1995). As Olsen (2003a, p. iix) notes:

Sub-national and community-based management efforts stand the best chances to be effective and to be sustained over the long term when they are supported by policies and institutional structures at the national level. Meanwhile, national-level initiatives build capacity ... across spatial and sectoral scales, providing support to local initiatives while addressing coastal development and conservation of more wide-ranging national interest.

Javier (2015, p. 2) contends that ICM initiatives, to be successful, must emphasise principles of “voluntariness, flexibility, coordination between institutions and territorial levels of management, cooperation between the public sector and non-governmental, democratic legitimacy involving public participation”. However, Creary (2003, p. 18) recognises that horizontal and vertical integration can be difficult to achieve since they often require power-sharing between different parts or levels of government:

Horizontal integration means that disparate functions (planning, permit letting, budgeting, development) must be coordinated. ... this requires levels of cooperation, which may be new for leaders of narrowly focused sectoral agencies. Similarly, local and regional units of government that exercise the power of land use planning and regulation have fought against vertical integration programs proposed by states or provinces and nations.

This can pose problems for the implementation of cooperative governance regimes. For this reason, “further efforts should be directed to the field of public policy” because problems of implementing ICM are mostly “not in the scientific-technic realm, neither in the lack of information for managing, on the contrary, they are in the lack of will, leadership, coordination, public participation and so on” (Javier 2015, p. 2).

In this vein, Kay and Lester (1997, p. 266) frame the status of coastal management in Australia as an inherently political activity, acknowledging “the inherent complexities and tensions within a still relatively young federal system of government (constituted in 1901) where the respective governmental roles and responsibilities are continually being interpreted”. Similarly, Harvey and Caton (2010, p. 203) note that “the changing overall patterns of Commonwealth and state government relations are especially salient to the actual role played by the Commonwealth in coastal management”. More recently, Coffey and Vodden (2012, p. 65) assessed “the adequacy of current approaches to coastal governance” in two federal systems – Canada and Australia – and argued that “while both jurisdictions would benefit from a more collaborative approach, the mechanisms for bringing about such an approach would vary and will not come easily in light of institutional and historic barriers”.

In light of this, the next section reviews current understanding of the relationship between federalism and ICM in Australia within the peer-reviewed literature.

2.6.1.1 Integrated coastal management in the Australian federation: Research to date

With respect to the Australian coastal management literature, Haward (1989, 1995b); Haward and VanderZwaag (1995), Glazewski and Haward (2005), Kay and Lester (1997), Huggett (1998), Wescott (2006, 2009), and Coffey and Vodden (2012) provide various accounts of the role of the federal structure of government in their consideration of the

difficulties experienced in implementation of ICM in Australia. Much of this work was produced around two decades ago, with few scholars exploring the relationship between the Australian federal system and ICM implementation more recently.

2.6.1.1.1 Intergovernmental integration in Australian ICM

On the topic of state-federal intergovernmental integration in the context of the Australian federation, Haward (1989) examines the establishment of the 1980 Australian Offshore Constitutional Settlement (OCS) which had been framed as a milestone in cooperative federalism. Prior to the OCS, considerable intergovernmental conflict was reported between the state and federal spheres with regard to jurisdiction over and management of offshore resources. The agreement was reached between the states and the federal government after Whitlam's Commonwealth government passed legislation, *The Seas and Submerged Lands Act 1973*, which declared that the federal government had sovereignty and jurisdiction of the coast and marine environment from the low water mark. In 1975, the states challenged the Commonwealth legislation in the High Court but it was upheld (Haward 1989). In response to this decision, the Commonwealth embarked on "a reordering and readjustment of powers and responsibilities" to provide the states with authority over the seabed and resources within the territorial sea up to three nautical miles Haward (1989, p. 337). According to the Commonwealth, the purpose of this was to:

... ensure that the States will have adequate powers to deal with matters in the territorial sea. History, common sense and the sheer practicalities make these matters for State administration, rather than central control, in the absence of overriding national or international considerations (Offshore Australian (1980) cited in Haward (1989, p. 337).

The result was the 1980 Australian Offshore Constitutional Settlement. However, as Haward (1989, p. 337) notes, "the High Court decision left the states with little, if any, constitutional bargaining power" and the ensuing debate over the exact nature of the intergovernmental agreements to be included in the OCS was an example of coercion more than cooperation. This paper provides a glimpse into the nature of state-federal relations and the impact of the constitutional division of powers on offshore policy and management.

Similarly, in their paper comparing the implementation of Chapter 17, Agenda 21 in Canada and Australia in terms of ocean law and policy, Haward and VanderZwaag (1995) focus on offshore issues. The "significance of the federal division of powers and responsibilities" with respect to implementing the Chapter 17 obligation of a national representative system of marine protected areas (MPAs) is highlighted (Haward & VanderZwaag 1995, p. 283). In the offshore arena, state and federal collaboration is a pertinent issue, necessitated due to the division of responsibility over the territorial sea enshrined in the Australian Constitution and the subsequent OCS. In contrast, with respect to land-based coastal zone management, state governments have constitutional jurisdiction on the terrestrial side¹², with federal government responsibilities largely confined to their involvement with international treaties, and influence through funding programs. State-federal relations in this regard are considered in a review of

¹² With the exception of Commonwealth defence land.

developments in institutional design and policy-making for coastal management in Australia and New Zealand. In this review, Haward (1995b) again recognises the power of the Australian government in relation to the states. Firstly, Haward (1995b, pp. 90-91) notes the legislative superiority of the Commonwealth government over the states:

The Commonwealth government is able to exert considerable influence on, and in particular areas exercise constitutional powers to over-ride, state decisions. A number of constitutional 'heads of power' reinforce the Commonwealth's position. Any state law which was found inconsistent with Commonwealth law based on these heads of power would be invalidated under another provision of the Australian constitution.

Secondly, Haward (1995b, p. 92) notes the implications of the fiscal superiority of the Commonwealth government for local and state-wide coastal management outcomes; this will be discussed further in the next section. Based on these observations, Haward (1995b) advocates "recognising the realities in constitutional, political and administrative frameworks in shaping institutional arrangements" for implementation of ICM. This is investigated further in a comparative case study of cooperative governance in coastal management in South Africa and Australia (Glazewski & Haward 2005). According to Glazewski and Haward (2005, p. 65), cooperative governance provides "a solution to the dilemmas arising from divided jurisdiction and overlapping or competing claims for responsibility between different units of government." The paper focuses on the legal and political factors which support cooperative governance and reflects on the respective roles of all three spheres of government – local, state and federal. Glazewski and Haward (2005, p. 66) note that intergovernmental cooperation within the federation is "not ... necessarily predicated on a harmonious relationship between government units". Rather, as Keohane (1984) contends, "cooperation requires that the actions of separate individuals or organisations ... be brought into conformity with one another through a process of negotiation" (cited in Glazewski & Haward 2005, p. 66).

While Glazewski and Haward (2005) assert that the complex jurisdictional framework and lack of processes facilitating intergovernmental interaction, and therefore negotiated outcomes, is a key factor hindering cooperative governance in ICM, Wescott (2006) argues that instead of focussing on institutional arrangements, the focus should be on determining "how the federal government can add value to coastal planning and management outcomes in practice" (Wescott 2006, p. 31). One way the federal government could 'add value' would be with respect to increased funding assistance to local and state governments, specifically for coastal management initiatives as in the previous Coastcare arrangement. This option reflects the significance of the financial dominance of the federal government within the Australian federation. The next section focuses on what has been written about the centralisation of fiscal capacity within the Australian federation, in the context of coastal zone management.

2.6.1.1.2 Federal financial dominance in Australia

As touched on earlier, the financial dominance of the federal government over the states has been recognized to be an issue with respect to coastal management in Australia (Coffey & Vodden 2012; Haward 1995b; Huggett 1998; Kay & Lester 1997; Wescott 2009). In their discussion of the political, financial and administrative context of coastal

management in Australia, Kay and Lester (1997, p. 268) acknowledged the impact of vertical fiscal imbalance (or VFI):

Vertical fiscal imbalance, linked with the various powers of federal, State, and local governments has led to an interesting and varied development of coastal programs in Australia. The oft-used maxim in local government circles is 'the Commonwealth has the money; the States the power and Local Government the problems'.

VFI can be described as an imbalance in revenue-raising and spending responsibilities. In Australia, "the Commonwealth Government raises revenues in excess of its spending responsibilities, while State governments have insufficient revenue from their own sources to finance spending responsibilities" (National Commission of Audit 2014, p. 145). Haward (1995b, p. 92) illustrates the significance of the fiscal superiority of the Commonwealth government in terms of its unofficial role in coastal management:

... the Commonwealth raises much more revenue than it needs for its own programs while the states suffer considerable imbalance between their own revenue-raising capacities and financial responsibilities. This imbalance increases the significance of Commonwealth-State financial transfers ... many of the problems in the coastal zone such as the effects of pollution or environmental degradation are beyond the financial capacities of local or state governments to finance. While state and local governments will need Commonwealth financial assistance, this assistance should not impose other, less tangible, costs such as those of Commonwealth-imposed coastal management policies or priorities.

For this reason, Huggett (1998) advocates federal government leadership. In his review of the role of federal governments in coastal zone planning and management in the European Union, United States of America, Canada and Australia, Huggett (1998, p. 42) draws attention to the issues raised by the RAC 1993 Inquiry; when expenditure responsibilities are divorced from the fund raising source as in the Australian case, several problems arise:

- Commonwealth government lacks the necessary information needed to determine state and local government expenditure levels and priorities;
- State and local government are able to avoid much of the responsibility for determining the extent to which funds are provided to finance those expenditures; and
- State government develop coastal zone programmes which local government do not have the resources to implement.

In terms of appropriate financial arrangements to build capacity for ICM, the Organisation for Economic Co-operation and Development (OECD) provided a set of international guidelines based on an analysis of 17 country reports and 16 case studies. The analysis intended to identify "measures for better integration in coastal zone management and, especially, the integration of economic and environmental considerations" (Cicin-Sain, Knecht & Fisk 1995, p. 103). According to the OECD 1991 report:

A major factor to successful ICM depends on how much a government implementing ICM can raise its own funds either independently or with assistance from the national government. Fundamentally, this flow of financial resources must be dependable and ongoing (Cicin-Sain, Knecht & Fisk 1995, p. 108).

This has been a problem to date in Australian coastal management (Harvey & Caton 2010). Wescott (2006, p. 32) highlights both state and federal governments' reluctance to effectively fund solutions to coastal problems, referring to the example of the National Cooperative Approach to ICZM Framework and Implementation Plan: "The 'National Framework' is severely limited in its potential impact by being compelled to be 'cost neutral', even in a time of very substantial surpluses in most states and federally".

To gain traction in this area, Wescott (2006, pp. 33-34) advocates a role for the federal government which involves the establishment of a National Coastal Council comprised of an independent and diverse membership, with the purpose of identifying solutions to coastal problems and, most importantly, "to significantly assist in funding the ... implementation of the identified solutions". As Wescott (2006, p. 34) highlights, "talk is cheap; improving coastal planning and management will require energy, vision and money".

The need for substantial federal funding for coastal management in Australia exists due to the reality of vertical fiscal imbalance. According to Wescott (2009), without the commitment of financial assistance from the federal government, the integrated governance framework cannot be effectively resourced or implemented. The lack of federal funding to date has been a barrier to "greatly enhancing the implementation of ICM and hence improving coastal planning and management across the nation" (Wescott 2009, p. 506). The underlying cause of this failure to adequately fund ICM is, according to Wescott (2009), a lack of political will on the part of the federal government.

On review of this literature, it appears that the detailed nature of the problems caused by the federal system of government in the context of coastal management in Australia is under-researched. Few scholars have picked up the threads discussed above and gone on to investigate the impact of Australian federalism on coastal management in practice; in particular, in the context of the constitutional division of powers and significant vertical fiscal imbalance requiring substantial federal government transfers to local and state governments. Thus, the following section outlines the rationale for this project.

2.7 Study rationale: ICM, fiscal centralisation and intergovernmental integration in the Australian federation – A case for exploration

The final report of the RAC Inquiry emphasised the importance of "facing the reality of the federal system" when designing a management program for implementation (Resource Assessment Commission 1993, p. 31). Thus, this research proposes to investigate the relationship between federalism, coastal governance arrangements and integrated coastal management in Australia, in order to understand the challenges to intergovernmental integration posed by Australian federalism.

Since many debates and conflicts in the coastal zone are underpinned by the actual process of governance and the issues that exist within and between different institutions responsible for coastal management (Olsen, Tobey & Kerr 1997), this research will explore the issues using a case study of South Australia. The research questions adopt a broad context as an initial starting point for research into this area because, as Crowley

(1999, p. 50) notes, “a deliberately broad focus maximises the potential to explain endemic problems with Australian environmental policy formation”.

In order to fully implement the intergovernmental integration aspect of ICM, policy and management should be consistent between the federal, state and local governments. This requires a shared vision for the coast. However, as the RAC 1993 report noted,

Different governments, Local, State and Commonwealth, will have different philosophies, perspectives, and priorities which will influence the way they choose to approach issues to do with the Coastal Zone. That is fact (Resource Assessment Commission 1993, p. 31).

In light of this, the proposed case study of South Australia will explore the governance issues from the perspectives of the coastal managers and decision-makers working ‘on-the-ground’ at the local, regional (NRM) and state level. Since most literature discussing intergovernmental integration in ICM in Australia focuses on the potential role of the federal government or state-federal relations, this study aims to understand challenges and opportunities faced at the local, regional and state level in their attempts to practice ICM within the federal system. The case study will focus on two main aspects: implications of the intergovernmental financial arrangements in the Australian federation, and the level of intergovernmental integration between the spheres of government involved in coastal management.

2.7.1 Study aim and research questions

Thus, the broad aim of this study is to develop a theory to explain why intergovernmental integration in the context of ICM is so hard to achieve or sustain in Australia. This will be achieved by exploring what Cicin-Sain and Knecht (1998) describe to be among the key determinants in the success or failure of ICM implementation: the nature of the prevailing political system, and the nature and relative strengths of the local, provincial, and central levels of government. Issues regarding the coastal governance arrangements, including the division of responsibilities for coastal management and the financial capacities of each sphere of government, will be explored from the perspectives of those spheres of government responsible for coastal management, in order to understand the different perspectives and priorities of each sphere and, in doing so, develop a theory grounded in empirical data. In order to meet the study objectives, the following research questions were devised, to be explored in the context of coastal management in Australia:

- 1. What is the nature of local government in South Australia? From the local government perspective, what are the governance issues posed by Australian federalism?*
- 2. What is the nature of state government in South Australia? From the state government perspective, what are the governance issues posed by Australian federalism?*
- 3. What is the nature of the federal government in Australia? How does this relate to the local and state spheres?*

4. *Considering the nature of Australian federalism, given the findings of this study, what are the implications for intergovernmental integration and the implementation of integrated coastal management in Australia?*

2.8 Chapter summary

Given the ecological, social and economic importance of coastal zones to human civilisation, and that competition for valuable resources in the coastal zone is being intensified by increasing population pressure and threat of climate change impacts, prudent coastal management is of major importance. According to the best-practice approach known as Integrated Coastal Management (ICM), effective integration between governing bodies involved in coastal management is paramount. Successful implementation of ICM requires an understanding of the political and institutional context in which it is required to operate. However, there has been little research looking at the implications of Australia's federal system of government for intergovernmental integration in Australian coastal management practice. To address this research gap, this study will investigate the nature, functions and relative strengths of the three spheres of government in the Australian federation, and will consider the impact these have on intergovernmental integration for effective ICM.

The following chapter will detail the research design intended to meet the broad objective of this project; that is, to develop a theory to explain why the intergovernmental integration aspect of ICM is so hard to achieve or sustain in Australian coastal management practice.

Chapter 3 Research design

3.1 Chapter overview

The purpose of this chapter is to outline the research design employed to achieve the overall aim of this study: to develop a theory as to why intergovernmental integration is hard to achieve or sustain in Australian coastal zone management. As outlined in the previous chapter, a review of the literature led to the refinement of the study to focus on exploring the relationship between coastal governance arrangements, the Australian federal system of government and intergovernmental integration. Four research questions were devised to explore this relationship; the answers to these research questions formed the basis of the theory developed. This chapter provides details of the research design, including methodology, methods, and verification strategies. The chapter concludes by outlining the limitations of the study and clarifying the scope.

3.2 Methodology

The methodology for this study was based on grounded theory and the methods followed a case study approach. This design was consistent with the purpose of the study to build theory from the analysis of qualitative data obtained in the field (Baxter 2010; Birks & Mills 2011; Creswell 2012; Crotty 1998; Leech & Onwuegbuzie 2007; Packer 2011; Thomas 2009).

The study was interested in examining inter-relationships between individuals and the coastal governance system they were working within. Thus, the research was designed purposefully to enable examination of the personal and subjective experiences, opinions, attitudes and perceptions of the people working within the governance system for coastal management at the local, regional and state scales. Data collection involved semi-structured, in-depth interviews, designed specifically to provide critical insights into the relationship between individuals and the governance system for coastal management with which they were interacting, to advance our understanding of the complex issues at hand (Dunn 2010). Ritchie and Spencer (1994, p. 174) state the value of this:

What qualitative research can offer ... is a theory of social action grounded in the experiences – the world view – of those likely to be affected by a policy decision or thought to be part of the problem.

3.2.1 Grounded theory

Grounded theory is an appropriate research methodology to employ when the researcher seeks to explore an issue and provide an explanation for the phenomena under study, as opposed to testing a pre-determined hypothesis (Leech & Onwuegbuzie 2007). In a grounded theory study, theory is derived from data via the researcher's systematic interaction with the data and development of hypotheses and concepts over the course of the study (Huberman & Miles 1994). As described by Stanley (2016, p. 374), grounded researchers:

- question gaps in the data, seeking information on what influences and directs the people and situation being studied;

- follow an open process of research rather than a fixed method;
- recognise the importance of context and social structure; and
- undertake an inductive process, where theory grows out of the data.

Thus, grounded theory is an iterative process with the purpose of building a theory about the phenomenon of interest (Corbin & Strauss 2008). The researcher begins by raising broad, generative questions to guide the research, which evolve over time and do not confine the research. Core theoretical concepts begin to be formed through collection of data, and are refined through interaction with the interview data and other sources. Over time, the researcher seeks to verify the theoretical concepts within the data and summarise them such that a conceptually dense theory emerges (Birks & Mills 2011; Corbin & Strauss 2008; Grix 2010).

To fulfil the aim of this research project, the methodology employed needed to provide insights grounded in experience of the issues arising from the coastal governance arrangements in South Australia, from the perspectives of people working within the system. In this way, the study adopted Charmaz's constructivist approach to grounded theory, which focuses on the importance of meanings that individuals attribute to issues by interpreting participants' thoughts, feelings, values, viewpoints and assertions, as opposed to describing acts and gathering facts (Charmaz 2014).

Similar research within the field of coastal management to utilise the methodology of grounded theory include: Stojanovic, Ballinger and Lalwani (2004) in their analysis of the processes and mechanisms of ICM initiatives and resulting changes in governance; Jentoft (2007) in his analysis of the role of power in fisheries management; Christie et al. (2009) in their study demonstrating the importance of local-level governance and institutional dynamics in marine ecosystem-based management in the Philippines; Gurran, Norman and Hamin (2013) in their examination of local practice in climate change adaptation planning in coastal Australia; and Stanley (2016) in her study of climate change adaptation in small coastal towns. The following section details the methods employed in this study to meet the overall aim of the project.

3.3 Methods

Table 3.1 summarises the methods employed to answer each research question. The methods are described below.

It was felt that a case study approach would provide the best insights into the practical issues that face the different stakeholder groups whose responsibility it is to manage the coast, while nonetheless providing a sound basis for generating new knowledge and constructing theory based on empirical evidence (Flyvbjerg 2006). As (Baxter 2010, p. 96) states:

Good theoretical explanations are those that are well rooted in the concrete aspects of the case yet sufficiently abstract that others in similar situations can see how they might apply to their own context.

Table 3.1 Aim, objective, research questions and associated methods

<p>AIM <i>To develop a theory explaining why intergovernmental integration is hard to achieve or sustain in Australian coastal zone management.</i></p> <p>REFINED OBJECTIVE FOLLOWING LITERATURE REVIEW <i>To explore the nature of prevailing political system - federalism - and the nature, functions and relative strengths of the local, state and federal spheres of government in the context of coastal management in Australia.</i></p>		
Research Questions	Methods	Chapter
1. What is the nature of local government in South Australia? From the local government perspective, what are the governance issues posed by Australian federalism?	Case study interviews; Literature review; Document analysis	6
2. What is the nature of state government in South Australia? From the state government perspective, what are the governance issues posed by Australian federalism?	Case study interviews; Literature review; Document analysis	7
3. What is the nature of the federal government in Australia? How does this relate to the local and state spheres?	Case study interviews; Literature review; Document analysis	8
4. Considering the nature of Australian federalism, given the findings of this study, what are the implications for intergovernmental integration and the implementation of integrated coastal management in Australia?	Synthesis	9

Thus, in this research design, in line with the principles of grounded theory, the case studies were undertaken to be ‘theory generating’ rather than ‘theory testing’ (Baxter 2010, p. 88; Eisenhardt 1989; Eisenhardt & Graebner 2007).

This study employed a variant of multiple case study design, known as spatial cross-case comparison, since “multiple case studies provide a broader basis for exploring theoretical concepts and explanations of phenomena” (Baxter 2010, p. 90). According to Yin (2009), case study selection should provide for literal replication (i.e. similarities between cases) and theoretical replication (i.e. differences between cases). The advantage of using multiple case studies is that it enables patterns to be more easily discerned, thus providing “opportunities to generate or modify concepts and theory so that they explain commonalities across cases despite contingencies or context” (Baxter 2010, p. 92). Hence, the purpose of this design was to draw out concepts grounded in all of the cases studied, independent of place and local governance context, in order to advance academic understanding of the phenomenon under investigation.

3.3.1.1 Setting and participants

This research project was undertaken in the state of South Australia between August 2009 and December 2016. In order to obtain a diverse array of opinions about the influence of the current governance arrangements for coastal management in South Australia, a range of different perspectives were sought. The individuals approached to take part in this study were chosen due to their position at each scale of coastal governance and management within South Australia: local, regional (NRM) and state.

Participants included those administering or overseeing coastal management initiatives and policy at a range of management levels within the SA government Department for Environment¹³, NRM Board staff (ranging from managers to on-ground staff)¹⁴, as well as co-ordinators, decision-makers and elected representatives at the local government level.

3.3.1.2 Case study sites

This project utilises a comparative case study approach to observe the coastal governance system in South Australia in three coastal NRM regions: Eyre Peninsula (EP) in the far west of the state, South East (SE) in the far east, and the Adelaide and Mount Lofty Ranges (AMLR) NRM Board covering the metropolitan area and peri-urban areas north and south of Adelaide. Within each coastal NRM region, people from three coastal local government areas were interviewed. Table 3.2 shows the LGAs selected within each NRM region. The three case study regions and the local government areas examined within each are described in more detail in Chapter Five.

Table 3.2 NRM regions and related LGAs

NR Eyre Peninsula	NR South East	NR Adelaide & Mt Lofty Ranges
<i>District Council of Tumby Bay</i>	<i>District Council of Kingston</i>	<i>City of Port Adelaide Enfield</i>
<i>City of Port Lincoln</i>	<i>District Council of Robe</i>	<i>City of Onkaparinga</i>
<i>District Council of Lower Peninsula</i>	<i>District Council of Wattle Range</i>	<i>City of Victor Harbor</i>

The case study regions were selected on the basis that they have significant sized coastlines within their administrative boundaries. Further to this, the three regions are at a range of distances from the state’s capital, Adelaide, to represent the diversity of issues that may be experienced across the state. The three corresponding local government areas chosen to represent each NRM region were selected on the basis of the following factors: the importance of their coastline to the community, region or state; experience of threats such as substantial population or tourism pressure; presence of or potential for significant coastal hazards; and the willingness of invited participants to take part in the study. Several of the LGAs are representative of sea change communities, as shown in

¹³ The governance arrangements for coastal management in the South Australia have been in flux in recent history, with the agency primarily responsible for coastal management undergoing several amalgamations with other SA government departments since the inception of this project. The ‘Department for Environment and Heritage’ (DEH) was restructured to incorporate the Natural Resources section of the ‘Department for Water, Land and Biodiversity Conservation’ (DWLBC) in 2009/10 to become the ‘Department for Environment and Natural Resources’ (DENR) and the ‘Department for Water’. A few years later, these two agencies merged to become the current ‘Department for Environment, Water and Natural Resources’ (DEWNR). Due to these frequent name changes over the course of the project, this institution will herein be referred to as the ‘Department for Environment’, or ‘DE’ unless the particular iteration of the department is important to the discussion.

¹⁴ One NRM Group member was interviewed in the South East; all other NRM representatives were NRM Board staff working for the SA government at the regional scale.

Table 3.3 which identifies five categories of coastal communities existing outside of capital cities.

Table 3.3 Typology of sea change communities

Adapted from Berwick (2007); Gurrán, Squires and Blakely (2005).

Typology	Description
<i>Coastal commuters</i>	Suburbanised satellite communities in peri-metropolitan locations within easy daily commuting of a capital city (e.g. Onkaparinga, SA).
<i>Coastal getaways</i>	Small to medium coastal towns within approximately a three-hour drive of a capital city for day tripping and easy weekend access to a holiday home (e.g. Victor Harbor, SA).
<i>Coastal cities</i>	Substantial and predominantly continuous regional urban conurbations beyond the state capitals (e.g. Gold Coast, QLD).
<i>Coastal lifestyle destinations</i>	Predominantly tourism and leisure communities generally more than three hours' drive from capital cities (e.g. Byron Bay, NSW).
<i>Coastal hamlets</i>	Small and remote coastal communities which may often be adjacent to protected natural areas (e.g. Limestone Coast including Robe, SA).

Time and resource constraints precluded the inclusion of interviews with other agencies at the state government level with a role in coastal management (such as Planning, Transport, Primary Industries, EPA and Fisheries, for example) as well as the missing spheres of governance (international, federal government, community groups, economic associations and other related NGOs). However, the advantages of this research design are that it did enable a less complex and more focused comparative study of coastal management at the state, regional and local government levels within SA, and further interviews could be conducted in the future with representatives from these groups to strengthen or test the theory generated from this study.

3.3.2 Interviews

Thirty three semi-structured, in-depth interviews were conducted across the three NRM regions and spheres of government between August 2011 and March 2013. Interviews were chosen to gain more detailed information about the coastal management process at the various levels of government involved. Interviews were undertaken since “interviews are an excellent method of gaining access to information about events, opinions, and experiences” and, key to the comparative case study element of the research design, allow the researcher “to understand how meanings differ among people” (Dunn 2010, p. 102). Finally, and central to the grounded theory elements of the research design, interviews were chosen for their strength in enabling the researcher to “discover what is relevant to the informant” (Dunn 2010, p. 103). However, it is recognised that this technique affects both the data gathering and the interpretation of results since, as Fontana and Frey (2000, p. 662) note:

Interviews are not neutral tools of data gathering but active interactions between two (or more) people leading to negotiated, contextually-based results.

The interview schedule used is provided in the appendices (Appendix 3.2), along with the research ethics documents (Appendices 3.3-3.5)¹⁵. It is noted that within the interview schedule and resultant discussions, the use of the terms 'state government', 'local government' and 'federal government' is ambiguous and open to interpretation. For example, when talking about 'state government' it could be interpreted to mean the politicians elected to represent the entity; the bureaucracy administering the entity; a particular individual deemed important or powerful within the entity; or, the entity as a whole. In saying this, care was taken in interpreting the various statements of each participant regarding any sphere of government, using the context of the interview discussions to discern meaning for each case.

Of particular importance to the theory-building aspect of this study, interviews were conducted in a semi-structured manner in that an interview schedule was used but flexibility in the order and manner of questioning was maintained (Dunn 2010). Further to this, the interview questions were designed to be broad and open-ended such that participants could discuss what was most important to them with regard to the general topic.

The interview schedule also served several other purposes. Firstly, it enabled transparency, giving the respondents a clear idea of the issues to be discussed. This was especially important given the timing of the study coinciding with the reorganisation of the SA government 'Department for Environment', and given that some of the topics could be perceived to be political and controversial. Secondly, having a clear 'run-sheet' beginning with simple questions helped to break the ice and allowed the interviewee to feel more comfortable and ease into the discussion. This was also important given the above point as well as the limited amount of time to establish a relationship with each respondent. Thirdly, an interview schedule gave the interview a framework for in-depth discussion keeping relevant to the topic. Further, breaking the interview up into general sections aided in the analysis of responses, whilst still enabling freedom to discuss issues as the conversation progressed. Finally, in most cases many of the topics discussed in the latter sections of the interview had already been explored in the introductory section on roles and responsibilities. This gave the opportunity for the respondent to elaborate further on issues they felt strongly about or gave the researcher the opportunity to press further for more detailed information about issues they felt might exist, once the respondent had 'warmed up' (Dunn 2010).

Interviews with the majority of the state government 'Department for Environment' employees were carried out first, followed by interviews with local government elected

¹⁵ The interview schedule included questions about horizontal integration with respect to integration between different departments within spheres of government. In line with the methodological approach of grounded theory, as the interviews progressed it became apparent that vertical integration, specifically intergovernmental integration, was going to be the focus of this study and less emphasis was placed on aspects of horizontal integration in the interviews. Accordingly issues raised regarding horizontal integration will not be presented in this thesis, unless in relation to discussion around vertical or intergovernmental integration.

members, local government staff and NRM Board staff in each NRM region: first, the Eyre Peninsula region, followed by the South East and finally metropolitan Adelaide and the Fleurieu Peninsula. All except two interviews were conducted face-to-face. Logistical constraints led to one telephone interview, although this participant had already been met face-to-face and a rapport built through this interaction. One other respondent was unable to meet in person and elected to answer the questions in writing, via email.

3.3.2.1 Development of interview schedules

The interview questions were formulated through the processes of literature review, informal conversations with established researchers and employees of the SA government 'Department for Environment', and observations made at the national coastal conference in 2010.

All questions were open-ended and expressed in a neutral way, designed purposefully to engage the participant in a non-confronting manner (Dunn 2010) about various aspects of coastal governance on the following broad matters:

1. Roles and responsibilities of local government, NRM Boards and SA government.
2. Nature of relationships and level of integration between spheres of government.
3. Impact of financial arrangements for funding of coastal management.

The use of open-ended questions was fundamental to the purpose of this study, as it permitted participants to describe and explain their points of view, encouraging genuine responses which could then be analysed to provide a greater insight into the issues experienced by each stakeholder group. Furthermore, open-ended questions enable answers that may not have been expected by the researcher and hence encourage exploration of new knowledge arising from the interview conversation (Dunn 2010; Patton 1990) – important elements enabling theory-building from interview data.

3.3.2.1.1 Pilot testing the interview schedule

The interview schedule developed for this study was pre-tested by asking four individuals with knowledge and experience of coastal management and qualitative research methods to check the wording and clarity of the schedules. Subsequently, two pilot interviews were conducted: one with an academic with coastal management expertise and the other an ex-coastal practitioner. Ambiguities in the questionnaire were identified and questions were re-worded and refined accordingly (Dunn 2010).

3.3.2.2 Identification of interviewees

Participants were recruited using theoretical sampling and snowballing techniques (Dunn 2010). During the SA government interviews, which were conducted first, participants were asked to recommend five other individuals who would be good to talk to. Many of the suggested individuals were followed up and took part in the study. Other interviewees were targeted after the selection of the case study sites, based on their involvement with the organisations of interest. For all NRM regions, those working

directly on coastal management were targeted where possible, and where these roles did not exist, the Regional Manager in charge of coastal management for the NRM region was pursued. Participants from each stakeholder group are summarised in Table 3.4.

Table 3.4 Table of interviewees by region and sphere of government

Table showing case study participant groups by *case study region* and *sphere of government*, where ‘I #’ refers to the interviewee anonymity code.

SA Government: (Dept. Environment/ Coast Protection Board)	I 1, I 2, I 3, I 4, I 5, I 7, I 8, I 17, I 18		
Local government (state-wide)	I 6, I 25		
	Eyre Peninsula (EP)	South East (SE)	Adelaide & Mt Lofty Ranges (AMLR)
Local Government	I 9, I 11, I 13, I 14, I 15, I 16	I 20, I 21, I 23	I 24, I 26, I 27, I 28, I 29, I 32, I 33
NRM	I 10, I 12	I 19, I 22	I 30, I 31

The majority of individuals interviewed were working ‘on-the-ground’ in coastal management or were managers with direct oversight of on-ground staff, with good insight into the processes and practical aspects of coastal management that could comment on the strengths and weaknesses of the governance system from their personal experience of working within it. For another perspective, and in an attempt to understand how the coast is prioritised by decision-makers, the opinions were sought from local government elected members and SA government high-level managers responsible for decision-making affecting coastal management ‘on-the-ground’ in South Australia.

3.3.2.3 Making contact

All interviewees were formally invited to participate in a face-to-face interview via email. Some invitees did not respond to their email. Where this occurred, alternative participants were identified and contacted in the same way. This technique was successful in obtaining interviews with representatives of all stakeholder groups except the AMLR NRM region. After emailing attempts failed to obtain an interview with the targeted AMLR practitioner, an NRM coastal community event run by the organisation was attended to make contact with alternative practitioners face-to-face. This was successful in obtaining two interviews with AMLR staff.

The interview time, date and location were set up via email communication prior to the interview taking place. All information, including questions and research ethics documents, were sent via email well in advance of the interview (see Appendices 3.1-3.4). This gave respondents the opportunity to consider knowingly if they wanted to be involved and if so, time to think about the questions.

3.3.2.4 The interview

Face-to-face interviews were conducted with all but two participants. One participant elected to respond to the questions in writing, while the other was interviewed over the phone. All interviewees were asked permission to record the interview for later transcription and analysis, and all accepted bar one. For this interview, handwritten notes were taken. For the telephone interview, the interviewee was on speakerphone and the interview recorded via digital voice recorder and transcribed as usual. The interview schedule contained roughly 20 questions which took between 30 minutes and 90 minutes to answer, depending on the participant's availability and willingness to converse. Every interview was concluded by giving the interviewee an opportunity to discuss anything else they felt important to the research.

3.3.3 Data analysis and presentation

Interviews from digital recordings were transcribed into MS Word by professional transcription companies. In order to ensure that each interview had been transcribed accurately, and to begin the process of analysis, each interview transcript was reviewed by the researcher listening to each recording and correcting each transcript manually to guarantee the discussion had been captured precisely. Once the transcripts were deemed accurate by the researcher, they were formally analysed using Glaser and Strauss (1967)'s method of constant comparative analysis (Leech & Onwuegbuzie 2007). Constant comparative analysis (CCA) is "the method of choice when the researcher wants to answer general, or overarching, questions of the data" (Leech & Onwuegbuzie 2007, p. 576).

3.3.3.1 Constant comparative analysis of interview transcripts

There exist many different approaches to qualitative data analysis (Bazeley 2007, 2009; Cope 2010; Dunn 2010; Thomas 2009). CCA, also known as coding, is the most common type of qualitative data analysis, useful for "utilizing an entire dataset to identify underlying themes" to inductively develop theory (Leech & Onwuegbuzie 2007, p. 565).

Broadly, coding is defined as "a process of identifying and organizing themes in qualitative data" (Cope 2010, p. 281). The purpose of coding is data reduction in order to extract themes, organisation in order to aid data handling and analysis, and perhaps most importantly, coding is part of the data analysis (Cope 2010).

