The Legal and Regulatory Framework for Integrated Coastal Zone Management: A Comparison between Australia and China

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Rapid development on Australia and China's coasts has exacerbated coastal ecosystem degradation and environmental deterioration, which has placed pressure on their coastal zone management. Integrated coastal zone management (ICZM) has been adopted as a promising mechanism to achieve sustainable coastal development. Both Australia and China have an ongoing capability to share their management experience and research outcomes on ICZM. As their research enthusiasm and investments on coasts bear fruit, there is much to learn from each other.

This research aimed to explain the contemporary legal and regulatory frameworks for ICZM in Australia and China, to evaluate the effectiveness of the frameworks from coastal stakeholders' perspectives and to put forward potential recommendations to improve the frameworks for ICZM. In order to fulfil these research objectives, this research used semi-structured interviews, questionnaire surveys, case inspections, contemporary legal and regulatory documents, academic and government publications and other data collected from fieldwork to achieve research "triangulation". This research analysed valid and verified views of 52 stakeholders from governments, academia, business, non-governmental organizations and the public. Their professional and personal experience in coastal zone management forms the legal and regulatory framework for ICZM, including legislation and regulations, government administration, judicial performance and public participation. Fieldwork conducted in Australia and China with focus on two intensive coastal developments, the Rose Bay Marina in Sydney, Australia, and the Celebration City Marina in Qingdao, China, provided in-depth understanding into how and why stakeholders evaluated the effectiveness of the legal and regulatory frameworks for ICZM.

The comparison between Australia and China facilitated this research to gain a broader insight, a greater awareness and a deeper understanding of coastal management issues in different national contexts. The contributions were demonstrated in terms of respondents' understanding of ICZM, coastal legislation and regulations, government administration on coasts, judicial performance in coastal disputes and public participation in coastal management. The detailed results were demonstrated and discussed through a comparative approach between Australia and China, and thus a useful synthesis of lessons and experience for achieving ICZM was provided to Australia, China and other coastal countries. Although it is not possible to give a unified mechanism for successful ICZM and not wise to simply transfer one country's experience to another, the findings in this research should be a source of inspiration for coastal managers as they consider measures propitious for their own national or regional contexts.

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The Legal and Regulatory Framework for Integrated Coastal Zone Management: A Comparison between Australia and China

Shengnan Chen

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

School of Physical, Environmental and Mathematical Sciences

University of New South Wales, Canberra

November 2014

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Abstract

Rapid development on Australia and China‘s coasts has exacerbated coastal ecosystem degradation and environmental deterioration, which has placed pressure on their coastal zone management. Integrated coastal zone management (ICZM) has been adopted as a promising mechanism to achieve sustainable coastal development. Both Australia and China have an ongoing capability to share their management experience and research outcomes on ICZM. As their research enthusiasm and investments on coasts bear fruit, there is much to learn from each other.

This research aimed to explain the contemporary legal and regulatory frameworks for ICZM in Australia and China, to evaluate the effectiveness of the frameworks from coastal stakeholders‘ perspectives and to put forward potential recommendations to improve the frameworks for ICZM. In order to fulfil these research objectives, this research used semi-structured interviews, questionnaire surveys, case inspections, contemporary legal and regulatory documents, academic and government publications and other data collected from fieldwork to achieve research ―triangulation”. This research analysed valid and verified views of 52 stakeholders from governments, academia, business, non-governmental organisations and the public. Their professional and personal experience in coastal zone management formed the legal and regulatory framework for ICZM, including legislation and regulations, government administration, judicial performance and public participation. Fieldwork conducted in Australia and China with focus on two intensive coastal developments, the Rose Bay Marina in Sydney, Australia, and the Celebration City Marina in Qingdao, China, provided in-depth understanding into how and why stakeholders evaluated the effectiveness of the legal and regulatory frameworks for ICZM.

The comparison between Australia and China facilitated this research to gain a broader insight, a greater awareness and a deeper understanding of coastal management issues in different national contexts. The contributions were demonstrated in terms of respondents‘ understanding of ICZM, coastal legislation and regulations, government administration on coasts, judicial performance in coastal disputes and public

participation in coastal management. The detailed results were demonstrated and discussed through a comparative approach between Australia and China, and thus a useful synthesis of lessons and experience for achieving ICZM was provided to Australia, China and other coastal countries. Although it is not possible to give a unified mechanism for successful ICZM and not wise to simply transfer one country‘s experience to another, the findings in this research should be a source of inspiration for coastal managers as they consider measures propitious for their own national or regional contexts.

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Abbreviations

BEZ	Blue Economic Zone
CCG	China Coast Guard
CCM	Celebration City Marina
CCP	Chinese Communist Party
COAG	Council of Australian Governments
DA	development application
EDO	Environmental Defender‘s Office
EIA	environmental impact assessment
EIS	environmental impact statement
ENGO	environmental non-governmental organisation
EPA	Environment Protection Authority
EPB	environmental protection bureau
EPBC	Environment Protection and Biodiversity Conservation
EP&A	Environmental Planning and Assessment
EP(IP)	Environment Protection (Impact of Proposals)
GBRMP	Great Barrier Reef Marine Park
GDP	gross domestic productivity
GNGO	governmental non-governmental organisation
ICAM	integrated coastal area management
ICM	integrated coastal management / integrated catchment management
ICOM	integrated coastal and ocean management
ICZM	integrated coastal zone management

INRM	integrated natural resource management
LEC	Land and Environment Court
MLG	multi-level governance
MLR	Ministry of Land and Resources
NGO	non-governmental organisation
NOC	National Oceanic Council
NPC	National People‘s Congress
NRMMC	Natural Resource Management Ministerial Council
NSW	New South Wales
PRC	People‘s Republic of China
QCCI	Qingdao City Construction and Investment
RAC	Resource Assessment Commission
RBM	Rose Bay Marina
SCCG	Sydney Coastal Councils Group
SEA	strategic environmental assessment
SEWPaC	Sustainability, Environment, Water, Population and Communities
SOA	State Oceanic Administration
SPSS	Statistical Package for the Social Sciences
USA	United States of America

Publications

Published papers:

1. Mei, H., Pearson, S. &**Chen, S.**, 2013. Judicial experience in environmental protection: An interview with the Chief Judge of the Land and Environment Court of New South Wales, Australia, *China Environment Law Review*, 9, 87-101.

2. **Chen, S.** & Pearson, S., 2015. Managing China's coastal environment: Using a legal and regulatory perspective, *International Journal of Environmental Science and Development*, 6(3), 225-230, doi: 10.7763/IJESD.2015.V6.595.

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3. **Chen, S.**, Pearson, S. & Wang, X.H., Blue economic zone construction in Shandong peninsula, Sino-Australian Research Centre for Coastal Management Workshop: Marine Industries and Economics in China and Australia - An Overview, Canberra, 14 November 2011.

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7. **Chen, S.**, Pearson, S. & Wang, X.H., The impacts of coastal developments on biodiversity: Strategic assessment of the marina construction in Australia, 3rd World Conference on Marine Biodiversity, Qingdao, 12-16 September 2014.

Chapter 1
Introduction

1.1 Research background

Australia and China both have long coastlines and extensive coastal zones. The Australian coastline is about 60,000 km (including the mainland and the islands) (Geoscience Australia, 2010; Short & Woodroffe, 2009) and China‘s coastline is around 32,000 km (including the mainland and the islands), stretching across tropical, subtropical and temperate zones (Li, 2011; Qin *et al.*, 2008). About 81% of the Australian population lives within 50 km of the coast and the coastal zone is one of the fastestgrowingareas in Australia in terms of population (Productivity Commission, 2011). In China, around 60% of the population live in the 12 coastal provinces (Hinrichsen, 1998). More than 70% of China‘s large cities are located in coastal areas and coastal development contributes over 55% to the national gross domestic product (GDP) (Wang 1992). However, the rapid population growth, increased economic development and natural disturbances have all exacerbated coastal ecosystem degradation and environmental deterioration, threatening sustainable coastal development both in Australia and China(Cao & Wong, 2007;NRMMC, 2006; SoE2011C, 2011; Wang *et al.*, 2011a; Wu *et al.*, 2012). The social, economic and environmental importance of the coastal zone and the increasing pressure on it calls for a better understanding of the conflicts and requires governments to improve their coastal management.

Integrated coastal zone management (ICZM) was a part of a global spring tide of integrated approaches in natural resource management (Wang *et al.*, 2011a). It traces back at least four decades, with Australia being one of its pioneers (Sorensen, 1997). Kay and Alder (2005 p. 13) predict that there will be an ~~in~~integrated suite of theories and tools applicable with confidence over all scales, timeframes, locations and issues”. ICZM proposes stakeholder participation, involves interdisciplinary cooperation and attempts to balance the economic, social and environmental pressures on coasts (Cicin-Sain, 1993; Kenchington & Crawford, 1993; NRCCM, 2006; Sorensen, 1993; Sorensen,

1997). It aims to achieve sustainable coastal development (Cicin-Sain & Knecht, 1998; Harvey & Caton, 2010; Lau, 2005) and is underpinned by a complex framework of laws and regulations (Dirhamsyah, 2006; Gates & Cox, 2012; Haward, 1996b; Rothwell, 1996).

Currently Australian and Chinese governments both accept ICZM as their coastal management mechanism (Pearson *et al.*, 2011; Wang *et al.*, 2011a). In Australia, from 1991 to 1993, the Resource Assessment Commission (RAC) conducted an inquiry into the development and management of Australia‘s coastal zone and recognised the lack of integration as a major shortcoming of coastal zone management (Thom & Harvey, 2000). In 2006, the Australian Federal Government published the National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan (NRCCM, 2006) and it aimed to use ICZM to maintain, restore and improve Australian coastal zone management, and also to achieve the sustainability of economic, social and environmental development on Australian coasts. The New South Wales (NSW) Government promulgated the *Coastal Protection Act 1979* which made provisions for a ministerial direction for coastal protection (Farrier & Stein, 2011). The major aims of the *NSW Coastal Policy 1997* include better integration of government agencies and the community in coastal planning and management.

In the past the Chinese government, in order to achieve more sustainable coastal development, implemented integrated management at local levels, in places such as Xiamen, Quanzhou, Shanghai and Shandong (Bin *et al.*, 2009; Peng *et al.*, 2006; Shi *et al.*, 2004; Thia-Eng *et al.*, 1997; Wu *et al.*, 2012). Although there is no national law specifically for coastal zone management, China has a series of comprehensive laws and regulations at national and local levels to regulate coastal activities. Key legislation and regulations which strengthen integration in coastal zone management are the *Marine Environment Protection Law of the People’s Republic of China (PRC)* (1982), the *Law of the PRC on the Administration of the Use of Sea Areas* (2001) and the *Law of the PRC on the Protection of Offshore Islands* (2009) (Cao & Wong, 2007; Wu *et al.*, 2012). In 2011, the establishment of Shandong Peninsula Blue Economic Zone (BEZ), Zhejiang Marine Economic Development Model Zone and Guangdong Marine Economic Development Pilot Zone embodied the integrated management mechanism for coastal provinces (Lv *et al.*, 2011).

In both Australia and China, numerous publications explain or discuss the concepts, history, achievements and lessons of ICZM (Dovers, 2002; Kenchington & Crawford, 1993; Lau, 2005). Some of these take regional or local cases as research subjects. In Australia, some studies focus on the evaluation of ICZM using social and economic indicators (Bowen & Riley, 2003; Ehler, 2003) and some deal with the institutional or legislative framework for coastal management (Haward, 1996; Lazarow *et al.*, 2006; Rothwell, 1996). Based on the previous research undertaken in Australia and China and the importance of the legal and regulatory framework for ICZM, an evaluation of ICZM from the perspective of its legal and regulatory framework is timely (Wang *et al.*, 2011a; Fan& Côté, 1990).

1.2 Research questions and research design

As set out above, this research compares the Australian and Chinese legal and regulatory frameworks for ICZM and it aims to answer the following questions:

- What are the contemporary legal and regulatory frameworks for ICZM in Australia and China?
- How and why do the frameworks work effectively or ineffectively?
- How can the legal and regulatory frameworks for ICZM be improved?

Previous environmental research used a cross-cultural and cross-national comparative approach (Jacob & Volkery, 2004; Pollnac & Christie, 2009; Portman *et al.*, 2012; Razzaque, 2013; Yabar *et al.*, 2012; Yang *et al.*, 2013). This enabled the research to gain a broader insight, a greater awareness and a deeper understanding of coastal management issues in the two different national contexts (Bryman, 2008).

This research draws on semi-structured interviews, questionnaire surveys, case inspections, legal and regulatory documents, academic and government publications and other data from fieldwork to achieve a measure of research ~~"tr~~iangulation". The triangulation with various sources of data helps to cross-check the validity of data collected and to verify the reliability of research design (Bryman, 2008; McNeill & Chapman, 2005). Interviews with 52 respondents of key coastal stakeholders from

governments, academia, business, non-governmental organisations (NGOs) and local communities were conducted. All the respondents have professional backgrounds or personal experience in coastal zone management and so their opinions are directly relevant to the achievement of ICZM. Additionally, the diversity of their backgrounds provides the research with several insightful angles on coastal issues.

Case studies, particularly those used in natural resource management research, are in-depth empirical investigations of contemporary phenomena within realistic contexts and they rely on multiple sources of data, used in a triangulating fashion, to allow researchers to retain the holistic and meaningful characteristics of realistic events and to expand and generalise these into new or existing theories (Denzin & Lincoln, 2003; Yin, 2009). Thus the case study is an approach to illustrate more general issues in the realities of natural resource management and complexity of the research (Eisenhardt, 1989; Somekh & Lewin, 2011). George and Bennett (2004) review the theories and practices raised by various schools that use case studies. They propose that case studies have great value in achieving high conceptual validity, fostering new hypotheses and closely examining hypotheses in specific contexts. In this research, study areas were initiated by two marina cases (Rose Bay Marina (RBM) in Australia and Celebration City Marina (CCM) in China) and they are organised in a nested hierarchy that includes marinas, surrounding regions, local jurisdictions, state/provincial jurisdictions and national jurisdictions (Table 4.1). These marina cases and study areas provide this research with realistic contexts, so that the researcher and respondents can identify their truths with boundaries provided by shared contexts. It is important to explain how this research draws on previous case studies of coastal zone management and why the two marina cases are essential foundation to research that makes a contribution to understanding the operation of legal and regulatory frameworks as they are applied in Australia and China.

Previous research on coastal management has approached issues through case studies. Table 1.1 summarizes some recent examples of case studies for coastal zone management. These case-study examples highlight the importance of geographical and social contexts that ensure the validity of research hypotheses, outcomes and impacts. Some use study areas placed within a nested hierarchy as this research does. Their selection of study areas is often initiated to understand by a small coastal region, a

specific coastal development or a particular coastal program then extends that understanding to surrounding regions and jurisdictions (Marschke & Nong, 2003; McCreary et al., 2001; Mcfadden, 2008; Powell et al., 2009;Rockloff&Lockie, 2004; Ye *et al.*, 2013). Both their case selection criteria and procedures support the rationale for research using case studies in marine and coastal management and for marina case studies and study area selections in this research.

Table 1.1 Recent examples of case studies for coastal zone management.

Study	**Description of cases**	**Research problem**	**Data sources**
McCreary *et al.* (2001)	Fish habit on the Guadalupe River and its bay-delta	Consensus-based agreements for ICZM	Interviews Documents Observation
Caffyn & Jobbins (2003)	Restinga-Smir and Tunisia (local sites in Morocco and Tunisia)	Governance capacity and stakeholder interactions in costal tourism	Interviews Pilot survey Documents Observation
Marschke & Nong (2003)	Peam Krasaop Wildlife Sanctuary; Koh Kong province; Cambodia	Adaptive co-management on the coastal zone	Documents Observation
Rockloff & Lockie (2004)	Port Curtis (catchment)	Participatory tools for coastal zone management	Interviews Documents
Mcfadden (2008)	Corton Village; London; Thames Estuary	Challenges of ICZM and integration from geographical thought	Interviews Documents Observation
Powell *et al.* (2009)	Hikkaduwa and its associated marine protected areas	Governance and institutional barriers to ICZM	Workshops Documents Observation
Niven & Bardsley (2013)	South Coast of Fleurieu Peninsula (Byron Shire Council)	Adaptation responses to vulnerable coastal systems	Interviews Documents
Ye *et al.* (2013)	Yudang Lagoon, Xiamen City	The role of ICZM in environmental restoration	Documents Observation
Stepanova (2014)	Two municipalities; One wind power conflict; One settlement conflict	Coastal development and multidimensional conflicts	Interviews Group interviews Documents

Marinas are used for the first time in this research as case studies to surface and evaluate research issues in coastal zone management. A marina is a small harbour or dock with

berths and moorings in waters and maintenance facilities on attached lands. They are readily observed and have a specific location on the coastal zone, occupying both coastal land and waters.

Both RBM and CCB are coastal developments that transfer public resources to private use through highly intensive interventions and investments. They represent one of the most dramatic transformations on the coastal zone. As constructed developments they have development proponents, consent and determining processes and legal accountabilities that are detectable in time and jurisdictions. The application process must obey laws and regulations and the legal procedure set by them. In the application process, governments and courts as the practitioners of laws play great roles. The legal documents for development application, government determination and court jurisdiction are most accessible when the relevant debates are at their decision-point. Coastal stakeholders interviewed in this research could access their conceptual and fresh ideas using the marinas as case studies to explore legal and regulatory frameworks.

Both RBM and CCM were newly proposed marinas in the process of development application at the time of this research. Compared with the design and operation processes, the application process is more intense. During application, the legally framed decision-making process requires disclosure and publication. Also, in the application process of marinas, the legal and regulatory framework and its performance are easily accessible from documents and from people engaged in the specific proposal. At other times the issues of ICZM may lack saliency. Selecting case studies that have a clear window provided by laws gives this research a golden opportunity to identify accurately the contemporary problems in coastal zone management and to collect contextually focused opinions from stakeholders involved in the application process. Marina cases in this research are sources of high quality evidence, clear stakeholder engagement and considered responses to decision-making dilemmas in coastal zone management.

In this research, RBM and CCM help to determine an axis of analysis that stretches from Woollahra, NSW to Australia, and from Qingdao, Shandong to China. Both RBM and CCM involve jurisdictions and stakeholders at different levels, so it is rational to investigate this axis to identify and understand the context and the in-depth analysis of

management problems behind the cases. The importance of multi-level investigations initiated by case studies has been widely accepted and practiced in previous research (Marschke & Nong, 2003; McCreary *et al.*, 2001; Mcfadden, 2008; Powell et al., 2009; Rockloff & Lockie, 2004). This axis for multi-level investigation also corresponds to the vertical integration in ICZM. At the horizontal dimension, RBM and CCM assist in: recognising social, economic and environmental sectors on the coastal zone; identifying regulations and institutions related to coastal zone management; and pinpointing coastal stakeholders. RBM and CCM set contexts with naturally shared borders for sharing knowledge and provide a focus that can generate considered responses from coastal stakeholders in Australia and China. Without these two marinas, this research could be too broadly scoped to advance the knowledge in this field. Practically these two marinas enable the discussions with respondents that would be otherwise stilted or abstract. With these two marinas, this research has greater legitimacy, as it is able to study the relevant legal and regulatory framework for ICZM as they are experienced by coastal stakeholders.

1.3 Thesis structure

The thesis is structured as introduction, literature review, background, methodology, results, discussion and conclusions:

Chapter 2 provides the necessary review of literature in: concepts and history of ICZM, multi-level governance, public participation and role of culture and political systems. This review aims to help readers make more sense of the research findings.

Chapter 3 briefly reviews the legal and regulatory framework for ICZM, explains the importance of the legal and regulatory framework to ICZM and demonstrates the political and legal systems in Australia and China. It introduces the significant laws, regulations, institutions and programs on ICZM in Australia and China. They are the key components of a legal and regulatory framework found in previous studies and are also important background for readers.

Chapter 4 explains the research methods: the comparative design with paired study areas; research approaches that sought to collect and verify sources using triangulation

that combined qualitative and quantitative methods; and data analysis methods in both qualitative and quantitative manners. This chapter describes the design, development and conduct of this research in order to provide useable results.

Chapter 5 describes the research results based on five themes:

- Theme 1 – respondents‘ understanding of ICZM,
- Theme 2 –laws and regulations related to coastal zone management,
- Theme 3 – government performance in ICZM,
- Theme 4 – judicial performance in coastal disputes, and
- Theme 5 – public participation in coastal zone management.

The last four of these themes are major components in the legal and regulatory framework discovered in this research. This research shows the findings in a comparative approach with charts, tables and quotes.

Chapter 6 discusses the major research results. It draws eight discussion items from the five themes of results. These discussion items are critical consideration of the research findings.They are:

- Item 1 – regional ICZM programs and national mechanisms,
- Item 2 – coastal laws and regulations,
- Item 3 – planning systems for coastal zone management,
- Item 4 – better integration in governments for ICZM,
- Item 5 – other influential factors in coastal governance,
- Item 6 – institutional arrangements for coastal zone management,
- Item 7 – environmental courts, and
- Item 8 – public participation in coastal zone management.

Chapter 7 summarises the major findings of this research and tries to provide recommendations to Australia and China for their legal and regulatory frameworks for ICZM in the future.

Chapter 2
Literature Review

2.0 Introduction

According to Sorensen's (1997) review, ICZM was already global practice in 90 coastal nations and semi-sovereign states. He traced it back to the 1970s, with the United Nations Regional Seas Program, United States of America (USA) and Australia as its pioneers.

In 1972, the United Nations Environment Program initiated the Regional Seas Program which recommended international institutions and national governments focus on the principles of integration (Kenchington & Crawford, 1993; Sorensen, 1997). The United States *Coastal Zone Management Act 1972* laid the foundation for coastal management and set the pattern for many nations to embrace ICZM (Kay & Alder, 2005). Also in 1972, the United Nations Stockholm Declaration encouraged the participating states to adopt an integrated approach to their resource management to ensure ecologically sustainable development (Kenchington & Crawford, 1993). In 1982, the *United Nations Convention on the Law of the Sea* covered the world's maritime zones and established the boundaries for ocean and coastal management (Kaye, 2001; Rothwell, 1996).

After the 1992 United Nations Conference on Environment and Development in Rio de Janeiro the focus on coastal zone management developed into ICZM (Cicin-Sain *et al.*, 2000; Cicin-Sain *et al.*, 1995). Section 17.5 of the *1992 United Nations Rio Declaration on Environment and Development* (known as Agenda 21) (UNSD, 1992) states, "Coastal States commit themselves into integrated management and sustainable development of coastal areas and marine environment under their national jurisdiction. To this end, it is necessary to, inter alia: a. provide for an integrated policy and decision-making process, including all involved sectors, to promote compatibility and a balance of uses; …"

The integrated approach to coastal zone management has evolved to focus on the coastal governance of the entire ecosystem, including human activities (Juda, 2003;

Juda, 2006; Pollnac & Christie, 2009), and on strengthening the objectives of sustainable development by considering social development, economic growth and environmental protection (Krelling *et al.*, 2008). Both social and physical science researchers (Harvey & Caton, 2010; Haward, 1996; Lazarow *et al.*, 2006; Rothwell, 1996; Wang *et al.*, 2011a; Wescott, 2009) consider a more reliable and effective legal and regulatory framework essential for the implementation of ICZM and the achievement of sustainable coastal development

2.1 Integrated coastal zone management

In the existing literature for coastal zone management, integrated coastal management (ICM), integrated catchment management (ICM), integrated coastal area management (ICAM) and integrated coastal and ocean management (ICOM) are used interchangeably. This thesis adopts ICZM and will explain this concept in detail.

2.1.1 Management

Ehler and Basta (1993 p. 7) define management as ―a set of related activities carried out to achieve desired objectives". Kay and Alder (2005 p. 77) interpret coastal management ―to mean directing the day-to-day activities occurring on coastal lands and waters, or it could be used to mean the overall control of the organisations that oversee these day-to-day activities". The former interpretation refers to ―strategic management" which sets broad objectives for management and focuses on the long-term performance of the organisations; the latter refers to ―operational management" which provides detailed objectives and gives a step-by-step description for controlling on-the-ground actions (Kay & Alder, 2005). These two interpretations also suggest the differences between coastal management (a broader concept which focuses on the strategic level) and coastal planning (a more specific process to make guidelines for decision-making in the near future) (Sorensen, 1997).

As for ICZM, management is a process of coastal governance which includes administrative planning and regulation in compliance with international and domestic legislation, environmental stewardship with economic growth and social development,

and shared responsibilities among coastal stakeholders (Bammer, 2005; Cicin-Sain & Knecht, 1998; Dovers, 2002).

2.1.2 Coastal zone

The coastal zone is a geographical entity covering both terrestrial and submerged areas along the coastline (Short & Woodroffe, 2009). The natural processes of the terrestrial and marine environments and the human activities, such as population growth, economic development and environmental pollution, have influences on the coastal zone (Cullinan, 2006).

The coastal zone in general is the interface where the land meets the ocean. The movement of the coastline creates the coastal zone naturally. The rise and fall of tides, passing of storms and many other natural processes cause the constant moving of coastlines, and the coastal area which witnesses this interaction between oceanic and terrestrial processes is normally the coastal zone (Hildebrand & Norrena, 1992; Kay & Alder, 1999). In the scientific definitions, Kay and Alder (1999 p. 3) delimit the coastal zone [area] to:

- contain both land and ocean components;
- have land and ocean boundaries that are determined by the degree of influence of the land on the ocean and the ocean on the land; and
- [not have] uniform width, depth, or height.

Coastal managers commonly define the coastal zone for jurisdictional boundaries or particular management programs (Kay & Alder, 2005) and there is no unified definition globally or in one country (Kay & Alder, 1999; Lu & Ai, 2001). According to section 304 of the US *Coastal Zone Management Act* of 1972, the coastal zone ~~"~~means the coastal waters (including the lands therein and thereunder) and the adjacent shore lands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes islands, transitional and intertidal areas, salt marshes, wetlands, and beaches". It includes the inland from the shorelines necessary to control shore lands and excludes the lands solely for the discretion of officers or held in trust by the United States Federal Government.

In Australia, the 1993 RAC Coastal Zone Inquiry defines the coastal zone from the perspective of particular management objectives. Towards the ocean side, the coastal zone extends to be the Australian Fishing Zone which is 200 nautical miles away from the low-water mark. Towards the land side, the coastal zone in one way extends to administrative boundaries taking the local jurisdictions abutting coasts as the extent for examining human influences, and in another extends to drainage basins abutting coasts for the description of physical and biological resources (RAC, 1993b). According to the RAC definition, the Australian coastal zone covers a marine area larger than the Australian land mass and accounts for about 17% of the land area of Australia, 1993a). In NSW, the *Coastal Protection Act 1979* defines the boundaries of the coastal zone. In general, it extends (Farrier & Stein, 2011 p. 575):

- one kilometre inland from the coast,
- one kilometre landward around any bay, estuary, coastal lake, lagoon, and
- one kilometre along either bank of a coastal river.

According to the Countrywide Comprehensive Investigations of the Coastal Zone and Tidal Land Resources, the coastal zone extends 10 km landward from the shoreline and to the fathom curve of 15 m seaward (Li, 2011). In Qingdao City, the coastal zone to the ocean side extends to the shoreline to the 10 m equidistant line; to the land side it extends to the first road, according to the *Regulations on Coastal Zone Planning and Management of Qingdao City* (1995).

Coastal zone management needs a coherent definition (Williams *et al.*, 2006), but currently particular administrative boundaries, physical features and management issues define the coastal zone and there are no universal criteria for the scope of the coastal zone (Kay & Alder, 1999). This comparative study does not apply precise boundaries of the coastal zone to Australia or China. It adopts the broad definition that a coastal zone is the interface between the land and sea (Harvey & Caton, 2010; Kay & Alder, 2005; Li, 2011; Lu & Ai, 2001; Short & Woodroffe, 2009).

2.1.3 Integration

Integration is the way to form a complete, harmonious or ordinated entity (Gove, 1993; Kenchington & Crawford, 1993; Lorrae & Bammer, 2010). Kenchington and Crawford

(1993) try to distinguish the concept of integration from coordination. They explain that integration stresses the unification of subordinate components and coordination emphasises independent components working to a common purpose. According to Lorrae and Bammer (2010 p. 24), integration "implies bringing disparate things into something more whole". They propose that in the field of integrated research those "things" include but are not limited to multiple disciplines, problem-solution frames, organisational units, multiple sectors and resources (Lorrae & Bammer, 2010). Bammer (2005) puts forward six core dimensions of integrative practice and research, including integration for what and for whom, integration of what, the context in which the integration is occurring, integration by whom, how integration is being undertaken and the impact of integration. These "things" and "dimensions" enable integration to be a process that allows more factors to be considered, encourages more stakeholders to be involved, trade-offs to be more transparent and compromises to be more explicit.

Natural resource management broadly adopts integrated approaches. Many scholars have described the benefits of integration for natural resource management, including better understanding of complex systems, reduced conflicts over natural resource use in the long term, greater ability to enact effective policy and practice, and a better chance for sustainable development (Jacob & Volkery, 2004; Lafferty & Hovden, 2003; Portman, 2012; Read & West 2014). Past studies have also recognised the drawbacks of sectoral mechanisms on natural resource management; therefore, integration is a response to previous failures in sectoral management of natural resources (Biermann, 2009; Rothwell, 2011; Smith, 2011).

"Integration" in ICZM refers to an approach to achieving sustainable coastal zone management with comprehensive consideration of social, economic and environmental values of the dynamic coastal systems (Cicin-Sain & Knecht, 1998; Kenchington & Crawford, 1993; Sorensen, 1993). ICZM emphasises integration but there is also an acknowledgement on the extreme difficulty in achieving it (Coffey & Major, 2005). Previous research on the integration of coastal zone management suggests that further empirical and evaluative studies are needed to test the effectiveness of integration within particular national and institutional contexts (Anker *et al.*, 2004; Portman *et al.*, 2012; Wang *et al.*, 2011).

In the literature of ICZM, the word "integration" has the following five dimensions (Cicin-Sain & Belfiore, 2005; Cicin-Sain *et al.*, 2000; Cicin-Sain & Knecht, 1998; Haq *et al.*, 1997; Harvey & Caton, 2010; Sorensen, 1997):

- vertical (or intergovernmental) integration,
- horizontal (or intersectoral) integration,
- spatial integration,
- interdisciplinary integration, and
- international integration.

Vertical integration takes place among national, state/provincial and local governments which significantly influence coastal zone management (Harvey & Caton, 2010; Sorensen, 1997). Horizontal integration is "the integration among government agencies in different sectors, and among different marine and coastal sectors (industries, conservation, recreation, tourism, beach protection), and integration between coastal and marine sectors and land-based sectors" (Harvey & Caton, 2010 p. 6). Spatial integration refers to the integration across catchments, coasts and ocean (Cicin-Sain & Belfiore, 2005; Cicin-Sain & Knecht, 1998). Interdisciplinary integration is the integration among different disciplines, particularly between science and management (Haq *et al.*, 1997). International integration addresses cross-boundary management issues when needed (Cicin-Sain *et al.*, 2000). Reviewing the programs and research on ICZM, vertical and horizontal integration have been the most important characteristics of ICZM and also the substantial challenges to it (Cicin-Sain *et al.*, 1995; Sorensen, 1997; Wescott, 2009).