In this study, coding was used as an exploratory exercise in order to generate theory grounded in empirical data. As Dunn (2010, p. 125) explains, "researchers analyse interview data to seek meaning from the data. We construct themes, relations between variables, and patterns through the data". Coding involved the following three steps:

1. Open coding – this involved a first pass through the data to reduce the wealth of material into organisable categories. The interview schedule provided the overarching themes to begin the coding process, as did basic descriptive codes such as geographical and demographic conditions. During this phase, ideas in the form of memos were also noted while concepts were being developed.

2. Axial Coding – this involved a second pass through the data to build on the formative codes, as well as a critical review of the aforementioned categories and codes, and further development of key concepts. Categories were refined.
3. Selective coding – this is the final pass through the data where the main purpose was to search for examples where themes are clearly illustrated or contrasted, in order to develop a coherent theory (Bazeley 2009; Cope 2010; Corbin & Strauss 2008; Dunn 2010).

3.3.3.1 NVIVO 10

Coding of interview data was conducted using a computer-based qualitative data analysis software (CQDAS) program, NVIVO 10. One of the main advantages of using a computer program such as NVIVO to carry out analysis of such a large and complex qualitative data set, is the ease with which the researcher can sort, refine and retrieve data (Wong 2008). This program was selected in preference to other similar applications (for example ATLAS) as it was available for use at the University, with training courses on the program provided to staff and students.

Following coding, NVIVO 10 was used to compare codes across stakeholder groups and to develop over-arching themes. In this way, the software enabled exploration of the complex and large data set to build theory (Bazeley 2007, 2009; Bringer, Johnston & Brackenridge 2006; Liamputtong 2009; Mills 2010; Salkind 2010; Welsh 2002; Wong 2008).

3.3.3.2 Presentation

Primary data are presented in the form of textual quotations derived from transcribed interviews and are used to illustrate the themes and concepts being discussed. Interviewees remain anonymous but their sphere of government (SA government: SG; NRM Board staff: NRM; local government: LG) and case study region (Eyre Peninsula: EP; South East: SE; Adelaide and Mount Lofty Ranges: AMLR) are displayed with each quote. Quotes are presented in the thesis text to demonstrate points, problems and perceptions of interviewees.

3.3.4 Document analysis

Document analysis is a source of empirical data often used to complement interview methods in case study research (Bowen 2009). As Merriam (1988, p.118) note, “documents of all types can help the researcher to uncover meaning, develop understanding, and discover insights relevant to the research problem” (Bowen 2009, p. 29). The advantage of document analysis is that it provides contextual data and historical insight beyond what can be obtained via the interview process (Bowen 2009; Yin 2009). Another advantage is that, unlike interviews which involve interaction with the researcher and subject, documents offer an ‘unobtrusive’ and ‘non-reactive’ point of view (Bowen 2009, p. 31).

The process of document analysis in this study involved a first-pass content analysis to gather meaningful and relevant information to provide context to, and enhance

understanding of, the case studies to support theory building (Bowen 2009; Corbin & Strauss 2008). Information from organisational and institutional documents have been used in this study to supplement and scaffold interview data. Such documents have included previous studies, background papers, organisational and institutional reports and survey data.

3.4 Verification of research

The validity of qualitative research is often questioned (Creswell & Miller 2000; Lincoln & Guba 1986). This section aims to acknowledge the researcher's inevitable influence on the entire research process, from the understanding of the research problem, framing of the research questions, data collection and analysis, through to the interpretation of results. As Takacs (2003, p. 31) discerns:

Knowledge does not arrive unmediated from the world; rather, knowledge gets constructed by interaction between the questioner and the world.

There are several steps that can be taken by the researcher to counter what may be argued as a short-coming or criticism of qualitative research, thereby enhancing the validity (also known as authenticity, trustworthiness, rigour or credibility) of qualitative research (Creswell & Miller 2000; Leech & Onwuegbuzie 2007; Lincoln & Guba 1986). According to Creswell and Miller (2000), the choice of validity procedures employed in a qualitative inquiry depend on two factors: the lens the researcher brings to the study and the paradigm assumptions, or worldviews, of the researcher. Table 3.5 exhibits a matrix of validity procedures based on the researcher lens and paradigm assumptions, as developed by Creswell and Miller (2000), and summarises the types of strategies that can be undertaken to verify research findings.

The various steps undertaken in this research study align with all three paradigm assumptions and most significantly with the lenses of the researcher and people external to the study. The latter likely reflects my positivist educational background. Steps taken include the triangulation of interview data with other data collected via literature review and document analysis (see below); an audit trail via documentation of interview transcripts, coding and concept and theory development using notebooks and the CQDAS program NVIVO 10; the search for disconfirming evidence during both interview and document analyses; thick description of the stakeholder group perspectives through the use of direct quotations throughout the thesis; peer debriefing via research meetings with colleagues and presentation of results at state and national conferences; and researcher reflexivity.

With respect to the latter, the validity of the qualitative research undertaken is enhanced if the position of the researcher is made explicit (Creswell & Miller 2000). To this end, whilst I have a brother working for the SA government 'Department of Environment', and several close friends working for the state government and the federal government, I consider myself to be an 'outsider' or a non-member of the groups (i.e. spheres of government in Australia) under study (Kerstetter 2012).

Table 3.5 Validity procedures based on researcher lens and paradigm assumptions

Adapted from Creswell and Miller (2000, p. 126).

<i>Paradigm → Lens ↓</i>	<i>Post positivist or systematic paradigm</i>	<i>Constructivist paradigm</i>	<i>Critical paradigm</i>
<i>Researcher</i>	Triangulation Use of multiple and different sources of information to corroborate results	Disconfirming evidence Search for disconfirming or negative evidence to contradict developed themes and categories	Researcher reflexivity Self-disclosure of researcher's assumptions, beliefs and biases that may shape inquiry
<i>Study Participants</i>	Member checking Presenting data and interpretations to study participants for confirmation of data and interpretation accuracy	Prolonged engagement in the field Enables comparison of interview data with observational data	Collaboration Inclusion of study participants as co-researchers or active participants enables representation of participants' views in narrative
<i>People External to Study (reviewers, readers)</i>	The audit trail Established by researcher via journal, memo, research logs, records of data collection chronology and data analysis procedures	Thick, rich description Detailed description of the research setting, participants, themes to convey the feeling of experience to the reader	Peer debriefing Peer review of data and research process to challenge assumptions and interpretations, providing critical reflection of research and findings

The main strategy employed in this study was triangulation, a technique employed by social science researchers to overcome the potential for findings to be an artefact of a single method, source or investigator bias (Bowen 2009; Lincoln & Guba 1985; Patton 1990). To this end, the use of multiple methods, theories and sources of data to analyse a research problem is a widely accepted practice (Blaikie 1991).

This thesis uses the following forms of triangulation: (1) Data source triangulation – Data was gathered from different sources, times, locations and groups, including interviews, policy documents, government reports, websites, legal acts and media sources; temporally ranging over one hundred years; with multiple groups at a range of governance and geographical scales. (2) Method triangulation – A range of different research methods were used including semi-structured interviews, literature review and document analysis. (3) Theoretical triangulation – A range of theoretical perspectives were employed to construct theory, including concepts from geography, political science, public policy and environmental management (Bowen 2009; Flick 1992; Leech & Onwuegbuzie 2007).

3.5 Scope and limitations of research

As in all research, the scope of the study and the knowledge that was able to be produced were limited by a number of factors. As discussed above, given the nature of qualitative inquiry it is recognised that the approach to the research imposes several limitations on its findings. Secondly, as a project undertaken to fulfil the requirements of a PhD,

constraints of budget and time limited the scale of the research. The following section serves to delineate what was and was not included in the scope of this research and the reasons for the final focus.

Firstly, it is important to clarify that this research did not set out to critique the concept of ICM as a model of coastal planning and management, nor to specifically evaluate through the use of indicators whether ICM has been successfully implemented in South Australia. Accordingly, the assumptions, based on the argument presented in the literature review in the previous chapter, are 1) ICM is the current best-practice model for the planning and management of coastal areas and resource use, and 2) intergovernmental integration, as prescribed by the ICM model, has *not* been successfully implemented in Australia to date.

Based on these fundamental assumptions, this study seeks to explain *why* the latter is the case. To meet this aim, the research design outlined in this chapter enables exploration of the relationship between coastal governance arrangements, federalism and intergovernmental integration but is limited to the perspectives of local, regional and state spheres of government in South Australia. However, within the paradigm of ICM and the prescription for 'vertical integration' as described by Vallega (2013), this is a relatively narrow exploration of decision-making affecting the management of the coastal zone. Thus, this research design clearly limits the consideration of both the international, federal government, community and other NGO perspectives.

Interviews with the community sphere were not sought due to the study's focus on 'intergovernmental integration' rather than community participation, since there is little work focussing on intergovernmental relations and considerable work with respect to community participation in coastal management to date – for example, Clarke (2003, 2008); Harvey, Clarke and Carvalho (2001); Wescott (1998).

Interviews with the federal sphere of government were not sought due to budget constraints preventing face-to-face liaison with federal government decision-makers based in Canberra. This was also considered acceptable by the researcher due to the desire to ground the research in the governance issues being experienced by those spheres of government constitutionally, legally and operationally responsible for the majority of landward coastal planning and management, i.e. at the local, regional and state scales.

Similarly, within the paradigm of ICM and the prescription for 'horizontal integration', consideration of integration across sectors and the land-coast-ocean continuum is important. The research design employed in this study focuses on issues affecting state government coastal zone jurisdiction, thus marine issues of federal government jurisdiction are not directly considered. The researcher acknowledges the existence of significant intergovernmental integration issues occurring across the land-coast-ocean continuum, and these have been covered previously by Foster and Haward (2003); Haward (1989, 1995a, 1996); Rothwell and Haward (1996); Wescott (2000, 2012).

Finally, this study elected to focus on the coastal governance system in one state, South Australia, in an attempt to reduce the level of complexity involved in investigating governance barriers to integration resulting from the diverse array of legislation, agencies and instruments which complicate comparisons between states. The transferability of the findings from this case study of South Australia to the rest of Australia is supported through analyses of inter-disciplinary literature and other documentation presented throughout the thesis. It is the role of future research to test or corroborate the theory developed in this thesis.

Naturalistic inquiry facilitates theory development (through the discovery of grounded theory) and provides the "thick description" in terms of which other researchers can further test hypotheses or determine the limits of transferability (Lincoln & Guba 1985, p. 32).

Given this scope and the related assumptions, this study seeks to build on what is known about the implementation of ICM in Australia by improving our understanding of factors related to coastal governance arrangements and federalism which might impede the level of intergovernmental integration, assumed necessary for successful implementation of the integrated coastal management model. Thus, this research aims to provide an explanation for the previously-reported observed phenomena of poor ICM implementation in Australia.

3.6 Chapter summary

This chapter has detailed the research design chosen to meet the aim of the study, which is to develop a theory as to why intergovernmental integration is so hard to achieve or sustain in Australian coastal zone management. The study has embraced a qualitative research approach, employing the methodology of grounded theory and the comparative case study method to generate theory grounded in empirical data. Semi-structured, face-to-face interviews were selected to comprise the main data collection technique, with interview transcripts coded and analysed using the CQDAS program NVIVO 10. Triangulation of these findings via document analysis enhanced the validity of the research, and the resultant theory was verified using a range of validation strategies.

The following two chapters provide the background to the case study: Chapter Four describes the coastal governance arrangements in South Australia, outlining the key legislation, policies and institutions involved, while Chapter Five describes the three case study regions and their coastal management needs, in order to provide context for the discussion of the results in the ensuing chapters.

Chapter 4 Coastal governance arrangements in South Australia

4.1 Chapter overview

The purpose of this chapter is to provide background information necessary to understand and contextualise the case study results presented in the subsequent chapters. The chapter will provide an overview of the main legislative and institutional arrangements for governance of the coast within the state of South Australia. The chapter will also provide a brief synopsis covering the strengths and weaknesses of coastal governance arrangements in South Australia, and the status of ICM in this regard.

4.2 Coastal governance arrangements in SA

As outlined in Chapter Two, state governments have authority over the majority of management responsibilities in the coastal zone, including environmental management and land-use planning and development. Each state can determine how to meet these responsibilities and, consequently, coastal governance arrangements have evolved to vary considerably from state-to-state in Australia (Lazarow 2010). The following sections provide a brief overview of the governance arrangements for coastal management within South Australia, as background information for the case study undertaken.

In South Australia, there are several pieces of state government legislation which relate either directly to coastal management, or influence the way the coastal zone is governed. Multiple SA government agencies, as well as local governments across the state, are responsible for administering this SA government legislation. This type of institutional complexity has been criticised for creating fragmented coastal governance arrangements (Harvey & Caton 2010; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; Kenchington & Crawford 1993; Resource Assessment Commission 1993).

In South Australia, responsibilities for environmental protection and conservation and natural resource management are currently separated from planning and development, and integration between these aspects has waxed and waned over the years. At present, these aspects of coastal management are governed through the legislation of the *Coast Protection Act 1972*, and the more recent *Development Act 1993* and *Natural Resources Management Act 2004*.

In terms of agency responsibilities, the role of protection, conservation and management of the coast is primarily the responsibility of the South Australian government's Department of Environment, Water and Natural Resources (DEWNR)¹⁶. Coastal development, in contrast, is governed separately through the SA government agency responsible for development policy and planning, currently known as the Department of Planning, Transport and Infrastructure (DPTI). Responsibilities for local planning and non-

¹⁶ As explained in footnote 11, this institution will be referred to as the 'Department for Environment' or 'DE'.

major development decisions has been delegated to local governments, which must adhere to the SA government planning regulations and be approved by the SA government Minister for Planning. The key features of these arrangements will be described in this chapter. Other relevant legislation, agencies and policy instruments will be listed in Table 4.1.

4.2.1 Coast Protection Act 1972

The *Coast Protection Act 1972* is “an Act to make provision for the conservation and protection of the beaches and coast of this State” (Government of South Australia 2015). The Responsible Minister is the Minister for Sustainability, Environment and Conservation. The Queensland Beach Protection Act 1968 and the South Australian Coast Protection Act 1972 were the first pieces of legislation related to coastal protection in Australia (Harvey & Caton 2010). The South Australian Coast Protection Act 1972 was established in response to a series of severe storms in the 1960s along the Adelaide coastline. Subsequently, it is reactionary in its approach with a focus on protection using engineering solutions, rather than sustainable coastal management espoused by ICM (Harvey & Caton 2010, p. 196; Harvey et al. 2012, p. 82). Despite the Coast Protection Act 1972 being under review for decades (Harvey et al. 2012), the legislation remains unchanged.

4.2.1.1 Definition of the coast in South Australia

The *Coast Protection Act 1972* defines the coast as:

All land that is—

- (a) within the mean high water mark and the mean low water mark on the seashore at spring tides; or
- (b) above and within one hundred metres of that mean high water mark; or
- (c) below and within three nautical miles of that mean low water mark; or
- (d) within any estuary, inlet, river, creek, bay or lake and subject to the ebb and flow of the tide; or
- (e) declared by regulation to constitute part of the coast for the purposes of this Act (Government of South Australia 2015).

4.2.1.2 Coast Protection Districts

The Coast Protection Act provides for creation of six Coast Protection Districts: Eyre, Fleurieu, Kangaroo Island, Metropolitan, South East and Yorke. Each district has its own management plan covering its environmental parameters, coastal geomorphology, hazards and development impacts.

Table 4.1 South Australian legislation, regulations, agencies and policy instruments related to coastal management

List of South Australian legislation, regulations, agencies and policy instruments relevant to state-wide coastal management at the time of writing (2016).

Legislation and Regulations (by year)	<i>Coast Protection Act 1972</i> <i>National Parks and Wildlife Act 1972</i> <i>Historic Shipwrecks Act 1989</i> <i>Wilderness Protection Act 1992</i> <i>Aboriginal Heritage Act 1993</i> <i>Harbours and Navigation Act 1993</i> <i>Heritage Act 1993</i> <i>Development Act 1993</i> <i>Environment Protection Act 1993</i> <i>Water Resources Act 1997</i> <i>Local Government Act 1999</i> <i>Aquaculture Act 2001</i> <i>River Murray Act 2003</i> <i>Natural Resources Management Act 2004</i> <i>Adelaide Dolphin Sanctuary Act 2005</i> <i>Fisheries Management Act 2007</i> <i>Marine Parks Act 2007</i> <i>Development Regulations 2008</i> <i>Crown Land Management Act 2009</i> <i>Crown Land Management Regulations 2010</i> <i>Coast Protection Regulations 2015</i>
Agencies and Institutions	Coast Protection Board (CPB) Department of Environment, Water and Natural Resources (DEWNR) Department of Planning, Transport and Infrastructure (DPTI) Department of Primary Industries and Regions (PIRSA) Environmental Protection Authority (EPA) Environment, Resources and Development Court (ERDC) Regional NRM Boards (7 out of 8 regions have coastline) Local government areas with coastline (33 out of 64 have coastline)
Policies, Plans, Strategies (by year)	CPB Policy on Coast Protection and New Coastal Development 1991 Living Coast Strategy for South Australia 2004-2009 Coast Protection Board Strategic Plan 2009-2014 CPB Policy Document – Revised 2012 State Natural Resources Management Plan South Australia 2012-2017 Coastal Planning Information Package 2013

4.2.1.3 Coast Protection Board

Unique to South Australia, the Act provides the basis for a statutory lead agency to be known as the Coast Protection Board (CPB), which is subject to the control and direction of the Minister (Government of South Australia 2015).

The Board—

(a) shall be a body corporate with perpetual succession and a common seal; and

(b) shall be capable of acquiring, holding, selling and otherwise disposing of real and personal property; and

(c) shall be capable of acquiring or incurring any other legal rights and liabilities, and of suing and being sued; and

(d) shall hold its property on behalf of the Crown (Government of South Australia 2015).

The CPB is responsible for managing the state’s coastline and administering the Coast Protection Act 1972. The membership of the Board and its duties, as defined by the Act, are shown in Table 4.2. The South Australian government’s Department of Environment provides administrative support to the Coast Protection Board.

Over its history, the CPB has played “a leading role in providing policy advice to the Minister for Environment, and financial, technical and policy advice to councils and other agencies involved in a wide range of coastal management related activities” (Coastal Management Review Committee 1988, p. 1). The CPB is also responsible for developing planning policy for the coast in South Australia, and acts as a referral authority on key development proposals on the coast (Coastal Climate Change Advisory Committee 2010, p. 118).

Table 4.2 Coast Protection Board membership and duties

Source: Coast Protection Board (1991, p. 2).

Membership	Duties
The Director of Planning (or nominee)	(a) to protect the coast from erosion, damage, deterioration, pollution and misuse;
The Director of Marine & Harbours (or nominee)	(b) to restore any part of the coast which has been subjected to erosion, damage, deterioration, pollution or misuse;
The Director of Tourism (or nominee)	(c) to develop any part of the coast for the purpose of aesthetic improvement, or for the purpose of rendering that part of the coast more appropriate for the use or enjoyment of those who may resort thereto;
A representative of Local Government	(d) to manage, maintain and, where appropriate, develop and improve coast facilities that are vested in, or are under the care, control and management of, the Board;
A person with expertise in biological processes affecting the coast	(e) to report to the Minister upon any matters that the Minister may refer to the Board for advice;
A person with expertise in physical processes affecting the coast	(f) to carry out research, to cause research to be carried out, or to contribute towards research, into matters relating to the protection, restoration or development of the coast.

4.2.1.3.1 CPB policies and strategic plans

The following two Coast Protection Board policies guide management of the South Australian coast:

- (1) Policy on Coast Protection and New Coastal Development endorsed in 1991, covering coastal development including hazard standards, sea-level rise and protection funding (Coast Protection Board 1991).
- (2) Coast Protection Board Policy Document endorsed in 2002 and revised in 2012, dealing with the following policy areas: 1. Development, 2. Hazards, 3. Protection Works, 4. Conservation, 5. Heritage, 6. Access and Amenity, 7. Partnerships,

Integration and Capacity Building, and 8. Research, reporting, monitoring and assessment (Coast Protection Board 2012).

In 2009, the Board established the Coast Protection Board Strategic Plan 2009-2014, which advocates “the sustainable use of the South Australian coast, for the benefit of society, the economy and the environment” (Coast Protection Board 2009, p. 1). The Strategic Plan set three basic priorities, as outlined in Table 4.3, with defined actions to meet these goals (Coast Protection Board 2009).

At the request of the South Australian government Minister for Sustainability, Environment and Conservation, the Coast Protection Board has also prepared the ‘Coast Protection Board Position Paper May 2015’ outlining future coastal management priorities for the state. The report covers the most important issues facing the South Australian coast at present, including the impact of sea-level rise, coastal land-use planning, development in hazardous areas and the costs and benefits of protection versus retreat (Department of Environment Water and Natural Resources 2015).

4.2.1.4 Coast Protection Fund

The Act also provides for a statutory funding mechanism, the Coast Protection Fund (CPF), to be maintained by Treasury but applied by the CPB in administering the Act. Monies are deposited into the fund from two sources: parliamentary decree, and funds recovered by the Board in pursuance of the provisions of the Act. Councils may apply to the CPB for funding for protection, restoration or development works. If approved, the CPB may grant any amount of funding of up to four-fifths of total cost of works, or any amount up to the total cost if works are required as a result of storm damage. In the case of funding requests for land acquisition for the purpose of protecting, restoring or developing that land, the Board may grant councils any amount up to one-half of the cost incurred in acquiring the land. In situations where the Board conducts works within, or benefitting, council(s) the Board may recover a contribution of up to one-half for coastal facilities, or one-fifth for other works; likewise, for land acquisition, the Board may recover up to one-half of the cost incurred by the Board in acquiring the land (Government of South Australia 2015).

4.2.2 Development Act 1993

The South Australian *Development Act 1993* is:

An Act to provide for planning and regulate development in the State; to regulate the use and management of land and buildings, and the design and construction of buildings; to make provision for the maintenance and conservation of land and buildings where appropriate; and for other purposes (Government of South Australia 2014).

The objectives of the *Development Act 1993* are shown in Table 4.4. The Responsible Ministers are the Minister for Planning and the Minister for Urban Development, Planning and the City of Adelaide.

Table 4.3 Coast Protection Board Strategic Plan 2009-2014

The key priorities and actions of the Coast Protection Board Strategic Plan 2009-2014 (Coast Protection Board 2009).

Strategic priorities	Actions
1. Adaptation of existing development to coastal hazards and the impacts of climate change	1.1 Support the implementation of the National Climate Change Adaptation Framework 2007, in particular, the acquisition of the national coastal DEM and coastal vulnerability assessment. 1.2 Assist Governments prepare coastal vulnerability assessments and adaptation plans. 1.3 Assist Local Government devise, prioritise and implement protection strategies for coastal settlements. 1.4 Provide advice to the Minister, Government, local government and the community on adaptation of coastal development.
2. Ensure new development is not at risk from current and future hazards	2.1 Ensure that coastal development occurs consistent with the hierarchy of adaptation: avoid, accommodate, adapt. 2.2 Seek increased powers to control development potentially at risk from coastal hazards. 2.3 Maintain the currency and relevance of Coast Protection Board policies, including allowances for sea-level rise, by reviewing as appropriate. 2.4 Seek the Government's adoption and inclusion of these policies in South Australia's development control system. 2.5 Better engage with the emergency management sector to exploit areas of joint interest regarding the impacts of climate change on coastal development 2.6 Prepare guidance for planning authorities, developers and the community on appropriate landscapes and criteria for specific types of development (i.e. marinas, ports, boat ramps). 2.7 Provide advice to the Minister, Government, local government and the community on sustainable coastal development.
3. Plan for resilience in coastal ecosystems to adapt to the impacts of climate change	3.1 Engage with planning authorities in developing land use frameworks, Planning Strategies and Development Plans that recognise and allow for adaptation (including retreat and migration) of tide-dependent ecosystems. 3.2 Ensure that development does not create additional pressures on at-risk ecosystems. 3.3 Provide advice to the Minister, Government, local government and the community on sustaining coastal ecosystems

The *Development Act 1993* provides for the states planning system, which comprises three tiers: the planning strategy, development plans and development assessment (Huppertz 2005). The planning strategy is developed at the state government level, whilst development plans and development assessment occur at the local government level (unless development is of Major Development status, which is assessed by the SA government Development Assessment Commission). As the *Development Act 1993* establishes the legislative framework for planning of land-use and development, the development system is critical in determining land-use and development outcomes in the coastal zone (Harvey et al. 2012, p. 83). The following sections will outline the role of development plans and development assessment at the local level.

Table 4.4 Objectives of the *Development Act 1993*

Source: Government of South Australia (2014)

<i>Development Act 1993</i>
<p>The object of this Act is to provide for proper, orderly and efficient planning and development in the State and, for that purpose—</p> <ul style="list-style-type: none">(a) to establish objectives and principles of planning and development; and(b) to establish a system of strategic planning governing development; and(c) to provide for the creation of Development Plans—<ul style="list-style-type: none">(i) to enhance the proper conservation, use, development and management of land and buildings; and(ii) to facilitate sustainable development and the protection of the environment; and(iia) to encourage the management of the natural and constructed environment in an ecologically sustainable manner; and(iii) to advance the social and economic interests and goals of the community; and(d) to establish and enforce cost-effective technical requirements, compatible with the public interest, to which building development must conform; and(e) to provide for appropriate public participation in the planning process and the assessment of development proposals; and<ul style="list-style-type: none">(ea) to promote or support initiatives to improve housing choice and access to affordable housing within the community; and(f) to enhance the amenity of buildings and provide for the safety and health of people who use buildings; and(g) to facilitate—<ul style="list-style-type: none">(i) the adoption and efficient application of national uniform building standards; and(ii) national uniform accreditation of buildings products, construction methods, building designs, building components and building systems.

4.2.2.1 Development Plans

In South Australia, the state government’s planning strategy guides the formulation and reviews of development plans, the statutory instruments against which development applications are assessed. Each council must produce a development plan specifying the type of development permitted in that local government area.

In 1994, the CPB policies were incorporated into development plans via a Ministerial amendment authorised by the Planning Minister; the Regional Coastal Areas Policies Amendment. This amendment provided development plans with policies to cover important aspects of coastal management, including environmental protection, maintenance of public access, hazard risk minimisation, erosion buffers, land division, protection of economic resources and development in appropriate locations (Clarke 2010; Coastal Climate Change Advisory Committee 2010; Department of Environment Water and Natural Resources 2013; Norman 2009a). Table 4.5 shows the standards applying to development in the coastal zone in South Australia.

Table 4.5 Development plan standards for coastal development

Sourced from Coastal Climate Change Advisory Committee (2010, pp. 119-120).

Development plan standards for coastal development
Sea-level rise of 1.0m by 2100 must be taken into account. Development permitted only where not subject to, or able to be protected from, coastal hazards. Coastal hazards to be minimised by: <ul style="list-style-type: none">❖ Site development levels at least 0.3 metres above sea flood levels;❖ Floor levels 0.55 metres above sea flood levels and protected from an additional rise in sea-levels of 0.7 metres (including from land subsidence) by 2100;❖ Small scale development set back a sufficient distance to provide for 100 years of coastal retreat;❖ Large scale development and township areas set back 200 metres, unless appropriate private protection is provided or council protection of the public reserve is to be provided. Development can accommodate changes in sea-level during the first 100 years of its life. Development will not require public funds for protection in the future. Development does not prevent natural coastal processes, including landward migration of mangroves, coastal saltmarsh and dune systems. Development provides for a 50 metre coastal reserve to maintain public access to the coast. Coastal reserves should be increased in width by the amount of any required erosion buffer (see above), where the width should be based on: <ul style="list-style-type: none">❖ The susceptibility of the coast to erosion;❖ Local coastal processes;❖ The effect of severe storm events;❖ The effect of a 0.3 metres sea-level rise over 50 years thereafter on coastal processes and storms;❖ The availability of practical measures to protect the development from erosion caused by a further sea-level rise of 0.7 metres per 50 years thereafter. No development where essential services cannot be provided and maintained, having regard to flood risk and sea-level rise, or where emergency vehicle access would be prevented by a 1 in 100 year average return interval flood event, adjusted for 100 years of sea-level rise.

Under Section 30 of the *Development Act 1993*, the Department for Environment advises on council development plan reviews and proposed amendments to ensure consistency with Coast Protection Board policy (Huppatz 2005).

4.2.2.1.1 Coastal Zones

Coastal zones have been established to serve various purposes, including protection of sensitive coastal features, prevention of development in hazardous areas and to ensure that development applications in any of the coastal zone categories are referred to the Coast Protection Board (Coastal Climate Change Advisory Committee 2010; Department of Planning and Local Government 2011).

Councils must adopt a coastal zone category for land with any of the following coastal features:

- coastal landforms and habitats (including beaches, coastal dunes and cliffs, coastal wetlands, tidal estuaries, saltmarsh and mangrove areas);
- important coastal geological features or other natural features of scientific, educational, heritage or cultural importance;

- buffer areas for the purpose of separating development from sensitive coastal and marine features and habitats;
- coastal landscapes of high scenic quality;
- areas exposed to coastal hazards (including flooding, erosion, acid sulfate soils and sand dune drift) where there are not adequate provisions to mitigate the hazard (such as a managed seawall or levee bank) or confirmed strategies to provide future protection; and
- coast protection measures such as erosion buffer areas, seawalls and levee banks (Department of Environment Water and Natural Resources 2013, p. 21).

The five coastal zone categories are described in Appendix 4.1.

4.2.2.2 Development Assessment

In South Australia, development assessment operates at two levels: local governments have Development Assessment Panels (DAPs) and the state government has the Development Assessment Commission (DAC). The DAC is reserved for development applications falling in the ‘major development’ category, which are considered to be of significance to the state. The majority of coastal development decisions fall to the DAP in the relevant local government area. DAPs comprise three elected local government members and four independent specialists who are appointed to the DAPs by the elected members (Beer & Kroehn no date).

4.2.2.2.1 Referral for development on coastal land

The *Development Regulations 2008* define the Coast Protection Board as the referral agency for development applications on coastal land.

Coastal land is defined as:

- a) land situated in a zone or area defined in the relevant Development Plan where the name of the zone or area includes the word “Coast” or “Coastal”, or which indicates or suggests in some other way that the zone or area is situated on the coast;
- b) where paragraph (a) does not apply: land that is situated in an area that, in the opinion of the relevant authority, comprises a township or an urban area and that is within 100 metres of the coast measured from mean high water mark on the sea shore at spring tide; or ..’ land that is situated in an area that, in the opinion of the relevant authority, comprises rural land and that is within 500 metres landward of the coast from mean high water mark on the sea shore at spring tide; if there is no zone or area of a kind referred to in paragraph (a) between the land and the coast;
- c) an area three nautical miles seaward of the mean high water mark on the sea shore at spring tide (Department of Environment Water and Natural Resources 2013, p. 10).

Schedule 8 of the *Development Regulations 2008* determines that the relevant planning authority must have regard to the CPB advice. Schedule 8 also provides the CPB with the power to direct planning authority decision-making where the development involves excavating or filling of land of more than nine cubic metres within 100 metres landward or three nautical miles seaward of the mean high water mark, or construction of coastal protection works within 100 metres landward or one kilometre seaward of the mean high water mark. In these instances, the CPB may impose conditions on the proposed development or may refuse the development, and the relevant authority must comply (Department of Environment Water and Natural Resources 2013).

Figure 4.1 shows the process for the assessment of coastal development applications in South Australia.

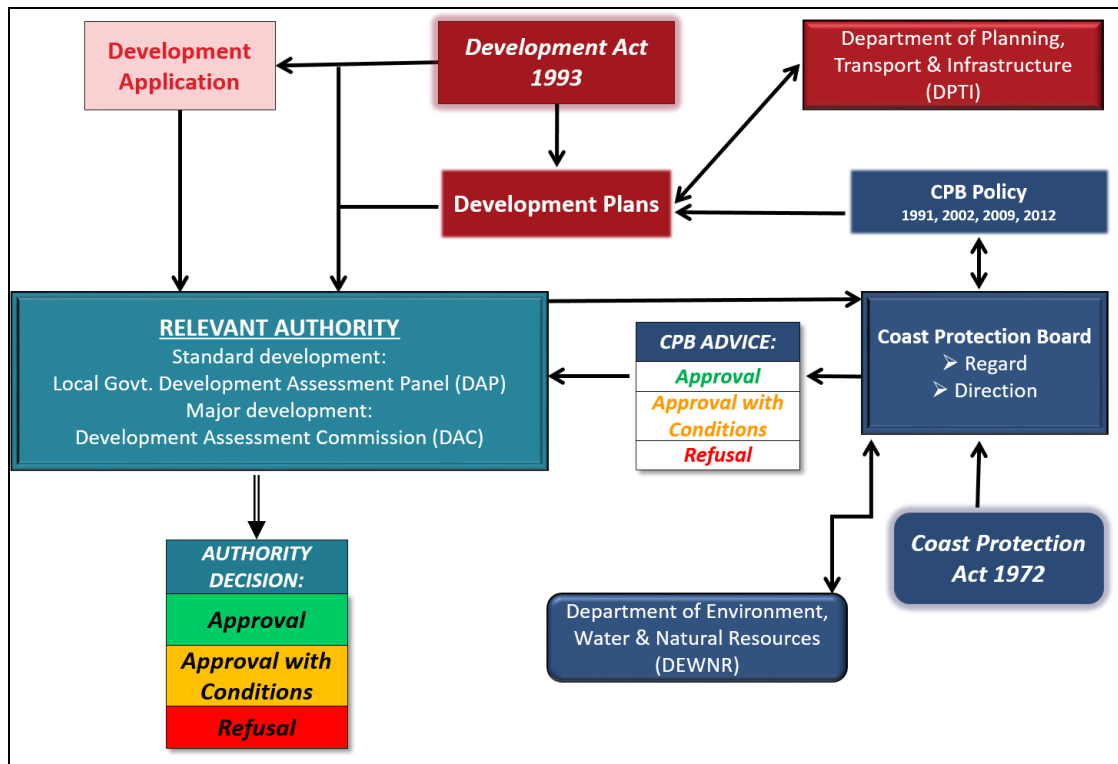


Figure 4.1 Governance arrangements for coastal development decision-making in South Australia

Flow diagram showing the legislation, policy instruments and institutions relevant to the assessment process for coastal development applications in South Australia.

4.2.3 Natural Resources Management Act 2004

The *Natural Resources Management Act 2004* was enacted in 2005 to replace multiple pieces of legislation governing the use and management of natural resources, including the *Water Resources Act*, the *Animal and Plant Control Act* and the *Soil Conservation and Land Care Act*. The numerous Boards previously in place to oversee catchment management, animal and plant control and soil conservation were replaced by eight, regionally-based NRM Boards (Hitchcock 2006). Since 2014, after the integration of the NRM Boards with the Department of Environment and Natural Resources (DENR) and the Department for Water (DfW), NRM Boards and their operational branches have been part of the reorganised Department of Environment, Water and Natural Resources (DEWNR). The key organisations involved in the implementation of this Act are outlined below.

4.2.3.1 NRM Council

The NRM Council is the body responsible for the implementation of NRM in South Australia, providing advice to the Minister for Sustainability, Environment and

Conservation and preparing the statewide NRM Plan (Eyre Peninsula Natural Resources Management Board 2013a).

4.2.3.2 NRM Boards

NRM Boards comprise community, state and local government members. Their goal is to work closely with the community, industry and all levels of government “to manage the environment to achieve a balance between our collective need for resources and the needs of the environment” (Eyre Peninsula Natural Resources Management Board 2013a, p. unpaginated). The main responsibility of NRM Boards is to manage investment in NRM on a regional scale, by prioritising the spending of NRM levy funding in line with the respective regional and state NRM Plans (South East Natural Resources Management Board 2010).