2.1.4 Integrated coastal zone management

In the history of ICZM since the 1970s (Sorensen, 1997), governmental organisations and researchers have put forward many definitions. Table 2.1 provides definitions of ICZM.

Table 2.1 Definitions of ICZM.

Sources	Definitions
The World Bank (Post & Lundin, 1996 p. 3)	"ICZM is a process of governance and consists of the legal and institutional framework necessary to ensure that development and management plans for coastal zones are integrated with environmental (including social) goals and are made with the participation of those affected. The purpose of ICZM is to maximize the benefits provided by the coastal zone and to minimize the conflicts and harmful effects of activities upon each other, on resources and on the environment".
United Nations Environmental Program (Brachya *et al.*, 1994 p. 16)	"ICAM [Integrated Coastal Area Management] is a continuous, proactive and adaptive process of resource management for environmentally sustainable development in coastal areas … ICAM is not a substitute for sectoral planning, but focuses on the linkages between sectoral activities to achieve more comprehensive goals".
Commonwealth of Australia (NRMMC, 2006 p. 7)	"The fundamental goal of ICZM is to maintain, restore or improve the quality of coastal ecosystems and the societies they support. A defining feature of ICZM is that it seeks to address both development and conservation needs within a geographically specific place – a single community, estuary or nation – and within a specified timeframe".
Sorensen (1997 p. 9)	ICZM is "the integrated planning and management of coastal resources and environments in a manner that is based on the physical, socioeconomic, and political interconnections both within and among the dynamic coastal systems, which when aggregated together, defines a coastal zone".
Cicin-Sain & Knecht (1998 p. 39)	"Integrated coastal management can be defined as a continuous and dynamic process by which decisions are made for the sustainable use, development, and protection of coastal and marine areas and resources".
Wu *et al.*(2012 p. 58)	"Integrated coastal zone management is such a concept that was proposed to manage the coastal zone using an integrated approach, regarding all aspects of the coastal zone, including geographical and political boundaries, to ensure sustainability. Compared with traditional coastal zone management, ICZM does not emphasize the needs of a single sector but takes a holistic view".

To summarise the above definitions, ICZM is one coastal management mechanism that allows all stakeholders to participate in efforts to balance economic, social and environmental pressures on coasts with the ultimate aim of achieving sustainable coastal development.

Coastal sustainability is the top priority for ICZM. The *Report of the United Nations World Commission of Environment and Development: Our Common Future* defines sustainable development as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987

p. 87). For coastal sustainability, the goals of ICZM are to achieve coastal development in a sustainable fashion, to improve the quality of coastal ecosystems, to maintain social stability on coasts and to reduce vulnerability to natural hazards (Cicin-Sain & Knecht, 1998).

Previous use of case studies to describe and evaluate ICZM in specific geographical and social contexts has made important contributions. For instance, Farhan and Lim (2013) have chosen Seribu Islands in Indonesia as a study area for vulnerability assessment according to the basic principles of ICZM. Vreugdenhil *et al.* (2012) focus on the Saldanha Bay project and investigate the pilot project diffusion and policy transition of ICZM in South Africa. In Shamsul Huda's (2004) research, the performance of a top-ranked coastal agency in ICZM programs is evaluated by drawing on case materials from five completed multi-sector projects led by the agency. In Australia and China, researchers have also widely adopted case studies for ICZM, such as in Jervis Bay (Dutton *et al.*, 1994), Gold Coast (Hunt *et al.*, 2007) and Murray Darling Basin (Bellamy *et al.*, 2002) in Australia, and in Chong Ming Island (Shi *et al.*, 2004), Yellow River Delta (Zhang *et al.*, 2011) and Yundang Lagoon (Ye *et al.*, 2013) in China. The transfer and uptake of good management practices in different cases are an important aspect of quality enhancement in ICZM (Chircop, 2000; Hill *et al.*, 2006). The rationale and foundations for the selection of marina cases and their surrounding regions in this research has been explained in the Introduction.

2.2 Multi-level governance

The concept of multi-level governance (MLG) emerged from political science where it is associated with globalisation, negotiation of multilateral agreements, proliferating jurisdictions, interrelations of state and non-state actors and challenges to state power (Bache & Flinders, 2004; Mwangi & Wardell, 2012; Zürn *et al.*, 2010). Multi-level governance is ―a set of general-purpose or functional jurisdictions that enjoy some degree of autonomy within a common governance arrangement and whose actors claim to engage in an enduring interaction in pursuit of a common good" (Mwangi & Wardell, 2012 p. 4). The term ―governance" denotes the sum of regulations such as policies,

programs and decisions, implies the public good in the name of a collective interest, encompasses the actors and processes that make up a collective course of action, and embraces structures that consist of stable institutional, socio-economic and ideational parameters (Zürn *et al.*, 2010). In order to review the literature of MLG, it is also necessary to clarify the terms ―scale" and ―level". Scale literally means ―relative size or extent" and it refers to spatial, temporal, quantitative and analytical dimensions for the measurement of any phenomenon. Level refers to a unit at a particular position on a scale (Mwangi & Wardell, 2012).

In natural resource management, early examples of MLG came from cases of integrated natural resource management (INRM) (Mwangi & Wardell, 2012). INRM is a complex process that occurs at a number of scales with multiple levels and involves various stakeholders, with each having their own objectives and perceptions (Campbell *et al.*, 2001). Kok and Veldkamp (2011) observe that a social-ecological system is essential to understanding scale and governance in natural resource management. Cash and Moser (2000) provide empirical evidence of cross-scale and cross-level interactions in managing the environment, and highlight the importance of scale and cross-scale dynamics in global environmental change.

After interviewing 55 representatives from each level of Australian governments, Lockwood *et al.* (2009) describe multi-level environmental governance in Australian natural resource management and its advantages and disadvantages. Advocates pointed out advantages including the capacity to integrate across social, environmental and economic issues, ability to establish appropriate power-sharing and partnership arrangements, and better conversion of planning products into on-ground outcomes. Opponents raised concerns regarding insufficient devolution of power, lack of downward accountability, exclusion of some stakeholders from decision-making, and inadequate vertical and horizontal integration (Lockwood *et al.*, 2009). Liu *et al.* (2012) do research on China‘s multi-level environmental governance in terms of the command-and-control regulations, centralised political system and mono-centric planning process. They point out that China‘s multi-level environmental governance lacks flexibility and feedback from stakeholders, and has weaknesses in the context of governing complex socio-ecological changes. They propose two alternative approaches to addressing these

weaknesses: one is decentralisation of the nation‘s planning regime, and the other is participative governance with greater public involvement (Liu *et al.*, 2012).

In the field of coastal zone management, MLG is frequently linked to ICZM (Dovers, 2002; Ehler, 2003; Glazewski & Haward, 2005; Kojima *et al.*, 2013; Lazarow, 2006; Tabet & Fanning, 2012; Taljaard *et al.*, 2012). The five dimensions of ICZM reviewed in Section 2.1.3 are ―scales" of coastal governance, while the national, state/provincial and local management for example are ―levels" on the scale of vertical integration. In Australia, the most famous investigation on coastal zone management was conducted by the Resource Assessment Commission (RAC) in 1993. Through this substantial coastal zone inquiry, Australian coastal states selected study areas to do in-depth investigations, such as the *Shires of Byron, Ballina and Maclean* in NSW,the Westernport region in Victoria, the Huon/Channel area in Tasmania and the Yorke Peninsula area in South Australia (RAC, 1993a; RAC, 1993b, RAC, 1993c; RAC, 1993d; RAC, 1993e). The inquiry is the result of a deliberative, interactive and collaborative approach between the Australian Federal Government, state governments and local authorities from the study areas. These study areas provide specific contexts to investigate the allocation and management of coastal zone resources in each state, particularly in relation to building, tourism, mariculture and associated development. As a result of the specific focus they present useful recommendations for ongoing coastal zone management.

Previous research has investigated the multi-level governance through many other cases. Farhan and Lim (2013) focus their research on Seribu Islands in Indonesia and conclude that inter-sectoral and inter-governance are key factors for successful ICZM in the region. Marschke and Nong (2003) conduct case studies on a protected area (Peam Krasaop Wildlife Sanctuary) and extend study areas to Koh Kong province and then Cambodia. They highlight that coastal management requires integration and multi-level governance across local communities, provincial jurisdictions and national jurisdictions. Powell *et al.* (2009) initiate their research from one coastal town (Hikkaduwa) and extend study areas to its associated marine protected area and then 12 local and national governmental agencies. They describe an effort to overcome the barriers to ICZM in Sri Lanka by fostering intergovernmental collaboration and initiating multi-level governance.

These are some examples of natural resource management research that have successfully focused on multi-level governance viewed with cases and surrounding areas. In this research, RBM and CCM are cases and they initiate the selection of study areas around them. Thus the vertical governance focuses on the regulations and governments from local to national levels; and the horizontal governance deals with the interrelationship of social, economic and environmental sectors, regulations and government agencies in the same government, and participation of stakeholders.

2.3 Public participation

Public participation in government decision-making is a process of power redistribution that facilitates individuals and groups to take an active role in making decisions that positively or negatively affect them (Arnstein, 1969; Enserink & Koppenjan, 2007; Reed, 2008). Effective public participation in the decision-making process contributes information that may otherwise not be available to decision-makers. It provides more complete and comprehensive information, produces more pragmatic and acceptable decisions through reflective deliberation, and may mitigate negative impacts before they occur (Edwards, 2001; Fischer, 2000; Zhao, 2010). Early public participation is beneficial to developers who can collect public opinions before they invest considerable time and money in the development design and application, and it promotes mutual understanding for achieving sustainable development and lifecycle management (Li *et al.*, 2012a; Varol *et al.*, 2011; Xie *et al.*, 2014). Public participation can also improve the quality and durability of government decisions (Beierle, 2002; Fischer, 2000), increase the rate of adoption and diffusion of new decisions among target groups, as well as enhance the capacity to meet local needs and priorities (Fogg, 1981; Martin & Sherington, 1997; McCleave *et al.*, 2003).

The most recent drive for public participation in government decision-making originated from western countries in the 1960s (Arnstein, 1969). In the 1970s, many developed countries, such as Australia, extensively advocated and gradually practised public participation as a mechanism for improving people‘s living environment by acknowledging and responding to their necessities and priorities (Sanoff, 2000; Xie *et*

al., 2014). Since the 1980s, public participation has become an integral aspect of democracy in most developed countries including the USA, European countries and Australia (Sanoff, 2000). The practice of public participation in major developed countries proves that it is an effective mechanism for improving communication among stakeholders, promoting sustainability of developments and enhancing collaborative governance (Enserink & Koppenjan, 2007; Sanoff, 2000; Varol *et al.*, 2011).

Developing countries have a comparatively short history of public participation in the western sense. China has only introduced public participation into the decision-making process since the 1980s and has gradually implemented it since the 1990s (Xie *et al.*, 2014). The "mass participation" advocated in China is different from the public participation in government decisions in the international discourse: "the former imposes an obligation on the people to cooperate with and support the government in the implementation of policies, plans or projects, while the latter emphasizes the rights of people to be informed, consulted and heard in the decision-making process" (Li *et al.*, 2012a, p. 48). International initiatives and assistance have played a part in the promotion of public participation in China, such as the environmental impact assessment training program funded by the Asia Development Bank in 1991 (Zhao, 2010). The effectiveness of public participation in developing countries remains a critical and debatable issue (Li *et al.*, 2012a; Li *et al.*, 2012b; Shan & Yai 2011; Yang, 2003).

2.3.1 The participative democracy approach to public participation

Public participation is a legislative requirement in the government decision-making process both in Australia and China. Traditionally, it takes place in a certain period in the process of decision-making through formal meetings or written submissions. In a participative democracy approach to public participation, "a broad range of interests are represented and participants are integrally involved throughout the planning processes, from initiation through decision implementation and monitoring" (Moote *et al.*, 1997 p. 877). Such an approach to public participation provides the public with an open and easy way to express their opinions to government authorities at any stage of decision making, implementation and evaluation. A participative democracy approach suggests that government decisions are more acceptable to the public if they are made through a

collaborative process with shared understanding and when all participants share responsibilities for the implementation of decisions (Milam & Heath, 2014; Polletta, 2013; Selin & Chavez, 1995). The participative democracy approach appears to improve decision-making and implementation by resolving conflicts throughout the process of natural resource management.

The continuous and two-way communication between the public and government authorities enhances information exchange and mutual learning. Unlike traditional public participation, a participative democracy approach is ―not a one-shot affair but a continuing network of interaction with others" (Bachrach & Botwinick, 1992 p. 211). It allows governments to respond in a timely manner and to continuously use public feedback in the decision-making process. The participative democracy approach contributes to the public's expression of concerns, correction of inappropriate decisions by government authorities and transfer of updated information between the public and government authorities (Chess & Purcell, 1999; Lyden *et al.*, 1990; Mackinson, 2011; Varol, 2011).

Previous studies on coastal zone management have looked into the participative democracy approach and proposed recommendations to public participation such as continuous participation and transparent information sharing (Mackinson *et al.*, 2011; Wescott, 2004; Zagonari, 2008). Dalton's (2006) research examines public participants' perceptions and tries to develop transparent and participatory processes for coastal and marine resource management. Rockloff and Lockie (2004) do research on the contribution of stakeholder analysis and social mapping to coastal management from their application in Port Curtis and its catchment. They conclude that stakeholder analysis and social mapping are successful participatory tools to document and feedback stakeholders' values. Elin (2000) identifies the participatory process as a key principle in capturing widespread knowledge through exploring five coastal projects in Kenya, Tanzania and Mozambique and conducting site visits and interviews in local communities. Trimble and Lázaro (2013; 2014) define criteria to evaluate participatory processes in coastal research and apply them in an artisanal fishery in coastal Uruguay. This fishery case provides the research with geographical contexts and boundaries for stakeholder selection. It can be seen from the published research that has a focus on particular cases and regions, the essence of a participative democracy approach could be

embedded in ICZM which itself stresses the wide involvement of participants and implies the continuous process of participation.

2.3.2 The role of ENGOs in decision-making

Environmental non-governmental organisations (ENGO) provide services to the public, complement governments in the provision of public goods and may challenge governments by demanding accountability and changes in administrative decisions (Carson, 2002; Lane & Morrison, 2006). In the past two decades, research shows that ENGOs have been active in natural resource management, environmental planning and administrative decision-making (Ho, 2001; Hsu & Hasmath, 2013; Jepson, 2005). The extent of their involvement in environmental management is increasingly widespread (Grano, 2012; Jepson, 2005; Lane & Morrison, 2006; Yang, 2005).

To be more specific, roles of ENGOs in decision-making include enforcing information disclosure requirements, guaranteeing public rights in environmental management, promoting public participation in decision-making and encouraging utilisation of legal instruments to protect public interest (Creighton, 2005; Fischer, 2000; Jepson, 2005; Kim & Jae Moon, 2003; Mathbor, 2008). Information disclosure is the premise for public participation in environmental management and the information needed includes the data from environment evaluations, such as the EIA, for project applications as well as the administrative information in the process of decision-making. ENGOs work with communities and media to expose misconduct and some ENGOs have expertise and equipment to collect first-hand information (Fu, 2011; Jepson, 2005; Plummer & Taylor, 2004; Sanoff, 2000). Building environmental capacity has been a traditional and continuous task of ENGOs, with the main goal being to keep people informed of environmental issues and to enable people to participate in environmental management (Lynam *et al.*, 2007; Mathbor, 2008; Plummer & Taylor, 2004).