4.2.3.3 NRM Levy

Historically, NRM was funded through the collection of catchment levies and contributions for animal and plant control by councils. Since the enactment of the *NRM Act 2004*, a new funding mechanism has been established. The Act stipulates that a regional NRM levy may be collected by local government as a separate rate and paid to the relevant NRM Board¹⁷. In 2006, the existing catchment levies and council contributions for animal and plant control were replaced by a single, regional NRM levy to be collected by local government and paid to the NRM Board. The NRM Act set out six different options for NRM Boards to calculate the levy, and from these options only two are being used: the value of rateable land, and a fixed charge on all rateable land. Councils are able to recover costs associated with collecting the levy from the NRM Board (Hitchcock 2006).

4.3 Chapter summary

The purpose of this chapter was to provide background information on the governance arrangements for coastal management in South Australia, as a preface to the exploration of the issues raised in the case study and discussed in the subsequent chapters.

The next chapter will introduce the case study sites examined in this research to provide a sense of the coastal systems and values of each case study region, as well as the demographic and economic characteristics and coastal management issues facing each local government area. The main coastal management issues identified by interview participants in each NRM region will also be presented.

¹⁷ Further complicating governance, since the administrative boundaries of local government areas and NRM regions are not aligned, some local government areas span more than one NRM region.

Chapter 5 Case study sites: Key characteristics and coastal management issues

5.1 Chapter overview

The purpose of Chapter Five is to describe the case study sites and the types of coastal management issues within each case study region. The chapter briefly describes the demographic, economic and coastal characteristics of each case study local government area (LGA) and NRM region, and presents the key coastal management issues as perceived by local government and NRM representatives interviewed in this case study of South Australia.

5.2 The South Australian coast

According to Geoscience Australia, South Australia’s mainland coast extends over 3,816 km, with islands adding 1251 km (Bourman, Murray-Wallace & Harvey 2016, p. 2). The coastal zone comprises diverse coastal landforms, including “cliffs, rocky outcrops and shore platforms, mangrove woodlands, mudflats, estuaries, extensive sandy beaches, coastal dunes and coastal barrier systems, as well as numerous nearshore reefs and islands” which have “developed under the influence of a range of tidal conditions and wave regimes, varying from high energy on exposed open ocean coasts (for example, the west coast of Eyre Peninsula) to low energy in protected shorelines with high tidal ranges (such as in the northern gulfs)” (Bourman, Murray-Wallace & Harvey 2016, p. 2). Approximately half (47 per cent) of the SA coastline comprises sandy beaches, with the majority of these backed by soft-sediment plains; as a result, sea level rise and associated shoreline recession and foredune destabilisation pose significant risk (Australian State of the Environment Committee 2011). Table 5.1 shows the length of coastline and the types of coastal landforms featured in each of the NRM case study regions.

Table 5.1 Land area, coastline length and landforms by NRM region

Data sourced from: Adelaide and Mount Lofty Ranges Natural Resources Management Board (2013); Caton et al. (2011); Caton et al. (2011); Twidale and Bourne (2010).

	NR Adelaide & Mt Lofty Ranges	NR Eyre Peninsula	NR South East
Total land area (ha)	1.12 million	8 million	2.8 million
Length of coastline (km)	333	2,475	427
Cliffs and bayhead beaches	✓	✓	✓
Beaches and backing dunes	✓	✓	✓
Mangroves	✓	✓	-

Approximately 80 per cent of South Australia’s population reside in the coastal zone (LGASA 2003). As with coastal zones around the world, the South Australian coastal zone is an area of high environmental, social and economic value, subject to multiple competing uses and under increasing pressure from internal migration and climate change (Nurse-Bray 2011). Sea level rise has ranged from two to seven millimetres per year in Southern Australia since the 1990s; a sea level rise of 1.1 metres would risk

between 25,200 and 43,000 residential buildings valued in the range of AU\$4.4 to \$7.4 billion (Australian State of the Environment Committee 2011, p. 881).

The case study sites comprised three NRM regions in South Australia: Eyre Peninsula (EP) in the far west of the state, South East (SE) in the far east, and the Adelaide and Mount Lofty Ranges (AMLR) covering the metropolitan area and peri-urban areas north and south of Adelaide. Within each NRM case study region, people from three coastal local government areas were interviewed. The location of the NRM regions and local government areas included in the case study are shown in Figure 5.1.

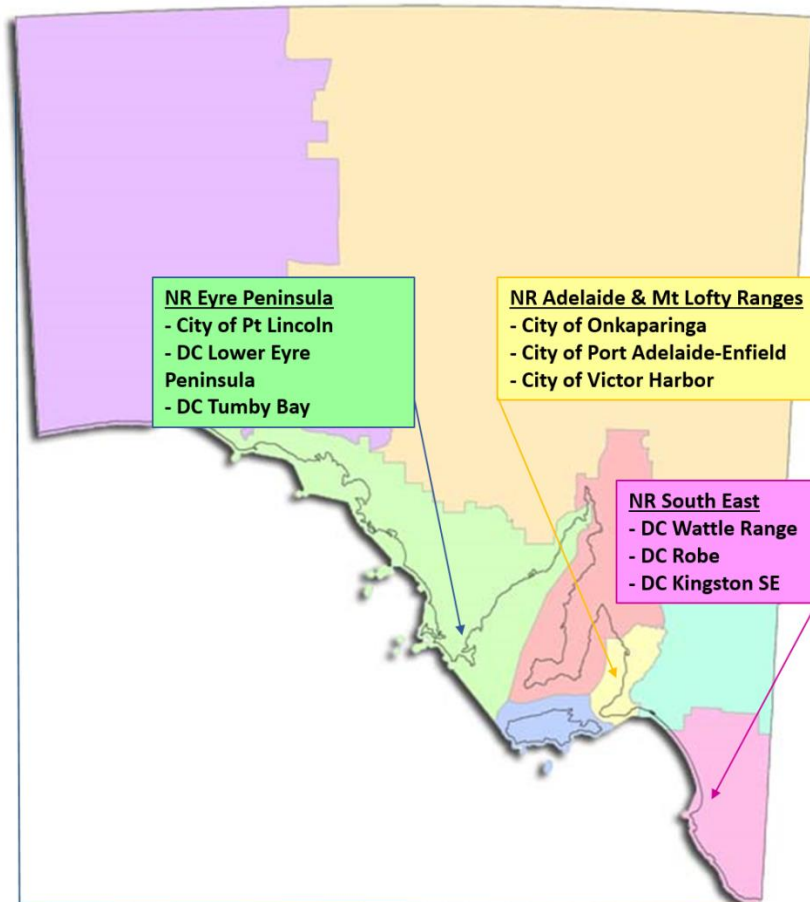


Figure 5.1 Map of South Australia showing case study sites

The state of South Australia has eight NRM regions, delineated in this figure by different colours. The three coastal NRM regions used as case study sites are the Eyre Peninsula region, in far west of SA (green); the South East, which stretches from the Murray Mouth south-east of Adelaide along the coast towards the eastern border with Victoria (pink); and the Adelaide and Mount Lofty Ranges region, comprising metropolitan Adelaide and the peri-urban Fleurieu Peninsula south of Adelaide (yellow).

The next sections provide an overview of each of the case study regions and their associated representative LGAs. The main coastal issues described by representatives of local government and NRM within each case study region are also presented.

5.3 Case study sites

5.3.1 Region 1: Natural Resources Adelaide and Mt Lofty Ranges (NR AMLR)

The Natural Resources Adelaide and Mt Lofty Ranges (NR AMLR) region was chosen due to its metropolitan and peri-urban location. As noted by Bourman, Murray-Wallace and Harvey (2016, p. 14), “this section of coast, which occurs in the most populated part of South Australia, provides an excellent example of intense human use of coastal resources and also illustrates problems arising from urban development without due care for coastal processes”.

The administrative jurisdiction of the NR AMLR region encompasses Adelaide, the capital city of South Australia, and stretches north to Mallala and the Barossa Valley, eastward to include the western Mt Lofty Ranges, west to cover the metropolitan coastline and 30 km into marine waters, and south of Adelaide to include the Fleurieu Peninsula (Adelaide and Mount Lofty Ranges Natural Resources Management Board 2013). The Fleurieu Peninsula is located approximately 70 km from Adelaide and can be described as a peri-urban area, with some residents commuting to the metropolitan area for work, but predominantly a popular sea change community and second home location for Adelaide locals.

The population of the NR AMLR region is estimated at 1.3 million –80 per cent of South Australia’s population. The total area is approximately 1,120,000 hectares, of which 59 per cent comprises land and 41 per cent marine waters. The NR AMLR region sustains multiple uses, including urban areas, remnant bushland, agriculture, horticulture and viticulture, as well as popular beaches and notable marine environments (Adelaide and Mount Lofty Ranges Natural Resources Management Board 2013). There are two National Parks and 44 Conservation Parks in the region (Paul 2015).

Significant coastal and marine ecosystems in the region provide substantial economic and social value to the state (Adelaide and Mount Lofty Ranges Natural Resources Management Board 2013, p. 24). From extensive mangroves forests and samphire marshes in the north, broad sandy beaches, dunes and coastal seagrass meadows in the metropolitan area, to reefs, cliff top and sandy beach communities in the south; these ecosystems provide critical habitat, nursery and feeding grounds for a wide range of aquatic and terrestrial plants and animals (Adelaide and Mount Lofty Ranges Natural Resources Management Board 2013, p. 24).

A map of the NR AMLR region is shown in Figure 5.2. The three LGAs examined within this region are the City of Port Adelaide Enfield (northern end of Adelaide sub-region) and the City of Onkaparinga (southern end of Adelaide sub-region), and the City of Victor Harbor (southern edge of Fleurieu sub-region). The range of population densities and growth rates in these LGAs is shown in Table 5.2. A brief description of each local government area follows.

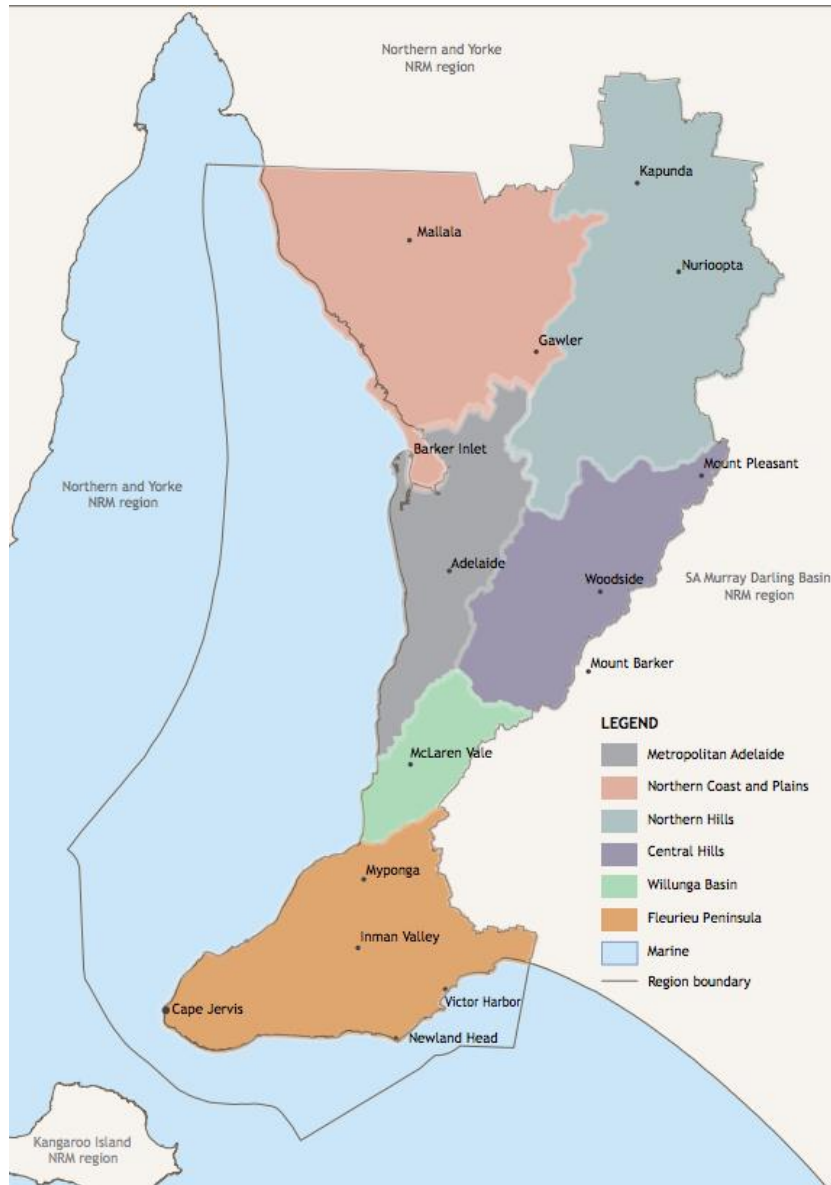


Figure 5.2 Map showing the subregions of NR Adelaide and Mt Lofty Ranges

Source: Paul (2015).

Table 5.2 Population density and growth rates of local government case study sites in NR AMLR region

Table comparing population density and growth rates of local government areas in the NR AMLR case study region. Data source: ABS (2016d).

	Population	Land Area (ha)	Density	Population Growth 2005-2015 (%)
City of Port Adelaide Enfield	122205	9412	12.98	18.57
City of Onkaparinga	167659	51829	3.23	11.12
City of Victor Harbor	14938	38510	0.39	24.54

5.3.1.1 City of Port Adelaide Enfield

The City of Port Adelaide Enfield (see Figure 5.3) is located in the north-western suburbs of Adelaide, located eight to fifteen kilometres from the CBD (ABS 2015b; City of Port Adelaide Enfield 2015a). The City of Port Adelaide Enfield is one of the biggest in metropolitan Adelaide, with an area of about 94 square kilometres from the River Torrens westward to Outer Harbor, and the third highest resident population in SA totalling over 120,000 (City of Port Adelaide Enfield 2015c). The City's population has been steadily growing (17 per cent since 2003), and is forecast to continue to grow, albeit at a lower rate of under ten per cent by the 2021 Census period (ABS 2015b; City of Port Adelaide Enfield 2015d).

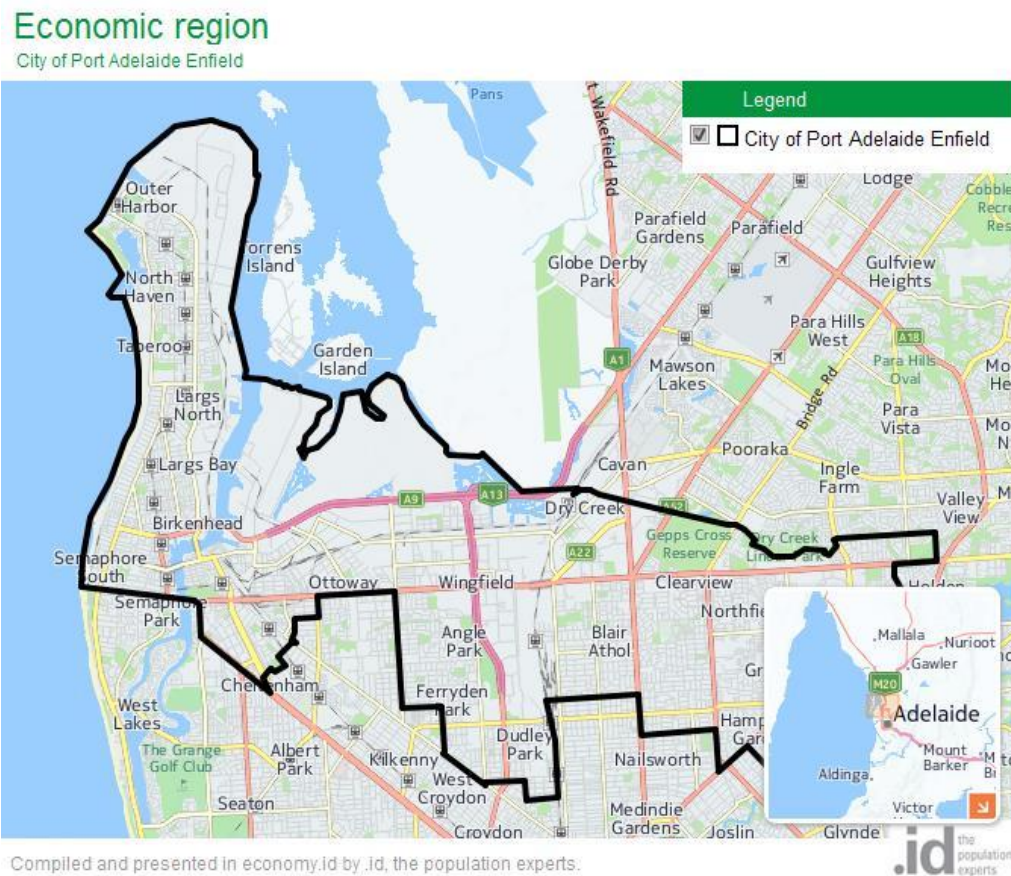


Figure 5.3 Map of City of Port Adelaide-Enfield local government area

Map showing City of Port Adelaide-Enfield local government area boundary, and its vicinity relative to Adelaide (inset). Source: (ABS 2016f).

The City of Port Adelaide Enfield was formed after the amalgamation of two diverse councils in 1996: the City of Port Adelaide – a coastal council containing Adelaide’s major port and harbor and significant to the development of the state – amalgamated with the inland City of Enfield. The Port Adelaide area is rich in history, having been “formed in parallel with the City of Adelaide ... [and] central to the colonisation of South Australia ... [as] the gateway for settlement, trade, shipping, commerce and (until the 1960s) immigration in the State” (City of Port Adelaide Enfield 2015c). The Enfield area was, up until the 1940s, an agricultural area due to the fertile soil of the River Torrens (City of Port

Adelaide Enfield 2015c). The main industry of employment in the city of Port Adelaide Enfield by far is manufacturing, which accounts for over 25 per cent of employment in the area (ABS 2016c). Within the City of Port Adelaide Enfield, the highest population densities are found along the coast (ABS 2015b; City of Port Adelaide Enfield 2015d).

Figure 5.4 shows an aerial image of the Le Fevre peninsula, where the City of Port Adelaide Enfield's highly modified coastline extends from Semaphore South, northward along the Le Fevre Peninsula and then eastward to the industrial and port-dominated area of Outer Harbour and the Port River. The northern and north-eastern protected sections of tidally-dominated coastline originally comprised mangroves and samphire, and small patches remain; southward, from North Haven to Semaphore South, is characterised by low wave energy beaches and dunes (Bourman, Murray-Wallace & Harvey 2016; Clarke & Simpson 2010; Twidale & Bourne 2010). The majority of this stretch of foreshore has been developed as passive recreation areas, including open lawn, barbecues, a shared bicycle/pedestrian path, boardwalks and landscaped areas (City of Port Adelaide Enfield 2015b; Clarke & Simpson 2010). The area also benefits from a relatively large buffer zone of vegetation-covered foredune in the area from Largs Bay to Taperoo (City of Port Adelaide Enfield 2015b), visible leading up to the North Haven marina in Figure 5.4.



Figure 5.4 Aerial photograph of City of Port Adelaide Enfield

Largs Bay and Le Fevre Peninsula, 2013. Image: me1406067; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.1.2 City of Onkaparinga

The City of Onkaparinga is the largest metropolitan council in South Australia, with an area of 518 square kilometres and population of over 167,000 residents (ABS 2016e). The council comprises 21 elected members with a staff of 600 (City of Onkaparinga 2010a). The City of Onkaparinga is located on the southern fringe of metropolitan Adelaide,

between 25 and 40 kilometres from the CBD (ABS 2016e). The landscape ranges from the hills to the coast and includes rural farmland, suburban blocks, light industrial uses and vineyards (City of Onkaparinga 2010c). The main sources of employment include retail trade, manufacturing and healthcare and social assistance (ABS 2016b). The population is forecast to grow to 212,275 by 2036, an increase of over 25 per cent (ABS 2015a).

Figure 5.5 depicts the boundaries of the City of Onkaparinga, while Figure 5.6 shows an aerial image of a section of the City of Onkaparinga’s coastline.

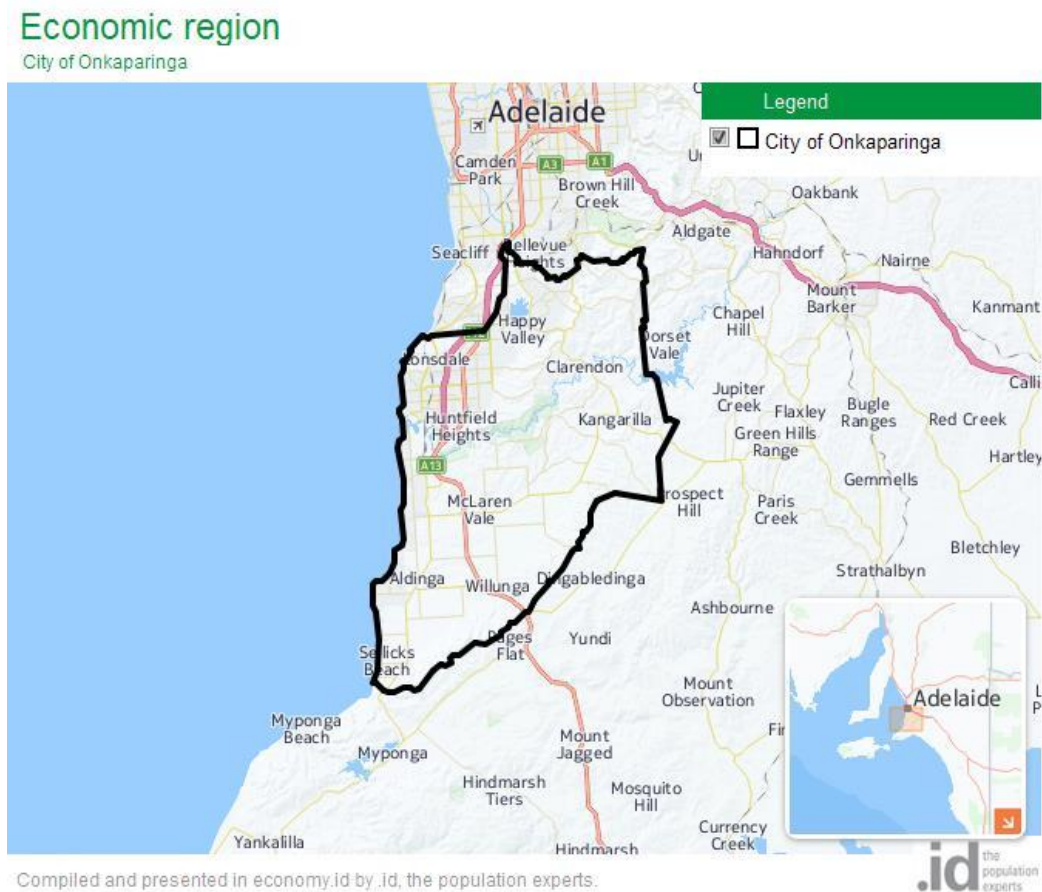


Figure 5.5 Map of City of Onkaparinga local government area

Map showing City of Onkaparinga local government area boundary, and its vicinity relative to Adelaide (inset). Source: ABS (2016a).

The City’s coastline is one of the longest and most diverse in the AMLR region extending over 31 kilometres from O’Sullivan Beach to Sellicks Beach (Clarke & Simpson 2010). The diverse coastline offers open sandy beaches, reefs, dunes, the Onkaparinga estuary and steep cliffs (Bourman, Murray-Wallace & Harvey 2016; Clarke & Simpson 2010). The City of Onkaparinga also has the only Marine Park on the Adelaide metropolitan coastline, comprising Aldinga Reef, Port Noarlunga Reef and Onkaparinga Wetland. Recreational activities include swimming, surfing, sailing, walking, snorkelling, beachcombing, diving, fishing, paddling and boating (City of Onkaparinga 2010b). Popular dive sites are Port Noarlunga reef and the Aldinga ‘drop-off’, home to the endemic leafy sea dragon (City of Onkaparinga 2010b). In contrast to other metropolitan Adelaide councils, the City of

Onkaparinga permits vehicle access on some beaches during the day in summer; access is prohibited on sand dunes, pebble banks and the high beach area (City of Onkaparinga 2010b).



Figure 5.6 Aerial photograph of City of Onkaparinga coastline

Witton Bluff, Christies Beach, 2014. Image: me1405322; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.1.3 City of Victor Harbor

The City of Victor Harbor is located 80 kilometres south of Adelaide on the shores of Encounter Bay. The council covers an area of 38,648 hectares, and is one of the fastest growing seaside towns in South Australia. The residential population of the City of Victor Harbor is approximately 14,000, plus an additional estimated 2,000 visitors or holiday home owners at any given time. In addition, the population doubles during the summer peak tourist season, swelling to approximately 30,000 from December to February (City of Victor Harbor 2011; Harvey, Rudd & Clarke 2008).

The community can be classified as ‘coastal getaway’ sea change community (Gurran, Squires & Blakely 2005) as described in Table 3.3, as it is a small to medium coastal town less than a two hour drive from the capital city. Accordingly, it is popular for day tripping and has easy weekend access for holiday home owners. It is also known for its retiree population, as well as an increasing number of lifestyle migrants and commuters who choose to live in Victor Harbor and travel to metropolitan Adelaide for work (City of Victor Harbor 2011; Harvey, Rudd & Clarke 2008). Furthermore, Victor Harbor is subject to increasing coastal development pressure, evidenced by a doubling of median house prices between 2000-2005 (Huppertz 2005). Victor Harbor is the regional centre for the southern Fleurieu, and the town provides wide-ranging retail, commercial and public service facilities. The main sources of employment include health and community services, primary production, retail, hospitality and tourism, construction and building,

education, light manufacturing and business services (ABS 2016g; City of Victor Harbor 2011).

Figure 5.7 depicts the boundaries of the City of Onkaparinga, while Figure 5.8 shows an aerial image of the highly modified coastline.

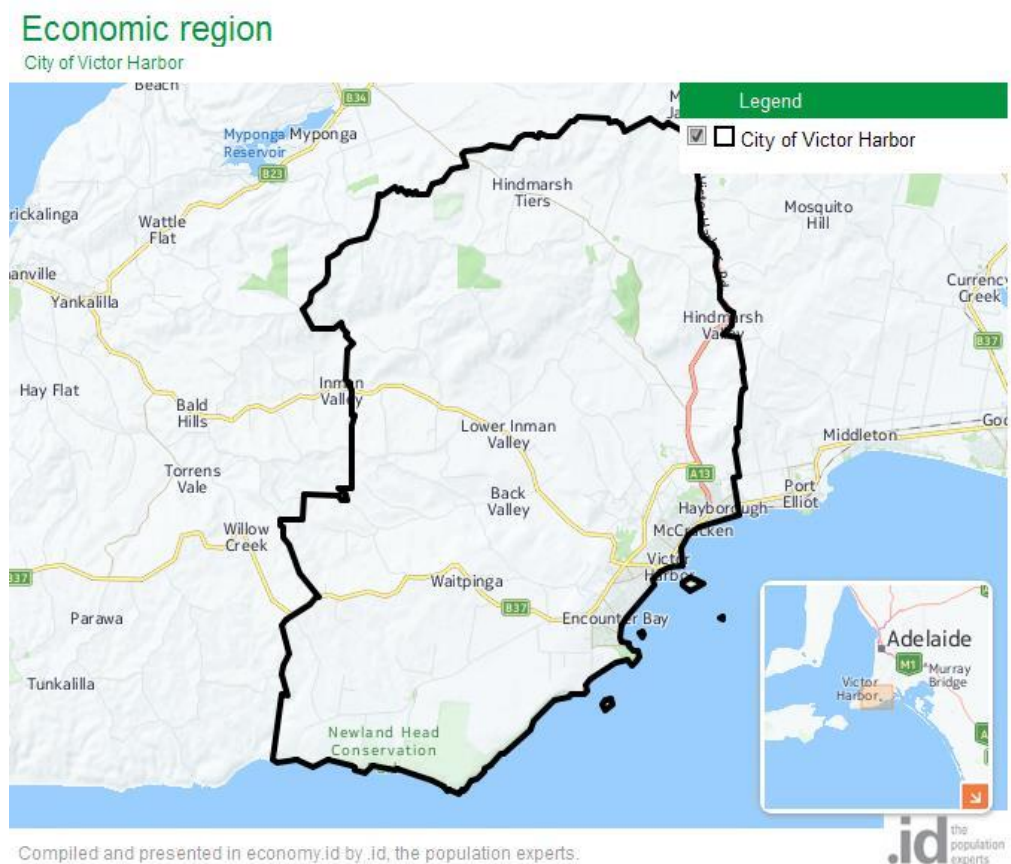


Figure 5.7 Map of City of Victor Harbor local government area

Map showing City of Victor Harbor local government area and its vicinity relative to the capital city of Adelaide (inset). Source: ABS (2016g).

In terms of coastal attributes, the City of Victor Harbor’s diverse coastline features a floodplain, rugged cliffs, granite islands and headlands, shore platforms and reefs, dunes, pocket beaches and medium to high energy long sandy beaches (Bourman, Murray-Wallace & Harvey 2016, p. 18; Clarke & Simpson 2010). The coastal zone is highly modified in places due to urbanisation (Clarke & Simpson 2010). As noted by Bourman, Murray-Wallace and Harvey (2016, p. 106), human impacts on the coast are marked, where:

Foredunes have been levelled and built over, beach sediment supply impacted by inland farming practices, river mouths entrained by engineering works and wave approaches influenced by breakwater construction.

Victor Harbor is widely known for its coastal attractions, which the town capitalises on through tourism. Many of the main attractions revolve around the coastline, for example: the coastal Encounter Bikeway, Heysen Trail and Rosetta Head (or The Bluff); the South

Australian Whale Centre and whale watching during winter; the Encounter Coast Discovery Centre; the horse-drawn tram to Granite Island; and surf beaches at Waitpinga, Parsons and Dump Beach (City of Victor Harbor 2013).



Figure 5.8 Aerial photograph of City of Victor Harbor coastline

Victor Harbor township, 2016. Image: fl1605205; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.2 Region 2: Natural Resources Eyre Peninsula (NR EP)

The Eyre Peninsula region was selected due to its relatively remote rural location, small towns with low population densities, sprawling coastline and reliance on coastal industries including fishing, aquaculture and tourism. The region comprises an expansive eight million hectares, and extends from the western edge of the upper Spencer Gulf, across the southern edge of the Gawler Ranges, westward to the edge of the Nullarbor Plain, and southward to the southernmost tip of the peninsula, Port Lincoln (Eyre Peninsula Natural Resources Management Board 2013b). A map is shown in Figure 5.9.

The area's population of approximately 55,000 relies heavily on the natural resources of the region, in particular the 2,475 km coastline which comprises almost half of South Australia's entire coast length (Eyre Peninsula Natural Resources Management Board 2013b). Over 50 per cent of the region is farmed, with native vegetation covering 45 per cent (of the pre-European amount, or 2,187,560 hectares). Almost half of this area is protected as National Parks or Conservation Parks, with a total of 75 parks in the region (Eyre Peninsula Natural Resources Management Board 2015, p. 6; Paul 2015).

The region has two main urban centres; Whyalla and Port Lincoln, where more than half of the population reside (Eyre Peninsula Natural Resources Management Board 2015, p. 6). The predominant economic drivers of the region are agriculture, in particular cereal farming and wool, as well as the commercial wildcatch fishing industry, especially tuna. Today, aquaculture provides an important source of productivity for the region, with tuna, oysters and other shell and finfish species farmed for export. Other important sectors to the area include tourism, mining and services (Eyre Peninsula Local Government Association 2014b; Eyre Peninsula Natural Resources Management Board 2015, p. 12).

A large part of the NR EP region economy is tourism, with over 350,000 visitors per annum (Eyre Peninsula Natural Resources Management Board 2009). Coastal areas face substantial visitor population increases over summer (Department of Planning Transport and Infrastructure 2015; Natural Resources Eyre Peninsula 2015). A significant drawcard for tourists to the EP region is the coastal and marine environment, which offers recreational fishing; camping; swimming with sea lions, sharks and tuna; aquaculture activities like the seafood trail; coastal parks and reserves; surf, and sheltered beaches (Eyre Peninsula Natural Resources Management Board 2009).

As shown in Figure 5.10, the Eyre Peninsula region comprises eleven local government authorities (Eyre Peninsula Natural Resources Management Board 2015, p. 6).

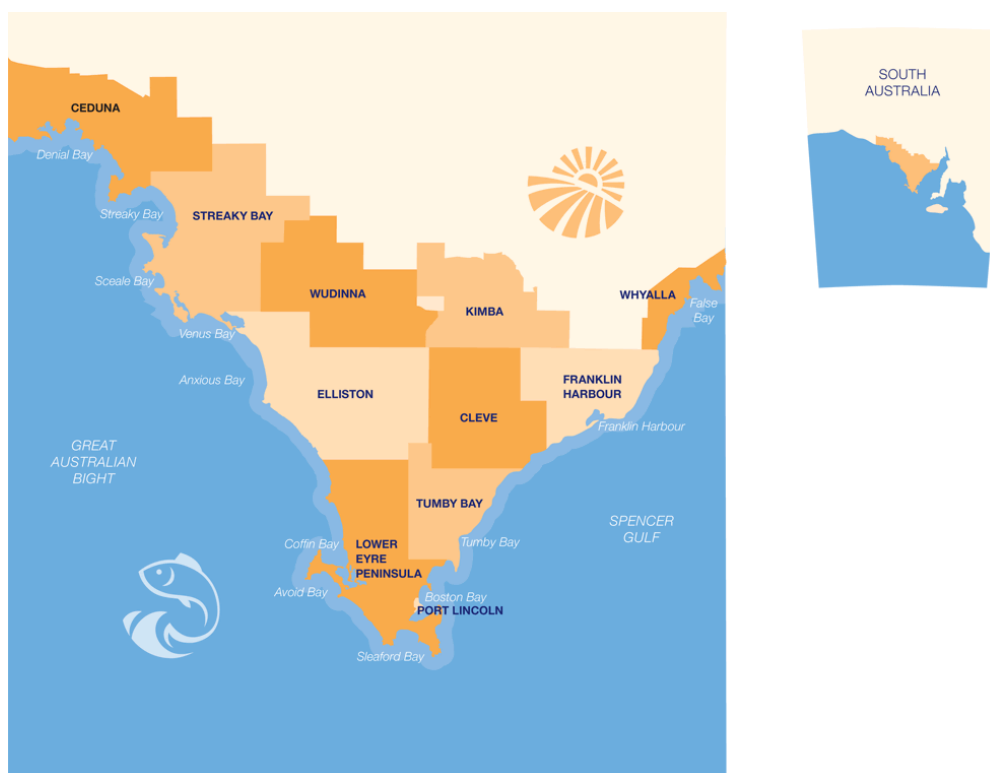


Figure 5.10 Map of Eyre Peninsula region showing local government areas

Map showing Eyre Peninsula region with eleven local government areas, eight of which are coastal. Their vicinity to Adelaide shown in the upper right image. LGA case study sites in the NR EP region were the three southern-most councils: City of Port Lincoln, District Council of Tumby Bay and District Council of Lower Eyre Peninsula. Source: Eyre Peninsula Local Government Association (2014a).

The three LGAs examined (City of Port Lincoln, District Council of Tumby Bay and District Council of Lower Eyre Peninsula) comprise ‘sub-region 5’ of the NR EP region, known as ‘Southern Eyre’ (Natural Resources Eyre Peninsula 2015). The Southern Eyre sub-region comprises approximately 650,000 hectares, 21,500 people and over 700 km of coastline (Natural Resources Eyre Peninsula 2015).

The range of population densities and growth rates in the case study LGAs of the NR EP region are shown in Table 5.3. A brief description of each local government area follows.

Table 5.3 Population density and growth rates of LG case study sites in NR EP region

Table comparing population density and growth rates of local government areas in the NR EP case study region. Data source: Australian Bureau of Statistics (2016).

	Population	Land Area (ha)	Density	Population Growth 2005-2015 (%)
City of Port Lincoln	14452	3036.7	4.7	6.94
District Council of Lower Eyre Peninsula	4731	472119	0.01	15.40
District Council Tumby Bay	2706	266906	0.01	2.38

5.3.2.1 City of Port Lincoln

The City of Port Lincoln is the primary service centre to and economic hub of the vast Eyre Peninsula region, with a population of approximately 14,000 in a relatively small land area of approximately 3037 hectares (Australian Bureau of Statistics 2016; Natural Resources Eyre Peninsula 2015). The economy of the city is largely based on fishing, aquaculture and seafood processors, supported by retail, health and community services, education, tourism and construction (Natural Resources Eyre Peninsula 2015). The City of Port Lincoln asserts itself as the “home of aquaculture” and “the seafood capital of Australia” (City of Port Lincoln 2016).

Figure 5.11 shows an aerial photograph of the Port Lincoln coast. The City of Port Lincoln has a short coastline relative to the adjacent local government areas in the region. Significantly, it is host to a deep water port with facilities for grain storage and bulk handling to support the region’s agricultural exports (Natural Resources Eyre Peninsula 2015). Port Lincoln also hosts many of the region’s tourists, attracted to the area for a range of coastal activities including diving with sharks, sea lions and tuna, fishing boat charters, nearby national parks, beaches and the world-renowned seafood (Natural Resources Eyre Peninsula 2015).



Figure 5.11 Aerial photograph of City of Port Lincoln coastline

Port Lincoln, 2013. Image: ep1304204; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.2.2 District Council of Tumby Bay

The District Council of Tumby Bay comprises 266,906 hectares and a resident population of approximately 2,706 which, like many coastal towns, swells during the summer school holidays (Australian Bureau of Statistics 2016; District Council of Tumby Bay 2007c). Located on Southern Eyre Peninsula, the main industries are cereal cropping, sheep and beef, supported by fishing and tourism. The main sources of employment for district residents are farming, Vittera (a grain storage and handling company), fishing and teaching (District Council of Tumby Bay 2007a).

Figure 5.12 shows an aerial photograph of the township and coastline of Tumby Bay. The coastline of DC Tumby Bay is characterised by relatively low wave energy beaches due to its position on the sheltered Spencer Gulf (Bourman, Murray-Wallace & Harvey 2016). The district “is noted for its outstanding coastal scenery along the Spencer Gulf, which contains habitats for waterfowl and other wildlife, and a diversity of natural scenery” (Department of Planning Transport and Infrastructure 2015, p. 10). The main towns of Tumby Bay and Port Neill have recreational jetties and community built boat ramps for boating and fishing (District Council of Tumby Bay 2007b), and their scenic coastal caravan parks and holiday accommodation attracts national and international tourists (Department of Planning Transport and Infrastructure 2015).



Figure 5.12 Aerial photograph of District Council of Tumby Bay coastline

Tumby Bay, 2013. Image: ep1303343; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.2.3 District Council of Lower Eyre Peninsula

The District Council of Lower Eyre Peninsula has a resident population in the region of 4,700 and an expansive land area of approximately 472,119 hectares. Lower Eyre Peninsula has seen the highest population growth of the Southern Eyre region, attributable to the areas fringing Port Lincoln and the Coffin Bay township, and is projected to grow to 2026 (Natural Resources Eyre Peninsula 2015, p. 5). The growth of Lower Eyre Peninsula (LEP) may be able to be explained by industrial growth in Port Lincoln which has increased demand for residential land and resulted in population growth within Port Lincoln itself as well as the expansion of peri-urban settlements surrounding Port Lincoln (Natural Resources Eyre Peninsula 2015).

The District Council of Lower Eyre Peninsula boasts an extensive and diverse coastline of 709 km (District Council of Lower Eyre Peninsula 2016). The district is “renowned for its magnificent rural and pristine coastal scenery, as well as thriving agricultural, fishing and tourism industries” (District Council of Lower Eyre Peninsula 2016). Figure 5.13 shows an aerial photograph of the township of Coffin Bay in the Lower Eyre Peninsula, known for its oyster production.



Figure 5.13 Aerial photograph of Lower Eyre Peninsula coastline

Coffin Bay, 2013. Image: ep1306072; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.3 Region 3: Natural Resources South East (NR SE)

The NR South East region was selected on the basis of its high dependence on the coastal zone as a popular tourist destination, fishing and aquaculture industries and high vulnerability to sea level rise (Department of Climate Change 2009). The region covers an area of approximately 2,800,000 hectares and is located in the south eastern corner of South Australia, abutting the Victorian border to the east, Southern Ocean to the south and the southern part of the Coorong lagoon and wetland system to the northwest (South East Natural Resources Management Board 2010).

The climate, soils and high quality underground water of the region, also known as the 'Limestone Coast', have created a highly productive area, contributing \$5 billion per annum towards the South Australian economy and the agricultural sector accounting for more than 30 per cent of the state's GDP (South East Natural Resources Management Board 2010). The region's natural resources contribute significantly to the successful industries of the area, which comprise plantation forestry, viticulture, agriculture, dairy, potatoes, fishing and aquaculture (South East Natural Resources Management Board 2010). Tourism is also a significant industry in the Limestone Coast region "because of the coastal location, woodlands and national parks" (South Australian Centre for Economic Studies 2012a, p. 1). There are a total of 57 parks in the South East region, comprising two National Parks and 55 Conservation Parks; making up approximately one fifth of the total parks in South Australia. Two marine parks have also been proclaimed (Caton, Quinn, et al. 2011).

At the time of this case study, the South East Region was divided into three NRM groups: Northern, Central and Southern, shown in Figure 5.14.

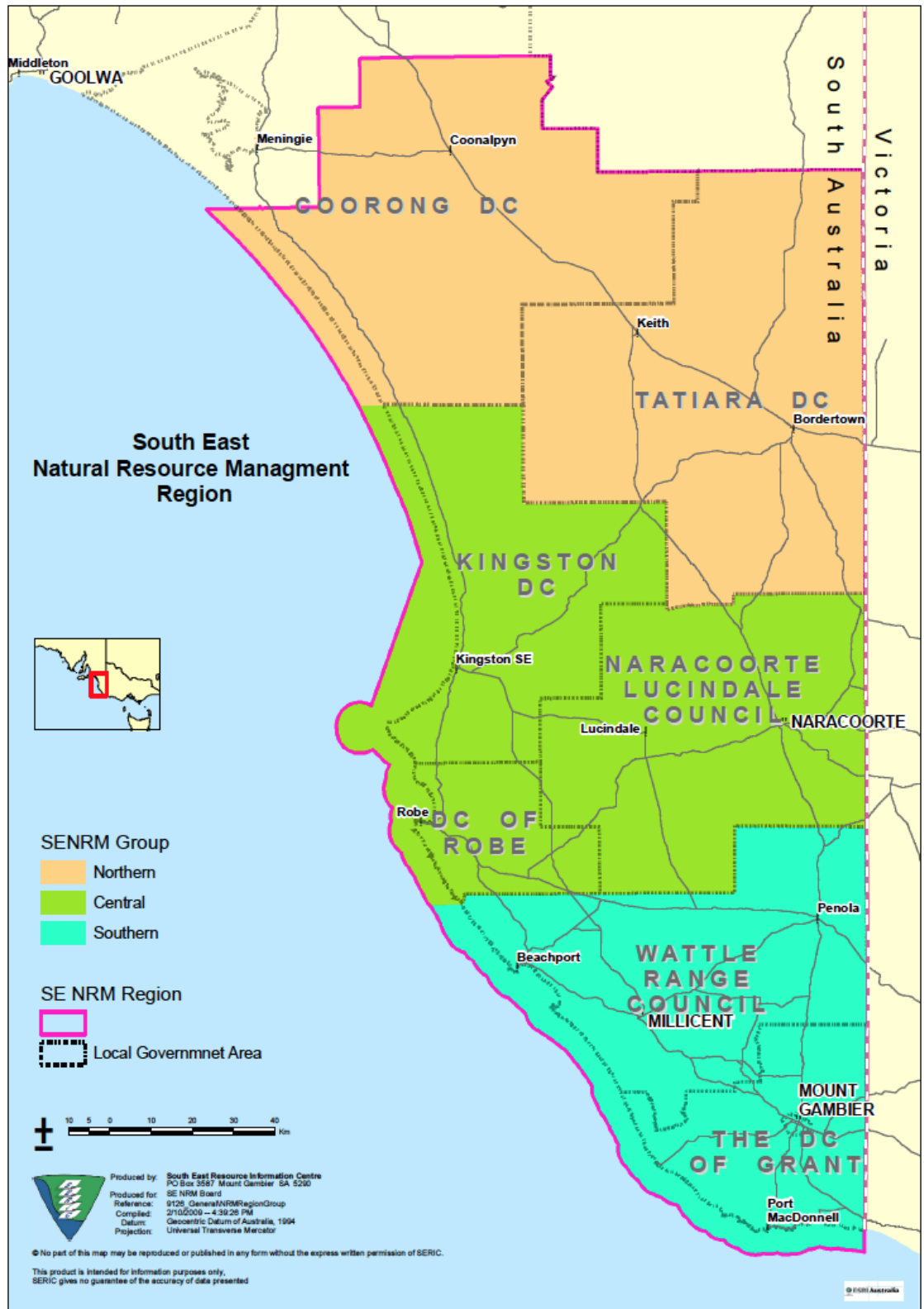


Figure 5.14 Map of NR SE region, sub-regional NRM Groups, and Local Government Areas

Map showing the South East NRM Groups; Northern, Central & Southern, as well as the District Council areas of Kingston, Robe and Wattle Range. Prominent coastal towns of the region - Kingston, Robe and Beachport, are also shown. Source: Paul (2015).

Each 'group' is managed by formal sub-committees of the Board called NRM Groups (South East Natural Resources Management Board 2013)¹⁸. The NR SE Board connects to the respective communities through these NRM Groups, who "facilitate information and knowledge transfer about their particular areas directly to the Board" and vice versa, as well as "assist the Board by monitoring, coordinating and undertaking specific functions involved in the implementation and development of regional NRM programs and plans" (South East Natural Resources Management Board 2010). NRM Group members comprise members of the community within the relevant geographic area, and possess a history of land management or other relevant experience specific to the geographic area (South East Natural Resources Management Board 2010).

The NR SE coastline extends for approximately 427 km, equating to roughly 10 per cent of the South Australian coastline (Caton, Quinn, et al. 2011). Significant coastal attributes of the region include a series of stranded dunes that rise between 20-50 metres above interdunal plains, internationally-recognised wetlands including the Ramsar-listed Bool and Hacks lagoons, and part of the Coorong and Lower Lakes wetland system (South East Natural Resources Management Board 2010).

The range of population densities and growth rates in these LGAs is shown in Table 5.4. A brief description of each local government area follows.

Table 5.4 Population density and growth rates of local government case study sites in NR SE region

Table comparing population density and growth rates of local government areas in the NR SE case study region. Data source: Australian Bureau of Statistics (2016).

	Population	Land Area (ha)	Density	Population Growth 2005-2015 (%)
District Council of Kingston SE	2,407	333,979	0.007	-1.71
District Council of Robe	1,387	109,161	0.01	2.37
District Council of Wattle Range	11,669	392,634	0.03	-6.45

5.3.3.1 District Council of Kingston

Situated on the low energy coast of Lacedpede Bay, Kingston is located approximately 300 km from Adelaide on the South East coast of South Australia. The area, with a population of around 2,400 and land area of almost 334,000 hectares, markets itself as the entrance to the Limestone Coast region (District Council of Kingston 2011, 2015). The economy and lifestyle of the area is highly dependent on the coastal zone, with significant lobster, aquaculture and fishing industries and recreational activities such as fishing (beach, boat and jetty), sailing, diving, kite surfing and safe swimming beaches supporting a strong tourism industry, especially during the summer months. Other key industries include agriculture, forestry and viticulture (District Council of Kingston 2011).

¹⁸ NR SE has since been re-organised into two areas (the Upper South East and the Lower South East) (South East Natural Resources Management Board 2013).

Figure 5.15 shows an aerial photograph of the township and coastline of Kingston. The District Council of Kingston is well-known for its safe beaches, coastal recreational activities such as fishing and diving, and national parks including the world-renowned Coorong (District Council of Kingston 2015). Cape Jaffa, located on the southern tip of Lacepede Bay approximately 20 km south of the Kingston township, is a commercial southern rock lobster fishing port and popular tourist destination due to the marina development and wine region (District Council of Kingston 2011).



Figure 5.15 Aerial photograph of District Council of Kingston coastline

Kingston, 2016. Image: se1604077; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.3.2 District Council of Robe

The District Council of Robe, covering an area of 109,161 hectares, is located approximately three and a half hours drive from Adelaide and five hours from Melbourne. The township of Robe, located on Guichen Bay, was founded as a seaport and village in 1846. The first active port in the South East, it was also the site of several shipwrecks. Robe has the highest number of 'historically important' buildings recognised by the National Trust in South Australia, and the township of Robe is listed in the South Australian government's Heritage Conservation Master Interpretation Plan (District Council of Robe 2016b). The increasing demand for residential development in Robe is evidenced by increasing median property prices; from AU\$195,000 to \$328,000 in just two years from 2003-5 (Huppertz 2005).

Figure 5.16 shows an aerial photograph of the township and coastline of Robe. The District Council of Robe is characterised by freshwater lakes and estuaries, coastal dunes, rugged cliffs and sandy beaches (District Council of Robe 2016a). The district is known for its prime agricultural and viticultural land, and as a popular coastal destination for tourists and retirees (District Council of Robe 2016b). The normally modest resident

population of approximately 1,400 swells to around 16,000 during summer with tourists, holiday home owners and seasonal workers (Campbell Page 2010; District Council of Robe 2016a).



Figure 5.16 Aerial photograph of District Council of Robe coastline

Robe, 2016. Image: se1603299; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.3.3.3 District Council of Wattle Range

The District Council of Wattle Range is situated in the southern Limestone Coast region and, abutting the Victorian border, is located half way between Adelaide and Melbourne. The main towns, Millicent and Penola, are located inland, but Beachport and Southend are popular coastal towns (Campbell Page 2010; District Council of Wattle Range 2016a).

The land area of the district comprises approximately 392,634 hectares and a population of 11,669 residents (Australian Bureau of Statistics 2016). The economic base of the area include the Coonawarra wine region, plantation timber forests, horticulture and crops, fishing, power generation, government service delivery, education, hospitality, and tourism (Campbell Page 2010; District Council of Wattle Range 2016a; Wattle Range Council 2014). Emerging industries include processing of seaweed for food additives, renewable power generation through wind farms and geo-thermal technology, and gas and oil exploration (Wattle Range Council 2014).

Figure 5.17 shows an aerial photograph of Beachport, a vulnerable section of the DC Wattle Range coastline. The scenic coastal towns of Beachport and Southend and the Canunda National Park and Rivoli Bay are popular coastal destinations for visitors and the non-resident population (District Council of Wattle Range 2016b).



Figure 5.17 Aerial photograph of District Council of Wattle Range coastline

Beachport, 2016. Image: se1603113; Source: Coast Protection Board (Department for Environment Water and Natural Resources 2016).

5.4 Coastal management issues: Results from this case study

The results from interviews in this case study of South Australia revealed that the coastal management issues being experienced at the local and regional (NRM) level can be attributed to two main drivers: population pressure and climate change.

I think the climate change issue and just increasing population adjacent to our coastline and just the thin strip that it is, you're getting this impact from the coastal side, potential wave impact and erosion, but then you've got the amount of people that are being drawn to the coast and wanting to use the coast, it's just... it's under pressure and under siege [I27 LG AMLR].

Development. They're the same issues everywhere, its development, inappropriate access - the network of informal tracks is quite astounding. Yeah and I guess, feral plants and animals. Yeah, and climate change, yeah [I12 NRM EP].

Councils, local governments sorry, are under a lot of pressure to develop and increase their rate revenue whereas sometimes it's not the best results for the coast, as well as a whole range of I guess activities that impact on it through stormwater and a whole lot of things ... The other most significant one down here is visitor impact, so how it is 'used and abused' if you like. And I guess overarching all of that is climate change [I19 NRM SE].

With respect to population pressure, the main coastal management issues revolved around impacts of increased growth and visitation, access and inappropriate coastal development. With respect to climate change, the main coastal management issues included erosion, sea-level rise and inundation. It is interesting to note that, while the management issues varied depending on region and locale, the drivers of the issues – namely population pressure and climate change – did not.

The following sections provide a sense of the types of coastal management issues being experienced in each case study region as a result of population pressure and climate change, as described by the local government and NRM representatives interviewed. The interview data is triangulated with secondary data from government reports and independent studies, thus verifying this study's findings.

5.4.1 Population pressure

The AMLR region has the highest average population density and growth rate of the three case study regions examined. Such population pressure places direct stress on the integrity of coastal ecosystems (Government of South Australia 2008). Specific coastal management issues related to population pressure in the AMLR region include new and historic coastal development in vulnerable or hazardous locations; pressure for access to beaches, from driving on beaches, to shared-use paths through sensitive coastal habitat along the foreshore and illegitimate pathways through dunes; high visitation pressure in summer months; pollution and water quality issues related to urbanisation and stormwater management; and recreational over-fishing.

Aldinga ... always had cars on the beach, people using the beach, but it was for a seasonal time when holidays were on. Now the population has increased it's just constant pressure [I27 LG AMLR].

A significant issue within the metropolitan coastal zone is the impact of stormwater runoff on subsequent water quality and aquatic life, highlighting the importance of integrated management of the catchment-coast-marine continuum.

The people pressure that we're putting on ... in terms of things like stormwater and water quality. We don't have the open spaces we used to have, the backyards we used to have where you'd actually drain a lot of that water so we're ending up with super highways of stormwater going out. Particularly in Adelaide we're in a real problem that we've developed so much that we don't have anywhere to store it before it goes out, which means that we have this pull the plug effect where everything goes out and gets to the coastal area and it's you see the big brown plume but you don't really think about it, you go "We can't swim for a couple of days". So a lot of the offshore effects are 'out of sight, out of mind' and that's a real problem if you're in charge of trying to actually manage that or have something to do with it [I30 NRM AMLR].

This is a well-recognised problem, with several studies having been conducted into the impacts of stormwater on seagrass meadows and water quality in the metropolitan coastal zone.

Dominant habitats in near shore subtidal waters they are generally seen as being in poor condition. A system in poor condition can lead to not only loss of ecological value but economic losses as well. Consistent with the findings of other similar large-scale studies, the Adelaide Coastal Waters Study (Fox et al. 2007) identified modification and degradation of Adelaide's coastal marine environment as a result of many years of near-continuous inputs of nutrient rich, turbid and coloured water and wastewater ... The Adelaide Coastal Waters Study generated a unique historical record of nitrogen (and other pollutant) loads to coastal waters, coupled with a long series of observations of seagrass cover in Adelaide coastal waters. Analysis of this historical loading trend (coupled with the realisation of long time lags in this system between loading increases and seagrass losses) shows that seagrass losses were

widespread after the loads increased to about half the present levels (Adelaide and Mount Lofty Ranges Natural Resources Management Board 2013, p. 30)

Other types of coastal issues exacerbated by increasing population pressure include loss of stabilising vegetation and erosion of dunes through inappropriate access; as well as the loss of habitat, biodiversity and ecological connectivity as a function of interrupting natural coastal ecosystems through coastal development, increased human access, and introduced species of both flora and fauna.

Impact of growth, and buildings that are related to that growth, but also the visitations that are related to that growth, are having a huge effect on biodiversity impacts on the coast I think [I26 LG AMLR].

In the metropolitan LGAs of Port Adelaide Enfield and Onkaparinga, the desire to live in what is known as the 'coastal strip' and have easy access to the beaches are major issues. A legacy of inappropriate coastal development, inappropriate access to beaches, pressure to allow driving on beaches, and the building of shared-use paths through sensitive coastal areas are relevant examples.

The peri-urban LGA of Victor Harbor experiences different kinds of population pressure to the metropolitan councils, in the form of the sea change phenomenon. As outlined in Table 3.3, there exists a typology of coastal communities experiencing the sea change phenomenon (Gurran, Squires & Blakely 2005). The City of Victor Harbor is classified as a 'coastal getaway', that is, a coastal town within a three-hour drive of a capital city popular for day trips and holiday homes. This type of population pressure is perceived to be a problem for a relatively small council like Victor Harbor due to their low capacity to provide the infrastructure and services the 'city-dwelling sea changers' are used to and demand.

Forty percent of our population... er, our land owners are non-resident. Um, the large part of that forty percent are Adelaide people who have a home in Victor Harbor as a second home, and come down here, you know, every weekend. Um, so in population terms what... you know, we talk about Victor Harbor having a population of fourteen and a half thousand, um, and with the visitors, with the visitors on weekends it could be twenty-four, twenty-five thousand every weekend.

Despite the low population densities in the NR EP region, population pressure was perceived to be a significant coastal issue for local government and NRM Boards alike, reportedly due to population growth and increased visitation. The population of the EP region as a whole grew by over five percent between 2001-2010, and is projected to grow by almost five percent from 2011-2026 (South Australian Centre for Economic Studies 2012b, p. 2). Table 5.3 shows that population growth over the last ten years have increased in all three LGAs studied: Lower Eyre Peninsula showing the largest growth at approximately 15 per cent, followed by Port Lincoln (seven per cent) while Tumby Bay's growth was relatively minor in comparison (two per cent). Participants felt that, in terms of population growth and increased visitation, the biggest problem for small councils is the provision and maintenance of services and infrastructure.

We're starting to be recognised as a good place to be, to visit and to live. And that will then, with that comes other pressures of, you know, how do you maintain what you've got. Also

the other thing for council is how to provide those facilities for, once again, either the services for the people or the services for the visiting tourists. I think they're the main issues [I14 LG EP].

Coastal areas were perceived to face substantial impacts of visitor population increases and recreational use.

I guess recreational or tourism impacts are pretty big. We're getting visited more and more from all sorts of fronts, whether it's fisherman or grey nomads or just people coming to see Eyre Peninsula so... particularly in the last five or six years it's gone from being a slow increase to a fairly rapid one [I10 NRM EP].

A more direct coastal impact would be illegal camping and access through the dunes and things like that, which... camping is one thing we don't mind that, but when they start four-wheel-driving over sensitive dune systems and things like that, we have problems. From a council perspective we can only manage that as best we can by blocking those access points, and the NRM is the re-vegetation [I13 LG EP].

For the LEP LGA, this is no mean feat with over 700 km of coastline. Issues resulting from increased visitation include demand for coastal infrastructure; increased demand for facilities such as toilets, car parks, trails, camping areas, boat ramps and moorings; and off-road vehicles, trail bikes and bush camping (Eyre Peninsula Natural Resources Management Board 2009).

Likewise, population pressure was perceived to be a significant coastal issue in the NR SE region, mostly in relation to visitation and the impact of off-road vehicles on beaches. Towns such as Kingston, Robe and Beachport are sea change communities of the 'coastal hamlet' typology (Gurran, Squires & Blakely 2005). In South Australia, the regulations regarding off road vehicles on beaches are enacted by councils, who are responsible for the management of local government land, and "may include the installation of gates and signs, the creation of codes of conduct, creation of by-laws permitting/prohibiting ORV use, opening and closing of roads or trails and numerous other functions" (Local Government Association of South Australia 2011, p. 11). Beach driving is permitted by the coastal councils of the NR SE region. Participants recognised the proximity of this region to Victoria, where beach driving is not permitted, to be an issue specific to the NR SE region. This issue has also been noted by others; "Victorian ORV users are known to travel interstate to Robe, eastern South Australia to drive on beaches" (Sargent et al. 2012, p. 10).

Yeah the population pressure, but particularly because one of the things about Robe is you can drive on the beach for a start ... a lot of people come from Victoria because it is quite close there and that is increasing as well ... Long Beach is very popular beach here, you know, people come here over the summer because of the beach and really they wouldn't be coming otherwise. The fact that you can drive on the beach is a real boom for this town ... It is sort of a compelling problem, the more people you get there, you've got less resources to handle it, more prospects of damage being caused... So we try to manage it as best we can we try and do our bit to make sure that people do the right thing and maintain that privilege that we've got [I21 LG SE].

5.4.2 Climate change

Some representatives of local government and NRM regions in this study referred to climate change in general as one of the main coastal management issues facing their local government area or NRM region. Others referred to specific hazards posed in the coastal zone as a result of climate change, including sea-level rise, storm surge, inundation, erosion and cliff instability. Many respondents also raised governance-related issues pending the impact of climate change. For example, issues included the dilemma of how to afford to maintain and protect infrastructure and assets; appropriate decision-making regarding new development in vulnerable areas; and a lack of financial resources or information available to enable effective decision-making; as well as the risk of liability and the need for an unpopular policy of retreat.

In the NR AMLR region there are a high number of assets and infrastructure at risk from the impacts of climate change (Department of Climate Change 2009; Department of Climate Change and Energy Efficiency 2011). Each of the local government areas in the coastal NR AMLR region described instances of urban development in hazardous areas which are already vulnerable to erosion or inundation, where vulnerability will only increase with the effects of climate change.

For example, a significant feature of the City of Onkaparinga coastline are the cliffs at Witton Bluff, which are unlike the more erosion-resistant cliffs elsewhere in the LGA due to the outer surface being soft clay and sandstone overlaying limestone (Bourman, Murray-Wallace & Harvey 2016). Ongoing exposure to rain, wind and waves has resulted in erosion and cliff instability, providing an ongoing risk to local government assets such as the main road on top of the cliff, as well as risks to the public (Clarke & Simpson 2010). As a result, extensive rock protection has been installed (Bourman, Murray-Wallace & Harvey 2016).

In my area I guess cliff stability, coastal erosion... at the moment it's not serious but it is directly affecting council infrastructure and also a lot of the amenity, you know, and natural values that we have got along the coast. Um, so part of the long-term planning is to protect these areas, try and enhance them at the same time... And really looking at climate change as well, as a part of that, the impact of that on those. Um, they're the main issues and they are big dollar items and not, yeah, sort of 50-100 thousand dollar fixes there. It'll be in the millions, tens of millions sort of thing [I28 LG AMLR].

According to Caton (2007), the cliffs and beaches are the most susceptible to the threat of climate change; cliff and beach erosion will become more intense as sea level rises, and the Onkaparinga Estuary will experience more frequent marine flooding. Furthermore, dune systems will recede or destabilise due to a combination of sea-level rise and increasing aridity impacting dune vegetation (Caton 2007).

The City of Port Adelaide Enfield is at significant risk of inundation, due in part to the ongoing issue of subsidence around the Port River Estuary owing to a combination of tectonic subsidence and groundwater removal since European settlement (Bourman, Murray-Wallace & Harvey 2016). This will be exacerbated by rising sea levels. In 2009, the *National 'First Pass' Assessment Report: Climate Change Risks to Australia's Coast*

identified the western region of Adelaide as being one of the most vulnerable areas in the nation. The City of Port Adelaide Enfield was found to be particularly vulnerable:

23 per cent of residential buildings in the City of Port Adelaide Enfield could be affected by sea-level rise by 2100. A recent study of seawater flooding risk to Port Adelaide identified that the estimated costs from flooding damage from the combined effects of sea-level rise (50–88 centimetres) and local land subsidence during a 1-in-100 year storm tide event could increase from \$8–28 million for a current day event to \$180–310 million under future scenarios (Department of Climate Change 2009, p. 110).

Hence, the need to maintain and protect existing assets and infrastructure in this area is high on the council's priority list.

Well, there will be inundation from king tides. Because the gulf is fairly shallow out from our coastline... certainly I see our biggest threat is a major king tide or a number of major king tides which could inundate very large areas of the [Le Fevre] Peninsula and Port Adelaide and that would cause significant damage [I32 LG AMLR].

Exacerbating the population pressure in the region, climate change will have serious impacts for the City of Port Adelaide Enfield.

We manage stormwater management. Sea-level rise is going to be a huge impact on stormwater management because, particularly in these areas of flat, we get sea-level rise and stormwater can't get out. So we've got serious problems [I33 LG AMLR].

For the smaller seaside council of the City of Victor Harbor, of foremost concern in the context of climate change were the issues of sea-level rise and inundation, how to plan for the future, and concerns over council's liability in terms of development approval. According to the *National 'First Pass' Assessment Report: Climate Change Risks to Australia's Coast*:

Victor Harbor [has] a significant number of buildings located within 110 metres of 'soft' coast... between 240 and 320 residential buildings within 110 metres of 'soft' shoreline. In the absence of coastal protection measures or other adaptation responses, these buildings may be at risk of increased erosion with sea-level rise and storm surge due to their location and the nature of the shoreline (Department of Climate Change 2009, p. 111).

The City of Victor Harbor was struggling with the feasibility of a 'protect versus retreat' policy.

First there is a planning matter that council needs to consider seriously: where do we go medium to long-term with regard to planning our zoning provisions within our development plan? And how do we address, you know, what's in existence already? You know, how do we protect, you know, it's either protect or retreat... and we need to decide, what are the best strategies for each particular area. Because our lower-lying areas are probably the oldest and either highly populated or commercial retail areas, we're probably looking at protection rather than retreat. So that's a challenge [I24 LG AMLR].

Participants also felt strong concern regarding council's legal liability over development in the coastal zone.

The liability aspects are a challenge for council ... what planning responsibility do we have to take with regard to any potential claims that might be forthcoming? What decisions have council made that have potentially exposed us to future liability? [124 LG AMLR]

Local councils require a greater protection from legal liability where they provide advice or make a decision in good faith relating to coastal planning and the impact of climate change [129 LG AMLR].

Climate change also figured as a significant coastal issue in the perceptions of the participants from the EP region, despite the fact that the level of scepticism regarding climate change impacts was arguably higher among local government representatives than it was in the other regions.

One we need to look at, the climate change issues that we need to look at, you know, with low lying land and all of those things [114 LG EP].

In this area here it's definitely climate change issues with sea level rise [115 LG EP].

In line with the issues described in the NR EP Board report, 'State of our resources: Recognising the state of natural resources of the Eyre Peninsula' (Eyre Peninsula Natural Resources Management Board 2009), low lying areas and historical development in hazardous coastal locations were perceived to be of concern in this region.

Probably the biggest one for us is protection of - well actually we've probably got two big ones: protection of existing development. There've been townships have been allowed to be built in what we consider inappropriate areas and now we need to protect them. We've got Tulka down south which, there's shacks within 10 meters of the water and it's eroding, so we've got a sea wall along a portion of it, and we've got to build another one to protect that. And the other one is development, or new development in inappropriate areas [113 LG EP].

In NR SE, climate change was largely accepted as being in progress by the local government and NRM representatives spoken to. Although some respondents may have been sceptical as to the anthropogenic source of climate change, or were certainly aware of their community's scepticism, the changes they were seeing on the coast for themselves were sufficient for them to accept that protection and adaptation along their coast was a priority.

Whether you believe in climate change or not, I think there's definitely a change in coastal processes, whatever brings that about. And I think that we're actually going through a phase... once upon a time we used to be building beaches, and now we're actually losing beaches [120 LG SE].

Ah look, the most significant issue really is the, well we call it 'climate change', whatever you want to call it... But, you know, the threats that come from the potential change in climate. We're not a council that tries to debate the ins-and-outs of what coastal change is. We, we're a fairly conservative council so we try to go down the line that, you know, like any other business activity, there's a risk in terms of managing coastal environment and we need to understand those risks. So for us, obviously coastal environment issues of potential sea-level rises, yeah, stronger storm surge issues, you know, and the erosion and those things that come with that [123 LG SE].

The most noticeable climate change impacts observed in the SE region were increasing erosion of beaches due to storm surges and high tides in the area.

We certainly have noticed here in the last, well the short time that I've been here; I've been coming, even though I've only been working here four years, I've been coming to Robe, regularly for forty years, so I am pretty familiar with the place, and one thing we have noticed is the erosion of beaches, from storm surges and high tides over the winter/spring months [I21 LG SE].

These perceptions are corroborated in two reports. Firstly, a report on the Limestone Coast prepared for the economic progression association, Regional Development Australia, which states that:

The DC of Robe has identified climate change as an issue citing more frequent and destructive storm surges causing damage to infrastructure, beach erosion and king tides as major concerns. Sea-level rise will be a problem for coastal councils impacting on storm water drainage, sewage disposal and coastal infrastructure in general; these impacts will affect several aspects of council operations including but not limited to: infrastructure, parks and gardens, the provision of community services and liability and risks associated with insurance and legal obligations (South Australian Centre for Economic Studies 2012a, p. 14).

Secondly, the First Pass National Assessment of Climate Change Risks to Australia's coast revealed that the SE townships of Kingston and Robe have the highest proportion of 'at-risk dwellings' in South Australia. This number would likely be higher if storm tides were included in the inundation analysis:

While the total number of buildings at risk may be relatively small, between 40–70 per cent of residential buildings in Kingston ... and between 40–50 per cent of residential buildings in Robe may be affected by sea-level rise by 2100 (Department of Climate Change 2009, p. 109).

As a result of this vulnerability, the 'maintain and protect' approach was favoured.

I just think it's actually the loss of beaches and that's actually eroding into sand dunes and that sort of dune formation, and once they're gone I don't think you're gonna get them back because, you know, some of those are heavily vegetated and that sort of stuff so what you're gonna get back is gonna take a long time – if it does come back – it's gonna take a lot of time to re-establish itself. So for us it's actually trying to work on slowing down the processes or shifting them away from public and private infrastructure as a way of trying to protect that investment [I20 LG SE].

Concerns related to climate change were also often associated with the uncertainty around it. The lack of data, decision-making information and guidance from other levels of government were raised as significant issues.

Well, I think climate change is the big ticket item, and no one really knows and there are lots of sort of projections about it, but no one really knows how that's going to pan out [I21 LG SE].

5.5 Chapter summary

The purpose of this chapter was to provide a rich description of the case study sites selected for this study, and the types of coastal management issues facing them, in order to assist with transferability and generalisability of these case study results to other regions across South Australia and Australia.

Analysis of interview transcripts revealed that population pressure and climate change are the principle drivers of the main coastal management issues raised by local government and NRM representatives across each region. While there were nuances in the specifics of the coastal issues in each region which reflected the geographic and demographic make-up of that region, it is interesting that irrespective of the metropolitan or rural character of the case study region, the main coastal management issues being faced at the local and regional level could be attributed to either population pressure or climate change.

The consistency of these main coastal issues across case study regions underscores the significance of these twin pressures for local government and NRM managers alike. In terms of coastal management, both of these pressures can be better managed through improved coastal governance. However, the pervasiveness of these issues, as evidenced by the interview data as well as the secondary data cited, implies that their management is not yet under control.

This background information serves as a preface to the exploration of the governance issues raised in this case study, which are discussed in the subsequent chapters.

Chapter 6 Coastal governance issues for local government: Results of a South Australian case study

6.1 Chapter overview

The purpose of Chapter Six is to address the first research question, in the context of coastal management:

What is the nature of local government in South Australia? From the local government perspective, what are the governance issues posed by Australian federalism?

Thus, this chapter focuses on coastal governance issues by examining the roles, responsibilities and capacity of local government in the context of the Australian federation. Specifically, the chapter explores the local government representatives' perceptions of what constitute the main coastal governance issues with respect to integrated coastal management.