The ENGOs‘ approaches to decision-making include but are not limited to institutionalised participation, community-based environmental planning, public-private partnerships and collaborative environmental management (Ribot, 2002). Many sectors of environmental management, such as land planning, ecosystem management, urban and regional development and water management, have used these approaches (De Freitas *et al.*, 2013; Duane, 1997; Reed, 2008; Varol *et al.*, 2011). In the field of coastal

zone management, ENGOs play an increasingly prominent role (Caffyn & Jobbins, 2003; De Freitas *et al.*, 2013; Mathbor, 2008; Wescott, 1998; Zagonari, 2008). ENGOs act as a bridge connecting coastal stakeholders such as communities, governments and business, and thus play a significant role in achieving integrated management on the coastal zone. In Australia, Coastcare is a pre-eminent example of an ENGO that harnesses public-private partnerships in coastal issues and promotes experimental knowledge, motivation and responsiveness of communities in order to reduce governmental intervention (Clarke, 2006; Harvey, 2001).

In China, government agencies, enterprises and individuals all have the chance to organise and sponsor NGOs. Government agencies set up governmental or government-organised NGOs (GNGO) (Chen & Uitto, 2007; Ho, 2001; Knup, 1997; Lo & Fryxell, 2005). There are two categories of ENGOs in China: grassroots NGOs sponsored by enterprises or individuals, and GNGOs sponsored by government agencies. The emergence of ENGOs in China has its roots in the failure of governments to perform certain duties on environmental issues and the failure of market mechanisms in environmental sustainability (Fu, 2011; Grano, 2012). Researchers (Cao & Wang, 2011; Grano, 2012; Hsu & Hasmath, 2013) observe that in China decision-makers widely accept ENGOs‘ recommendations, but recommendations usually encounter obstacles in acceptance and implementation if they are too intrusive. In the past 20 years, Chinese ENGOs have become more influential in their roles in public education, environmental decision-making and public interest litigation (Fu, 2011; Schwartz, J., 2004; Yang, 2005). Their performance and functions in the decision-making process are worthy of further evaluation. The research on NGOs and ENGOs with expertise in coastal issues appears to be a gap in the field.

2.4 The role of culture and political systems

Both culture and political systems play important roles in natural resource management. Their roles are worthy of consideration for this cross-cultural and cross-national research between Australia and China. A review of the role of culture and political

systems in natural resource management and particularly in coastal zone management will help readers make more sense of the results and discussion chapters in this thesis.

2.4.1 The role of culture

Different cultures influence people's perceptions and actions to "evaluate experiences, interpret observations, form judgments, make inferences, resolve problems, and make classifications" (Thompson, 2007 p. 213). Culture is an important element in differentiating management between the west and the east (Alyousif, 2010; Cong & Pang, 2009). Culture is a crucial matter for the successful exchange of experience between countries (Phal-Wostl, 2008). Unique historical, social, political and religious traditions all contribute to cultural traits in management. They affect social norms, government policies and decisions, and management practices (Alyousif, 2000; Pahl-Wostl *et al.*, 2008). Culture is also resilent through time as people continously adapt to the changes of social and environmental conditions (Head *et al.*, 2005). It is "a dynamic mix of symbols, beliefs, languages and practices that people create, not a fixed thing or entity governing humans" (Anderson & Gale, 1992 p.3).

Previous studies have investigated the role of culture in natural resource management, and analysed how culture influences human thoughts and behaviours. By considering the role of culture in natural resource management, the chance of effective management may increase due to: (i) a better comprehension of beliefs, values and knowledge which make sense to human behaviours (Satterfield *et al.*, 2013); (ii) a deeper understanding of the relationship between human activities and the environment (Chan *et al.*, 2012; Satterfield *et al.*, 2013); (iii) a successful exchange of information between managers and the target society (Thomas, 2001; Thomas, 2002); (iv) the exploration of more flexible management measures (Palmer, 2004); (v) the development of participative and adaptive management approaches (Stepherd, 2010); (vi) the adoption of more sustainable management rooted in cultural changes in society (Pahl-Wostl *et al.*, 2008; Wu, 1995); and (vii) a greater acceptance of the dynamics and transitions towards new management regimes (Head *et al.*, 2005).

Little research focuses on the role of culture in coastal zone management, but researchers (Costanza & Liu, 2014; Fogg, 1981; Gu & Wong 2008; Lau, 2003; Lau, 2005; Lazarow, 2006; Lieberthal, 1997; Wescott, 2009) have analysed cultural roles and

impacts more broadly on government performance, participative traditions and the decision-making process of coastal zone management. They take culture as a underlying element to interpret management practices on coasts. For instance, Lau (2005) says the relationship network (*guanxi* in Chinese) is an informal power structure with Chinese cultural features. He says that *guanxi* is decisive in Chinese political culture and that it plays a significant role in the decision-making processes in ICZM. Lazarow (2006) points out that a growing number of lobbyists seek to influence decision-makers through actions, events and actors external to existing policies, programs and institutional arrangements in the decision-making processes in ICZM. He interprets lobbyists‘ participation in decision-making as part of Australia‘s political culture.

Since culture has a role in a wide range of natural resource management practices, it is probably too general to discuss the role of culture without a specific context or a target issue. This research has findings relevant to cultural issues in coastal zone management and these will be discussed within a particular context and with a focus on specific coastal issues. In this research, it is the two marinas and their surrounding areas that provide the boundaries to create such a particular context to discusss specific culture issues in coastal zone mangement.

2.4.2 The role of political systems

The Commonwealth of Australia is a federal constitutional monarchy. Australia became an independent nation with the Australian Consitution on 1 January 1901. The Australian Constitution requires the separation of powers into the legislative, the executive and the judiciary. No one person or body in Australia exercises more than one power, and the separation of powers is strongly upheld (Carvan, 2005; Lovell, 1998). The Australian Constitution creates a federal system of government with three tiers: Commonwealth or federal, state and territory, and local governments. The essence of Australian federalism is the division of powers between the Federal Government and state governments(Carvan, 2005).

The Commonwealth has no legal standing to interfere with coastal issues under state authorities. It has no direct power over environmental matters within states, leaving the state governments in charge of the coastal environment (Farrier & Stein, 2011). State governments in Australia have powers and responsibilities over nearly all coastal

terrestrial areas and the offshore areas up to 3 nautical miles seawards, except areas such as waters for military use (Baird & Rothwell, 2011; Kaye, 2001; Rothwell, 1996). Australian federalism entrusts the states with great authority and independence in managing the coastal zone within their sovereignty. However, federalism brings challenges to achieving vertical integration among Australian governments (Harvey & Caton, 2010; Thom & Harvery, 2000; Wescott, 2009).

The *Constitution of the PRC* (1982) provides that the PRC is a socialist state under the people‘s democratic dictatorship and all power in China belongs to the Chinese people (article 2 of the Chinese Constitution). China‘s state organs (“organ” is *jigou* in Chinese and refers to government agencies; it is the official translation in the Constitution) apply the principle of democratic centralism (article 3). The National People‘s Congresses (NPC) and the local people‘s congresses at various levels are the organs through which the people exercise state power. All executive, judicial and procuratorial organs are created by people‘s congresses to which they are responsible and by which they are supervised (article 3). China‘s political system does not have separation of legislative, executive and judicial powers.

The Chinese government has five administrative levels (IOSCPRC, 2008): the central, provincial, municipal, county and township governments. This research takes the last four collectively as “local governments” in China. For ICZM, the power distribution in these five levels of governments focuses on the central-local relations in a top-down hierarchy. This is a reflection of the democratic centralism of China‘s political system, which allows for unrestrained discussion and ensures centralised leadership (Lau, 2003; Lieberthal, 1997). Since the reform and opening-up policy in 1978, reforms of economic and administrative decentralisation have helped to transfer part of the central power to local levels, and local governments have increasing power over coastal issues (Lu & Ai, 2001). These reforms contribute to the decentralisation of coastal governance and motivate local governments to have more power and responsibilities over the coastal zone, but they cannot substantially change the centralised leadership of China‘s coastal zone management (Lau, 2005).

Previous research using other national and regional cases also identifies the important roles of political systems in coastal zone management. For example, Melissa and Nong

(2003) investigate one protected area in the Cambodian coastal context and conclude that historical, cultural and political contexts are particularly significant in achieving integrated management on the coastal zone. In Nadim *et al.*'s (2006) research, the Caspian Sea in western Asia constitutes the study focus. In such a region with a large number of bordering countries, the political issues of these countries lay foundations for sustainable coastal development and planning in the region. In previous research, the role of political systems has always been investigated within a national or regional context (Boissenvain & Selwyn, 2004; Lee, 1993; Tan-mullins, 2007). In-depth investigations on the role of political system necessarily have a national or regional context. In this research, the Australian and Chinese contexts provide important political frames for the researcher and respondents to have a deliberate discussion and reflection on the role of political system in coastal zone management. These discussion and reflection are indispensable for exploring the legal and regulatory framework for ICZM.

2.5 Conclusions

This chapter provides the review of literature, including the history and concepts of ICZM, the key concepts of integration and considerations of methodology. It reviews multi-level governance, public participation, participative democracy, the role of ENGOs and the role of culture and political systems in the literature. This literature review explains key concepts in this research, identifies the need for this research and highlights the research contribution the thesis aims to make.

Chapter 3
Background

3.0 Introduction

A legal and regulatory framework is important for coastal zone management (Berube & Cusson, 2002; Cullinan, 2006; Harvey & Caton, 2010; Haward, 1996b; Rothwell, 1996). Previous studies emphasise the description and assessment of individual legislation, regulations, policies, institutions and programs (Clarke, 2006; Haward, 1996b; Lazarow *et al.*, 2006; Preston, 2012; Rothwell, 1996). Based on previous studies, this chapter introduces the legislation, regulations, policies, institutions and programs for coastal zone management in Australia and China. This background will help readers to understand the research findings.

This chapter partly answers the first research question about the contemporary legal and regulatory frameworks for ICZM in Australia and China. Previous publications make a significant contribution to the writing of this chapter. This is different from Chapter 5 which gathers new findings in this research through fieldwork. Therefore, a separate chapter is considered to be appropriate.

3.1 Legal and regulatory framework for ICZM

3.1.1 A review of the legal and regulatory framework for ICZM

A legal and regulatory framework is important for ICZM to achieve sustainable coastal development (Gates & Cox, 2012; Haward, 1996; Rothwell, 1996). The legal framework consists of legislation and regulations and legal institutions, and the institutional framework comprises administrative institutions (Baird & Rothwell, 2011; Dirhamsyah, 2006; Haward, 1996; Kaye, 2001; Middle, 2004) (Figure 3.1).

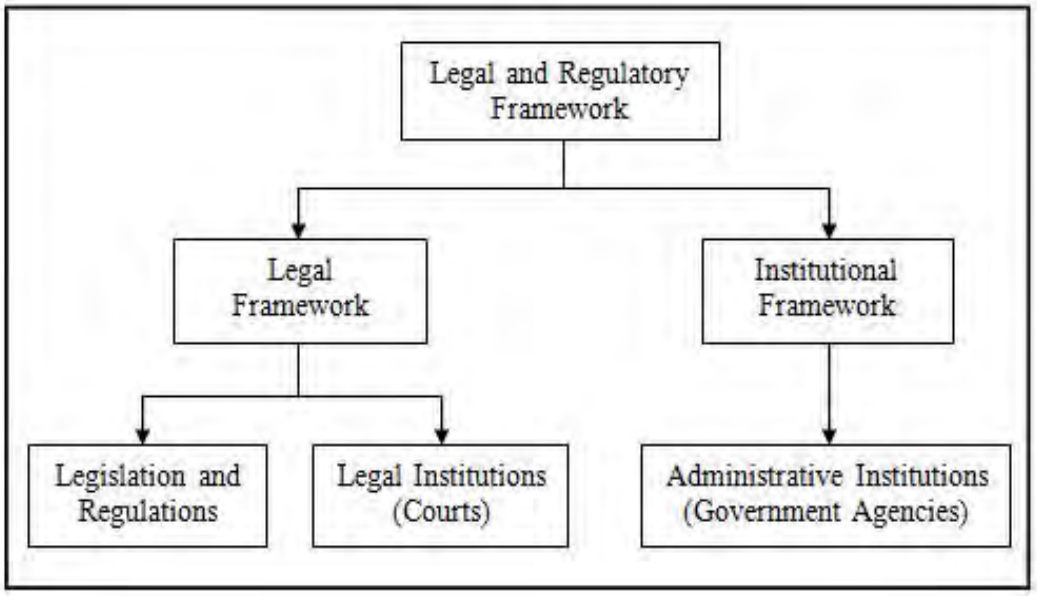


Figure 3.1 The legal and regulatory framework in the literature.

In most studies, the legal framework is composed of legislation, regulations and policies. Researchers (Baird & Rothwell, 2011; Gates & Cox, 2012; Kaye, 2001; Makgill & Rennie, 2012; Rothwell, 1996; Wescott, 2011) have described and discussed the legal framework at international, national and state levels. In some studies, the legal framework covers legal institutions, especially courts, as these institutions adjudicate legal disputes in accordance with the rule of law (Patlis, 2005). Previous studies have rarely looked at the legislature in the legal framework for coastal zone management. It is not a major focus of this study either, since this research focuses on the legal and regulatory framework for ICZM at a management level. The institutional framework for coastal zone management implements the legislation and regulations and facilitates greater vertical and horizontal integration among governments and governmental sectors (Haward, 1996; Norman, 2009).

Previous studies of the legal and regulatory framework for ICZM mainly described and evaluated individual coastal legislation, policies, institutions or programs (Clarke, 2006; Harvey *et al.*, 2001; Haward, 1996). There has also been research on the inter-relationship between governments, community participation and decision-making processes (Dirhamsyah, 2006; Makgill & Rennie, 2012; Wescott, 1998; Zagonari, 2008). Complementing the earlier work, this research also considers the responses of coastal stakeholders to identify gaps in the framework.

3.1.2 The importance of the legal and regulatory framework to ICZM

In the implementation of coastal zone management there is a growing interest in the legal and regulatory framework (Karim & Hoque, 2009). According to the definition given by the World Bank (Table 2.1), the legal and regulatory framework is essential for the proper implementation of ICZM (Moksness *et al.*, 2009). In accordance with the World Coast Conference and the United Nations, the successful implementation of ICZM is indicated by "(1) coordinated legislation, (2) efficient institutional organisation, and (3) a high degree of public participation" (Lau, 2003 p. 120).

Legislation is at the heart of the framework (Cullinan, 2006). As Gibson says:

> Law exerts an inevitable influence over the process of integrated coastal zone management (ICZM). Even when non-statutory means are employed to achieve the objectives of ICZM, they must function within an established legal framework that already defines the powers and duties of many public and private stakeholders involved in the administration and use of coastal areas (Gibson, 2003 p. 127).

Legislation lays the foundation for courts to adjudicate disputes and provides the principal mechanism for governments to ensure the implementation of their policies and programs (Eagle, 2011). Regulations are detailed explanations of laws and elaborated guidelines for administrative institutions to implement the laws and facilitate a more effective mechanism to achieve ICZM (Tissier *et al.*, 2011). Cullinan (2006 p. 9) shows the importance of legislation as a tool of governance when he writes, "the primary purpose of ICM law is to establish a governance system that enables, facilities and supports an integrated approach to managing human uses of coastal areas".

"Laws both shape and are shaped by, institutions" (Cullinan, 2006 p. 221). Karim and Hoque (2009 p. 171) state, "a well-defined legal framework is a must for establishing an enabling institutional framework for ICZM". On the other hand, existing administrative and legal institutions are important in the design of new legislation and the amendment of existing legislation to achieve ICZM (Cullinan, 2006), and they are the key practitioners of coastal zone management. Effective and well-functioning institutions contribute to the implementation of laws and regulations, the performance of coastal

policies and programs and the achievement of integration in coastal zone management (Haward, 1996; Lazarow *et al.*, 2006; Middle, 2004; Tissier *et al.*, 2011)

To summarise, the legal and regulatory framework for ICZM can facilitate the implementation of coastal policies and programs, promote vertical integration among governments, establish conflict resolution mechanisms for horizontal integration among government agencies or among coastal stakeholders, facilitate and protect public participation and reduce the potential for conflict in the decision-making process (Cullinan, 2006; Kaye, 2001; Patlis, 2005).