6.2 Local government: Coastal management roles & responsibilities

As outlined in Chapter Two, local government is regarded as an integral part of the Australian system of government due to its significant role in municipal governance, planning, community development, service delivery, asset management and regulation (Australian Local Government Association 2012; Department of Infrastructure and Regional Development 2015). Since local governments are enacted by state government legislation, their responsibilities are delegated by their respective state governments (Sansom 2009).

With respect to coastal governance and operational management, local government has been delegated many state government responsibilities, including development planning, development assessment, public land management, stormwater management and drainage. Local government is also responsible for the day-to-day maintenance of beach access and facilities in their jurisdiction; in many cases this includes significant infrastructure such as jetties and boat ramps, as well as stormwater and sewerage infrastructure (LGASA 2003). In terms of climate change adaptation, local government's role in land-use planning and development decision-making in the coastal zone is a critical one (Harvey & Caton 2010).

These roles and responsibilities, and local government's capacity to fulfil them, are explored in the following section. The results of interviews with local government representatives in response to questions regarding the governance arrangements for coastal management in Australia are synthesised with secondary data to enhance our understanding of the local government perspective.

6.3 The local government perspective: Results from a South Australian case study

Several prominent themes emerged from the interviews with local government representatives regarding the roles and responsibilities of the spheres of government involved in coastal management in Australia. These themes included (i) a strong discourse around local government's lack of financial resources to cope with their coastal management responsibilities; (ii) local government's lack of autonomy from state government; (iii) the problem of state government cost-shifting to local government; and (iv) local government's lack of recognition in the Australian Constitution. Each of these themes will be discussed in turn below.

6.3.1 Lack of financial resources

The main governance issue raised in this case study related to local government's coastal zone management responsibilities was a perceived lack of financial resources to effectively manage the coast, including to maintain and protect existing assets and infrastructure, especially in the face of impending climate change impacts.

The thing that ties all of this together is the fact that there are assets. And people. And so I think the biggest risk for councils in coastal areas is existing assets within risk zones. And how to juggle the breadth and width of the risk with the limited resources... and, the problem of having something built in that space, it kind of limits their options, you know. So, I think the biggest risk is around what we've already got in place, and, with the continual creep effect of erosion, but also the ongoing increase in incidence and strength of inundation in some of our low lying areas as well [I25 LGASA].

I don't think there's anywhere near adequate resourcing to do the job that needs to be done [I26 LG AMLR].

Lack of funding restricts the capacity of councils to defend their planning decisions when these are challenged before appeals tribunals or land environment courts. Lack of funding also affects the capacity of local councils to undertake adaptation works in the interests of reducing their community's potential exposure to climate change risks [I29 LG AMLR].

A lack of resources to adequately manage coastal management issues within their jurisdiction was a concern in all councils. Despite the strong rate bases of the large metropolitan councils of the City of Onkaparinga and the City of Port Enfield, concern over a lack of financial resources to deal with coastal issues still featured as a significant issue.

In my area I guess cliff stability, coastal erosion ... at the moment it's not serious but it is directly affecting council infrastructure and also a lot of the amenity, you know, and natural values that we have got along the coast. So part of the long-term planning is to protect these areas, and try and enhance them at the same time. And it's really just a matter of prioritising, going through a prioritising process to try and get some of these areas repaired and fixed um, around, yeah... And really looking at climate change as well, as a part of that, the impact of that on those. They're the main issues and they are big dollar items and not, yeah, sort of 50-100 thousand dollar fixes there. It'll be in the millions, tens of millions sort of thing [I28 LG AMLR].

A lack of financial resources was also a major issue facing the smaller, non-metropolitan councils.

I think the one thing local government does really well though is it gets the problem solved. And it gets into it. But a lot of the stuff we're grappling with is way and above our resource levels [I23 LG SE].

Local government representatives also spoke of the financial constraints at the state government level, which they perceived to be severely limiting to what local government is able to do in terms of coastal management and protection.

We'll certainly be seeking some state government help but I think we'll be unlucky, I'll think we'll be very lucky if we're going to get it, they're not handing it out [I21 LG SE].

We've got a significant area of erosion we're dealing with, we've had some recently good outcomes with DENR and the Coastal Protection Board. But it's spasmodic. I don't think it's properly funded. They are, the organisations themselves aren't properly funded [I23 LG SE].

Unfortunately we're relying on Coastal Protection Board for support funding for those programs and, you know, we're now looking at a state-wide call upon their purse, and sometimes we get a knockback and can't continue with the program, you know, for a one or two year period that we put in place. So the, you know, the state government needs to look at that issue in terms of adequately resourcing those grant funding programs that we're all trying to tap into [I24 LG AMLR].

Local governments, rural and metropolitan alike, were looking to state and federal governments for the provision of either data or funding assistance to enable detailed local mapping and risk assessment, in order to understand the likely impacts of climate change in their area.

So we really need some drivers and some assistance coming from those federal and state levels. You know, around mapping projects, around, you know, modelling projects, around risk assessments, all those sorts of things that come with understanding infrastructure impacts, liveability impacts, those types of things [I23 LG SE].

Often we just find it difficult to apply development plan provisions about the coast because we don't have information ... an example is, there's a whole lot of new development plan provisions about sea-level rise that have just come into all councils' development codes ... So they say things like 'if a development application comes in that is within a coastal zone or within 100 metres of the coast, then you must make sure that it can deal with what 2100 or 2070 sea-level rise is going to be and you also have to take into account erosion and provide for a buffer. And, you know, also include subsidence and storm surge'. So our development assessment guys would say "well okay, what does that mean? How high is that going to mean? How wide is a buffer going to be? How far is erosion going to go?" It's going to be different in different areas, depending on the type of topography and so on. Does a developer go out and do sea-level rise modelling for one development? Of course not. And we shouldn't even expect them to. Should local government do it? Okay, maybe, maybe ... but most councils wouldn't have any and would, and no way would have the funds to do it. Is it a state government thing? Well, some state governments in Australia do certainly have it, have started doing that, high resolution sea-level rise modelling that can be used for decision making. South Australia hasn't and has no intention of doing so [I33 LG AMLR].

For the more isolated LGAs of the rural west and east of SA, a lack of resources to manage coastal issues may have reflected several factors; the low rate base of these LGAs, the expansive land and coastline area under local government responsibility, and the unwillingness of LGAs to raise rates in fear of discouraging population growth of the area or potentially losing votes in the next local election (Sansom 2009).

So, um, look, some of our coastal councils are, regional councils, are literally just trying, you know, scratching to keep up with the day-to-day business of running a council [125 LGASA].

Local governments are empowered via state government legislation to raise revenue through council rates on property, user fees and charges, interest fines and other penalties, and developer charges and contributions (Productivity Commission 2008). Local government rhetoric is that local governments are in a position of limited fiscal capacity. This is exemplified by the LGASA's current rates campaign, shown in Figure 6.1.



Figure 6.1 LGASA Rates Campaign 2016

Source: LGASA (2016).

The reality is that, according to the 2013-14 figures shown in Table 6.1, councils raise on average 92.8 per cent of their own revenue with grants and subsidies making up the remaining 7.2 per cent. In South Australia, own-source revenue amounted to 92.4 per cent of local government expenditure. However, state and national averages mask the fact that the local government's ability to raise revenue varies considerably depending on their location (urban versus rural), population size, rating base and ability to levy user charges (Department of Infrastructure and Regional Development 2015; Sansom 2009).

Table 6.1 Local government revenue sources by jurisdiction 2013–14

Percentage figures show the proportion of ‘revenue derived from each source’ out of the ‘total revenue of the state’. Source: Australian Bureau of Statistics, Government Finance Statistics, Australia, 2013–14, ABS cat. no. 5512.0 in Department of Infrastructure and Regional Development (2015, p. 5).

Revenue source		NSW	Vic	Qld	WA	SA	Tas	NT	Total
Own-source revenue									
Taxation	\$m	3,810	4,030	3,302	1,835	1,305	351	105	14,738
	%	34.2	45.7	29.9	41.7	63.0	48.7	28.4	38.2
Sales of goods and services	\$m	3,988	1,609	3,642	1,004	381	162	95	10,881
	%	35.8	18.2	32.9	22.8	18.4	21.6	25.7	28.2
Interest	\$m	313	88	286	121	23	18	10	857
	%	2.8	1.0	2.6	2.8	1.1	2.4	2.7	2.2
Other*	\$m	2,096	2,454	3,396	964	211	170	58	9,348
	%	18.8	27.8	30.7	21.9	10.2	22.6	15.7	24.2
Total own-source revenue		10,207	8,181	10,626	3,924	1,920	701	268	35,824
Grants and subsidies	\$m	934	638	431	472	154	51	103	2,782
	%	8.4	7.2	3.9	10.7	7.4	6.8	27.8	7.2
Total grant revenue		934	638	431	472	154	51	103	2,782
Total revenue	\$m	11,140	8819	11,057	4,396	2,073	751	370	38,606
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The majority of local government own-source revenue is raised through taxation via rates applied to property. According to Table 6.2, in 2013–14, the national average of local government revenue from rates was 38.2 per cent; South Australia had the highest percentage at 63 per cent of own-source revenue (Department of Infrastructure and Regional Development 2015). This figure indicates the high dependence of local government own-source revenue on rates applied to property in South Australia. In the rural EP and SE regions, the practical implications of local governments’ reliance on own-source revenue, and the need to grow revenue streams to meet future needs, was in the forefront of interviewees’ minds.

We’ve got miles and miles of space. We’re desperate for any sort of activity, whether it’s industrial or whether it’s commercial or whether it’s residential development [I9 LG EP].

We need to be able to grow, so we can support our schools and our hospitals, ‘cause if we don’t do that... we can’t stay static ‘cause that will not, that will not retain our hospitals and our teachers, you know. I know we can now, but you know what it’s like ... we need to have some sort of growth ... We need to be able to have some sort of growth, and that needs to be promoted but in a sense, um, so we need to encourage development but we need to also be, also aware that we need to be careful about how we do it [I14 LG EP].

Now local government, um, you know, the, they’re interested in rates, development, and they don’t see ecology as being important. Develop at any cost [I22 NRM SE].

Despite the variance in own-source revenue-raising capacity across councils, there are options open to local governments looking to fund coastal initiatives and infrastructure. Options relevant to coastal councils include increasing council rates, stipulating developer charges and contributions for developments in the coastal zone, and special service and user charges (Productivity Commission 2008; Sansom 2009). Furthermore, it has also

been suggested that local government is in a good position to source finance for infrastructure through borrowing due to their very low net debt (Productivity Commission 2008; Sansom 2009). It should be noted that, due to “state government restrictions on the level of borrowings or the purpose or the source of borrowings”, this would require state government approval (Productivity Commission 2008, p. 22).

6.3.2 Lack of autonomy from state government

Many local governments feel insecure about their place in the federal system (Australian Local Government Association 2012; Megarrity 2011; Wild River 2006). This is because local government is not recognized in the Australian Constitution, and – despite being “granted varying degrees of recognition and protection under state Constitutions” – the format of local government can be altered relatively simply through changes to state legislation (Sansom 2010, p. 180). Since councils can be “created, dismissed and directed as the states wish” (Sansom 2002, p. 2), their place at the bottom of the ‘pecking order’ was felt strongly by local government representatives interviewed in this case study, in particular the elected representatives.

Everything I see in South Australian local government just indicates that state doesn't trust local government to make the right decisions, so they bring in big brother with an overview to say yes or no. Every development application needs to be referred to a whole raft of government agencies that either comment or refuse or say “no” or generally make it more difficult for us. And they don't, they don't... To me, it's as if they don't trust local government to make reasonable decisions, whether it's about protecting the environment or developing further industrial land or whatever [I9 LG EP].

... if push comes to shove and the local community want to do something and the state doesn't want to do it, the state wins [I9 LG EP].

I think local government in a lot of cases is the last person on the end of the chain. We've got a lot of people telling us, setting the rules and regulations and we're trying to meet some, and basically, you know, like our council, we've got six-hundred-and-something kilometres of coastline and we're a small council. There's no way we're going to be able to do everything that is put down. But, look, a lot of our planning comes down from state government and, the coastal um, they're trying to bring in a coastal conservation zone, and that has stalled at the moment but I've got no doubt it will be picked up again, and the Coast Protection Board, the state government one, has a lot to say what we can and can't do along the coastal area. The NRM also have their say. So, as I see it, we're on the end of the chain [I14 LG EP].

It's not helped by overzealous state government agencies who, who want to just shut people out without trade-offs [I15 LG EP].

Even the decisions that local government makes in terms of by-laws, development assessment plans... are all potentially overridden, even though their local decisions made in consultation with local people, can be vetoed by state government. So at the end of the day, I'd go so far as to say local government exists as a whim of the state government because we exist because of their act of parliament, and I think we are treated accordingly. I think we are - it's very much a servant/master relationship, it's not a collaborative, join hands and go in partnership, it is definitely, in my view from all of the experience that I'm talking about where I've come from, I believe it is a servant/master relationship [I26 LG-AMLR].

I have seen similar things happen where the government – this goes to state government – may not be necessarily happy with the direction a council might be taking on an issue, so they'll establish a Working Party Group. All of a sudden this 'group' will come in and be trying to do things that really, the state government and the local council should have got their heads around years ago. So why establish another group? And is that just so that that group can actually give the government the decisions and answers they want, and therefore cut out the true representation of the people, which is the local government? Local government's been elected to perform the role. Now, either that local government is empowered to do that or the state government wipes them out. You don't bring in other little focus groups, and I'm sure if we were to try that with either the state or federal government they'd be very annoyed [132 LG AMLR].

At the heart of this dissonance is what Wild River (2002) refers to as the local-state antinomy: the reality that local governments' perspective on the role of local government differs from the state government's perspective, where both are equally valid points of view. That is to say, since local governments are in fact constituted under state government legislation, accordingly, state government perceives local governments' role as one of service delivery to the local area on behalf of the state government. Conversely, since local government councilors are democratically elected by the constituents of the local government area, and since local governments have formal legislative roles within that area, the local government perspective is that they are autonomous, and their role is to serve their local constituency. As Wild River (2006, p. 4) articulates:

The simultaneous but contradictory views of the local governments as creatures and servants of the **state** and the **local** are both valid in historical, legal and practical terms. The results of this conflict cause considerable frustration among officials working in both local and state or territory spheres, since their expectations of one another are rarely met (author's own emphasis).

Compounding the discord resulting from this local-state antinomy is the pressure on local government to provide an increasing array of services and an unwillingness to raise further revenue through increasing rates or other means of revenue-raising. This issue is covered in the next section.

6.3.3 Cost shifting

A consistent source of tension from the local government perspective, raised in interviews with both local government staff and elected representatives, was the problem of state government cost shifting.

Cost shifting is primarily a state phenomenon – a mix of devolution without funding ('unfunded mandates'), legislation that imposes new functions or compliance requirements but without matching revenue, levies on local government to help fund state services, and restrictions on local government rates and charges (Sansom 2010, p. 192).

Local government's role has expanded significantly over the last 50 years, while their revenue base has not grown as substantially as that of the federal and state governments' revenue bases over this period (Kelly, Dollery & Grant 2009; Megarrity 2011; Sansom 2002, 2009).

I think there's a power imbalance between the state and local government... because I think there's too much concentration of power at the state level and expectation at the local level, so states have the power to create an expectation that local can deliver, and not funded accordingly. So I think there's a bit of a weakness there in that it allows a group to have power but not to fund the group they expect to deliver adequately [I26 LG AMLR].

A lot of things are put onto local government because we're the bottom end of the tier, so we can't offload it to anyone else. So things have been flowing on to us, local government for years, but we're not necessarily getting any additional funding and experienced people to guide us through it [I32 LG AMLR].

Cost shifting to local government is a well-recognised intergovernmental relations issue in Australia. In 2002, the federal government called for an inquiry into cost shifting, to be conducted by the House of Representatives Standing Committee on Economics, Finance and Public Administration (HORSCEFPA). The HORSCEFPA report found five factors contributing to an increase in local government functions:

1. Devolution, where another sphere of government gives local government responsibility for new functions;
2. Raising the bar, where another sphere of government increases the complexity or standard of local government services;
3. Cost shifting, whereby either:
 - a. local government performs the services of another sphere and funding associated with this is later reduced or stopped; or,
 - b. local government elects to take on a function that has been ceased by another sphere;
4. Increased community expectations, whereby the community demands improved services;
5. Policy choice, whereby individual local governments expand service provision by choice (House of Representatives Standing Committee on Economics Finance and Public Administration 2003; Kelly, Dollery & Grant 2009; Wild River 2006, p. 12).

Recognising the significant influence of intergovernmental financial relations on local government roles and responsibilities, the SCEFPA report concluded that cost shifting is widespread and "is, ultimately, a symptom of what has become dysfunctional governance and funding arrangements" (House of Representatives Standing Committee on Economics Finance and Public Administration 2003, p. 139).

With regard to coastal management, cost shifting was raised by several interviewees as an issue in terms of the significant resources required to manage large tracts of coastal Crown Land.

Yeah, it's a handball from the government, they own it and they say... 'We own it, we want a say on what happens on it development-wise and things like that, and works, but that's all your responsibility' and they don't like to come to the party very often with any sort of funding assistance either... We see that as a handball, a big handball because they want to keep doing that and they don't want to give us money [I13 LG EP].

These quotes illustrate the disempowering effect of the cost shifting issue in terms of local government being given responsibility without corresponding capacity, often in the form of financial capacity.

Another source of tension related to cost shifting more broadly surrounded the collection and distribution of the state government-imposed NRM levy. As mentioned in Chapter Four, the NRM levy is paid by rate payers and collected by councils via their council rates notices on behalf of NRM Boards. Despite being provided an administration fee for collecting the levy, this was commonly perceived to be another form of cost shifting from state to local government. Furthermore, the NRM levy was effectively perceived as the SA government devolving their expenditure responsibility (that is, the funding of NRM) to the community. This was a source of considerable tension.

And yet we're contributing so much to all these things, our ratepayers are contributing so much. Are we getting value for money? Is it like a River Murray Levy? Who knows? It's just money that you never see again [132 LG AMLR].

In addition to this, there was a lack of clarity on the role of NRM, and the value being obtained from the NRM levy was questioned.

The NRM. I don't know what they do. All I know is that there's a levy that funds them... and I don't know what they do. I don't know what they do [19 LG EP].

These observations suggest that a perceived lack of financial resources at the local government level is having a significant effect on intergovernmental relations between local and state government spheres. Reportedly, relations between coastal councils and the CPB were a lot more positive when the CPB had substantially more funding to assist local governments with their coastal management responsibilities (Caton 2011 *pers comm*). Considering this, and in light of the fact that the biggest concern for local government was their lack of resources to cope with their coastal management responsibilities, intergovernmental financial relations appear to contribute considerably to the state of intergovernmental relations.

Supporting this idea, as evidenced by this quote reflecting a rural local government perspective, the opportunity to receive funding can be a strong driver of more positive intergovernmental relations.

Well I think the state, South Australian state government, historically is poor in what they do. The amount of funding they put into NRM is poor. They're talking about pulling out of RDA funding in 2013. Um, you know, just simple things like their road funding compared to other states, the state government is low. They're poor. That's why the Commonwealth government is so, the Commonwealth sector is so important to us because they bring a lot of funds in. And the NRM bring a lot of federal funds. The RDAs bring a lot of federal funds [114 LG EP].

The evolving relationship between the local and federal government spheres, arguably driven by more favourable financial relations, is the topic of the next section.

6.3.4 Constitutional recognition of local government

Local government associations across Australia are campaigning for the formal recognition of local government in the Australian Constitution (Australian Local Government Association 2012). At the heart of the most recent¹⁹ push for constitutional recognition is the drive for securing funding direct from the federal government without having to pass through state governments.

The primary reason for seeking that constitutional recognition is so that we can establish a direct link, a legally-recognised direct link to federal government funding [I24 LG AMLR].

According to Sansom (2009, p. 20), “the single most important source of external funding for local government are the federal financial assistance grants first introduced in the mid-1970s and maintained or increased under bipartisan policies ever since”. These federal financial assistance grants (FAGs), also known as untied grants, are unconditional, providing recipient local government with significant independence in terms of their expenditure priorities.

However, in line with constitutional law, federal FAGs are administered via state governments through their local government grants commissions. In 2006, FAGs were worth over US\$1.4 billion (AUD\$1.8 billion) per annum (Sansom 2009). Around two thirds of this grant funding is allocated to non-metropolitan councils with limited fiscal capacity, although this remains insufficient for such disadvantaged councils to reach average capacity for service delivery (Sansom 2009).

The federal government also provides funding directly to local government in the form of Special Purpose Payments (SPPs). For example, an extra US\$300 million (AUD\$400 million) per annum was allocated for the *Roads to Recovery program* in 2000, which funded “local road improvements and ‘strategic’ regional roads managed by local councils” (Sansom 2009, p. 21). Although local government has been receiving SPP funding directly from the federal government, this form of funding is challengeable in the High Court due to the fact that local government is not recognised in the Constitution (Sansom 2009). Consequently, local government remain anxious that such valuable future federal funding streams cannot be guaranteed. Constitutional recognition would enable local government to be able to legally receive funding directly from the federal government without having to go through the states (Australian Local Government Association 2012; Megarrity 2011).

As noted by the interviewees, the ability of the federal government to fund local governments directly has mutual benefits for both parties:

The federal government’s just got a lot more of it. Of the funds... And they, they actually like funding local governments directly because they don’t have to go through the state filtering and process [I33 LG AMLR].

¹⁹ Referendums were held in 1974 and 1988 as to whether local government should be recognised in the Constitution, but both failed to carry (Marshall 1997).

This viewpoint is maintained in the Australian Local Government Association's (ALGA) campaign material, *The case for change: Why local government needs to be in the Australian Constitution* (Australian Local Government Association 2012, p. 2), which claims that local governments cannot be expected to provide "the increasing range of services expected by the community" owing to limited resources. Furthermore, the Australian Local Government Association (2012, p. 2) states:

Because most of the tax paid by Australians goes to the Federal Government (more than \$4 out of every \$5 in tax is collected by the Federal Government) it is important that the Federal Government can provide funding directly to councils to meet local community needs.

The ALGA's proposed change to the Constitution relates to Section 96, which at present refers to the federal government's ability to fund state governments. According to the Australian Local Government Association (2012, p. 7), Section 96 of the Constitution should be amended (*see italics*) to read:

During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State, or to any local government body formed by a law of a State, on such terms and conditions as the Parliament thinks fit.

It is important to note that local governments' current quest for constitutional change is regarding their financial recognition only, in order to be able to access federal government funding; it does not affect democratic recognition, which would alter the states' powers over the establishment of local governments (Australian Local Government Association 2012). This is in contrast to the last referendum of local government constitutional recognition, which reportedly failed to carry due to strong opposition from state governments (Sansom 2009).

The campaign material for local governments' financial recognition in the Australian Constitution argues that this is the *only* way to secure existing and future federal government funding (Australian Local Government Association 2012). Whilst stating that receiving funding directly from the federal government was the most efficient option, it was not clear why funding could not continue to be simply diverted to local government through the states. The interview data sheds light on this, as there was a strong impression from the local government perspective that federal government funding passing through the state government before being transferred to the local level was ineffective.

Every time we go through state government, more money comes out, you know, they, they just strip money out of it and like it's like putting it through a sieve you know, some sticks to the state government [I20 LG SE].

Direct funding to local councils is a far more effective way of implementing climate change adaptation measures and other coastal planning issues, as there is no guarantee that Commonwealth funds distributed to local councils through state governments will be applied to the purposes for which they are intended [I29 LG AMLR].

This opinion has also been supported in the academic literature. Sansom (2010, p. 193) notes that state governments sometimes intercept or offset federal government funding designated for local government initiatives:

Local government does not always receive its fair share of Commonwealth special purpose payments made to and through the states, and in some cases states have offset increased federal grants by reducing their own assistance to councils.

These issues are important contributors to the lack of autonomy, and hence local governments' overall feeling of disempowerment, within the Australian federal system. Furthermore, these examples of local governments' distrust of state governments reflects yet another symptom of local-state tension and poor intergovernmental relations. These issues underpin local governments' previous and current campaign for recognition in the Australian Constitution.

6.4 Key findings

The local-state intergovernmental relationship is "undoubtedly coloured by Australia's Constitutional framework [whereby] local government is not recognised in the federal Constitution and is legally totally subservient to the states" (Sansom 2002, p. 2). The examples provided above offer a glimpse into the poor shape of local-state intergovernmental relations currently playing out in the practice of coastal management in South Australia.

It appears that previous coastal management literature has not focused on the tension between local and state governments in the context of coastal management. Thus, these issues are worthy of further exploration. The attitudes of local government representatives towards the SA government consistently reflected feelings of disempowerment, distrust and resentment in the face of their delegated responsibilities. The observed acrimony was greatest around the subject of local government's roles and responsibilities within the federal system with regard to two related issues:

- 1) High responsibility versus low capacity, whereby local government lacks the financial resources to carry out delegated responsibilities, and lacks the fiscal capacity to raise sufficient revenue for their substantial expenditure needs. This issue is exacerbated by on-going cost shifting from state to local government.
- 2) A lack of autonomy, whereby local government perceives their position as a creature of the states conflicts with their legislative role to serve their local constituency.

Both of these issues are fundamentally a function of asymmetrical power relations with the state government which, ultimately, disempower local government and lead to the intergovernmental tension observed between the local and state spheres.

6.5 Chapter summary

In this South Australian case study of coastal management in a federal system, the results presented in this chapter reveal the local government perspective. The main coastal governance issue raised by local government representatives was a lack of financial resources to deal with various aspects of coastal management, particularly in the face of population pressure and impending climate change impacts, and ongoing cost shifting from state government. These asymmetries in responsibility versus capacity are coupled with a lack of autonomy from the state government and a lack of recognition as a legitimate sphere of government in the Australian Constitution. Thus, the overall sense of the position of local government in the Australian federal system is one of disempowerment.

The next chapter examines the state government perspective, presenting perceptions of the main issues with respect to coastal governance arrangements for integrated coastal management from the perspective of the SA government (Department for Environment) representatives interviewed.

Chapter 7 Coastal governance issues for state government: Results of a South Australian case study

7.1 Chapter overview

The purpose of Chapter Seven is to address the second research question, in the context of coastal management:

What is the nature of state government in South Australia? From the state government perspective, what are the governance issues posed by Australian federalism?

Thus, this chapter focuses on coastal governance issues by examining the roles, responsibilities and capacity of the state government in the context of the Australian federation. Specifically, the chapter explores the state government representatives' perceptions of what constitute the main coastal governance issues with respect to integrated coastal management.

7.2 State government: Coastal management roles & responsibilities

In terms of the Australian Constitution, authority over any powers that were not exclusively centralised at the federal level remain with the states. Hence, planning and management responsibilities in the coastal zone reside with the states (Harvey & Caton 2010; Haward 1995b). All states have enacted a range of legislation or other instruments to manage activity within the coastal zone (Clarke 2010; Harvey 2016). Consequently, coastal governance arrangements in Australia vary considerably on a state-by-state basis.

The specific coastal governance arrangements in South Australia are outlined in Chapter Four. These roles and responsibilities, and the state government's capacity to fulfil them, are explored in the following sections. The results of interviews with SA government representatives in response to questions regarding the governance arrangements for coastal management in Australia are synthesised with secondary data to enhance our understanding of the state government perspective. It should be kept in mind that the state government perspective presented here represents that of the Department for Environment (DE) and the Coast Protection Board (CPB), and does not include any other SA government agencies or elected members.

7.3 The state government perspective: Results from a South Australian case study

Three prominent themes emerged from the interviews with state government representatives regarding the roles and responsibilities of the spheres of government involved in coastal management in Australia. These themes were (i) a lack of financial resources to provide and maintain coastal protection works across the state; (ii) a lack of autonomy in terms of federal government intervention in matters of state government jurisdiction; and (iii) a lack of power for the Coast Protection Board to direct development decisions in the coastal zone. These themes will be discussed below.

7.3.1 Lack of financial resources

A resounding issue, raised by local, NRM and state government representatives alike, was a lack of financial resources at the state government level. The perceived decline of the SA government CPB fund, which is used to assist councils to fund projects to maintain and protect existing coastal assets, natural or built, was highlighted.

Well they don't have the money. They don't have the money... In terms of works, it's about \$400,000 at the moment. Well, that's about \$4 million less than they need to spend at even a cursory glance, so, they obviously don't have the money. So the answer to your question is no the state of South Australia does not have the money [11 SG].

The Coast Protection Board is struggling with limited funding. We've got an ever growing list of unfunded applications for protection works that we just can't help councils with. We've got to really cherry pick the highest priority ones year-by-year [12 SG].

I mean, the Coast Protection Board doesn't have a great deal of money and so it's pulled back what it funds down to really core things, things that have an influence on human life, property and assets, so that's where its money goes [12 SG].

For South Australia, I think it would be good to have more funding available at state level. You know, in regards to coast protection decisions, some money needs to be spent. We are seeing, I suppose, an increasing number of requests for fix-up works along the coast, for ongoing erosion particularly, and the Coast Protection Board is not funded sufficiently to do that work, to provide all the support that various councils will need now and ongoing [13 SG].

At this stage it's probably a whole series of smaller things: fix-ups of sea walls, erosion hot spots, increasingly causing issues. Mostly adjacent to settlements. They might be public areas, and they may be shack settlements which is quite a legacy here as well. So it just seems to be an increasing number of requests from councils for fix-up type work ... again, the councils probably don't have the resources of their own, or rates base, to really fund the works properly [13 SG].

This issue was also highlighted in the CPB Position Paper:

Coastal protection works are expensive to construct and both the Board and local government have limited capacity to fund the necessary works. For example, under current funding arrangements, the Board is able to provide grants totalling approximately \$350,000 each year for coastal management projects in South Australia. Given that the cost to construct a typical seawall is in the order of \$5,000 per lineal metre, this means that the Board's annual grant budget can fund a total of approximately 100 metres of seawall construction across the entire state each year (Coast Protection Board 2015, p. i).

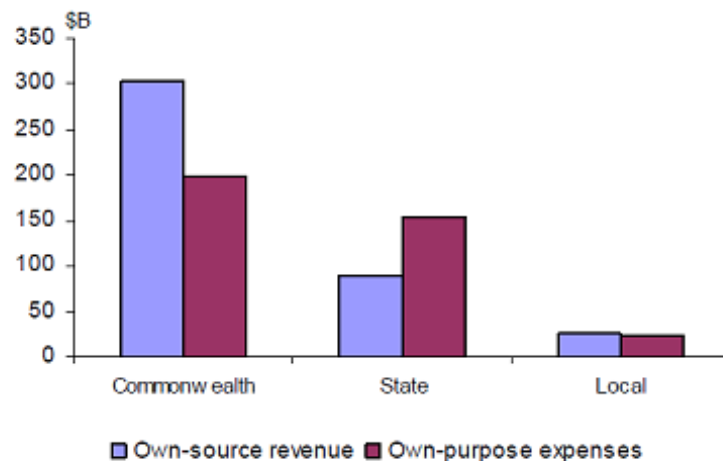
In line with the principle of subsidiarity, as followed in the division of responsibilities between spheres of government determined by the Australian Constitution, state governments have considerable expenditure responsibilities. The expenditure priorities of state governments must be considered in the context of their overall constitutional responsibilities, which include significant outlays for health, education and transport. Of the many considerable funding pressures facing state governments, public hospital funding is the most significant. Eccleston (2008) provides evidence of the substantial, and growing, burden of state governments' health expenditure responsibilities.

A significant trend in Australian public finance in recent years has been for the States to fund a greater proportion of Australia's public-hospital system despite the fact that the States have the weakest revenue base. This is particularly significant given that health-care costs are growing faster than either GDP or revenue across the developed world ... The growing revenue needs of public hospitals alone consumed 90 per cent of the GST growth dividend [2004-05 and 2005-06] and growth in hospital costs (12 per cent per annum) has exceeded GST revenue growth (8.9 per cent per annum) over the past year by 3 per cent per annum (Eccleston 2008, p. 44).

The practical reality of these competing priorities for state government funding was raised in interviews.

Well, the real dilemma for the state is that it carries the responsibility for the hospital system. The medical system is in large part is funded by the Commonwealth through the Medicare arrangements, but the hospital system is not and it's the greatest drawer on the funds of the states, and it is an area, if you said "why has the funding for environment diminished over the last ten years?" it is largely due to the cost of the health services. Not entirely but largely it is about that ... the state doesn't exercise the discipline around health spending that it needs to, but that is a very difficult area because people don't like to die ... we see it in our budgets [I7 SG].

As outlined in Chapter Two, state governments have significant expenditure responsibilities relative to their own-source revenue, as compared to the other spheres of government in the Australian federation. Figure 7.1 shows this vertical fiscal imbalance between the spheres of government in the Australian federation, and supports the argument of Eccleston (2008) that the fiscal position of the state governments is the weakest of all three spheres when their revenue base is considered in relation to their expenditure responsibilities.



1. Multijurisdictional sector (mainly public universities) not shown.
 2. Own-source revenue defined as total revenue minus grant revenue; own-purpose expenses defined as total expenses minus grants to other levels of government.
- Source: ABS 5512.0 2007-08

Figure 7.1 Revenue versus expenses of the spheres of government in the Australian federation

Source: Parliament of Australia (2016, unpaginated).

One factor contributing to this predicament is the limited fiscal capacity of the states. State government have limited means of raising revenue to meet their expenditure responsibilities. Sources of revenue for state governments, on average across all states, are depicted in Figure 7.2.

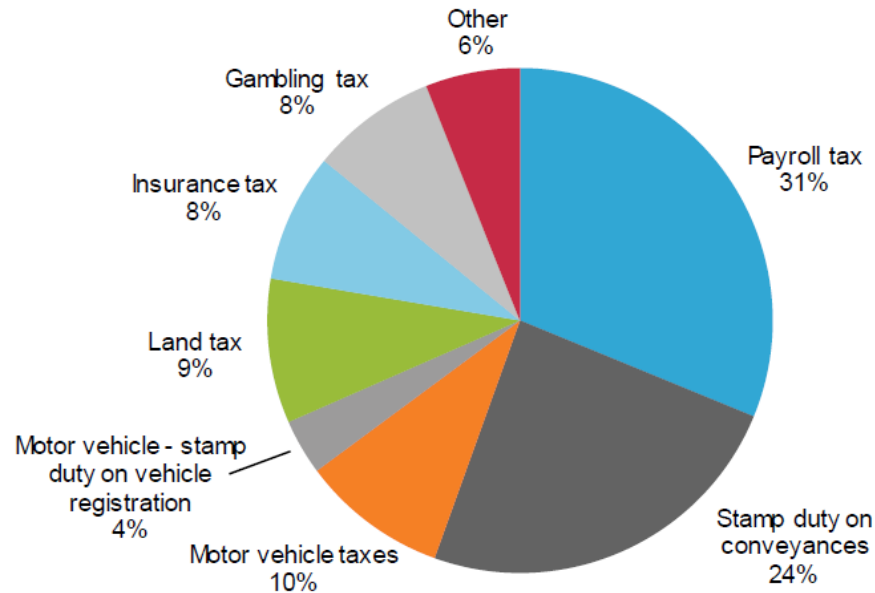


Figure 7.2 Source of state own-source revenue (national average 2013-14)

Source: Australian Government Tax White Paper (Australian Government 2015, p. 143).

The limited means by which state governments can raise revenue is recognised to be inefficient and not in line with the principles of effective federalism; specifically the principle of financial subsidiarity, which espouses that revenue-raising capacity should match expenditure responsibilities and not limit the government’s ability to finance new spending decisions (Henry et al. 2008).

The manifestation of issues related to the limited fiscal capacity of the states and the fiscal primacy of the federal government is expanded on in the next section.