3.2 ICZM and its legal and regulatory framework in Australia

Marcucci (2012) divides the evolution of coastal management practice into three stages. In the first stage from the 1950s through to 1970, coastal management adopted a sectoral or fragmented approach with engineering dominating over natural processes, with limited ecological consideration and with no public participation. In the second stage from the 1970s to around 1990, coastal engineering still defined the solutions, and a reactive management approach was dominant in coastal management. In this stage, coastal management achieved greater integration among the various sectors and there were also increased levels of proactive management with more environmental consideration and increasing public participation. Finally, from the 1990s to the first decade in the millennium, coastal management was experiencing the growth and expansion of integrated principles in coastal management, sustainable principles, ecosystem-based principles and public participation principles. In addition, Marcucci (2012 p. 406) points out that these principles —became increasingly codified in law globally". As one of the pioneer nations conducting ICZM in the world (Sorensen, 1997), Australia has experienced the above process from sectoral to more integrated management and has increasing legislation and regulations for the implementation of ICZM.

3.2.1 Important laws and regulations related to coastal zone management in Australia

When the Australian Constitution was a draft in the 1890s, the Commonwealth does not appreciate the importance of offshore waters other than for defence. In the wake of World War I, the United Kingdom Parliament enacted the *Statute of Westminster 1931* to enforce the equality of Britain and the then dominions. This spurred Australia to have a more active role in offshore affairs (Rothwell, 1996). Within Australia, there were conflicts between the Federal Government and state/territory governments concerning their powers in the coastal zone, such as the jurisdictional limits. The *Seas and Submerged Lands Act 1973* conferred Commonwealth sovereignty over the territorial sea and continental shelf. In 1975 the High Court confirmed the validity of the *Seas and Submerged Lands Act 1973* in the decision of New South Wales v Commonwealth (Kaye, 2001). However, the Offshore Constitutional Settlement of 1979 and the subsequent *Coastal Waters (State Powers) Act 1980* and *Coastal Waters (State Title) Act 1980* extended the legislative jurisdiction of the states to certain coastal waters and thus empowered the states‘ coastal management (Baird, 2011; Kaye, 2001; Rothwell, 1996).

Although state/territory governments in general control coastal management, the Commonwealth plays a role in coastal affairs of national significance, and in making coastal policies, inquiries, programs, and decisions on military and international affairs on the Australian coasts and oceans (Haward, 1996; Wescott, 2006). Commonwealth legislation and policies comprise the national legal and regulatory framework for ICZM and they, together with the coastal inquiries and programs, enable the development of ICZM at the national level.

3.2.1.1 Important coastal laws, policies and inquiries related to ICZM at the Australian national level

Resource Assessment Commission Coastal Zone Inquiry (1993)

Prior to 1993, there had been few national approaches to coastal management in Australia, except for inquiries conducted by the Australian Federal Government (Wescott, 2011). In 1993, the RAC, after undertaking an inquiry for 18 months, released

the Final Report of the RAC Coastal Zone Inquiry. It mentioned the importance of integration among Australian, state, territory and local governments by developing legislation, policies and programs to cope with the management challenges of the coastal zone (SoE2011C, 2011). Section 5.5.2 of this report outlined ICZM with four elements involving the vertical integration between spheres of government and horizontal integration among government sectors and coastal stakeholders (RAC, 1993).

The RAC Coastal Zone Inquiry in 1993 –was the watershed for coastal management in Australia" (Wescott, 2011 p. 138). It recommended ICZM at the national level and, in order to achieve integration, it advocated establishing a National Coastal Action Program, a National Coastal Agency and a National Coastal Consultative Council, and enacting a Coastal Resources Management Act (Harvey & Caton, 2010; Norman, 2009). Although the Australian Federal Government did not implement all the recommendations, it at least released the Commonwealth Coastal Policy in 1995, established Coastcare and increased the funding for the Coasts and Clean Seas Initiative of the Natural and Heritage Trust (Harvey *et al.*, 2001; Wescott, 2011). All these achievements showed Australian coastal management moving to ICZM. The RAC Coastal Zone Inquiry led to national initiatives underpinned by principles of ecologically sustainable development (Harvey *et al.*, 2012).

***Commonwealth Coastal Policy* (1995-1999)**

The Keating Labor Government released the Commonwealth Coastal Policy in May 1995 in response to the recommendations of the RAC Coastal Zone Inquiry (1993) (Thom & Harvey, 2000). It aimed to promote ecologically sustainable development of Australia's coastal zone, to encourage an integrated approach to coastal management, to improve public participation and to lay a foundation for Commonwealth activities in the coastal zone (Harvey & Caton, 2010).

The Commonwealth Coastal Policy provides the means for the Commonwealth to manage its own coastal activities as well as a range of initiatives for all Australian governments to work together for the best management of the coast. The initiatives include programs relating to the impact of greenhouse issues on the coastal zone and assessing the vulnerability of coastal areas to rising sea levels. Coastcare was a significant outcome of the Commonwealth Coastal Policy (Harvey & Caton, 2010). It

was an Australian community-based coastal stewardship program which ran between 1995 and 2002 and was underpinned by the principles of ICZM (Clarke, 2006). Coastcare emerged as a response to an international trend in community involvement and an integrated approach to coastal management after the Agenda 21 in 1992 (Clarke, 2006; Harvey *et al.*, 2001; Thom & Harvey, 2000). It was a unique program in Australia that officially connected the three tiers of government and involved the local community, business and interest groups working towards sustainable coastal development.

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cth) consolidated the Australian Commonwealth's legislative powers over the environment, including the significant national issues of the coastal zone (Ogle, 2000). It is a central piece of environmental legislation for the Australian Federal Government and provides a legal framework for environmental issues of national significance.

The EPBC Act has a broader application than just coastal zone management, so it is difficult to characterise it explicitly (Kaye, 2001). Before the enactment of the EBPC Act, the Commonwealth had engaged in coastal and marine issues in a sectoral nature, in particular with fishery, offshore pollution and navigation (Rothwell, 2011). The EPBC Act allowed for ~~a~~ co-operative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples" (section 3(1) of the EPBC Act). The EPBC Act advocates an integrated approach to environmental management involving relevant stakeholders, which lays a foundation for ICZM in the legal framework at the Australian national level.

One key objective of the EPBC Act is to protect the environment, especially the nine matters of national environmental significance: world heritage properties, national heritage places, wetlands of international importance (Ramsar wetlands), nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, the Great Barrier Reef Marine Park (GBRMP), nuclear actions and a water resource related to coal mining (division 1 of the EPBC Act). If actions may have a significant impact on a matter of national environmental significance, the EPBC Act will affect relevant groups or individuals, including landowners, developers, farmers, councils, state and territory agencies and Commonwealth agencies.

Any development should consider all nine matters protected under the EPBC Act (AGDE, 2014d). When a proposal potentially has a significant impact on a matter of national environmental significance, the EPBC Act comes into play. The Australian Government‘s Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) conducts an assessment on the proposed development, depending on the significance of the project and the information available for assessment. All assessments consider technical information assembled by the proponent and comments made by the public (AGDE, 2014d). The Australian Government‘s Environment Minister is responsible for protecting areas of national environmental significance and considering environmental decisions in social and economic contexts. However, the Environment Minister has no authority to intervene in a proposed development unless it has a significant impact on one of the nine matters of national environmental significance. This demarcation is determined by the division of powers between the Commonwealth and the states and territories in the Australian Constitution (Elliott & Thomas, 2014).

All other environmental matters, except those of national environmental significance, are the responsibility of states or territories. The EPBC Act sets up a mechanism that avoids duplication between federal and state governments in their environmental protection functions (Ogle, 2000). When a proposed project involves matters of both local and national environmental significance, the Australian Government may come to an agreement with the relevant state or territory government for the project assessment. As for those state or territory decisions without any impact on the nine matters of national environmental significance, the EPBC Act does not empower the Australian Government‘s Environment Minister to justify or overturn state or local government decisions affecting the environment (AGDE, 2014d). If community concerns are not one of the nine matters of national environmental significance, community members or groups cannot ask the Australian Government‘s Environment Minister to act beyond the legal authority to intervene in state or local government decisions on the environment (AGDE, 2014d).

The EPBC Act provides legal scope for Commonwealth engagement in environmental laws and creates a platform for the Commonwealth to have a more integrated response to marine and coastal environmental management. Through the division of powers on

environmental matters between the Australian Federal Government and state/territory governments, the EPBC Act establishes the mechanism for vertical integration among governments. Authorising SEWPaC as the determining power on environmental matters is an effective distribution of power among government agencies, which results in the horizontal integration of environmental management. The EPBC Act's broad effects on relevant groups and individuals as well as its wider involvement of stakeholder engagement and consultation are consistent with the core spirit of integration. Although the EPBC Act is enacted for environmental issues rather than specifically for coastal zone management, it definitely contributes to the achievement of integration of coastal zone management.

National Cooperative Approach to Integrated Coastal Zone Management – Framework and Implementation Plan (2006)

In 2003, Australian, state and territorial governments endorsed the Framework for a National Cooperative Approach to Integrated Coastal Zone Management based on the concept of a catchment-coast-ocean continuum (Norman, 2009). It encouraged integrated arrangements and cooperative processes.

In 2006, the Commonwealth released the National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan (the Framework). The goal of the Framework and Implementation Plan was to set "the scene for national cooperation in managing coastal issues and achieving ecologically sustainable development outcomes in the coastal zone over the next decade" (NRMMC, 2006 p. 10). Recognising the different legislative and administrative frameworks for coastal zone management in jurisdictions, Australia adopted a national cooperative approach to "address cross boarder and sectoral issues, harmonise joint action towards management of common issues and build on existing and encourage new investments from all jurisdictions" (NRMMC, 2006 p. 10).

To achieve the national cooperative approach, the section on Framework identified two key themes, the catchment-coast-ocean continuum with an integrated approach and the coastal issues for national collaboration. Reflecting these themes, the Implementation Plan put forward six priority areas, including integration across the catchment-coast-ocean continuum, land- and marine-based sources of pollution, climate change, pest

plants and animals, planning for population change and capacity building. For each priority area, the Framework set up possible actions to achieve the objective of each area and provided a template for governments at all levels to respond to the objective (Baird, 2011).

To sum up, the actions to implement the objective included endorsing management guidelines and tools to guide the process of ICZM, communicating the roles and responsibilities among governments, industries, research institutions and communities, establishing intergovernmental networks to improve capacity of all governments, and sharing data and knowledge across jurisdictions and disciplines (NRMMC, 2006). These actions reflect the dimensions of integration in ICZM and the components of the legal and regulatory framework for ICZM discussed in Section 3.1.1.

Managing our coastal zone in a changing climate: The time to act is now (2009)

More recently, the effect of climate change and rising sea level policies have increasingly influenced coastal management (Harvey *et al.*, 2012; Norman, 2009). ~~–~~Managing our coastal zone in a changing climate: The time to act is now" is a 2009 report by the House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts. It was based on an 18-month inquiry and makes 47 recommendations relating to limited national collaboration and cooperation for efficient management and sustainable development (SoE2011C, 2011). The report adopts ICZM as the national coastal management mechanism and the 47 recommendations include (HORSCCCWEA, 2009; SoE2011C, 2011):

- noting the gaps and addressing the uncertainties around legal matters relating to the coastal zone,
- improving the cooperative mechanism between governments to achieve sustainable coastal development, and
- working with state and territory governments through the Natural Resource Management Ministerial Council (NRMMC), in consultation with other stakeholders.

Following the 2009 report, the Australian Federal Government established the Coasts and Climate Change Council which delivered a report to the SEWPaC Minister in late

2010 recommending a reform to enhance national consistency and collaborative arrangements across federal, state and local governments to achieve sustainable coastal development (Harvey *et al.*, 2012). Although it is difficult to have a nationally consistent approach to coastal zone management for climate change and rising sea levels, national coastal legislation and policies and national coastal councils are coordinative mechanisms of coastal zone management in the changing climate (Harvey *et al.*, 2012).

3.2.1.2 Important laws, regulations and policies related to coastal zone management in the NSW

This research took NSW as a study area at the state level in Australia, so an explanation of its coastal laws, regulations and policies are necessary to provide the research background. In addition, since the 1970s NSW has experienced an intensive process of law and policy making for coastal management, which is a miniature of the legal framework for coastal management in Australia. Table 3.1 summarises the coastal laws, regulations and policies in NSW.

Table 3.1 Coastal legislation, regulations and policies in the State of NSW.

Year	Law, Regulation or Policy
1979	Coastal Protection Act 1979
1979	Environmental Planning and Assessment Act 1979
1988	NSW Coastline Hazard Policy
1990	NSW Coastline Management Manual
1992	Estuary Management Manual
1994	Coastal Protection (Non-Local Government Areas) Regulation 1994
1994	Fisheries Management Act 1994
1997	NSW Coastal Policy 1997: A Sustainable Future for the New South Wales Coast
1997	Marine Parks Act 1997
2000	Environmental Planning and Assessment Regulation 2000
2002	State Environmental Planning Policy No. 71 – Coastal Protection
2003	Coastal Design Guidelines for NSW
2004	Coastal Protection Regulation 2004
2005	State Environmental Planning Policy (Major Development) 2005
2005	Floodplain Development Manual
2007	State Environmental Planning Policy (Infrastructure) 2007
2009	NSW Sea Level Rise Policy Statement
2010	NSW Coastal Planning Guideline: Adapting to Sea Level Rise
2010	Coastal Risk Management Guide: Incorporating Sea Level Rise Benchmarks in Coastal Risk Assessments
2010	Guidelines for Preparing Coastal Zone Management Plans 2010
2010	Coastal Protection and Other Legislation Amendment Act 2010
2011	Coastal Protection Regulation 2011
2011	State Environmental Planning Policy (State and Regional Development) 2011
2011	State Environmental Planning Policy No. 14 – Coastal Wetlands
2011	Coastal Zone Management Guide Note: Emergency Action Subplans
2012	Coastal Protection Amendment Act 2012

The *Coastal Protection Act 1979* is the principal legislation in NSW for coastal management. It makes provisions relating to the coastal authorities and powers of authorised officers and provides for the protection of the coastal environment so as to achieve ecologically sustainable development of the coastal zone (Simington, 2011). The Act gives the Environment Minister power to control coastal development and it

initiated the establishment of the NSW Coastal Panel, providing advice to the Minister and local councils. The *Coastal Protection (Non-Local Government Areas) Regulation 1994*, *Coastal Protection Regulation 2004* and *Coastal Protection Regulation 2011* were enacted to assist in administrating the *Coastal Protection Act 1979*.

The *Environmental Planning and Assessment Act 1979* (EP&A Act) (NSW) was another significant piece of legislation for coastal or environmental management and land-use planning in the 1970s. This Act encourages ecologically sustainable development and proper utilisation of natural and artificial resources. It promotes the sharing of responsibility for environmental planning among the governments in NSW. It also provides increased opportunities for public involvement and participation in environmental planning and assessment. The *Environmental Planning and Assessment Regulation 2000* and the *Environmental Planning and Assessment Regulation 2010* were released to provide guidance for the Act.

In 1988, the *NSW Coastline Hazard Policy* proposed the Coastline Hazards Program which aimed to ensure the implementation of Coastline Management Plans and the consideration of coastal hazards during strategic coastal management and planning. As a central component of integrated management in the *NSW Coastline Hazard Policy*, the NSW Government developed the *NSW Coastline Management Manual* in 1990. The Manual advocates the bottom-up model in coastal management to replace top-down mechanisms and promotes the integration and cooperation between the State Government and local councils.