7.3.2 Lack of autonomy from federal government

The federal government’s spending power in contrast to that of the state government was commonly raised among state government representatives. This issue comprises two dimensions: (i) a lack of revenue to fund expenditure, and (ii) a reliance of federal government transfers.

As explained in Chapter Two, the asymmetry in spending responsibility versus revenue-raising capacity, known as vertical fiscal imbalance, means that state governments do not have sufficient own-source revenue to fund their expenditure responsibilities, thus requiring intergovernmental financial transfers from the federal government. This is depicted in more detail by Figure 7.3.

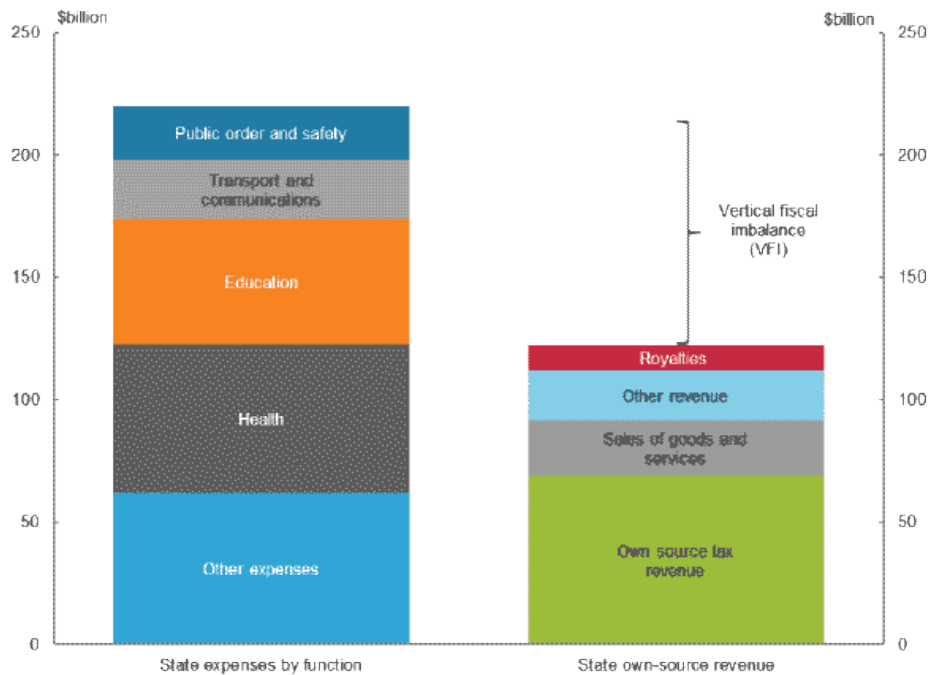


Figure 7.3 Vertical fiscal imbalance: State expenses vs State own-source revenue (2013-14)

“Own-source tax revenue includes stamp duties on conveyances, land tax, other property taxes, and payroll tax, among other state taxes”. Source: Australian Government (2015, p. 153).

The comparative lack of financial resources at the state level is disempowering to the states because it enables the federal government, through their financial primacy, to have influence in areas of state government jurisdiction.

The feds have limited powers but they have lots of resources and so, do get involved with grant schemes and funding schemes. There are some specifically for local government, others where the state is expected to get involved as well. The feds are trying to influence and get consistency across the country on climate change issues, [pause] and I’m not quite sure that they fully appreciate local or regional factors in trying to do that [I2 SG].

We see the federal government taking something of an interest in coastal development and policy, at a very broad level, and again they have the money. Greater resources as far as money, so greater capacity to spend [I3 SG].

As depicted in Figure 7.2, there are various means by which state governments can raise revenue to cover their expenditure responsibilities. Figure 7.4 illustrates how these revenue streams relate to a government’s level of fiscal autonomy. Own-source revenue provides state governments with the greatest degree of fiscal autonomy, as they have the power to determine how they raise and spend their revenue. At the other end of the spectrum, providing the least degree of fiscal autonomy, are tied grants which deliver funding from the national government, only under certain conditions determined by the national government, whereby state governments do not control how these funds are either raised or spent (Henry et al. 2008).

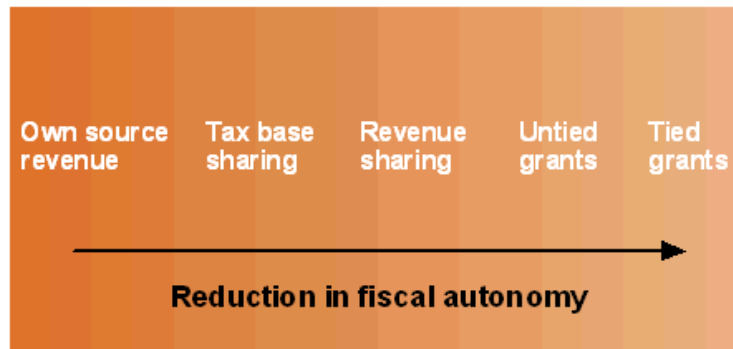


Figure 7.4 Fiscal autonomy spectrum of revenue sources for sub-national governments in federal systems

Source: Henry et al. (2008, unpaginated).

From the state government perspective, exacerbating the lack of fiscal autonomy and adding to the tension between the state and federal spheres is the experience of the federal government not consulting with the states, and actively bypassing the states by introducing mechanisms to fund local and regional bodies directly.

They tried to get together the National Elevation Data Framework, you know, for example, to get a nationwide coastal DEM. It fell in a heap. They've got the coastal portal; they've done that First Pass Vulnerability Assessments which were of limited value. And one of the major problems is they just go off and do this stuff without reference to either state or local government, and then wonder why state and local government is underwhelmed by the result [laughs]. They seem to be slow learners in that sense ... They seem to have trouble communicating on a reliable basis [I2 SG].

The previous federal government actively bypassed the states in many coastal issues. Not just coastal issues but NRM issues. Money straight to regional, trying to bypass the states on that. But I think in coastal management, there's not a lot of expertise floating around, and in a state like South Australia I think a central critical mass of expertise that can keep each other current and keep up with the latest, is in my view, the best way to go. But then again you could also say that I'm hopelessly biased in that area, because that's where I am [laughs] [I2 SG].

Over recent years we have probably seen the propensity of federal governments wanting to fund that at the local and regional level, rather than through the states. So it seems to me that in South Australia, you know, the economies of scale; we see some distribution of monies that are, as far as the state priority list, perhaps don't make perfect sense. Those regions that are better prepared and better resourced to make bids for funds might be more successful, but it might not be the best priorities, I think. So the spending power is with the Commonwealth, the implementation is at the local level, and the state has some sort of role in between, but often limited financial resources to implement its policy it seems to me [I3 SG].

I suppose over a period of five years maybe there's been that greater propensity for the Commonwealth to want to spend at that local and regional level, you know, perhaps for noble reasons. You know, bypassing the states quite deliberately. Which has the effect of actually getting money on the ground. But I think, at least in a state like South Australia,

there needs to be some priority setting that would best happen, I think, at state level [13 SG].

We see the federal government taking something of an interest in coastal development and policy, at a very broad level, and again they have the money. Greater resources as far as money, so greater capacity to spend [13 SG].

I don't think there is any doubt that the federal government has got stronger, it is more centralist, it has avoided states, you know, it has exercised far greater authority in the last 20 years [17 SG].

The inherent weakness in our system though is one around taxation and who has the financial muscle, and so what we have observed over the last 20 years is the Commonwealth government, because it's got the taxing powers, collects the money in large part, and it has tried to in the natural resource management area to avoid the states by going directly to regional bodies and local government to fund things and that's crazy because you in fact miss the value the state brings in terms of better priority setting and better organization. You know, it needs to be inclusive and you can't exclude one level of government [17 SG].

The phenomenon of the federal government instigating mechanisms to fund at the local and regional level rather than through the states is well-recognised in the academic literature. Often referred to as 'regionalisation'²⁰ (Farrelly 2005; Kelly, Dollery & Grant 2009), federal funding and partnerships have been criticised for hindering the political authority of state governments (Eccleston 2008).

The results of this case study demonstrate that regionalisation has created tension between the state government and the federal government by effectively disempowering the state government and disrupting their strategic goals. With respect to intergovernmental integration for integrated coastal management, the concern is that regionalisation has led to a piecemeal, *ad hoc* and fragmented approach to coastal management within the state.

7.3.3 Lack of power to direct coastal development decisions

A third theme prominent in discussions with SA government Department for Environment representatives revolved around the related issues of (i) existing vulnerable coastal development, and (ii) the lack of Coast Protection Board powers to direct coastal development decision-making in the coastal zone.

As described in Chapter Four, the SA government establishes legislation, institutions and the overarching policy, strategies and programs to direct decision-making. However, the majority of local land-use planning decisions are delegated to local government. From the perspective of SA government staff, the legacy of past coastal development and the limitations of the Coast Protection Board to prevent poor decision-making in the future was intertwined with their perceived imperative for stricter coastal development control, considering the impending impacts of climate change.

²⁰ Farrelly (2005, p. 396) differentiates regionalisation (government-imposed) from regionalism (citizen-driven), acknowledging both phenomena are present in Australia but the former is more dominant.

There's a lot of existing hazards and issues with the coastal zone, whether its ensuring that development infrastructure is properly located. I guess there's a few things there; one is that it's not going to be impacted by coastal hazards or two that it's not going to have an impact on coastal processes [I2 SG].

From our perspective it's dealing with that coastal development, the ongoing sea change stuff, you know, further residential development basically. And dealing with that in the face of, sort of, the changing nature of the coast, ongoing erosion mostly, particularly in regards to climate change impacts of sea-level rise. So we have a legacy of existing development built close to the coast, that's under some ongoing threat. But also that ongoing pressure of further development occurring along the coast [I3 SG].

I think for the overall South Australian coast, I think protection of development is going to be a key matter. Certainly going into the future with erosion of beaches, whether that's climate change induced or ongoing aspect of our sandy coasts. It seems to be one that's been worldwide, so I would think that is one of our major issues [I18 SG].

These perceptions align with the state's governance responsibilities, whereby the Department for Environment is responsible for supporting the Coast Protection Board in administering the *Coastal Management Act 1972* and providing coastal development advice in accord with the *Development Act 1993*.

Despite the SA government's ultimate authority over land-use planning and natural resource management in the state, the perspectives of the DE representatives interviewed revealed a sense of powerlessness in the face of increasing demand for coastal development. The lack of power to direct coastal development decisions by the expert body, the Coast Protection Board, was perceived to be a major barrier to effective coastal governance in the state in terms of development control.

I think that our planning controls have been pretty poor in that we have allowed a fair bit of development along the coastline, especially in rural areas where, in my view, we should have kept it in townships and we have not, we've allowed it to spread ... you have essentially got settlement all the way ... so you have got all of those impacts on the biological integrity of the coastline and something that is severely impacting [I7 SG].

If you look at South Australia, there are some good examples of the spread of urban development from Victor Harbor to Goolwa - could have been avoided. We could have had township development well-controlled rather than strip development uncontrolled, so you have got that massive length of coastline severely affected. And it's funny, if you go into the South East, if you went down south of Mount Gambier you will find this similar, not similar in scale but there are poor decisions about what people can do on the coastline that essentially changed the character of those areas. I just don't think we have looked after the planning of the coast as well as we could have [I7 SG].

We have attempted here to try and get, because we have got a Coast Protection Board with some stewardship responsibilities for the coast, we have tried to increase their reach and influence in the local government planning. We haven't been that successful in extending that reach, you know, they have got certain powers but they are largely around protecting the physical integrity of the coast from a structural or engineering perspective rather than from a biodiversity or a landscape perspective [I7 SG].

I think the other issue is in fact ensuring that the Coast Protection Board has enough strength in terms of its advice and direction to the planning authorities [I18 SG].

While coastal development applications must have regard to the state government's Coast Protection Board advice, local development decision-makers (Development Assessment Panels, or DAPs) may still grant development approval in conflict with this advice. Around 15 per cent of development applications in the coastal zone are eligible for CPB direction; the remaining 85 per cent of applications planning authorities need only have regard to CPB advice (Coast Protection Board 2013). Huppatz (2005, p. 13) reported that in 2004, 19 per cent of development applications reported by planning authorities were approved despite being 'not in accord' with CPB advice. The CPB Position Paper states that:

... the Board is particularly concerned with development being approved against the Board's advice in regards to unaddressed coastal hazards. Previous efforts to improve that via the power of direction have not been successful. From 2004 to 2013, 276 dwellings and 126 extra allotments have been approved at odds with the Board's advice regarding coastal hazards (Coast Protection Board 2015, p. 13).

Significantly, the issues of inappropriate coastal development occurring in South Australian, which results in 'incremental creep' and the 'tyranny of small decisions', ultimately places "individuals and the wider community at increased risk of incurring future costs associated with coastal hazards" (Coast Protection Board 2015, p. iii).

The CPB's lack of power to direct, by default, thus provides local government DAPs a critical role in development decision-making in the coastal zone. As described in the previous chapter, local government's main source of revenue is property rates, and there is considerable pressure to adopt a pro-development approach.

I think the issue is that some of the local councils are poorly resourced in making those decisions, um, often limited planning expertise within council. And also they're dealing with, often the smaller councils have a development imperative. They want to see further development in their area and that's often likely to occur by way of coastal development, and those councils are perhaps sometimes poorly equipped to deal with those decisions [I3 SG].

However, the pressure to develop is not only felt at the local level. When asked why planning controls weren't tighter, the explanation put forward by a high level executive within the Department of Environment was resistance from other pro-development state agencies.

The state government has the power and authority, it just doesn't exercise it. So when there is a vacuum that is filled by local government, they will behave in a way that they see fit because the state doesn't exercise the power and authority it has ... The Coast Protection Act was made in 1972 so it has not been amended since then. There has not been a lot of change. And I know that from a development planning perspective the state authorities have resisted efforts to tighten that up. So it is about that. [I7 SG].

This perception is corroborated by the work of Higgins-Desbiolles (2011, p. 553), which implicates the South Australian state government as trading in a "death by a thousand cuts" approach to coastal development, whereby "environmental protection [is] 'traded

off' in the pursuit of tourism development and the income and employment it provides". Narrating the governance and development approval process of an ecotourism venture, the Southern Ocean Lodge (SOL), in the heart of pristine coastal wilderness on Kangaroo Island, Higgins-Desbiolles (2011, p. 567) highlights the implications of "an era of reduced government funding and forced public-private sector partnerships in our current neoliberal context". Having major development status, thus bypassing the local DAP process, the SOL case exemplifies the lack of horizontal integration in state governments, where economic imperatives always appear to trump environmental ones.

Key provisions intended to secure conservation in environmental legislation can be overturned by other legislation focused on facilitating development. These trade-offs seem to only work one way in our current situation of the market economy – in favour of development at the expense of the environment. Assessing the position of bodies such as the [Department for Environment] and [Native Vegetation Council], it is clear that agencies focused on environmental protection can be compelled to accept limits to their capacities in a time of tighter budgetary constraints, and this limits their impact in the policy debates with their colleagues in the economic agencies of government. It is clear in such circumstances that environmental conservation will be slowly undermined as ecological interests are traded off in the interest of promoting economic development (Higgins-Desbiolles 2011, p. 567).

Eccleston (2008) shows that even with the erosion of the state tax-base, taxation from state-based instruments had to increase last decade, and this was mainly achieved through increases in property taxation – states saw an opportunity to capitalise on the property boom being experienced and increased taxes such as land tax and conveyancing charges on real-estate transactions accordingly (Eccleston 2008).

With economic growth the foundation of GST revenue and property taxation remaining one of the few state-based revenue streams available, state governments are compelled to encourage population growth and property development within their state – a state of affairs that is having major consequences for Australia's coast. These arguments are not new. As Walker (1999, p. 31) contends,

States depend on Canberra for the bulk of their revenue, and among the few sources of discretionary income capable of rapid expansion is natural resources. Thus, States tend to favour their exploitation, even at the expense of good husbandry.

And Crowley (1999, p. 59) concurs:

The best that liberal democratic states have managed is a rhetorical commitment to sustainable development, all the while remaining 'committed above all else to the pursuit of economic growth'.

Thus, the disempowerment of the state government through their limited control over spending of incoming tied grant revenue, coupled with a limited capacity to generate own-source revenue, creates a vicious cycle whereby they are compelled to make the most of the revenue-raising mechanisms they do have.

7.4 Key findings

From the perspective of SA government representatives, there were three main coastal governance issues: (i) a lack of financial resources; (ii) a lack of autonomy from the federal government, driven by vertical fiscal imbalance and a limited fiscal capacity; and (iii) a

lack of power to direct coastal development decision-making in the face of pro-development agendas at local and state government levels.

Each of these issues ultimately reflect the position of the state government as having responsibility without matching capacity – either fiscal or legal. With respect to the latter, the SA government DE representatives interviewed are disempowered in the face of pro-development agendas, both at the local and broader state government level. These issues are underpinned by a lack of autonomy, in terms of both fiscal capacity and fiscal autonomy. The fiscal superiority of the federal government enables intervention in areas of state government jurisdiction.

Furthermore, this study's findings are unique in suggesting that the impact of insufficient funds for coastal management at the state government level exceeds the practical problem of not being able to provide funding for maintenance and protection. In addition, it significantly impacts intergovernmental relations between the local and state spheres by (i) hindering the possibility of more positive relations with local government, since funding of local government appears to be a driver of a more positive intergovernmental relationship, (ii) straining relationships with local government due to state government cost-shifting, and (iii) exacerbating the disempowerment of the states' by motivating local government to partner with federal government in funding relationships. Moreover, this situation hinders the political autonomy and authority of state governments. According to Eccleston (2008, p. 45):

The political authority of State governments has increasingly been constrained ... where they either require direct funding and/or cooperation from the Commonwealth. This has both eroded political accountability in Australia's federal system and has forced State governments to accede to Commonwealth demands in areas where States have traditionally had jurisdiction.

The implications of this will be explored in subsequent chapters.

7.5 Chapter summary

In this South Australian case study of coastal management in a federal system, the results presented in this chapter reveal the perspective of the SA government Department for Environment representatives interviewed. The main coastal governance issue raised by the SA government representatives were (i) a lack of financial resources to maintain and protect existing coastal assets, both natural and built; (ii) a lack of autonomy from federal government intervention in matters of state government jurisdiction; and (iii) a lack of power to direct coastal development decision-making in the face of pro-development agendas at local and state government levels. These issues reflect an asymmetry in responsibility versus capacity, coupled with a lack of fiscal and political autonomy which has been enabled by the federal government's financial primacy. Thus, the overall sense of the position of state government in the Australian federal system is one of disempowerment.

In light of the case study findings discussed in Chapters Six and Seven, the next chapter examines the role of the federal government over the history of Australia's federation, and relates this to the asymmetries in responsibilities versus capacity and the overall sense of disempowerment observed at the local and state government levels.

Chapter 8 The role of the federal government in coastal governance and intergovernmental relations in Australia

8.1 Chapter overview

The purpose of Chapter Eight is to address the third research question:

What is the nature of federal government in Australia? How does this relate to the local and state spheres?

The analysis in this chapter complements the empirical evidence generated through the case study fieldwork by contrasting the theoretical basis of federalism, as outlined in Chapter Two, with the practice – or ‘career’ – of Australian federalism over the century since federation. In this way, Chapter Eight serves to enhance our understanding of the evolving role of the federal government in Australia, and how its financial relationship with the local and state spheres underpins many of the tensions described in the previous two chapters.

8.2 Australian federalism, in practice

The previous two chapters illustrated the types of coastal governance issues being experienced at the local and state levels in this case study of South Australia. The analysis revealed that the manifestation of two prominent themes – intergovernmental tension and disempowerment – is driven by two fundamental problems at both the local and state government levels. The first is a sense of frustration regarding asymmetries in responsibility versus capacity. Related to this, and arguably underpinning it, is a lack of autonomy. As touched on in Chapters Six and Seven, these issues can be related to the practice of federalism in Australia.

To understand the foundations of the intergovernmental tension and disempowerment observed at the local and state level in this case study, it is useful to contrast the theoretical basis of federalism with Australian practice. As outlined in Chapter Two, in theory, federalism is a system of two recognised jurisdictions; the federal jurisdiction and the constituent units of the federation. The intention is that neither jurisdiction is superior to or more powerful than the other (Blank 2010; Parkin 2003; Summers 2006; Ward 2010). However, as Blank (2010, p. 531) notes:

Simply stating that a system is federal hardly tells one what the exact legal arrangements are in any specific governmental function. What matters more is the way these legal (and political) mechanisms and structures operate in a concrete setting, how they are interpreted, and how they are adjudicated. And while it is crucial to observe the status quo from which it emerges ... it is more important to see the "career" of the scheme afterwards.

Thus, the tensions described in Chapters Six and Seven can be better understood by considering how the Australian federation has evolved since its inception and, in particular, the ways in which power has become more and more centralised at the federal level.

Australia is recognised as having one of the most centralised federal systems in the world (Petchey & Shapiro 1994) with one of the highest VFIs of any federal state in the OECD (Twomey & Withers 2007, p. 37). Due to the power imbalance created by such a high VFI, critics posit that Australia's practice of federalism "runs contrary to the federalist ideal" (Eccleston 2008, p. 45).

Kay and Lester (1997) previously noted the importance of historical political and legal changes affecting Australian coastal management since federation. The next section builds on this description, seeking to explicate some of the key events in the political history of Australian federalism to demonstrate how power has become concentrated at the federal government level.

8.3 Key centralising events in the political history of Australian federalism

To demonstrate the trend towards centralisation in the Australian federation, this analysis will focus particularly on the evolution of fiscal federalism. Fiscal federalism is concerned with understanding:

... which functions and instruments are best centralised and which are best placed in the sphere of decentralised levels of government ... and the ways in which [spheres of government] relate to one another through such instruments as intergovernmental grants (Oates 1999, p. 1120).

8.3.1 To federate or not to federate? Fiscal federalism is the question...

Immediately prior to federation, the geographical land mass now known as Australia was made up of six British colonies: New South Wales, Victoria, Queensland, South Australia, Western Australia and Tasmania. Towards the end of the 19th century, a series of conventions and referendums were held by the colonies regarding whether or not they should form a federation.

For the colonies, the attraction of the federation was the opportunity to reduce barriers to inter-state trade in terms of tariffs on goods crossing borders. Pre-federation, the majority of the colonies' revenue comprised customs and excise. Federating would mean that this lost revenue must be made up from tariffs imposed by the federation on the rest of the world (McLean 2004) and transferred back to the states. Consequently, "taxation, tariffs and fiscal federalism occupied a great deal of time in the Australian constitutional conventions" (McLean 2004, p. 4).

The framers of the Australian Constitution deliberated extensively and carefully over what was known as the 'Braddon clause', now part of Section 87 of the Constitution, which deals with the return of customs and excise revenue made by the federal government back to the constituent states. In order for the colonies to be willing to cede any powers to a federal government, especially their main source of revenue, it was crucial that they be guaranteed a return of this revenue. The Braddon clause directed that $\frac{3}{4}$ of federal customs and excise revenue would be returned to the constituent states. However, as the Colony of New South Wales (NSW) was already economically powerful and other colonies were not as exposed to the world economy, this draft of the Constitution failed to carry in the NSW referendum.

Critically, in order to pass the referendum for the federation, the Premiers of Victoria and NSW brokered a deal “to restrict the operation of the Braddon clause to ten years, and to insert a new clause (now s.96) empowering the Commonwealth to make grants to the States” (McLean 2004, p. 5). As will become apparent through this brief political history, this was a significant event in enabling federal financial dominance and thus disempowerment of the constituent states. Significantly, “all the action in Australian fiscal federalism now takes place under this clause” (McLean 2004, p. 5).

8.3.2 Federation

In 1901, the six British colonies united to form a federation called the Commonwealth of Australia. As noted in Chapter Seven, the residual powers that remain with state governments – as determined by the Australian Constitution – correspond to significant expenditure responsibilities since state government powers largely reflect the principle of subsidiarity (Australian Treasury 2008). As stated in Chapter Two, subsidiarity is an important principle of government which says:

‘Governments need to delegate their powers, authorities, and duties to the smallest (or to the closest-to-the-citizens) jurisdiction that can efficiently perform them’ ... or ‘action should be taken at the lowest level of government at which particular objectives can adequately be achieved’ (Blank 2010, p. 533).

Given the significant expenditure responsibilities of the states, sustainable sources of revenue are required (Australian Treasury 2008). Therefore, fiscal federalism and the issue of asymmetries in fiscal responsibilities versus fiscal capacity will be a major focus of this analysis.

8.3.2.1 Vertical fiscal imbalance

Vertical fiscal imbalance has been a feature of the Australian federation from the beginning. This was a direct result of the unification which provided the Commonwealth’s exclusive power over customs and excise, the main source of revenue (McLean 2004). Figure 8.1 depicts the evolution of VFI since federation. At the outset, it can be seen that the Commonwealth government was responsible for providing almost 40 per cent of state government revenue via intergovernmental transfers.

In 1908, the federal government passed legislation to create trust funds in which to divert their ‘surplus’ revenue, thus reducing the amount that could be transferred to the states. This legislation was challenged in the High Court in the *Surplus Revenue Case*, but the High Court found that “the money has been duly appropriated and was no longer surplus revenue” (Finlay 2012, p. 84). This is the first of several examples of “the Commonwealth deliberately circumventing the federal balance envisaged by the drafters of the Constitution”, and of the High Court’s role in increasing the centralisation of power through its interpretations of the constitutional validity of federal government actions (Finlay 2012, p. 84).

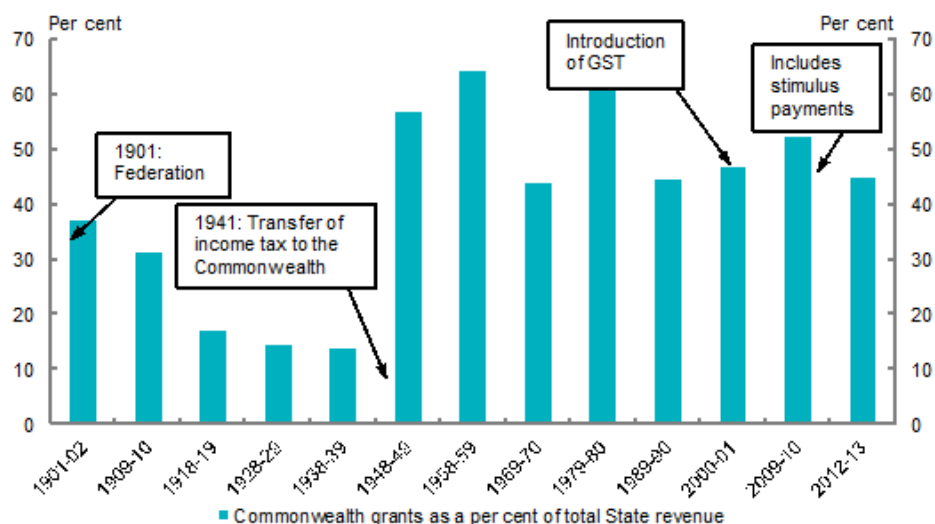


Figure 8.1 Vertical fiscal imbalance since federation

VFI, measured as Commonwealth grants as a percent of total state revenue. Source: Commonwealth of Australia (2012, p. 171).

8.3.3 World War II and the Uniform Income Tax Scheme

World War II (WWII) was the basis for another critical moment in the history of fiscal federalism in Australia, producing the largest increase in VFI in the history of the Australian federation, when the Commonwealth broadened their tax base by implementing a uniform income tax scheme (see Figure 8.1: 1941).

Section 51(ii) of the Constitution provides for the Commonwealth government to make laws regarding taxation, although this is a power shared with the states. Since 1915, the Commonwealth had levied concurrent personal income taxes along with the states. During WWII, the states rejected the Commonwealth's request to cease levying income taxes for the duration of the war in return for financial compensation. In response to this, the Commonwealth enacted legislation to impose income tax at a level approximately equal to that of the Commonwealth and states combined (Finlay 2012, p. 84).

When States tried to reassert their power to tax, the Commonwealth legislated to reduce its grants dollar for dollar to any State that did so. The High Court, whose judgements on these matters have been consistently pro-Commonwealth, upheld the constitutionality of the *de facto* Commonwealth monopoly of the income tax base (McLean 2004, p. 8).

Keeping in mind that the Constitution gives precedence to Commonwealth laws over state laws, the Commonwealth also legislated that priority be given to the payment of Commonwealth income tax over state income tax. In addition, the Commonwealth offered financial grants to any state not imposing their own income taxes, with the added disincentive of transferring state resources used in the collection of income taxes to the Commonwealth (Finlay 2012).

Despite the unanimous opposition of the scheme by the Premiers of the state governments and High Court challenges in the *First Uniform Tax Case* and the *Second*

Uniform Tax Case, the scheme was upheld as constitutionally valid and continues to this day.

The effects of the uniform taxation scheme were profound. By the fiscal year 1948/49, the Commonwealth were collecting 88 per cent of all taxes levied in Australia, compared to 8 per cent by the states and 4 per cent by local governments (Dollery 2002, p. 35).

As Kay and Lester (1997, p. 268) reflect:

In the post-war years, Australian political life adjusted to the federal government collecting taxes and then distributing those taxes back to the States through a complex grants system.

Henceforth, a significant level of vertical fiscal imbalance is an entrenched feature of Australian federalism.

8.3.4 New Federalism

Another significant period in the centralisation of power at the federal government level began with the Whitlam era of 'new federalism'. Gough Whitlam, a Labor Prime Minister, was elected in 1972 and the federal government proceeded with a policy to intervene in areas of state government responsibility through the use of Special Purpose Payments (SPPs), also known as tied grants. SPPs targeted areas such as education, urban development and urban planning, transport, hospitals, community health and legal aid (Kay & Lester 1997; Stilwell & Troy 2000; Summers 2006). "Whitlam argued that many problems facing Australian society could be solved only at a national level with Commonwealth finance" (Summers 2006, p. 142). Accordingly, the use of SPPs increased during Whitlam's three year reign from 30 to 49 per cent of federal government grants to state governments (Summers 2006, p. 142).

As Figure 7.4 depicts, SPPs reduced the fiscal autonomy of the state governments, thus contributing further to their disempowered status in the federal system. Furthermore, during the era of 'new federalism' which continued beyond the Whitlam years, VFI peaked with federal government grants accounting for over 60 per cent of state government revenue (Commonwealth of Australia 2012, p. 171).

The Whitlam government was dissolved by the Governor General in 1975 during the "Constitutional crisis", partially attributed to Whitlam's heavy use of tied grants (Gillespie, 1994, cited by Kay and Lester (1997, p. 268). Despite the newly elected Prime Minister, Malcolm Fraser, vowing to "institute tax-sharing arrangements and scale down the use of SPPs ... the Coalition government ... produced little or no increase in the financial autonomy of the states" (Summers 2006, p. 142). As noted by Court (1994, p.8) cited in Kay and Lester (1997, p. 269) "tied grants provide a means by which the federal is able to achieve its own policy objectives in areas of State responsibility while restricting the budget flexibility of the States".

As portrayed in the examples discussed in Chapters Six and Seven, whilst the states are further disempowered through the federal government's increased use of tied grants, local government are a grateful recipient of federal finance. However, as the HORSCEFPA Inquiry noted, this has been a double-edged sword for local government (House of

Representatives Standing Committee on Economics Finance and Public Administration 2003). As a result of their broadened tax base, councils diversified their activities to include “quality of life issues and general considerations of community well-being. Local initiatives such as child care, tourism, urban renewal and recreation became a part of the functions of many councils” (Marshall 1997, p. 4). The broadening of responsibilities at the local government level was not always matched by sustained financial assistance, and often increased community expectations of local government.

This has played a role in the asymmetries in responsibility versus capacity observed in this case study, thus exacerbating disempowerment at the local government level. Furthermore, as described in the previous chapters, the use of SPPs to bypass state governments has exacerbated the disempowerment of state governments within the Australian federal system. Thus, this type of intervention from the Commonwealth government is arguably the catalyst for many of the local-state intergovernmental tensions described in this case study.

Finally, Fraser’s government introduced a tax-sharing arrangement with local government to ensure that councils received “a fixed percentage of the financial cake” (Marshall 1997, p. 4). In this way, the federal government managed to institutionalise both competition for federal finance between state and local governments, and local-state intergovernmental tension.

8.3.5 Regionalisation

The 1990s heralded the start of a watershed era in terms of the Commonwealth’s influence in the realm of natural resource and environmental management. Beginning with the establishment of the National Soil Conservation Program in 1983, and followed by the One Billion Trees program in 1989 and the National Landcare Program (NLP) in 1992, the federal government have provided funding to community groups at the local level (Farrelly 2005; Hajkowicz 2009; Robins & Kanowski 2011).

In 1997, John Howard’s conservative Coalition government privatised Australia’s publicly-owned telecommunications asset, Telstra, to fund the largest environmental spending program in Australia’s history, the Natural Heritage Trust (NHT). The NHT was intended “to stimulate significant investment in the conservation, sustainable use and repair of Australia’s environmental, agricultural and natural resources” through allocating funds, and generating matching funds and in-kind resources (Crowley 1999, p. 255). Following on from this, the National Action Plan for Salinity and Water Quality (NAPSWQ) was established in 2001 to “motivate and enable regional communities to use coordinated and targeted action” (Farrelly 2005, p. 395).

The first phase of NHT from 1996/7 to 2000/1, known as NHT I, principally funded local environmental community groups. The worldwide trend towards the regionalisation of environmental and natural resource planning and management influenced the second phase, known as NHT II, from 2000/1 to 2007/8. NHT II focused its funding to regional, community-based, natural resource management groups for the development and implementation of regional plans (Farrelly 2005). The next iteration of federal

government NRM funding was incoming Labor Prime Minister Kevin Rudd’s Caring for our Country (CfoC) program, which commenced in 2008.

The regionalisation of federal government NRM programs is depicted by Hajkowicz (2009) in Figure 8.2. The regionalisation era has seen the federal government expand their reach by spending upward of \$6.5 billion on environmental and natural resource management initiatives direct to the local and regional level and according to federal government priorities (Hajkowicz 2009, p. 472). Due to their lack of resources, state governments have been compelled to partake in these federally-driven programs (Robins & Kanowski 2011), and have thus been further disempowered in terms of their political authority.

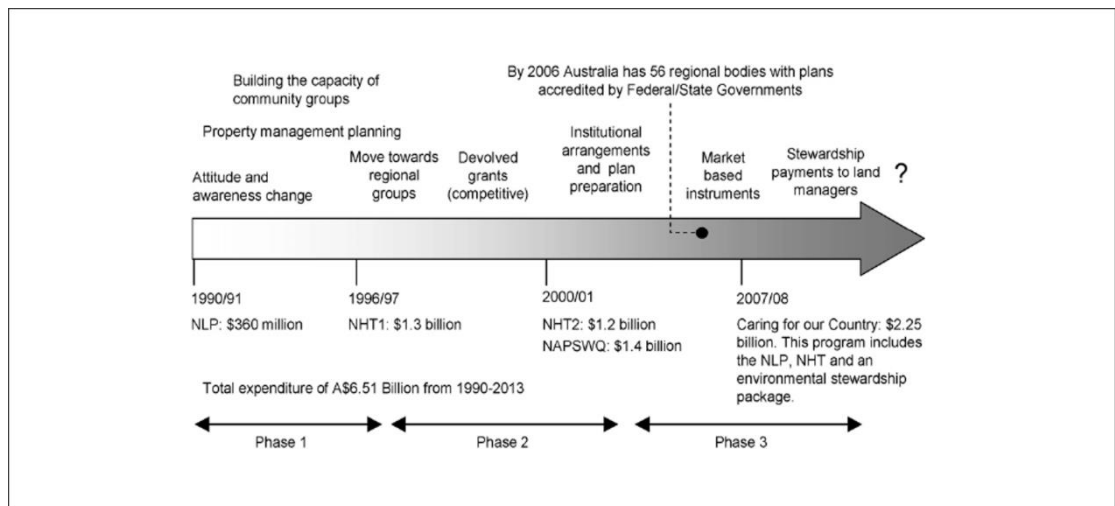


Figure 8.2 Regionalisation of NRM programs since the 1990s through major federal government funding initiatives

Source: Hajkowicz (2009, p. 472).