In 1997, the NSW Government released the *NSW Coastal Policy 1997: A Sustainable Future for the New South Wales Coast*. It emphasises an integrated approach to coastal management, with a focus on ecologically sustainable development. Its key themes are better integration of the range of government agencies and community organisations in coastal planning and management, and the integration of the principles of ecologically sustainable development into coastal zone management and decision-making. The *NSW Coastal Policy 1997* provides a framework for balanced and coordinated coastal management and encourages participation and coordination between government agencies, local councils and the community. All council management measures should be consistent with the *NSW Coastal Policy 1997* with a Direction issued by the Minister

for Planning under the EP&A Act. The NSW Government established the Coastal Council in 1998 as an independent agency to monitor and review the implementation of the *NSW Coastal Policy 1997* and to provide government with independent advice regarding coastal planning and management (Simington, 2011).

The NSW Government, in June 2001, announced its AU$11.7 million Coastal Protection Package to protect the state‘s coastal resources and to achieve the sustainability of coastal development in a whole-of-government framework. As part of the package, coastal zone planning and development is now subject to the *NSW Coastal Policy 1997*, the *State Environmental Planning Policy No. 71 – Coastal Protection*, the *State Environmental Planning Policy (Major Development) 2005* and the Local Planning Directions under section 117(2) of the EP&A Act (EDO, 2012).

In recent years, climate change and associated rising sea level policies have increasingly influenced coastal management. Local government has taken climate change as a driving force in coastal zone management. Potential risks of rising sea levels and the assessment of how existing coastal facilities bear the risk create an increased financial burden for local and state governments. The increased financial burden has incurred a wider use of precautionary principles in determining government regulations and coastal development decisions (Harvey *et al.*, 2012).

In October 2009, the NSW Government released the *NSW Sea Level Rise Policy Statement* which outlines the challenges caused by rising sea levels, and incorporates rising sea level adaptation into the state government‘s coastal management objectives (NSWG, 2009). Similar guidelines include the *NSW Coastal Planning Guideline: Adapting to Sea Level Rise 2010* and the *Coastal Risk Management Guide: Incorporating Sea Level Rise Benchmarks in Coastal Risk Amendment 2010*.The *Coastal Risk Management Guide* aims to assist local councils, developers and consultants in incorporating rising sea level benchmarks identified in the *NSW Sea Level Rise Policy Statement*. It also updates the related coastal hazard information in the *NSW Coastline Management Manual* (1990) (Simington, 2011).

3.2.2 Primary government agencies related to coastal zone management in Australia

Section 3.1.2 explained that legislation and regulations shape institutions and are promulgated by institutions. Administrative institutions (government agencies) are particularly important for the enforcement of laws, regulations and policies (Cullinan, 2006; Karim & Hoque, 2009). Since there is rarely research on government agencies just for coastal management, the following section referring to government websites summarises the key departments and agencies and their functions related to coastal management in the Australian Federal Government and the NSW Government.

3.2.2.1 Primary government agencies related to coastal zone management at the Australian national level

Table 3.2 provides a summary of the key departments and agencies and their management functions related to coastal management in the Australian Federal Government. It is based on the *Australian Government Directory* (http://www.directory.gov.au/) published after the election in September 2013.

Table 3.2 Key departments and agencies and their management functions related to coastal management in the Australian Federal Government.

Departments and agencies	**Management functions**
Department of the Environment	Implement Australian Federal Government policies on environmental protection and conservation of biodiversity; deal with environmental information and research; develop domestic climate change policy and climate change adaptation strategy; manage water policy and resources.
Department of Agriculture	Support sustainable fishing and aquaculture industries.
Department of Industry	Develop competitive and innovative industries; foster collaboration between industry, business and research sectors.
Department of Infrastructure and Regional Development	Support an efficient, safe and environmentally friendly maritime transport system.
Australian Fisheries Management Authority	Implement efficient and cost-effective fisheries management; ensure that fishery-related activities are consistent with the principles of ecologically sustainable development.
Australian Maritime Safety Authority	Provide aids to navigation and lighthouses, as well as coastal pilotage.
National Water Commission	Drive national water reform; provide independent and public advice by assessing, auditing and monitoring water reform progress.

Table 3.2 shows that no department or agency in the Australian Federal Government currently focuses on coastal management. In the Australian Federal Government, there are a few councils and committees responsible for consultation on regional coastal management issues, such as the Central Coast of NSW Area Consultative Committee, the Gold Coast and Region Area Consultative Committee and the Sunshine Coast Area Consultative Committee.

According to the report *Institutional Arrangements, Incentives and Governance – Unlocking the Barriers to Successful Coastal Policy Making*(2002), there is lack of integration among the various levels of government, or within agencies dealing with coastal management in any one government. Also, there is a lack of specialised institutions for coastal management in the Australian Federal Government (Wescott, 2006). Currently, the Australian Federal Government does not engage in coastal management issues as much as state and local governments, except for coastal development of national significance or within national coastal waters.

3.2.2.2 Primary government agencies related to coastal zone management in NSW

According to the Offshore Constitutional Settlement 1979, the coastal waters within 3 nautical miles offshore are under the control of state and territory governments, —thus clearly coastal management in Australia is largely a State/Territory responsibility" (Wescott, 2011 p. 138). Based on the *NSW Government Directory* (http://www.service.nsw.gov.au/nswgovdirectory) published in 2013, Table 3.3 lists the key departments and agencies and their management functions related to coastal zone management in the NSW Government.

Table 3.3 Key departments and agencies and their management functions related to coastal management in the NSW Government.

Departments and agencies	Management functions
Office of Environment and Heritage	Protect and conserve the NSW environment, including the natural environment, culture and heritage and built heritage; manage NSW national parks and reserves; reduce the impact of coastal hazards and maintain the ecological health of our estuaries.
Environment Protection Authority (EPA)	Improve environmental performance and waste management for NSW; balance between environmental protection and competing demands on the environment.
Department of Planning and Infrastructure	Make long-term planning for the NSW's sustainable growth; assess State significant development proposals; ensure the planning system is efficient and effective.
Department of Primary Industries	Develop profitable, sustainable and biosecure agriculture and fisheries; ensure best management of catchments, natural resources and water; it has divisions of Fisheries NSW, Biosecurity NSW, NSW Office of Water and Catchments & Lands.
Roads and Maritime Services	Regulate the operations and programs of roads and waterways; take charge of marine safety; regulate commercial and recreational boating; manage the Sydney Harbour beds.
NSW Trade & Investment	Drive sustainable economic growth across the State of NSW; take charge of the sustainable management of the Crown Lands in NSW, including the dry land and submerged land.

Table 3.3 summarises the major departments and agencies related to coastal management in the NSW Government, but more agencies will be involved in specific coastal issues. Most agencies have acknowledged the importance of cooperation with

other agencies‘ stakeholders in government management, which indicates integrated management is at its initial stage. For example, the operational mechanism of the EPA works with the community, business, industry and government to balance environmental protection, social development and economic growth in a more sustainable manner. The EPA aims to engage the community by providing them with information and guidance about environmental issues and activities, and uses both social and scientific research to monitor the trends of environmental issues and help business and industry improve their environmental performance. This process not only reflects the integration between government agencies and a wide range of stakeholders, but also shows the integration between science and management.

3.3 ICZM and its legal and regulatory framework in China

According to the Priority Project Plan of China‘s Agenda 21 (ACCA, 1996), ICZM was one of the projects under the priority area of natural resource management and utilisation. In 2013, the Chinese Central Government initiated the National Oceanic Council (NOC) under the authority of State Oceanic Administration (SOA). The Central Government designed the NOC to be a high-level consultation body to coordinate important oceanic affairs among government agencies and to formulate an integrated oceanic development strategy.

Researchers (Cao & Wong, 2007; Lau, 2005; Wu *et al.*, 2012) have observed that Chinese decision-makers realise the importance and effectiveness of ICZM. In the past two decades, China has tended to manage its coastal zone in a more integrated way, with consideration of economic growth, social development, natural resource preservation and environmental protection. Sustainable development is a fundamental Chinese state strategy, and also the objective of coastal zone management (Wang *et al.*, 2011a; Wu *et al.*, 2012).

In China, coastal zone management is generally part of marine management; therefore, ICZM is encompassed by integrated marine management and is the implementation of integrated marine management on the coastal zone (Lu & Ai, 2001).Currently, China‘s coastal zone or marine management mechanism is a combination of coordinative

management with sector-based management(Huang & Huang, 2010a; Lu & Ai, 2001). China has not yet fully achieved ICZM, though it is the desired mechanism from the decision-makers‘perspective (Guan, 2007; Yun & Jiang, 2002).

China has traditionally a top-down or centralised approach to regulating natural resource management (Cao & Wong, 2007). For coastal zone management, the Central Government has the power in law-making and general planning, while the local governments work more on the implementation of these laws, policies and detailed working plans. The Countrywide Comprehensive Investigations of the Coastal Zone and Tidal Land Resources in 1980-1986 is an important national coastal zone programs. The investigations ranged along the Chinese mainland and island coastline and covered 350,000 km², roughly extending to 15-m isobath seawards and 10 km landwards from the shoreline (Cao & Wong, 2007; Su, 1988). They took seven years and, as a comprehensive project, involved 15,000 professionals from various government sectors and research institutions at the national, provincial and local levels. The investigations provided scientific evidence for management programs and infrastructure construction projects, as well as fundamental data for policy-making and economic and administrative reforms. They also increased public awareness of coastal development and protection (Cao & Wong, 2007; Lau, 2005; Su, 1988).

3.3.1 Important laws and regulations related to coastal zone management in China

–Ruling the country by law” is a fundamental state strategy in China, and there are a series of laws and regulations related to marine and coastal matters at national and local levels (Cao & Wong, 2007; Zou, 1999). These laws and regulations provide legal guidance and justification for coastal management schemes and practice. Table 3.4 shows the legislative system of the PRC, including the law-makers and policy-makers and their promulgations.

Table 3.4 Legislative/administrative institutions and their promulgations in China.

	Institutions	**Promulgations**
Legislative	National People‘s Congress and its Standing Committee	Laws
	People‘s congresses and their standing committees of provinces, autonomous regions, municipalities directly under the Chinese Central Government, and larger cities	Local regulations
	People's congresses of the ethnic autonomous areas	Autonomous regulations/ Separate regulations
Administrative	State Council	Administrative regulations
	Ministries and commissions of the State Council, and other organs endowed with administrative functions directly under the State Council	Regulations
	People‘s governments of the provinces, autonomous regions, municipalities directly under the Chinese Central Government and larger cities	Regulations

In China, the *Constitution of the PRC* (1982) and the *Legislation Law of the PRC* (2000) prescribe that the National People‘s Congress (NPC) and its Standing Committee are the law-makers at the national level. The State Council may enact administrative regulations in accordance with the *Constitution of the PRC* (1982) and the *Legislation Law of the PRC* (2000). The people's congresses or their standing committees of the provinces, autonomous regions and municipalities directly under the Chinese Central Government may enact local regulations which do not contradict the Constitution, laws and administrative regulations. They can also approve local regulations promulgated by the people's congresses or their standing committees of the larger cities. The people's congresses of the ethnic autonomous areas may enact autonomous regulations and separate regulations.

On the basis of the laws and administrative regulations, the ministries and commissions of the State Council and the other government agencies with administrative functions directly under the State Council may enact rules within the limits of their power. The people's governments of the provinces, autonomous regions, municipalities directly under the Chinese Central Government and the larger cities may enact regulations in

accordance with laws, administrative regulations and local regulations of their respective province, autonomous region or municipality (IOSCPRC, 2008).

3.3.1.1 Important laws and regulations related to coastal zone management at the Chinese national level

In China, there is currently no national law or administrative regulation specifically for coastal management (Wu *et al.*, 2012), but a few such regulations do exist in the coastal provinces and cities. Table 3.5 is a summary of the major laws and regulations concerned with coastal zone management at the Chinese national level.

Table 3.5 Major laws and administrative regulations related to coastal zone management at the Chinese national level.

Laws / Administrative regulations	**Year**
Law of the PRC on the Territorial Sea and the Contiguous Zones	1992
Law of the PRC on Exclusive Economic Zones and Continental Shelves	1998
Law of the PRC on the Protection of Maritime Environment	1982, revised in 1999
Administrative Regulations of the PRC Concerning the Prevention and Control of Pollution Damages to the Marine Environment by Coastal Construction Projects	1990
Administrative Regulations of Prevention and Control of Pollution Damage to the Marine Environment by Marine Construction Projects	2006
Administrative Regulations of the PRC Concerning Prevention of Pollution Damage to the Marine Environment by Land-based Pollutants	1990
Administrative Regulations of the PRC on Control of Dumping of Wastes in the Ocean	1985
Administrative Regulations of the Prevention and Control of Marine Environment Pollution from Ships	2009
Law of the PRC on the Administration of Use of Sea Areas	2001
Law of the PRC on the Protection of Offshore Islands	2009
Law of the PRC on the Evaluation of Environmental Effects	2002
Law of the PRC on Environmental Protection	1989
Law of the PRC on Land Administration	1986, revised in 1988, 1998 and 2004
Fishery Law of the PRC	1986, revised in 2000 and 2004
Law of the PRC on Maritime Traffic Safety	1983
Port Law of the PRC	2003
Law of the PRC on Mineral Resources	1986, revised in 1996
Law of the PRC on the Protection of Wildlife	1988, revised in 2004
Law of PRC on the Prevention and Control of Water Pollution	1984, revised in 1996 and 2008
Water Law of the PRC	1988, revised in 2002
Forestry Law of the PRC	1984, revised in 1998

Table 3.5 shows that the existing laws and regulations cover most aspects of coastal zone management. They have specific or relevant provisions regulating the exploitation and protection of coastal resources and the management of human activities on the coastal zone (Fan& Côté, 1990). The two key pieces of legislation are the *Marine Environment Protection Law of the PRC* (1982) and *Law of the PRC on the Administration of the Use of Sea Areas* (2001).

***Marine Environment Protection Law of the PRC* (1982)**

The *Marine Environment Protection Law of the PRC* (1982) is the most important law for marine and coastal zone management in China (Fu, 2003; Guan & Liu, 2003; Zou, 1999). It encourages an intergovernmental mechanism in marine management and stipulates the formation of a marine functional zoning scheme, establishment of marine nature reserves and implementation of a marine environmental impact assessment system. These management measures consolidate the legal basis for the practice of marine and coastal zone management (Wu *et al.*, 2012).

The *Marine Environment Protection Law of the PRC* (1982) also makes provisions for the prevention and management of marine pollution and lays the foundation for a series of laws and regulations after 1982 (Zou, 1999). It mainly covers five sources of pollution: pollution by dumping of wastes in the ocean, pollution by land-based pollutants, pollution from coastal construction projects, pollution from marine construction projects and pollution by ships. Correspondingly, the State Council promulgated five pieces of administrative regulations, including the *Administrative Regulations on Control of Dumping of Wastes in the Ocean* (1985), the *Administrative Regulations Concerning Prevention of Pollution Damage to the Marine Environment by Land-based Pollutants* (1990), the *Administrative Regulations Concerning the Prevention and Control of Pollution Damages to the Marine Environment by Coastal Construction Projects* (1990), the *Administrative Regulations on Prevention and Control of Pollution Damage to the Marine Environment by Marine Construction Projects (2006) and the Administrative Regulations on the Prevention and Control of Marine Environment Pollution from Ships* (2009) (DPLPSOA, 2012).