8.3.6 Franchise fees forgone

In 1997, state governments’ own-source revenue bases were again limited by a High Court decision affecting Australia’s practice of fiscal federalism. The Commonwealth challenged states’ use of franchise fees, claiming they were a form of excise which is an exclusive power of the Commonwealth. The High Court ruled in favour of the Commonwealth, deeming franchise fees a form of excise on alcohol and tobacco. To replace the loss of state revenue, the Commonwealth “agreed to increase its excise taxes and return the proceeds to the states” (McLean 2004, p. 8).

However, this once again increased in VFI and resulted in a loss of own-source revenue, thus reducing the fiscal autonomy of the state governments. With the state governments at the mercy of the Commonwealth for approximately 45 per cent of their total revenue, and their scope for own-source revenue-raising become more limited, the loss of franchise fees was another small increment in their fiscal disempowerment within the federal system.

8.3.7 The GST: 'A New Tax System'

In 1999, another major development in Australian fiscal federalism had the effect of simultaneously limiting the state government's own-source revenue base, and once again increasing VFI (see Figure 8.1). Prime Minister John Howard's Coalition government introduced a goods and services tax (GST), which was sold to the states as a means of providing them with more financial security and guaranteed untied revenue to ensure secure funding of the states' essential services and infrastructure (Eccleston 2008; Finlay 2012). In effect, the GST was presented to the states a guaranteed 'growth tax' that would reliably increase state government revenue in line with economic growth (Eccleston 2008; Finlay 2012).

Branded as '*A New Tax System*', the federal government's perspective was that this new system was a means of reducing VFI (Eccleston 2008; Finlay 2012; McLean 2004).

In addition to their own revenue sources, the States received around \$40 billion in GST revenue from the Australian government. The GST is an Australian government tax, with all revenue provided to the States to compensate them for — among other things — the removal of a range of inefficient state taxes, the loss of revenue replacement payments (originally levied in place of franchise fees) and the loss of financial assistance grants. The Australian government distributes the GST to the States as an untied grant based on the principle of horizontal fiscal equalisation (HFE²¹), which takes into account the relative revenue raising capacity and expenditure needs of each of the States (Australian Treasury 2008, p. 297).

However, the GST package replaced some indirect state taxes and some existing federal government transfers. Whilst federal government rhetoric is to the contrary, scholars argue that the GST simply replaced one form of general revenue assistance with another and it is thus not a true method of tax-base sharing (Finlay 2012; Twomey & Withers 2007; Warren 2006).

Furthermore, in abolishing several state-based taxes, the capacity of the states to raise own-source revenue was further restricted (Finlay 2012; Twomey & Withers 2007; Warren 2006). This is evidenced by state-based own-source taxes accounting for 40 per cent of total operating income pre-GST, compared to 33 per cent post-GST (Eccleston 2008; Koutsogeorgopoulou & Tuske 2015). In this way, as illustrated in Figure 8.1, the introduction of the GST both increased VFI and reduced the fiscal autonomy of the state governments (Eccleston 2008; Finlay 2012; Koutsogeorgopoulou & Tuske 2015; Twomey & Withers 2007; Warren 2006). In this way, the GST further contributed to the disempowerment of state government in the Australian federal system.

Moreover, according to the Commonwealth, the establishment of the GST system was intended to provide financial security to the states. However, Hamill (2006, p. 75), cited by Eccleston (2008, p. 40), argues that the GST does not provide an adequate funding base for the states. In fact, the states are no better off financially after the introduction of the GST (Eccleston 2008; Koutsogeorgopoulou & Tuske 2015; Twomey & Withers 2007).

²¹ The system of HFE will not be discussed in this thesis. However, due to the equalisation process taking into account tied grants received by the states before calculating GST dividends to each state, the impact of HFE on decision-making processes at the state government level is worthy of exploration in future research.

The grants received by the States from the Commonwealth in 2006 amount to 5.5 per cent of GDP – exactly the same percentage as in 1996. Indeed, the (net) payments to the States over the entire post-GST period remain at levels below the pre-GST average of 6 per cent of GDP for the whole period of the 1980s and 1990s. During the same period, the Commonwealth's revenue rose by a further 2 per cent to 20 per cent of GDP. This is a \$20 billion windfall for the Commonwealth well ahead of State and Territory gains both absolutely and proportionately (Twomey & Withers 2007, p. 26).

This is important to note, since the Commonwealth rhetoric regarding the GST is one of financially independent states. As Twomey and Withers (2007, p. 26) highlight, this discourse provides the Commonwealth with an avenue to encroach upon areas of state government responsibility:

The argument is often made that the States, despite having been given financial security through the revenue from the GST, have failed to fulfil their responsibilities, so the Commonwealth is obliged to intervene and assume or oversee State responsibilities in the interests of the Australian people.

By increasing VFI and limiting state government fiscal capacity, the Commonwealth have:

... ensured that the States remained dependent upon Commonwealth funding. It is disingenuous to suggest that the States are failing in their responsibilities because they require Commonwealth funding and that the Commonwealth should therefore take over State policy functions, when this is the system that the Commonwealth deliberately created (Twomey & Withers 2007, p. 26).

According to Winer and Hettich (1997, p. 2), "history suggests ... the choice of and among tax instruments has always been largely a political decision". Considering the political history of Australian federalism outlined above, this would certainly appear to be the case.

8.4 Fiscal centralisation and disempowerment in the Australian federation

Intergovernmental conflict in the Australian federation has previously been attributed to VFI because the states face a considerable expenditure burden and limited means for revenue-making (Eccleston 2008). However, the Australian Treasury (2008) maintains that vertical fiscal imbalance is not necessarily a problem for state governments. This would be true if:

- 1) Significant and unconditional transfers from federal to state were guaranteed (as would have been the case if the Braddon Clause had endured and the *Surplus Revenue Case* not been upheld);
- 2) If the federal government were to only channel unconditional funding through the states; and,
- 3) If state governments had less restricted means of raising own-source revenue.

However, a high level of VFI is an issue in Australia's case due to the architecture of fiscal federalism, which ultimately undermines the fiscal autonomy – and hence the political autonomy and authority – of the states.

8.5 Key findings

This chapter has demonstrated that, despite the Commonwealth government having few exclusive powers over the management of coastal land and resources in Australia, it exerts considerable influence through its financial clout. The analysis presented in this chapter supports this contention, as previously described by multiple scholars in the coastal management literature reviewed in Chapter Two (Harvey 2016; Harvey & Caton 2010; Haward 1995b; Kay & Lester 1997).

Given the prominence of the themes disempowerment and intergovernmental tension which emerged from the interviews with local and state government representatives, it is important to appreciate how the federal balance has been skewed to create a dominant federal sphere. The predicaments at the local and state government levels outlined in Chapters Six and Seven have evolved along with the federal government's financial dominance within the Australian federation. This financial dominance has been significantly aided by the Commonwealth's legislative dominance, which is largely determined by the Constitution (since Commonwealth laws take precedence over state laws) but has been enhanced considerably by the interpretations and rulings of the High Court over the years. The above analysis depicts the specific ways in which fiscal centralisation serves to disempower state governments. This thesis also contends that Australia's operationalisation of fiscal federalism is a major source of intergovernmental tension underpinning many of the issues described by local and state government representatives.

8.6 Chapter summary

Fiscal centralisation in Australia is characterised by a high vertical fiscal imbalance and a reduction in fiscal autonomy of state governments. As demonstrated by this brief political history of Australian federalism, fiscal centralisation and an accompanying sense of federal superiority have become entrenched in the practice of Australia's federal system.

With respect to the finding of this case study, the issue with fiscal centralisation in South Australia is twofold. Firstly, VFI and limited fiscal capacity render local and state governments under-resourced to meet their coastal management responsibilities. Secondly, fiscal centralisation contributes to the intergovernmental tension observed in this case study by disempowering local and state governments and undermining their autonomy.

The next chapter will expand on the implications of fiscal centralisation, and the subsequent disempowerment of sub-national levels of government, for intergovernmental relations and the implementation of ICM in the Australian federation. Based on the analyses presented in chapters six, seven and eight, Chapter Nine will explicate the theory generated by this study to explain Australia's difficulty achieving intergovernmental integration for ICM to date.

Chapter 9 A theory on Australian federalism, intergovernmental integration and ICM

9.1 Chapter overview

The purpose of Chapter Nine is to address the fourth and final research question in order to meet the overall aim of this study:

Considering the nature of Australian federalism, given the findings of this study, what are the implications for intergovernmental integration and the implementation of integrated coastal management in Australia?

Thus, Chapter Nine considers the predominant themes emerging from the interviews with local and state government representatives as outlined in the previous three chapters to develop a theory to explain the difficulty implementing ICM in Australia to date. The implications for the future of coastal management and ICM implementation in Australia are also discussed.

9.2 Australian federalism: An adversarial system

As determined in Chapters Six and Seven, the intergovernmental tension observed through this case study of coastal management in South Australia is attributable to problematic governance arrangements at the local and state levels. These governance issues comprised asymmetries in responsibility versus capacity (both fiscal and legal) and asymmetries in power (essentially, a lack of autonomy).

At both the local and state level, interview results indicated a sense of frustration regarding a lack of financial capacity to meaningfully promote coastal protection, management and climate change adaptation in the coastal zone. Related to this, and arguably underpinning it, was the issue of disempowerment created by intergovernmental power imbalances. From the local government perspective, the experience of disempowerment stemmed from (i) a desire to be autonomous from the state government, (ii) the increasing trend in cost-shifting from the state to local government, and (iii) a lack of recognition in the Australian Constitution. From the perspective of SA government representatives, the experience of disempowerment stemmed from (i) their lack of capacity to prevent poor coastal development decision-making, and (ii) a lack of autonomy from the federal government, related to significant and increasing SA government budget restraints and increasing federal government intervention in areas of state government jurisdiction – for example, the direct funding of local and regional coastal programs. Figure 9.1 illustrates these findings in a flow diagram.

Chapter Eight enhanced our understanding of the case study experiences by exploring the increasingly centralised role of the federal government in Australia, arguing in particular that fiscal centralisation has significantly affected relationships with and between the local and state spheres. It is contended that this particular aspect of Australian federalism underpins many of the intergovernmental tensions described in Chapters Six and Seven.

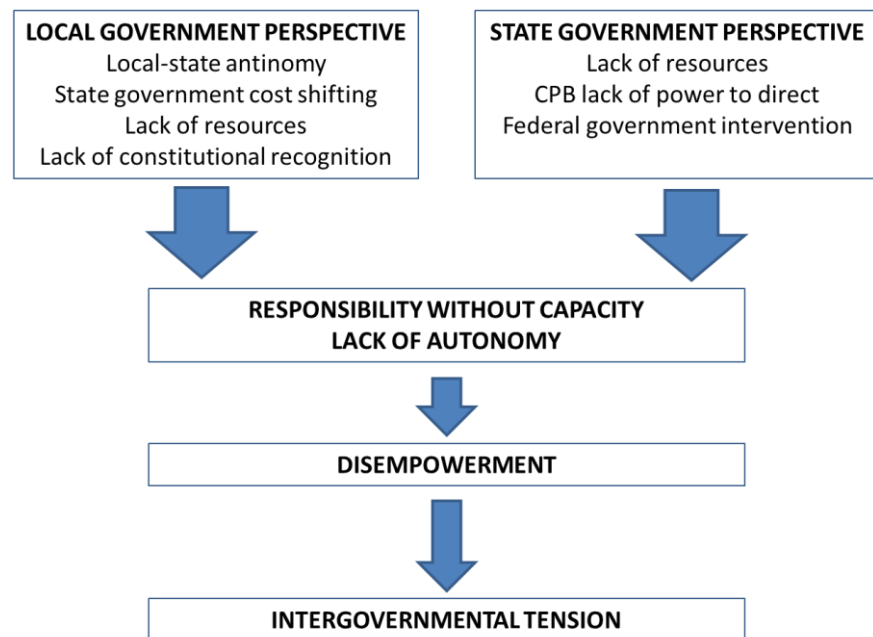


Figure 9.1 Flow chart depicting case study findings

The flow chart depicts the relationship between (i) the coastal governance issues being experienced at the local and state government levels, (ii) the foundations underpinning these issues (i.e. asymmetries in responsibility and capacity, and a lack of autonomy), (iii) the impact of these foundations on local and state government discourse, and (iv) the impact on intergovernmental relations in South Australian coastal management.

The findings of this case study are consistent with the arguments of Sansom (2002, 2010). Any action of the state government which is perceived to impinge on local government autonomy is particularly detrimental to local-state relations. As Sansom (2010, p. 201) notes:

The quality of relationships varies markedly from state to state and time to time... Relationships tend to deteriorate sharply when states move to amalgamate councils, impose additional functions or cost burdens, restrict local government revenues or powers, or make significant decisions that are seen to impact adversely on councils and their communities.

As evidenced by the perspective of local government representatives illustrated in the results of this case study, and supported by the findings of the HORSCEFPA Inquiry into cost shifting (House of Representatives Standing Committee on Economics Finance and Public Administration 2003), it is in this way that local-state relations are often strained. Furthermore, as Chapters Six and Seven highlighted, “the activities and futures of state and local governments are inextricably linked, but ... this is rarely manifested in ... shared priorities” (Sansom 2010, p. 200).

While Chapter Six focused on the perspective of local government representatives, it is revealing to consider the local-state relationship from the perspective of the SA government representatives interviewed. In contrast to the local government perspective, local-state government relations were not as volatile from the state government perspective. Often, state government representatives openly acknowledged local government’s predicament with regard to the top-down nature of the system and

having increasing responsibilities accompanied by limited capacity, and were largely sympathetic to local government's position.

I suppose at the local government level we see that much of the responsibility for the on-ground implementation and the immediate development assessment decisions are made by councils, often with an imposed system, I suppose, on them as far as the planning controls, say where the, you know, the ultimate authority for the development plan policy, for example, rests with the Planning Minister at that state level. Likewise with the planning strategy [13 SG].

I think the relationship with local government hasn't changed that much, apart from it probably cops it because, you know, it feels like it has to take on this cost shifting from state to local. If you spoke to anybody in local government they would say that is what is happening, that we've got greater responsibilities and it's probably true, I think it's probably true, and there's not much that they can do about that [17 SG].

The basis of two key sources of tension that were prominent in interviews with local government representatives (i.e. a lack of autonomy and cost shifting) are represented in this quote from a SA government representative:

Researcher: *And the local government, how come they have ended up with these extra responsibilities?*

17: *Because they don't have any authority at all.*

Researcher: *But why is the state government giving...*

17: *Because they cannot afford to, essentially.*

Researcher: *It's a resource issue?*

17: *Yeah it's a resource issue. So the local government has the capacity to raise its own revenue through rates, and whilst those rates are capped to some degree, what the state has done is it has pushed greater responsibility on to local government to fund through the rate base. You will see it in other areas as well, and faced with an inability to fund environmental issues, it's introduced an NRM levy, it's got a waste levy, and it has been far more conscious of recovering costs of natural resource management.*

While the CPB once had significant funds to dedicate to protection, rehabilitation (including land acquisition) and facilities along the South Australian coastline, subsequent funding constraints have severely restrained provision of grants for facilities (Coastal Management Review Committee 1988, p. 4). It appears that significant state government budget cuts continue to do so. As mentioned earlier, local-state intergovernmental relations were reportedly better when the SA government had a much higher budget for its CPB fund (Caton 2011 *pers comm*).

The absence of comparably negative attitudes from the SA government perspective towards the local government was perplexing. However, re-visiting the SA government representatives' interview transcripts to check for instances of state-local tension

revealed a relatively negative discourse towards the federal government in general. This discourse was found to resemble the disempowerment and discord observed in the local-state relationship. As depicted in Figure 9.1, the lack of fiscal capacity at the state government level, combined with the lack of autonomy from federal government intervention, contribute to an overall feeling of disempowerment at the state government level.

In this study, the relative lack of hostility towards local government from the SA government perspective has been interpreted to be due to the SA government's general position of power over local government. Ironically, the more positive perspective of local government towards the federal sphere, taken to be indicative of better intergovernmental relations, is a strong contributor to the feeling of disempowerment observed in state government representatives – this is attributed to the direct funding relationship between the local and federal spheres.

The literature on intergovernmental relations in Australia clearly associates actions of the Commonwealth with the state of intergovernmental relations in the Australian federal system (Dollery 2002; Dollery, Stewart & Worthington 2000; Kelly, Dollery & Grant 2009; Sansom 2002, 2010; Worthington & Dollery 1998). Several authors argue that Australia's practice of fiscal federalism leads to adversarial state-federal relations since VFI undermines the federalist ideal of autonomy (Bowditch 2014; Broschek 2014; Eccleston 2008; Finlay 2012; Gallop 2012; McQuestin & Woods 2010). As expressed by Finlay (2012, p. 82),

The result has been the transformation of the States over the past century from financially independent colonies to "institutionalized beggars" dependent on Commonwealth handouts... The fiscal dominance of the Commonwealth Government has important implications for the federal balance as with fiscal power comes policy power ... Thus fiscal dominance within a federal system brings with it the ability to skew the federal balance.

Further, some scholars have argued that VFI is "the root cause of intergovernmental conflict in the Australian federation" (Eccleston 2008, p. 39). This is supported by Sansom (2010, p. 180) who declares that "intergovernmental relations in Australia are dominated by vertical fiscal imbalance".

Sansom (2002, 2010) asserts that local-state relationships are highly dependent on how the federal system is playing out. The findings of this study concur. This thesis argues that the damage to intergovernmental relations caused by Australia's practice of fiscal federalism is not limited to the state and federal spheres. In fact, VFI has a ripple effect which cascades through the entire governance system and impacts significantly on local-state relations in the coastal management context in two main ways.

- 1) Firstly, it is contended that VFI contributes to the compulsion for state government to cost shift to local government due to its inability to raise its own sufficient revenue, damaging relations from the local government perspective.
- 2) Secondly, VFI enables the federal government, through their financial dominance, to undermine state jurisdictions by intervening in areas of state government responsibility, hence damaging relations from the state government perspective.

These ideas will be further explained in the next section.

9.3 Theory on Australian federalism, intergovernmental integration and ICM

The well-known maxim in Australian government circles, *'The feds have the money, the states have the power and local government has the problems,'* (Kay & Lester 1997) is an often-quoted representation of the above-mentioned issues within the Australian federation. Figure 9.2 depicts this conceptualisation, whereby – as opposed to the political theory of federalism depicted in Figure 2.1 - the Australian federation resembles a hierarchy with the federal government at the pinnacle.

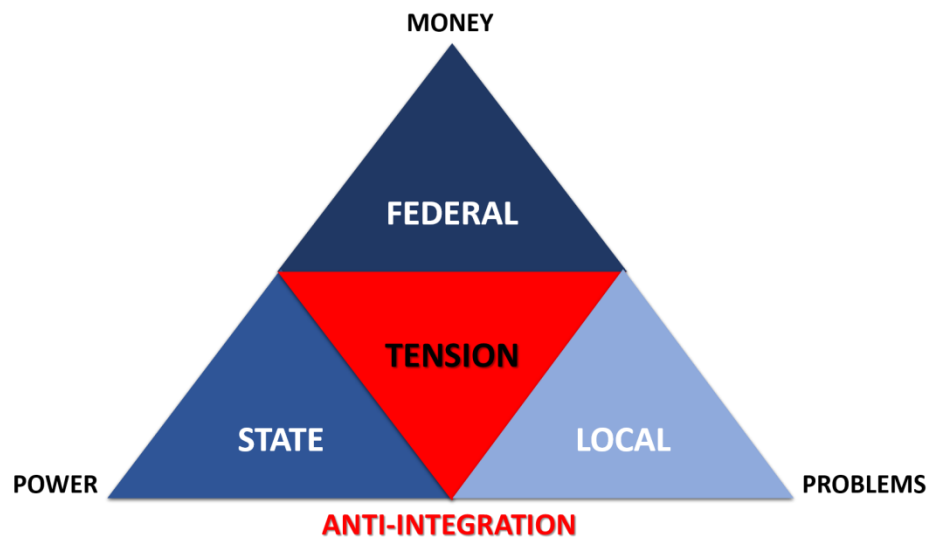


Figure 9.2 Theory on the impact of Australia’s adversarial federal system on intergovernmental relations and intergovernmental integration in Australian coastal management

A visual representation of the maxim in Australian government circles, *'The feds have the money, the states have the power and local government has the problems,'* and of the theory being developed in this thesis, whereby fiscal centralisation results in intergovernmental tension and is ultimately anti-integrative as opposed to cooperative.

The conceptualisation of the federal government being superior to the local and state spheres reflects the findings of this case study and has important consequences for intergovernmental relations. The state government feels largely subjugated by the federal government due to its lack of fiscal autonomy, and threatened by the evolving relationship between local government and the Commonwealth. Equally, local government feels subjugated by the state government, and this – along with the attraction of federal government funding – drives a more positive relationship with the federal government. In this respect, the intergovernmental tension observed in the case study can be attributed to the way fiscal federalism is operationalised in Australia.

This theory provides for an understanding of the difficulty in achieving intergovernmental integration in Australia, as prescribed by the ICM model. In terms of intergovernmental integration as a goal of ICM, the very nature of Australia’s federal system of government

is adversarial, and therefore anti-integrative. While cooperative federalism has been a useful rhetorical tool from the federal government perspective, the reality is that cooperative federalism is not possible in practice as long as such a significant structural imbalance exists in the form of vertical fiscal imbalance (McQuestin & Woods 2010). This is simply because the Commonwealth and the states are not equals. As McQuestin and Woods (2010, p. 1) writes,

Intergovernmental negotiations in Australia have been primarily driven by the financial dependency of the states on the Commonwealth, rather than by shared policy interests or concurrent responsibilities. This asymmetry in bargaining powers ensures the Commonwealth is able to achieve many of its objectives in areas of concurrency or state jurisdiction, with or without the cooperation of the states.

Thus, Australian federalism is at the heart of the consistent failure to effectively implement ICM in Australia. This thesis contends that the intergovernmental tension observed in this case study is an inherent part of the Australian federal system due to Australia's practice of fiscal federalism. Fiscal federalism in Australia is characterised by fiscal centralisation, comprising a high level of VFI and a lack of fiscal autonomy at the sub-national levels. Thus, fiscal centralisation hinders intergovernmental integration for successful implementation of ICM.

As the findings of this case study demonstrate, Australia's practice of fiscal federalism makes intergovernmental integration difficult because it causes discord between the spheres of government. Furthermore, due to their limited fiscal capacity, local and state governments are not empowered to deliver their own visions for the coast. Therefore, one of the biggest problems facing coastal management in Australia is the reality of the disparity in fiscal capacity between federal, state and local governments and the implications this has for cooperative governance and accountability. Shared interests are hard to achieve in an adversarial federal system, especially shared interests that prioritise the environment over development.

Ultimately, cooperative federalism can only work when the States and the federal have shared interests. When these interests differ, the nature of the VFI on the Australian federation and the system of tied funding which it yields will inevitably result in cost shifting, accountability problems and intergovernmental conflict (Eccleston 2008, p. 48).

The following section suggests some significant implications of fiscal centralisation for coastal management in Australia, in general.

9.4 Implications of fiscal centralisation for coastal management in Australia

In terms of the implications of fiscal centralisation for coastal management in Australia, Kay and Lester (1997), Wescott (2009), and multiple Commonwealth inquiries into coastal zone management (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; Resource Assessment Commission 1993) have previously associated VFI with restricting the states' ability to provide the services and infrastructure it is responsible for.

The division of powers between the spheres of government in Australia, largely shaped by the Australian Constitution, reflects to some extent the principle of subsidiarity — that is, that decisions should be taken as close as possible to the citizens by the lowest level of government possible (Australian Treasury 2008). However, this means that the states have significant expenditure responsibilities and need sustainable sources of revenue to fund this expenditure. Fiscal centralisation, as is the case in the Australian system, is converse to the principle of financial subsidiarity, where both spending and taxation decisions should be devolved to the level of government closest to the citizens (Eccleston 2008). As Bowditch (2014, p. 2) argues:

The Federation was originally about strengthening diversity through interstate commerce; not imposing uniformity for its own sake. To that end, the Federation should empower the states to deliver public services that are fit for purpose for their jurisdiction; anchored with access to efficient state taxes to fund these expenditures.

This study has found that the implications of VFI are much broader than have been previously identified in the Australian coastal management literature. In addition to limiting the capacity of sub-national governments to fulfil their coastal management responsibilities, this study has identified that fiscal centralisation has major implications for intergovernmental relations and theorises that it significantly hinders intergovernmental integration for ICM.

Further to this, this thesis contends that the lack of fiscal autonomy being experienced at both the local and state government levels is having a significant impact on the development of Australia's coasts. This is because a lack of fiscal autonomy has a range of significant theoretical, financial, political and economic repercussions (Eccleston 2008).

According to Dafflon (2006, p. 289), the principle of financial subsidiarity should be employed in order to improve spending efficiency, accountability of the responsible government to their electorate, and empowerment of sub-national levels of government:

First, fiscal responsibility is needed at decentralized levels of government to link taxing and spending decisions and avoid overspending. Second, fiscal responsibility increases accountability and the understanding of the electorate, with the subsequent improvement of decision making in a democratic context. Third, decentralized fiscal (budget) responsibility plays an important role in the distribution and in the control of power, which characterize federalism.

Particularly relevant to the implications of fiscal centralisation is the idea of accountability. As Carter (2013, p. 1) describes, the relationship between intergovernmental relations and financial subsidiarity are inextricable:

The relationship... can become very acrimonious. New, unfunded, statutory mandates that require extra spending... or even simply a cut in national budget transfers to subnational government tiers, require an offsetting and relatively large rise in local taxes or unpopular cuts in local services... A blame game often ensues.

Intergovernmental relations in Australia are characterised by a 'blame game', with each sphere 'scapegoating' other spheres and 'passing the buck'. As a result, no sphere is held accountable for the tyranny of small decisions disrupting the biological integrity of the coast and placing considerable assets, both natural and built, at risk. Local and state

government dependence on federal finance will continue to promote intergovernmental conflict and a lack of accountability unless the sub-national governments are able to gain access to, and just as importantly control over, the necessary financial resources to fund the services and infrastructure they are responsible for (Eccleston 2008).

A further implication of Australia's practice of fiscal federalism in terms of coastal management is the lack of a strategic approach. Fiscal centralisation constrains state governments in policy arenas of their constitutional jurisdiction because they require funding from the federal government (Eccleston 2008). Initiatives funded by the Commonwealth are not driven by the priorities of state governments, even in cases where states have provided matching funds (Hajkowicz 2009, p. 471). Thus, in addition to eroding the political accountability of state governments, political authority is also hindered where federal funding and partnerships are involved (Eccleston 2008). As Walker (1999, p. 38) explains,

Diffusion of responsibility is inherent in a system in which one level government raises funds, but another spends them. The availability of Commonwealth funding makes it worth a State's while to put forward projects even when their worth is in doubt. As the granting body, the Commonwealth has to act as "gatekeeper". If it refuses funding, it can be blamed while the State claims to be "doing its best". The merits of the project are less important in this case than its political utility to the State. The Commonwealth, if it sets up criteria for approval, may be tempted ... to abandon them for political advantage. In short, the political relationship of granter and grantee has the effect of distorting project evaluation away from economic or ecological rationality towards political.

One example of this is federal government intervention in the NRM area since the 1990s, which has significantly altered the way the coast is governed in South Australia. The SA government completely revised its NRM legislation (the Natural Resource Management Act 2004) and state departmental administrative arrangements to "capitalise on the existing regions established by the Commonwealth" (Farrelly 2005, p. 397). This entailed a merger of the previous soil conservation, water management and pest control boards and the formation of the current statutory regional NRM Boards in 2005 (Farrelly 2005).

Further to this, any state government strategic approach is undermined by the significant level of direct funding being provided by the Commonwealth government to regional NRM Boards, local governments or community groups. These initiatives are driven by a Commonwealth agenda to achieve Commonwealth strategies, and are not examples of cooperative governance. Crowley (1999, p. 255) notes that "between 40 per cent and 60 per cent of funds have bypassed state and local government to directly fund community-based projects".

Demonstrating the incompatibility of these federal funding initiatives with a strategic approach at the state government level, Farrelly (2005, p. 395) notes that:

Many projects were spatially and temporally incongruent ... in part due to groups working independently of one another ... but also owing to a lack of formal regional contexts or integrated policies.

The Envirofund program released under NHT II provided "local environmental community groups direct access to funding from the Commonwealth, bypassing the regional groups"

(Farrelly 2005, p. 396). The subsequent federal government funding initiative, CfoC, was also criticised for its “narrower agenda, increased central government control, and compromised buy-in by state and territory governments” (Robins & Kanowski 2011, p. 88).

With respect to the coast, Clarke (2011, p. 10) has criticised the shift in political focus of federal government funding programs away from an early emphasis on coastal NRM to increasingly focus on water, dryland salinity and terrestrial environments. Regarding coastal NRM, Clarke (2011, p. 10) finds that Rudd’s CfoC further restricted coastal NRM “through a narrow and spatially selective lens”. In this way, federal government intervention does little to support the strategic goals and priorities of the state government.

9.5 Key findings

A handful of scholars in the coastal management field have acknowledged issues relating to VFI and the centralisation of power at the federal level (Haward 1995b; Huggett 1998; Kay & Lester 1997; Wescott 2009). This study builds on these ideas by providing empirical evidence of the existence of these issues, and the on-ground implications of this system in terms of intergovernmental tension and poor intergovernmental relations. As a result, this thesis proposes that Australia’s practice of fiscal centralisation hinders intergovernmental integration, and is thus a significant barrier to the successful implementation of integrated coastal management in Australia.

Uniquely, this study contends that the damage to intergovernmental relations in the context of coastal management is not limited to the state and federal spheres. Rather, it has a ripple effect, which cascades through the entire governance system and impacts significantly on local-state intergovernmental relations. This is evidenced by intergovernmental tension resulting from the compulsion of the SA governments to cost shift to local government, due to their inability to raise sufficient own-source revenue.

The interference of the federal sphere with funding of local government is also damaging to local-state relations, since it means local and state governments essentially compete for federal funding (Sansom 2002). Furthermore, to use the analogy of (Sansom 2002), the local-state relationship is subverted as local governments wish to escape their ‘loveless marriage’ with the state government in favour of a more fruitful funding relationship with the federal government – the ‘rich uncle’²².

Fiscal centralisation also enables a lack of accountability for all three spheres of government, since revenue-raising capacity is not aligned with expenditure responsibilities. In this way, each sphere can argue that they either do not have the capacity, or they do not have the responsibility, for any given issue. Thus, intergovernmental relations in the Australian federation are characterised by a blame game, scapegoating and passing the buck to other spheres.

²² Referring to Sansom’s (2002) paper ‘Three weddings, a loveless marriage and a rich uncle: Local government reform and intergovernmental relations in Australia’.

9.6 Chapter summary

This chapter has demonstrated the relationship between governance arrangements and poor intergovernmental relations in a case study of coastal management in South Australia. As observed in this case study, problematic governance arrangements leading to intergovernmental tension and poor intergovernmental relations include (i) asymmetries in responsibility versus capacity, and (ii) a perceived lack of autonomy. This was evident at both the local and state government levels.

Moreover, through synthesis of the case study results with the broader literature on Australian federalism and intergovernmental relations, this thesis posits that poor intergovernmental relations are an inherent part of Australia's federal system of government, since fiscal centralisation renders the overall governance system adversarial²³ rather than cooperative. It is in this way that intergovernmental integration is hindered rather than helped.

Hence, the nature of the political system in which ICM is striving to operate in Australia presents an incredible challenge to intergovernmental integration, as prescribed by the ICM model.

²³ While coercive federalism has been used to describe intergovernmental relations between the state and federal governments by several authors (Cranston 1979; Mathews 1977; Smart 1991), in the context of this study, the term adversarial is preferred as it better reflects intergovernmental relations on the whole between the three spheres of government – local, state and federal. The term 'adversarial' was chosen in preference to 'coercive' for two main reasons. Firstly, Else-Mitchell (1977, p. 110) asserts that the phrase "coercive federalism" is "pejorative and ... some caveat should be entered because coercion as it is properly understood in a legal and constitutional sense, if practiced by the Commonwealth would infringe the basis of the federal compact and probably be regarded as invalid by the High Court". Secondly, the term adversarial better captures the impact of Australian federalism on local-state relations, whereby local and state governments are essentially competing for federal funding rather than working cooperatively as partners. For this reason, this thesis asserts that Australian federalism, by nature of the financial dominance of the federal sphere in spite of the constitutional autonomy of the state sphere, generates adversaries rather than collaborators in terms of both local-state and state-federal intergovernmental relations.

Chapter 10 Conclusion

10.1 Chapter overview

Chapter Ten provides an overview of this thesis, restating the importance of coastal management and the problem of a lack of intergovernmental integration in Australia, which provided the focus for this study. This chapter also outlines the design framework and methodology selected to address the aim of the study; summarises the case study findings; and, reiterates the theory generated. Finally, the chapter suggests future research on this topic, and concludes with a discussion on the implications of these research findings in relation to the introductory section's dialogue on a lack of a national approach in Australian coastal management.

10.2 Study premise

The coastal zone is critical to human civilization: the majority of the world's population live and work in the coastal zone, and humans are reliant on coastal resources and intact coastal ecosystems for livelihoods and food (Martínez et al. 2007). However, coastal ecosystems are showing signs of degradation, and are under increasing development pressure from the dependence of growing populations on coastal resources (Harvey & Caton 2010). The Australian coast is no exception. In Australia, the coast comprises 17 per cent of the land mass (Harvey & Caton 2010), is home to 86 per cent of the population (Norman 2009b), and is "fundamentally important to the Australian lifestyle and economy" (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009, p. 1). Though sparsely populated in comparison to many other coastlines around the world, this significant national environmental asset remains at risk of serious degradation because of cumulative impacts of human activity in the coastal zone. Australia has a history of degraded coastal assets due to poor coastal management and planning practice, now intensified by increasing pressure on the coastal zone due to population growth and amenity migration (Norman 2009b) and the threat of climate change impacts (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009).

The competitive nature of coastal resource use together with escalating deterioration of coastal ecosystems necessitates effective management of the coastal zone. However, management of the coastal zone is exceedingly complex due to the dynamic nature of the biophysical features of the land-sea interface, coupled with the discrete governmental arrangements for coastal management that have been developed based on administrative rather than biophysical boundaries. Nevertheless, there is a global imperative for an integrated approach to management of coastal resources, as stated by the United Nations Conference on Environment and Development (UNCED):

Each coastal state should consider establishing, or where necessary strengthening, appropriate coordinating mechanisms ... for integrated management and sustainable development of coastal and marine areas and their resources, at both the local and national levels (United Nations 1992).

Australia is a signatory to several important international conventions dealing with environmental issues, including the Declaration of the United Nations Conference on Environment and Development quoted above. Agenda 21, Chapter 17 commits Australia to integrated management and sustainable development of coastal areas. However, in Australia, integrated management of coastal areas involving the three spheres of government has been difficult to achieve (Glazewski & Haward 2005; Haward 1995b; House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009; Kay & Lester 1997; Wescott 2006, 2009, 2012).

Effective coastal management necessitates the coordination of any stakeholders who may impact on or be impacted by the coast. This is acknowledged in what has become the internationally accepted best-practice approach towards coastal management, known as Integrated Coastal Management (ICM). ICM promotes a focus on coordinated decision-making between various levels of government and broad consultation with all interest groups (Cicin-Sain & Knecht 1998; Harvey & Caton 2010; Kay & Alder 1998). The dissatisfaction with coastal resource management has been the topic of numerous Commonwealth government inquiries over the past four decades. The regular repetition of such inquiries, and inaction despite major recurring recommendations, shows that little has changed in spite of the knowledge, understanding and recommendations generated by these inquiries.

In Australia, the governance arrangements for coastal management are a function of the division of powers within the Australian federation, as determined by the Australian Constitution. However, few scholars have focused on examining the relationship between the federal system of government and integrated coastal management in Australia. The dependence of the state governments on federal finance has been suggested to be restrictive to the states' ability to provide their constitutionally-bound services and infrastructure (Haward & VanderZwaag 1995; Kay & Lester 1997; Resource Assessment Commission 1993; Wescott 2009). Yet, the detailed nature of the problems caused by the federal system of government in the context of coastal management in Australia has been under-researched. Thus, the purpose of this study was to investigate the relationship between federalism and coastal governance in the context of ICM in Australia, using a case study of South Australia. The broad aim was to develop a theory to explain why intergovernmental integration, as endorsed by the ICM model, has been so hard to achieve or sustain in Australia.

The relationship between federalism, coastal governance and ICM was investigated by combining elements of grounded theory with a comparative case study approach. Three coastal NRM regions across South Australia – one eastern, one western and one metropolitan/peri-urban region – were utilised to provide a varied geographical perspective on the governance issues impacting coastal management in the state. Thirty three semi-structured, in-depth interviews were conducted with representatives of local government, NRM Boards and staff, and South Australian government Department for Environment staff, in order to obtain a varied perspective of the issues facing each sphere of government responsible for coastal management. Interview data was analysed using NVIVO 10 qualitative data analysis software, following the constant comparative method, and emergent theory was consolidated by using complementary data derived from

literature review and document analysis. Findings were verified using a range of strategies, including triangulation.

The research questions were designed to explore key determinants in the success or failure of ICM implementation: the nature of prevailing political system and the nature, function and strength of the local, provincial, and central levels of government (Cicin-Sain & Knecht 1998). Issues regarding coastal governance arrangements, including the division of responsibilities for coastal management between the spheres of government and their associated capacity to fulfil these responsibilities were considered.

Thus, this thesis has synthesised empirical data obtained via interview with secondary data from document analyses and literature from a range of disciplines such as geography, politics, economics, public policy and environmental management, in order to develop a theory as to why intergovernmental integration, as prescribed by the ICM model, has been so difficult to achieve in Australia. The answers to the research questions that were devised to meet the aim of this study are discussed below.

10.3 Research Question 1

What is the nature of local government in South Australia? From the local government perspective, what are the governance issues posed by Australian federalism?

The main coastal governance issue raised by local government representatives was a lack of financial resources to deal with various aspects of coastal management, particularly in the face of population pressure and impending climate change impacts and ongoing cost shifting from state government. The attitudes of local government representatives towards the SA government consistently reflected feelings of disempowerment, distrust and resentment in the face of their delegated responsibilities.

The observed acrimony was greatest around the subject of local government's roles and responsibilities within the federal system with regard to two related issues. Firstly, local government suffers from asymmetries in responsibility versus capacity, whereby they have insufficient financial resources to carry out delegated responsibilities and have limited fiscal capacity to raise revenue for their increasing expenditure needs. This issue is exacerbated by on-going cost shifting from state to local government. Secondly, local government perceives that their position as a creature of the state government conflicts with their legislative role to serve their local constituency – this issue is referred to as the local-state antinomy (Wild River 2002).

Coupled with a lack of recognition as a legitimate sphere of government in the Australian Constitution, local government lacks autonomy in the Australian federation. These issues are fundamentally a function of asymmetrical power relations between the three spheres of government, which ultimately disempowers local government, underpinning the intergovernmental tension observed between the local and state spheres.

10.4 Research Question 2

What is the nature of state government in South Australia? From the state government perspective, what are the governance issues posed by Australian federalism?

From the perspective of SA government representatives, there were three main coastal governance issues: (i) a lack of financial resources; (ii) a lack of autonomy from the federal government, driven by vertical fiscal imbalance and a limited fiscal capacity; and (iii) a lack of power to direct coastal development decision-making in the face of pro-development agendas at local and state government levels. Each of these issues ultimately reflect the position of the state government as having responsibility without matching capacity. This is underpinned by a lack of autonomy, in terms of both fiscal capacity and fiscal autonomy, both of which enable federal government intervention in areas of state government jurisdiction.

Furthermore, this study's findings are unique in suggesting that the impact of insufficient funds for coastal management at the state government level exceeds the practical problem of not being able to provide funding for maintenance and protection. In addition, it was found to significantly impact intergovernmental relations between the local and state spheres by:

- 1) hindering the possibility of more positive relations with local government, since funding of local government appears to be a driver of a more positive intergovernmental relationship;
- 2) straining relationships with local government due to state government cost-shifting; and,
- 3) exacerbating the disempowerment of the states' by motivating local government to partner with federal government in funding relationships.

Moreover, this situation hinders the political autonomy and authority of state governments. Thus, like local government, the overall sense of the position of state government in the Australian federal system is one of disempowerment.

10.5 Research Question 3

What is the nature of federal government in Australia? How does this relate to the local and state spheres?

Despite the Commonwealth government having few exclusive powers over the management of coastal land and resources in Australia, it exerts considerable influence through its financial clout. Given the prominence of the themes, disempowerment and intergovernmental tension, which emerged from the interviews with local and state government representatives, it is important to appreciate how the federal balance has been skewed to create a dominant federal sphere.

The financial dominance of the Commonwealth government has been significantly aided by the Commonwealth's legislative dominance, which is largely determined by the Constitution (since Commonwealth laws take precedence over state laws), but has been

enhanced considerably by the interpretations and rulings of the High Court over the years. As a result, fiscal federalism in Australia is characterised by a high vertical fiscal imbalance and a reduction in fiscal autonomy of state governments. Indeed, Australia has one of the highest VFIs of all OECD nations (Twomey & Withers 2007).

As demonstrated in Chapter Eight, fiscal centralisation and an accompanying sense of federal superiority have become entrenched in the practice of Australia's federal system. The predicaments at the local and state government levels outlined in Chapters Six and Seven have evolved along with the federal government's financial dominance within the Australian federation.

The issue with fiscal centralisation in the Australian federation is twofold. Firstly, VFI and limited fiscal capacity render local and state governments under-resourced to meet their coastal management responsibilities. Secondly, fiscal centralisation contributes to the intergovernmental tension observed in this case study, by disempowering local and state governments and undermining their autonomy.

10.6 Research Question 4

Considering the nature of Australian federalism, given the findings of this study, what are the implications for intergovernmental integration and the implementation of integrated coastal management in Australia?

The intergovernmental tension and poor intergovernmental relations observed in this case study of coastal management in South Australia are related to problematic governance arrangements. These include (i) asymmetries in responsibility versus capacity – both fiscal and legal – and (ii) a perceived lack of autonomy, at both the local and state level.

Moreover, through synthesis of the case study results with the broader literature on Australian federalism and intergovernmental relations, it is contended that poor intergovernmental relations are an inherent part of Australia's federal system of government due to fiscal centralisation. The impact of fiscal centralisation on the autonomy of sub-national governments creates an adversarial rather than cooperative governance system. It is in this way that intergovernmental integration is hindered rather than helped. Hence, the nature of the political system in which ICM is striving to operate in Australia presents an incredible challenge to intergovernmental integration, as prescribed by the ICM model.

Furthermore, it is suggested that the financial dominance of the federal government undermines the political autonomy and authority of state governments and leads to accountability issues for all three spheres, thus enabling a lack of leadership despite pressing and increasing coastal management issues.

Thus, this thesis theorises that fiscal centralisation is a significant barrier to meaningful integration between the spheres of government involved in coastal management in Australia.

10.7 Contribution to knowledge

This study has contributed empirical data on the coastal management and governance issues being experienced at the local and state government level in South Australia, and has provided evidence of the on-ground implications of Australian federalism, in terms of intergovernmental tension and poor intergovernmental relations.

Importantly, comparison of coastal management issues across the South Australian case study regions and LGAs revealed similar concerns, irrespective of geophysical, social and economic variables, related to the twin pressures of climate change and population pressure at the coast. The importance of addressing these issues effectively is evidenced by their ubiquity.

In addition to this, and rather surprisingly, the coastal governance issues being experienced at the local and state government levels were also similar. From the perspective of local and state government representatives, governance issues were dominated by a perceived:

- 1) lack of financial resources,
- 2) lack of fiscal and legal capacity to fulfil responsibilities; and,
- 3) lack of autonomy from the state and federal sphere, respectively.

In the interviews with local and state government representatives, these coastal governance issues were manifest in discussions, and examples were coded as intergovernmental tension and disempowerment. Synthesis of the case study results with secondary data and academic literature led to a theory linking the observed intergovernmental tension with the concentration of power at the federal level, resulting from increasing fiscal centralisation since federation.

While scholars have previously acknowledged issues relating to VFI and the centralisation of power at the federal level (Haward 1995b; Huggett 1998; Kay & Lester 1997; Wescott 2009), this study has produced empirical evidence of the on-ground implications of fiscal centralisation, comprising intergovernmental tension and poor intergovernmental relations between the local and state spheres of government in South Australia.

The implications of Australia's high VFI, beyond constraining the capacity of state governments to fund their constitutional responsibilities, have not previously been considered in the Australian coastal management literature. This thesis asserts that the implications of fiscal centralisation are much broader than have been identified previously in terms of a lack of financial resources for effective coastal management at the local and state government levels.

In addition to limiting the capacity of sub-national governments to fulfil their coastal management responsibilities, Australia's high VFI has major implications for intergovernmental relations. This is because of Australia's practice of fiscal federalism, whereby the fiscal autonomy of local and state governments is restricted, exacerbates their disempowerment within the federal system. Uniquely, this study shows that the deleterious impact of fiscal centralisation on intergovernmental relationships has a ripple

effect, which cascades through the entire governance system and impacts significantly on local-state intergovernmental relations.

In summary, the aim of this study was to generate a theory on why intergovernmental integration, as prescribed by the ICM model, has been so hard to achieve or sustain in Australia. The objective was to develop this theory based on empirical evidence obtained by comparative case study and qualitative analysis of interviews with coastal managers and decision-makers at the local and state government level. This thesis has theorised that Australia's practice of fiscal federalism, resulting in fiscal centralisation, is an inherent part of Australian federalism, and that it hinders intergovernmental integration between the spheres of government in the Australian federation. In this way, Australia's federal system is at the heart of the consistent failure to meaningfully achieve or sustain ICM.

The following section considers this theory in the context of the scope and limitations of this study and, in light of this, suggests avenues for further research.

10.8 Future directions

The intention of this thesis was to situate issues related to coastal management and governance, which have been well-established to date in the academic and grey literature, within the context of federalism, which has rarely been examined.

This thesis contends that the state of intergovernmental relations between the spheres of government in the Australian federation is particularly relevant to the practice of integrated coastal management. However, this topic has been under-researched in the Australian coastal management literature to date. Future research should consider conducting deeper analysis into the relationship between federalism and intergovernmental relations in the context of coastal management in Australia, to further refine and test the theory developed in this study.

In particular, the perspective of federal government representatives could be sought, along with the perspective of other local and state governments across Australia. Since this case study was based in South Australia, comparison with other states would serve to test the theory, and establish whether fiscal centralisation is a significant issue underpinning intergovernmental tension and a lack of intergovernmental integration in Australia. In addition, examining the perspectives of elected members at the local, state and federal levels would be interesting.

Further to this, it would be beneficial to explore aspects affecting horizontal and spatial integration in the context of Australian federalism and fiscal centralisation. In this vein, including stakeholders from the marine side, including federal government representatives, as well as the perspectives of fisheries representatives, other state government agencies (such as Planning, State Development, Department of Premier and Cabinet) would be valuable in order to understand other possible drivers of intergovernmental tension and barriers to intergovernmental integration – both horizontally and vertically.

To complete the analysis in the Australian context, it would be valuable to include an investigation of the perspectives of community groups, NGOs and industry, especially the influence of economic associations such as Regional Development Australia.

In addition to this, it would be worthwhile conducting case studies on coastal development decision-making – both local (DAP) and state (DAC) cases – to identify whether the drivers of decisions not in accord with state-based coastal expert advice are fundamentally associated with the limited fiscal capacity of the local and state governments, as well as what other factors might be at play.

Another avenue for exploration could be to re-examine the best-case scenarios of ICM in Australia to date, for example Coastcare and the Great Barrier Reef Marine Park, to question the role of the states in these examples and determine whether they were examples of cooperative, or coercive, federalism in action.

Since the theory developed should apply to any form of intergovernmental integration required within the Australian federation, the analysis could be expanded beyond the coast to look at the nature of intergovernmental integration and intergovernmental relations in many sectors, especially those where state governments have the constitutional responsibility such as health, education and other environmental issues. One example for analysis could be the level and nature of intergovernmental integration in the governance of the Murray-Darling Basin.

Finally, it would also be useful to compare Australia's version of federalism, in particular fiscal federalism, with that practiced by other federations, to explore whether similar tensions exist and what the related outcomes are for the implementation of integrated coastal management in other federations.

To conclude this thesis, the next section reflects on the introductory chapter's dialogue on a lack of a national approach in Australian coastal management.

10.9 The national leadership debate and the role of the states

This study sought to build on what is known about the implementation of ICM in Australia by improving our understanding of factors related to coastal governance arrangements and federalism, which might impede the level of intergovernmental integration assumed necessary for successful implementation of the integrated coastal management model. Thus, as outlined in the Introduction, this research aimed to provide an explanation for the previously-reported observed phenomena of incomplete ICM implementation in Australia.

The opposition of state governments to Commonwealth intervention in coastal zone management matters has been implied by several authors to be one reason that intergovernmental integration has failed in Australia (Cicin-Sain & Knecht 1998, p. 349; Harvey & Caton 2010; Huggett 1998; Kay & Lester 1997; Lazarow et al. 2006). These assertions have neglected to understand the perspective of the states, and the role the Commonwealth has played in undermining their political authority and accountability since federation.

Given the hegemonic nature of the federal government in Australia, it is unsurprising that the prevailing discourse in the Australian coastal management literature is one calling for increased federal government action and leadership in coastal management (Clarke & Harvey 2013; Harvey 2016; Huggett 1998; Wescott 2012). It is interesting to note that the latest federal government inquiry into coastal management highlighted that the states have finally joined in the call for national leadership, as long as this takes the form of collaboration and consistency rather than prescription and coercion:

The Committee further notes that, while the states and the NT have called for national leadership, they have expressed the desire for the Australian Government to lead the process of collaboration between the jurisdictions and introduce new consistency into coastal zone management rather than calling for a prescriptive top-down arrangement that would hand coastal zone management responsibilities to the Australian Government (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009, p. 267).

As explained in Chapter One, the recommendations of the various federal government inquiries have rarely been implemented, and if they have, they have been short-lived (e.g. Commonwealth Coastal Policy) or ineffective (e.g. The ICZM Framework and Implementation Plan). The question was asked '*why is this so?*'

Based on the findings of this study's exploration of coastal management in the context of Australian federalism, the answer appears to be that the Australian federation, through its mechanisms of fiscal centralisation, has created a system whereby no sphere of government is able to be held accountable.

As explained in Chapter Nine, fiscal centralisation enables a lack of accountability, since revenue-raising capacity is not aligned with expenditure responsibilities. In this way, each sphere can argue that they either do not have the capacity, or they do not have the responsibility, for any given issue. Thus, intergovernmental relations in the Australian federation are characterised by a blame game, scapegoating and passing the buck to other spheres. For this reason, the Australian federal system is adversarial rather than cooperative.

Thus, the question of a national approach to coastal zone management in Australia is an intricate one and must be considered carefully. In light of this study's findings, to avoid further intergovernmental tension one must be careful not to conflate 'national approach' into federal government intervention. In Australia's current federal system, the role of the federal government in coastal management must be clearly defined and agreed to, if not determined by, the needs of state and local governments.

Furthermore, the requirements for federal government involvement should be carefully considered. The high level of fiscal centralisation in the Australian federation predicates federal government funding involvement. However, it should be noted that national coordination between the states does not necessarily require federal government intervention. For example, national associations like the Australian Coastal Councils Association pool resources, contract-in expertise and share knowledge and information. In theory, this approach could also be used between state governments to improve consistency in approaches to coastal planning and development, where necessary.

The federal government's involvement in international conventions has been beneficial in some environmental matters, since it often requires reporting from the local and state governments which places them on the agenda for funding. However, the notion of solving Australia's coastal management issues through increased Commonwealth power over coastal management should be cautiously examined.

Given the low priority the federal government has given to ocean policy and management, which is their constitutional responsibility (Haward 1996; Wescott 2000), and given the federal government's track record of funding issues based on political whim and the capricious cycle of political will (Clarke & Harvey 2013; Walker 1999), the role of the federal government in the future of Australian coastal management should be carefully considered.

The lack of sustained federal government action in the coastal management space – despite the numerous major inquiries and their recommendations over the years – raises the question whether the federal government is the right sphere to pin these expectations on. While it is tempting to argue that they are the only sphere that can afford to provide this 'leadership' and that any money flowing into coastal management initiatives on-the-ground is good, relying on these federal government transfers decreases the political accountability of the states: while all eyes are on the Commonwealth for assistance, they are not pressuring the states for action.

In conclusion, the asymmetries in responsibility versus capacity produced by Australia's practice of fiscal federalism creates blurred lines, sometimes referred to as 'fuzzy' governance (Hovik & Bjørn Stokke 2007). This makes it difficult for the constituency to fully understand which sphere of government is responsible for what, and when they do, to make demands to the responsible sphere of government and have them acted upon. Moreover, due to their relative incapacity to raise revenue, state governments are not empowered to lead by creating a vision for their coastal zone and implementing means of raising own-source revenue to fund it. Further, Australia's practice of fiscal federalism reinforces an 'economic-growth-at-all-costs' agenda for state and local governments – a state of affairs that is having major consequences for Australia's coast.

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Appendix 1.1 Terms of Reference of Commonwealth Government Inquiries into Coastal Management in Australia

<p><i>Management of the Australian Coastal Zone</i></p> <p>House of Representatives Standing Committee on Environment and Conservation, 1980.</p> <p>Terms of reference (House of Representatives Standing Committee on Environment and Conservation 1980):</p> <p>On 23 November 1978 the Committee resolved to inquire into and report on management of the Australian coastal zone with particular reference to:</p> <p>(a) the alternative uses, including industrial and residential development, tourism and recreation, mining, forestry and fishing;</p> <p>(b) Commonwealth Government owned and controlled property; and</p> <p>(c) the development of a co-ordinated approach.</p>
<p><i>The Injured Coastline: Protection of the Coastal Environment</i></p> <p>House of Representatives Standing Committee on Environment, Recreation and Arts, 1991.</p> <p>Terms of reference (House of Representatives Standing Committee on Environment Recreation and the Arts 1991):</p> <p>That the Committee inquire into the environmental degradation of the Australian coastline and coastal waters, with particular reference to: causes, effects and costs of pollution, sewage disposal, coastal land degradation and resource depletion; management of urban water resources; impacts on tourism, fishing and other industries dependent on the coastal zone and coastal waters; the adequacy of existing management regimes; administrative arrangements, legislative measures and development policies required to ensure sustained use and environmental protection; review of previous parliamentary reports relating to the coastal zone; and the role of the Commonwealth Government in ensuring proper management of the coastal zone.</p>
<p><i>Coastal Zone Inquiry</i></p> <p>Resource Assessment Commission, 1993.</p> <p>Terms of reference, as prescribed by the Prime Minister of the Labor government of the day, Bob Hawke (Resource Assessment Commission 1993):</p> <p>I require the Resource Assessment Commission to conduct an inquiry into Building, Tourism, Mariculture and associated development in Australia's coastal zone. The scope of the inquiry shall be to:</p> <ul style="list-style-type: none"> - examine and report on the future use of Australia's coastal zone resources with particular reference to the integrated management of building, tourism, mariculture and associated development, particularly outside metropolitan areas; - examine and report on the use, including potential use, of regulatory and economic instruments and institutional arrangements to promote integrated coastal zone management. <p>In preparing its report, the Commission should:</p> <ul style="list-style-type: none"> - take into account and give due weight to, the findings of previous related inquiries and existing background and policy work by Commonwealth, state, territory and local governments; - take into account and give due weight to the work and objectives of the special Premiers' Conference aimed at providing a clear definition of the roles and responsibilities of the different spheres of government; reducing duplication and overlap of functions and services; and providing more integrated and effective delivery of programs and services; - assess the environmental, cultural, social, industry, and economic impact of such development; - develop criteria for evaluating the future use of coastal zone resources.
<p><i>Managing Our Coastal Zone In A Changing Climate: The Time To Act Is Now</i></p> <p>House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts, 2009.</p> <p>Terms of reference (House of Representatives Standing Committee on Climate Change Water Environment and the Arts 2009, p. xiii):</p> <p>The Committee will inquire into and report on issues related to climate change and environmental pressures experienced by Australian coastal areas, particularly in the context of coastal population growth.</p>

Appendix 3.1 Interview schedule

PROJECT INFORMATION FOR INTERVIEW PARTICIPANTS

Definitions of Key Terms used in this Study

Federalism

The system of government in Australia in which governmental power is divided between separate tiers of government, i.e. the Commonwealth and the State/Territory governments. Each tier has a degree of authority and sovereignty over particular governmental functions, outlined in a formal written Constitution.

Coastal Governance

Governance is a management framework through which fundamental goals are strived for via institutional processes and structures that form the basis of planning and decision-making. Coastal governance refers to the processes and structures in place for the management of coastal resources.

Integrated Coastal Management (ICM)

Integrated Coastal Management has been internationally endorsed as the best-practice approach towards coastal resource management. Among other things, ICM promotes integration through coordinated decision-making within and between government departments and tiers of government, and broad consultation with all interest groups.

Project Summary

An array of Commonwealth and State departments, regional bodies and local governments are involved in the management of coastal resources in Australia. Many of the debates and conflicts involving management of the coast are underpinned by the actual process of governance. It is well-established that coastal governance arrangements play an important role in determining whether Integrated Coastal Management can be successfully implemented. However, the influence of the federal system of government on coastal governance arrangements and ICM in Australia is under-researched.

In this study I will investigate whether Australian federalism has any impact on coastal governance arrangements and, in turn, whether or not this affects the implementation of ICM in Australia. I seek to understand the relationship between federalism, coastal governance and ICM via:

- An analysis of coastal governance arrangements in Australia, using South Australia as a case study;
- Case studies at different levels of government involved in coastal management administration and practice, i.e. Federal government, State government, Natural Resource Management Boards and local government.

Interviews

The case studies will involve semi-structured qualitative interviews engaging key individuals with knowledge and experience in aspects of governance arrangements that affect management of the coastal zone in Australia. There will be a focus on gathering information that reveals the working relationships between local, regional, State and national governance arrangements, including the influence of intra- and inter-governmental relations and funding on coastal management. The interview questions are intended to stimulate discussion of the issues of specific interest to this study. The questions are provided below in advance to give you time to consider the questions and improve the depth-of-thought able to be given to your answers.

INTERVIEW QUESTIONS

1. Briefly explain your current role and/or your background in coastal management in Australia.
 - If your work is/was directly related to the practice of coastal management, who do/did you work most closely with?
 - Include all agencies/departments, other organisations etc.
 - Explain the nature of the collaboration(s).
2. In your opinion, please discuss what you believe to be the most serious issue(s) currently facing the coastal zone.
3. In your opinion, what are the current roles and responsibilities of the following governance bodies in coastal management in Australia? Explain your answer.
 - a. Federal government
 - b. State government
 - c. Regional NRM bodies
 - d. Local government
 - i. In your opinion, should these roles and responsibilities be different? If so, how? If not, why not?
4. How do you see the power balance between the three tiers of government in Australia: Local, State and Commonwealth?
 - a. Who has power? What form(s) of power are there?
 - b. Do you think power differentials between the three tiers of government affect the way the coast is managed in South Australia?
 - c. What types of power do you think most influence coastal management?
 - d. Do you think power, or lack of power, affects the implementation of ICM?
5. Do you think the roles of the different tiers of government have changed over time?
 - a. Has power shifted? If so, how/where?
6. What do you consider to be the strengths and weaknesses of Australia's federalist system of government with regards to coastal management in South Australia?
7. What do you consider to be the advantages and disadvantages of Natural Resource Management bodies becoming involved in the management of the coastal zone?
8. Describe the relationship and degree of integration between the different tiers of government in Australia (e.g. Local through to Federal).
 - a. Do you think these relationships affect coastal governance and/or management?
9. Describe the relationship and degree of integration between different departments and agencies involved in environmental management at the State government level within South Australia.

- a. Do you think these relationships affect coastal governance and/or management?
10. Describe the relationship and degree of integration between the different branches within the State government's Department of Environment and Natural Resources in South Australia.
 - a. Do you think these relationships affect coastal governance and/or management?
11. What do you think were the main driving forces behind the re-organisation of State government institutions for environmental management (DEH & DWLBC)?
12. What do you think are the strengths and weaknesses of the recent changes to the organisational structure within DENR, in terms of the State government's ability to achieve Integrated Coastal Management?
13. Do you think that Integrated Coastal Management a useful concept? Why or why not?
14. Do you think the principles of ICM are used in decision-making at the State government level? Why or why not?
15. At the State government level, how are the different environmental areas within DENR prioritised in terms of budget funding?
16. How is coastal management financed in South Australia?
 - a. In your opinion, what is the influence of financial arrangements for the funding of coastal management on coastal management outcomes?
 - i. How do these particular funding mechanisms influence coastal management?
 - ii. What are the outcomes that are mainly affected by such funding mechanisms?
17. Are there coastal issues that are not able to be adequately dealt with due to the current funding arrangements?
 - a. If yes, why? At what scale are these issues?
18. In your opinion, how does direct funding from the Commonwealth government to local government, community groups and NRM bodies affect the implementation and/or outcomes of coastal management?
19. Could funding mechanisms and overall financial arrangements for coastal management be improved? If so, how? If not, why not?
20. In your opinion, do the coastal governance arrangements in South Australia affect coastal development and/or land-use decisions in South Australia?
 - a. If yes, what are the main factors linking the relationship between coastal governance arrangements and coastal development and land-use decision-making?

21. In your opinion, on a scale of 1 (very effective) to 5 (detrimental), how effective are the governance arrangements for achieving Integrated Coastal Management in Australia?
1. very effective
 2. effective enough
 3. effective in some ways but ineffective in others
 4. ineffective
 5. detrimental to effective ICM
- a. Why? (Please explain your reasoning for choosing 1-5)
22. Can you recommend five people who would be relevant for me to interview?
23. Is there anything else you would like to add?
24. Would you like to be informed of the results of this study?
- a. If yes, what is the best method of contacting you for this?

**I am grateful for your contribution to this study.
Thank you for taking the time to participate.**

Appendix 3.2 Consent form

THE UNIVERSITY OF ADELAIDE
HUMAN RESEARCH ETHICS COMMITTEE

STANDARD CONSENT FORM **FOR PEOPLE WHO ARE PARTICIPANTS IN A RESEARCH PROJECT**

1.	I, <i>(please print name)</i> consent to take part in the research project entitled: GOVERNANCE AND INTEGRATED COASTAL MANAGEMENT IN AUSTRALIA
2.	I acknowledge that I have read the attached Information Sheet entitled: INFORMATION SHEET FOR THE RESEARCH PROJECT GOVERNANCE AND INTEGRATED COASTAL MANAGEMENT IN AUSTRALIA
3.	I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.
4.	I have been informed that, while information gained during the study may be published, I will not be identified and my personal data will not be divulged.
5.	I understand that I am free to withdraw from the project at any time, and can choose to answer none, some or all of the questions asked in the interview.
6.	I am aware that I should retain a copy of this Consent Form, when completed, and the attached Information Sheet and Complaints Procedure Form.
 <i>(signature)</i> <i>(date)</i>

WITNESS
I have described to <i>(name of subject)</i> the nature of the research to be carried out. In my opinion she/he understood the explanation.
<i>Status in Project:</i>
<i>Name:</i>
..... <i>(signature)</i> <i>(date)</i>

Appendix 3.3 Information Sheet

THE UNIVERSITY OF ADELAIDE
HUMAN RESEARCH ETHICS COMMITTEE

INFORMATION SHEET FOR PEOPLE WHO ARE PARTICIPANTS IN A RESEARCH PROJECT

The purpose of this study is to develop a more detailed understanding of the institutional context in which coastal management is practiced. Your participation is requested to complete a semi-structured interview comprising roughly 20 questions which will be used to drive discussion of governance issues associated with coastal management in your experience. The questions will be provided in advance and will cover such topics as your knowledge, experience and/or opinion on matters related to coastal governance arrangements in Australia.

It is estimated that the interview will take up to 1 hour. The interview will be conducted by the project coordinator, Nicole Pelton. The interviewer will travel to a location convenient to you at a time convenient to you to conduct the interview. If necessary, a telephone interview may be conducted. Interviews will be audio-recorded with your permission only.

No payment will be offered for your participation in this study. You may choose to withdraw from participating in this study at any point prior to the completion of the research. Anonymity and confidentiality will be maintained at all times in the storage, discussion and presentation of your contributed data.

A consent form and a complaints form are also attached. If you choose to participate, you will be provided with a copy of these to keep, as well as this information sheet.

If you wish to receive a copy of the study results and/or publications, please provide your contact details.

Thank you for your time.

Regards,

Nicole Pelton

CONTACT DETAILS OF RESEARCH GROUP

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Appendix 3.4 Complaints form

THE UNIVERSITY OF ADELAIDE HUMAN RESEARCH ETHICS COMMITTEE

Document for people who are participants in a research project

CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The Human Research Ethics Committee is obliged to monitor approved research projects. In conjunction with other forms of monitoring it is necessary to provide an independent and confidential reporting mechanism to assure quality assurance of the institutional ethics committee system. This is done by providing research participants with an additional avenue for raising concerns regarding the conduct of any research in which they are involved.

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

Project title:

GOVERNANCE & INTEGRATED COASTAL MANAGEMENT IN AUSTRALIA

1. If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator:

Name: **Miss Nicole Pelton**
Telephone: **(08) 830 35645**

2. If you wish to discuss with an independent person matters related to

- Making a complaint, or
- Raising concerns on the conduct of the project, or
- The University policy on research involving human participants, or
- Your rights as a participant

Contact the **Human Research Ethics Committee's Secretary** on phone **(08) 8303 6028**.

Appendix 4.1 Coastal Zone Categories for Development Plans

Source: Department of Environment Water and Natural Resources (2013, pp. 22-23).

Coastal zone	When to use
<p>Coastal Conservation Zone</p> <p>This zone includes undeveloped and natural parts of the coast that include sensitive coastal features and land subject to coastal processes. The role of this zone is to safeguard areas of environmental significance on the coast and to protect development from coastal hazards, such as flooding, erosion and acid sulfate soils.</p>	<p>This zone should be selected where the land includes:</p> <ul style="list-style-type: none"> • coastal features and habitats that are sensitive to the direct impacts of development (including coastal dunes and cliffs, coastal wetlands, saltmarsh and mangrove areas) • important coastal geological features or other natural features of scientific, educational, heritage or cultural importance (including coastal cliffs) • buffer areas separating development from sensitive coastal and marine features and habitats • coastal landscapes of high scenic quality • areas exposed to coastal hazards (including flooding, erosion, acid sulfate soils and sand dune drift) where there are not adequate provisions to mitigate the hazard (such as a managed seawall or levee bank) or any strategies to provide future protection. <p>The zone boundary should include land that allows for the retreat of the coastline where this is anticipated.</p>
<p>Coastal Settlement Zone</p> <p>This zone primarily accommodates existing dwellings or shack areas that are located on the coast and which are to be retained. The zone prevents the further division of land or the creation of new dwellings, but permits alterations and additions to the shacks.</p>	<p>This zone should be selected where the land contains:</p> <ul style="list-style-type: none"> • dwellings or shacks that are exposed to coastal hazards (such as seawater flooding or erosion) where there are neither adequate provisions to resolve the deficiency (such as a council-managed seawall or levee bank) nor any strategies to protect development • coast protection measures such as erosion buffer areas, seawalls and levee banks located to the front of a settlement area. <p>Note: If coastal hazards are adequately addressed, a non-coastal zone such as a Settlement Zone or similar may be appropriate over the land containing the dwellings or shacks (perhaps with the inclusion of required minimum site and floor levels or setback requirements).</p>
<p>Coastal Open Space Zone</p> <p>This zone accommodates areas located on the coast of a settlement, town or urban area that are subject to coastal processes and that do not have a high conservation value. The zone has</p>	<p>This zone should be selected where the land includes areas located in front of a settlement or town that include:</p> <ul style="list-style-type: none"> • coastal features such as dunes that are not of

<p>been designed to facilitate low-scale development that strengthens the recreational value of these coastal areas. Public access and recreational facilities such as jetties, boardwalks, and boating facilities may be appropriate in the zone. Public amenities, shelters and landscaped areas for passive recreation are also envisaged. Coast protection works designed to protect inland development from coastal hazards are anticipated in appropriate locations and should be designed to support the recreational and amenity value of the area.</p>	<p>high conservation significance</p> <ul style="list-style-type: none"> • coast protection measures such as erosion buffer areas, seawalls and levee banks • land subject to coastal hazards (such as seawater flooding or erosion) where there are neither adequate provisions to resolve the deficiency (such as a council-managed seawall or levee bank) nor any strategies to protect development.
<p>Aquaculture Zone (and Coastal Policy Area)</p> <p>This zone applies where aquaculture development has been developed, or is proposed to be developed. The zone has been prepared to accommodate the on-land services that support off-shore aquaculture as well as on-land aquaculture facilities (e.g. hatcheries and grow-out facilities). If coastal hazards are present in this zone that cannot be easily addressed through policy, a Coastal Policy Area should also be included to ensure development applications are referred to the Coast Protection Board. (If the risk can be addressed through floor and site levels, referrals to the Board may not be required and therefore a Coastal Policy Area would not be required.)</p>	<p>This zone should be selected where the land includes areas developed for aquaculture, or proposed to be developed for aquaculture.</p> <p>Note: The Coastal Policy Area should also be selected where the land includes areas developed for aquaculture, or proposed to be developed for aquaculture, that are exposed to coastal hazards (such as seawater flooding or erosion) where there are no provisions to resolve the deficiency (such as a council-managed seawall or levee bank) or strategies to protect development.</p>
<p>Coastal Marina Zone</p> <p>This zone accommodates the development of a marina, The zone anticipates infrastructure such as moorings, boat launching facilities, revetment walls etc. These should be incorporated into the zone to ensure appropriate referrals to the Coast Protection Board are in place. Abutting land uses, such as housing, industry and commercial development, where the coastal hazards are adequately addressed (e.g. by protection works or by the inclusion of required minimum site and floor levels or setback requirements) should be located in non-coastal zones.</p>	<p>This zone should be selected where the land includes coast protection works, marina waterways and berths, pontoons, jetties, piers, slipways and boat ramps.</p> <p>Note: Non-coastal zones (containing residential, commercial and other development) may be appropriate landward of the above features where the coastal hazards are adequately addressed.</p>