Law of the PRC on the Administration of the Use of Sea Areas (2001)

In the 1990s, the annual GDP growth rate of China's marine sectors was around 20% per annum and local and foreign investment intensified the sea use activities. These activities created disorderly and excessive sea use, abuse of marine resources and deterioration of the marine environment. Considering these problems, in 1993 the Chinese Central Government enacted the *Tentative Regulations on Management of Sea Use*, and in 2001 developed it into the *Law of the PRC on the Administration of the Use of Sea Areas*. Internationally, the promulgation of the *Law of the PRC on the Administration of the Use of Sea Areas* (2001) responded to the United Nations Conference on Environment and Development in 1992which had called for ICZM to achieve sustainable development (Li, 2006). This law contributed to the establishment of the right to sea use authorisation system, user-fee system and marine functional zoning system (Chang *et al.*, 2013). For coastal zone management, this law is of great importance to coastal water use and supervision.

The promulgation and implementation of this law improved the legal basis for ICZM and initiated a series of administrative regulations (Li, 2006). The most important one is the *Notice on the Assessment and Approval of Projects on Sea Use in the Coastal Provinces, Autonomous Regions and Municipalities* directly under the Central Government, which sets out the mandate of provinces. In accordance with the *Law of the PRC on the Administration of the Use of Sea Areas* (2001) and the Notice, the State Council has the authority to examine the application of sea use, or the people's governments of provinces, autonomous regions and municipalities directly under the Central Government with the authorisation of the State Council. Thus, China established a two-level management system for sea use activities (Li, 2006). The enforcement of the *Law of the PRC on the Administration of the Use of Sea Areas* (2001) and the implementation of the sea use authorisation, user-fee and marine functional zoning systems provided empirical experience in the regulation of coastal sea use, enhanced the legalisation regarding sea use, alleviated the intensive sea use conflicts, guided the distribution of marine development and ameliorated the impacts on the eco-environment.

3.3.1.2 History of the national coastal law and regulation

Although the existing laws and regulations cover most coastal affairs, the coastal zone still has a large number of problems and the coastal management scheme in general remains sector based. According to key reviewers (Cao & Wong, 2007; Lau, 2005; Luo *et al.*, 2013), the main obstacles to coastal zone management in China include a lack of comprehensive and special laws, weak enforcement of existing laws and regulations, unclear jurisdiction and a lack of responsibility by government agencies.

So far, China has not enacted any special law for coastal zone management at the national level (Wu *et al.*, 2012). Along with the Countrywide Comprehensive Investigations of the Coastal Zone and Tidal Land Resources in the 1980s, the Central Government drafted a law on coastal zone management, and downgraded the law to a regulation (Lu & Ai, 2001; Su, 1988). After nearly 10 years of drafts and revisions, the Central Government failed to enact a law or regulation. One reason was that the existing laws and regulations covered most aspects of coastal zone management, so any new law or regulation might cause legislative redundancy and overlap. The other reason was that there were conflicts of interest among government agencies, as most agencies expected more rights but fewer responsibilities with the promulgation of a new law or regulation (Huang & Huang, 2010a; Huang & Huang, 2010b; Lu & Ai, 2001). The State Development Planning Commission in the 1990s, for the exploitation and protection of coastal zone and tidal land resources, initiated the *Regulations on Coastal Zone and Tidal Land Resources of the PRC*. They came to nothing for the same reasons as the drafted coastal law and regulation in the 1980s (Lu & Ai, 2001). It seems that before enacting a special law or regulation for coastal zone management, it is important to increase integration among government agencies.

3.3.1.3 Important regulations and rules related to coastal zone management at local levels

In China, although there is no coastal law or regulation at the national level, there are a few coastal regulations at local levels. For instance, the *Regulation on Coastal Zone Management of Jiangsu Province* (1991) was the first provincial regulation on coastal zone management (Huang & Huang, 2010a). In 2013, Hainan Province enacted the *Regulations on Coastal Zone Protection and Development of Hainan Special Economic*

Zone. Since this research selected Shandong Province and Qingdao City as study areas, Table 3.6 provides a summary of the coastal regulations and rules in these jurisdictions.

Table 3.6 Regulations related to coastal zone management in Shandong Province and Qingdao City.

Regulations	**Year**
Regulations on Sea Areas Administration of Shandong Province	2004
Regulations on Marine Environment Protection of Shandong Province	2004
Marine Environment Protection Planning of Shandong Province (2008-2020)	2008
Marine Functional Zoning of Shandong Province (2011-2020)	2012
Regulations on Fishery Resource Protection of Shandong Province	2002
Regulations on Coastal Zone Planning and Management of Qingdao City	1995
Regulations on Sea Areas Administration of Qingdao City	1999
Regulations on Marine Environment Protection of Qingdao City	2009
Marine Functional Zoning of Qingdao City	2005
Regulations on Marine Fishery Management of Qingdao City	1997
Regulations on Uninhabited Island Management of Qingdao City	2008

In 1995, the Seventeenth Session of the Standing Committee of the Thirteenth People‘s Congress of Qingdao City approved the *Regulations on Coastal Zone Planning and Management of Qingdao City* (1995). In line with the Regulations, the Qingdao Municipal Government set up the Management Committee of Coastal Zone and Consultation Committee of Coastal Zone to be responsible for the coastal zoning plan and other issues related to coastal exploitation, development and protection (Jiang *et al.*, 2011; Zhang, 2009).

In 2009, the Qingdao Municipal Government promulgated the *Regulations on Marine Environment Protection of Qingdao* City (2009) to replace the *Regulations on Nearshore Marine Environmental Protection of Qingdao City* (1995). In accordance with the new Regulations, Qingdao Municipal Government and the governments of coastal districts should establish a coordinative marine environmental protection mechanism with integration among relevant agencies, a cross-regional cooperative

mechanism for marine environmental protection and a joint enforcement mechanism of marine laws and regulations. In addition, the new Regulations propose the establishment of an ecological compensation system, a total pollutant control system and an environmental impact assessment system for projects in the marine environment.

3.3.2 Primary government agencies related to coastal zone management in China

3.3.2.1 Primary government agencies related to coastal zone management at the Chinese national level

In China, the Central Government plays a key role in policy-making, while local governments take responsibility for implementing coastal zone management (Wu *et al.*, 2012). In the Chinese Central Government, there is no specific agency or institution taking responsibility for ICZM (Wu *et al.*, 2012). The coastal zone management is ~~"a~~ matter of shared responsibility involving many ministries and departments and local communities" (Fan& Côté, 1990 p. 311). Table 3.7, based on the website of the Central People's Government of PRC (http://english.gov.cn/links.htm#1), summarises the key agencies involved in coastal zone management in the Chinese Central Government and their management functions.

Table 3.7 Key ministries and agencies involved in coastal zone management in the Chinese Central Government and their management functions.

Ministries and agencies	**Management functions**
Ministry of Land and Resources	Protect and rationally utilise the natural resources on coasts such as land, mineral and marine resources.
State Oceanic Administration	Draft basic marine laws, regulations and policies; coordinate marine activities and institutions; draft regulations and rules to safeguard legal rights and enforce laws; draft and supervise the marine zoning plan and sea area uses; be responsible for island protection, marine ecological environment protection; manage the marine monitoring and surveillance, and hazard forecasting and warning; manage the marine technology development, marine economy supervision and marine international cooperation; undertake tasks related to the NOC.
Ministry of Environmental Protection	Control coastal environmental problems from human activities.
Ministry of Transport	Supervise waterborne traffic safety such as waterborne traffic control, inspection of ships and its crews and equipment, and registration and prevention of pollution; guide public security related to maritime affairs, navigation and harbours.
Ministry of Water Resources	Develop and manage water infrastructures, major rivers, shorelines, estuaries and coast beaches.
Ministry of Agriculture	Guide the exploitation and protection of fishery resources in fishery waters, shoals and swamps.

Table 3.7 lists only the major agencies related to coastal zone management in the Chinese Central Government. The governments at local levels have a similar horizontal structure to the Central Government of corresponding agencies with corresponding management functions (Cao & Wong, 2007).

In the Chinese Central Government, the Ministry of Land and Resources (MLR) is responsible for the planning, administration, protection and rational utilisation of natural resources such as land, mineral and marine resources, so the coastal lands and coastal waters are both under the authority of MLR. The SOA is subordinate to the MLR and is the leading agency for coastal zone management (Lau, 2005; Wu *et al.*, 2012). The SOA has the authority to manage marine affairs and coordinate agencies for marine and coastal zone management (Cao & Wong, 2007). The Ministry of Environmental Protection has the leading role in overall environmental management, including cooperation with the SOA on coastal waters and specifically the prevention of marine

pollution from land-based sources and coastal construction projects (Cao & Wong, 2007; Chen & Uitto, 2007; Lau, 2005).

Other major agencies related to coastal zone management include the Ministry of Transport, Ministry of Water Resources and Ministry of Agriculture. The obligations of these agencies are not only for coasts, but they develop guidance and standards for coastal zone management (Wu *et al.*, 2012). There is coordination and also internal competition for administrative interest on coasts among these agencies (Chen & Uitto, 2007). In dealing with marine and coastal issues, they usually attempt to obtain more benefits and evade responsibilities, which results in internal competition (Lu & Ai, 2001).

3.3.2.2 Marine management mechanism and the SOA

Coastal zone management has significant overlap with marine management in China and so the SOA, in charge of marine affairs, is widely regarded as the leading agency for coastal zone management (Li, 2011; Lu & Ai, 2001). There are three major stages of the marine management mechanism and institutional reforms, from the foundation of the PRC in 1949 to the 1970s, the 1980s to early 1990s and the 1990s to now. In the first stage, marine management developed from a resource-based mechanism to an institution-based mechanism. In this stage, the Chinese Central Government set up the SOA and its three branches. The second stage was a transition period in which Chinese governments established marine institutions at local levels. In the third stage, Chinese governments have gradually developed an integrated mechanism for marine management.

Establishment of national marine institutions (1949-1970s)

After the foundation of the PRC in 1949, Chinese governments managed the ocean and coastal zone in terms of different natural resources, so marine and coastal zone management were basically the extension of natural resource management on land (SOAMDSRI, 2011; Zhong, 2013). All the government agencies related to marine resource management constituted a resource-based sectoral mechanism. However, the rapid development of the society and economy and the increasing conflicts related to

marine resource management rendered this sectoral mechanism inefficient (SOAMDSRI, 2011).

In 1964, the Chinese Central Government established the SOA and entrusted it to manage marine resources, conduct marine environmental surveys, collect and collate marine information and provide marine public services. The newly established SOA aimed to transfer the sectoral and temporal coordinative mechanism to a specialised and stable marine working force (Lu & Ai, 2001). In 1965, the Central Government set up the North China Sea Branch, East China Sea Branch and South China Sea Branch in Qingdao, Ningbo and Guangzhou to respectively manage the Bohai Sea and Yellow Sea, East China Sea, and South China Sea. These three branches are directly subordinate to the SOA. The establishment of the SOA and its three branches signified the initial formation of a national administration for marine management and created the vertical management mechanism between the SOA and its three regional branches (Zhong, 2013).

Establishment of local marine institutions (1980s-early 1990s)

In 1978, the reform and opening-up policy started in China. Coastal areas benefited from their outstanding locations and abundant natural resources. This laid a great foundation for further marine institutional reforms. In 1982, the Chinese Central Government upgraded the SOA to be directly under the State Council (SOAMDSRI, 2011), which reflects the national importance of marine affairs.

With the enforcement of the reform and opening-up policy and the exploitation of natural resources, local governments were more involved in marine and coastal zone management. After the national government institutional reform in 1988 and the reform of the marine management system in 1989, provincial, municipal and county governments gradually set up local marine management agencies (SOAMDSRI, 2011). The local marine management agencies were organised in the following forms (SOAMDSRI, 2011):

- combining marine and fishery management agencies,
- independent marine management agencies, and
- agencies merged into land and resource management institutions.

The establishment of local marine management agencies augmented the efficiency of marine management at local levels and facilitated the vertical integration among governments at different levels. Hence, China's marine administration established vertical or intergovernmental mechanisms among the national, provincial, municipal and county governments. In 1989, the three branches of the SOA established marine management regions and marine monitoring stations. Thus, the SOA has a four-tier administrative mechanism, that is, the SOA, its three branches, marine management regions and marine monitoring stations (Lu & Ai, 2001). Figure 3.2, taking Qingdao City in Shandong Province as an example, illustrates the vertical/intergovernmental marine management mechanism in China.

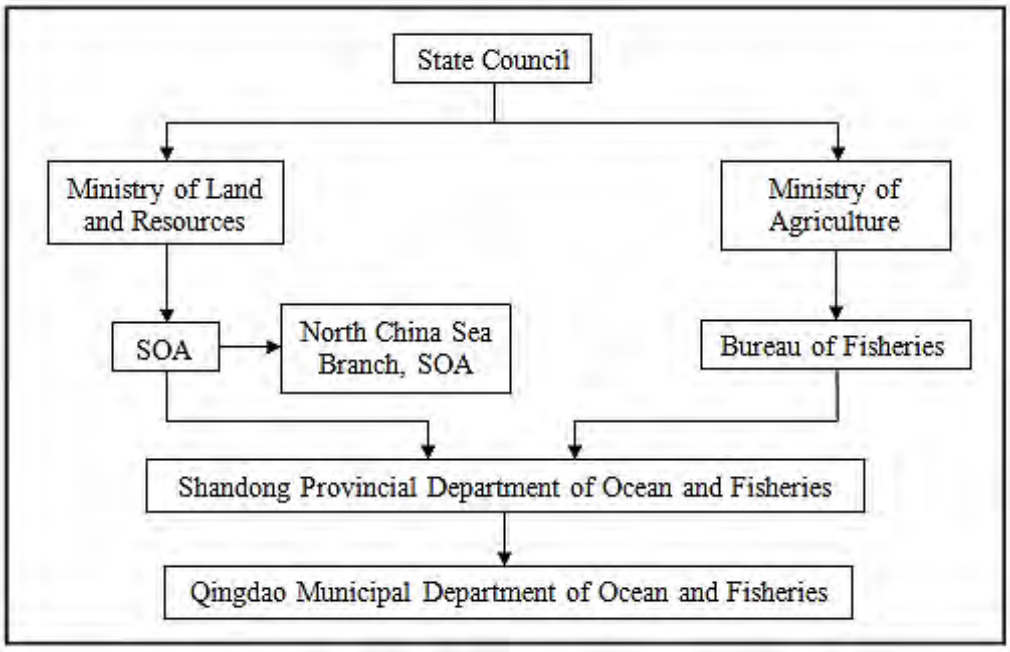


Figure 3.2 The vertical/intergovernmental marine management mechanism for Qingdao.

Integrated marine management at the initial stage (1990s to now)

Since 1983, the State Council's administrative structure and responsibility has been reorganised every five years. Before 1993, the SOA was directly subordinate to the State Council, but after the structural reform of the State Council in 1993, the SOA was incorporated into the Commission of Science and Technology under the State Council. In 1998, another structural reform took place in China and since then the SOA has been under the newly established MLR as a ~~"in~~managed unit" (Lau, 2005). Despite the

downgrading and upgrading of the SOA, it has increasing powers in marine management (Lau, 2005; SOAMDSRI, 2011).

After the 1990s, all the Chinese governments at the provincial, municipal and county levels on the coastal zone set up marine management agencies to undertake marine management tasks at local levels (SOAMDSRI, 2011). After the national government institutional reform in 2008, the Chinese Central Government entrusted the SOA with a new function, that is, to strengthen research on marine strategies and to intensify integration and cooperation on marine affairs. It is the first time the SOA has had a function of integrated management, which clearly shows that an integrated mechanism is the objective of marine management (SOAMDSRI, 2011). In the latest structural reform of the State Council in 2013, the Chinese Central Government empowered the SOA to manage the newly established NOC and the China Coast Guard (CCG). All these changes demonstrate the growing importance of the SOA in China‘s marine management.

3.3.2.3 Local government agencies related to coastal zone management

Although China‘s ICZM is in its initial stage, there are successful cases at local and regional levels (Luo *et al.*, 2013; Wu *et al.*, 2012). The practice of ICZM in China began with Xiamen City, located on the south-eastern coast, which is a Special Economic Zone in China (Zhang & Xue, 2012). In 1993, the Chinese Central Government launched Xiamen as a demonstration site of the Global Environment Facility/United Nations Development Program/ International Maritime Organization Regional Program for the Prevention and Management of Marine Pollution in the East Asian Seas (MPP-EAS) (Hong & Xue, 2006b; Peng *et al.*, 2006; Thia-Eng *et al.*, 1997). Through this demonstration project, Xiamen established an ICZM system with a leading group, coordinating mechanism (including financial mechanism), scientific support system, legislative system and enforcement mechanism (McCleave *et al.*, 2003; Peng *et al.*, 2006; Xue *et al.*, 2004). The demonstration project of Xiamen provided lessons and experience for further practice of ICZM in China. In the last decade, Shanghai, Shandong, Jiangsu, Quanzhou and other coastal regions have also carried out ICZM projects, or promulgated regulations and policies for ICZM (Bin *et al.*, 2009; Huang *et al.*, 1998; Shi *et al.*, 2001; Shi *et al.*, 2004; Wu *et al.*, 2012).

As for government agencies, the local departments and national ministries do not correspond one to one, but there are always agencies with corresponding functions in the governments of each level (Cao & Wong, 2007). Therefore, in Shandong Provincial Government, Qingdao Municipal Government and the county (or district) governments, there are always agencies with corresponding functions for marine and coastal zone management to those in the Chinese Central Government (Table 3.7). Similar to the Chinese Central Government, there is no particular agency just for coastal zone management in Shandong Provincial Government; however, various government agencies with functions related to coastal zone management work in a coordinative manner to achieve ICZM. These provincial agencies work under the double leadership of provincial government and national ministries (Wu *et al.*, 2012).

3.4 Conclusions

This chapter explains the importance of a legal and regulatory framework to ICZM, introduces laws, regulations, institutions and programs for ICZM, and discusses the key findings from previous studies. All these partly answer the first research question about the contemporary legal and regulatory framework for ICZM and provide background for a better understanding of the findings in this research.

Chapter 4
Methodology

4.0 Introduction

In research, the relationship between theory and research determines the differences in deductive and inductive approaches. These two approaches suggest tendencies rather than hard-and-fast distinctions or preferences (Bryman, 2008). Deduction tends to apply theories to guide empirical inquiries, while induction tends to generalise inferences from realistic contexts and observations (Bryman, 2008). Since this research is based on realistic problems in coastal zone management, an inductive approach is more appropriate. For such problem-based research, the experience and responses from multiple coastal stakeholders are valuable.

Figure 4.1 outlines the process of this research. It shows that the research gathers evidence from semi-structured interviews, questionnaire surveys, case inspections, legal and regulatory documents, publications and other data from fieldwork to create research ―triangulation". In social research, there are several categories of triangulation, including the triangulation of measures, the triangulation of observers, the triangulation of theories and the triangulation of methods (Neuman, 2006). Generally, ―triangulation entails using more than one method or source of data in the study of social phenomena" (Bryman, 2008 p. 379). It helps to cross-check and verify the reliability of a research design and the validity of the data collected (McNeill & Chapman, 2005; Somekh & Lewin, 2011). Researchers accept that a mixture of methods and data sources will increase effectiveness and validity, and reflect a multi-perspective ideal (McNeill & Chapman, 2005). ―Applied to social research, it means it is better to look at something from several angles than look at it in only way" (Neuman, 2006 p.149).

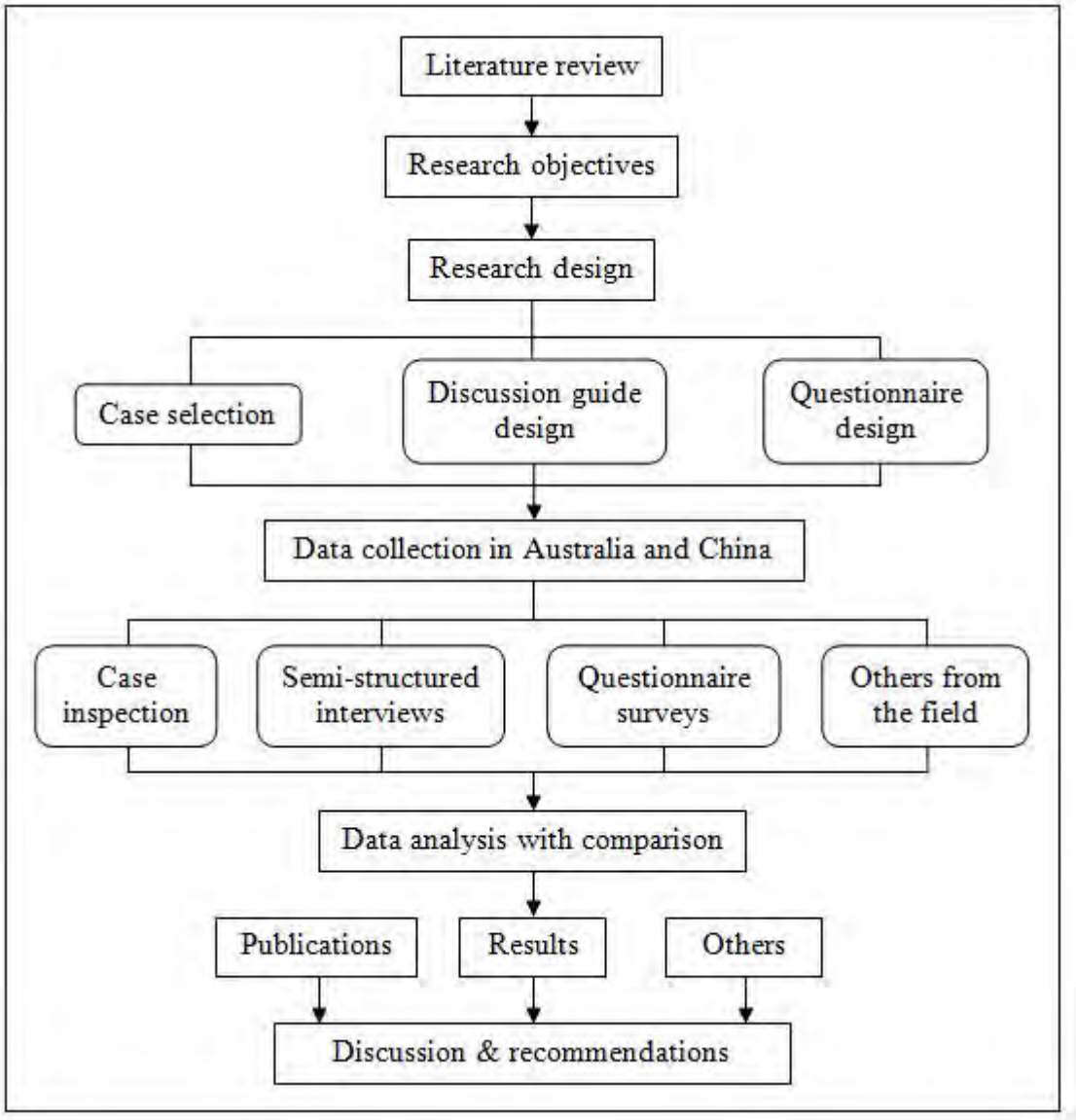


Figure 4.1 Research process and methodology.

This chapter will first introduce the study areas in Australia and China; the second section will explain how this research collected data, especially through the use of semi-structured interviews and questionnaire surveys; and the last section will explicate the data analysis methods.

4.1 Study areas

This research uses two marinas (RBM and CCM) to focus attention on the vertical integration. Table 4.1 and Figure 4.2 show the study areas arranged in the vertical

dimension. The following section will explain why this research uses marinas and how marinas help to focus the research.

Table 4.1 Study areas in Australia and China.

	Australia	China
National jurisdictions	Commonwealth of Australia	People's Republic of China
State/Provincial jurisdictions	State of New South Wales	Shandong Province
Local jurisdictions	Woollahra Municipal Council	Qingdao City
Surrounding regions	Sydney Harbour	Jiaozhou Bay
Marina developments	Rose Bay Marina	Celebration City Marina

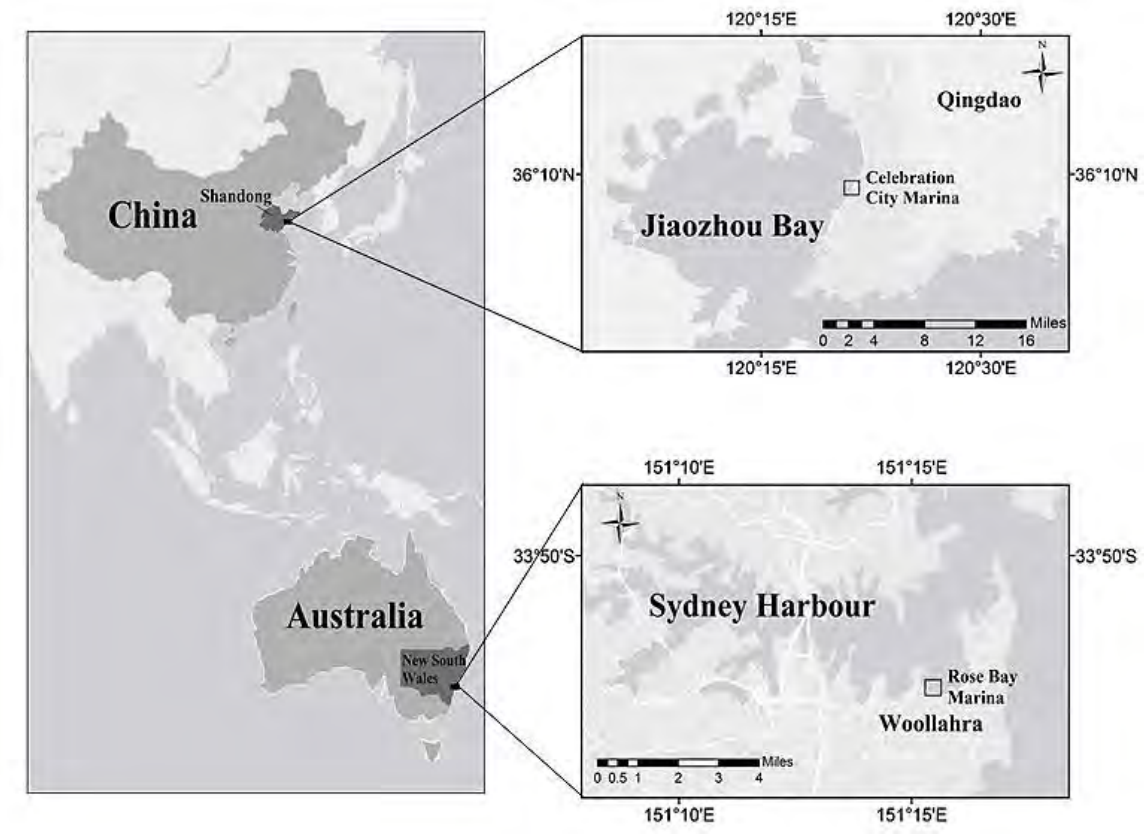


Figure 4.2 Study areas in Australia and China.

A marina is a small harbour or dock with berths and moorings in waters and maintenance facilities on attached lands. Both RBM and CCM were newly proposed marinas in the process of development approval application. Previous research has studied coastal management issues through the lenses of coastal wetlands, offshore fisheries and coastal tourism (Caffyn & Jobbins, 2003; Dale *et al.*, 2010; Done

&Reichelt, 1998). Coastal developments, especially marinas, provide a new research perspective to observe and evaluate the legal and regulatory framework for ICZM. Also:

- marinas are typical coastal developments located on the coastal zone, occupying both coastal land and coastal waters. They are small but physically discrete and readily observed;
- the application process of marinas is intense, so the contention and tension among stakeholders are clear; and
- in the application process for marinas, the focus for researching the legal and regulatory framework is easily accessible, as the documents are available to the public when the relevant debates are at their decision-point.

The two marinas set borders and narrow the focus for this research. As stated earlier, these marinas act like the origin of a coordinate system. They link each "level" on the vertical and horizontal "scales", and vividly illustrate the multi-level governance reviewed in Section 2.2. At the vertical dimension, they assist in determining appropriate levels on the vertical scale (Table 4.1). At the horizontal dimension, they contribute to recognition of social, economic and environmental sectors in coastal issues, regulations and government agencies related to coastal zone management, and coastal stakeholders. Without these two marinas, the scope of this research would be too broad and abstract.

4.1.1 Study areas in Australia and a brief history of Rose Bay Marina

In Australia, the state of NSW has a coastline over 2000 km. The population of NSW is around 7.29 million, accounting for over 30% of the total population in Australia (ABS, 2013). It was the first Australian state to promulgate specialised coastal legislation, the *Coastal Protection Act 1979* (NSW), and it has a long history of developing ICZM (Harvey & Caton, 2010). The Woollahra Municipal Council is one of the 152 local councils in the state and has a population of around 52,000. It is located at the eastern part of Sydney Harbour and is one of the wealthier communities in NSW.

Sydney Harbour is the regional area surrounding RBM. It is one of the finest harbours in the world for its natural beauty and is of value to a variety of stakeholders including coastal residents, boat users and service providers (Hoskins, 2009). The 240 km

shoreline of the Harbour encompasses about 54 km² of water body with intensively urbanised shores, numerous bays for shipping and naval purposes, and a broad area of residential property (Dawkins & Colebatch, 2006; Hoskins, 2009; McCready *et al.*, 2000).

RBM is situated on the south-western shore of Rose Bay in Sydney Harbour (Figure 4.3). To the east and north of RBM are private swing moorings licensed by NSW Roads and Maritime Services. Land access to the marina is from New South Head Road. The Point Piper Marina shown in Figure 4.3 is located on the western shore of Rose Bay and shares the same developer as the RBM. Figure 4.4 shows a compiled history of RBM, referring to the RBM website (http://rosebaymarina.com.au/), Environment Impact Statements (EIS) 2006 and 2012 (Osborne, 2012; Osborne & Britton, 2006), Development Application Assessment Report 2012 (Holbert, 2012) and NSW Land and Environment Court(LEC) judgements 2008, 2009 and 2013.

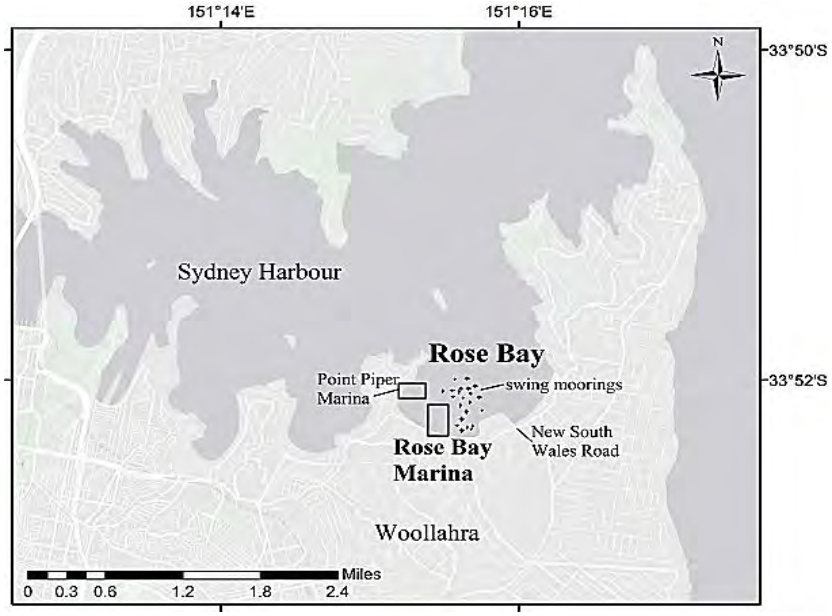


Figure 4.3 Rose Bay Marina.

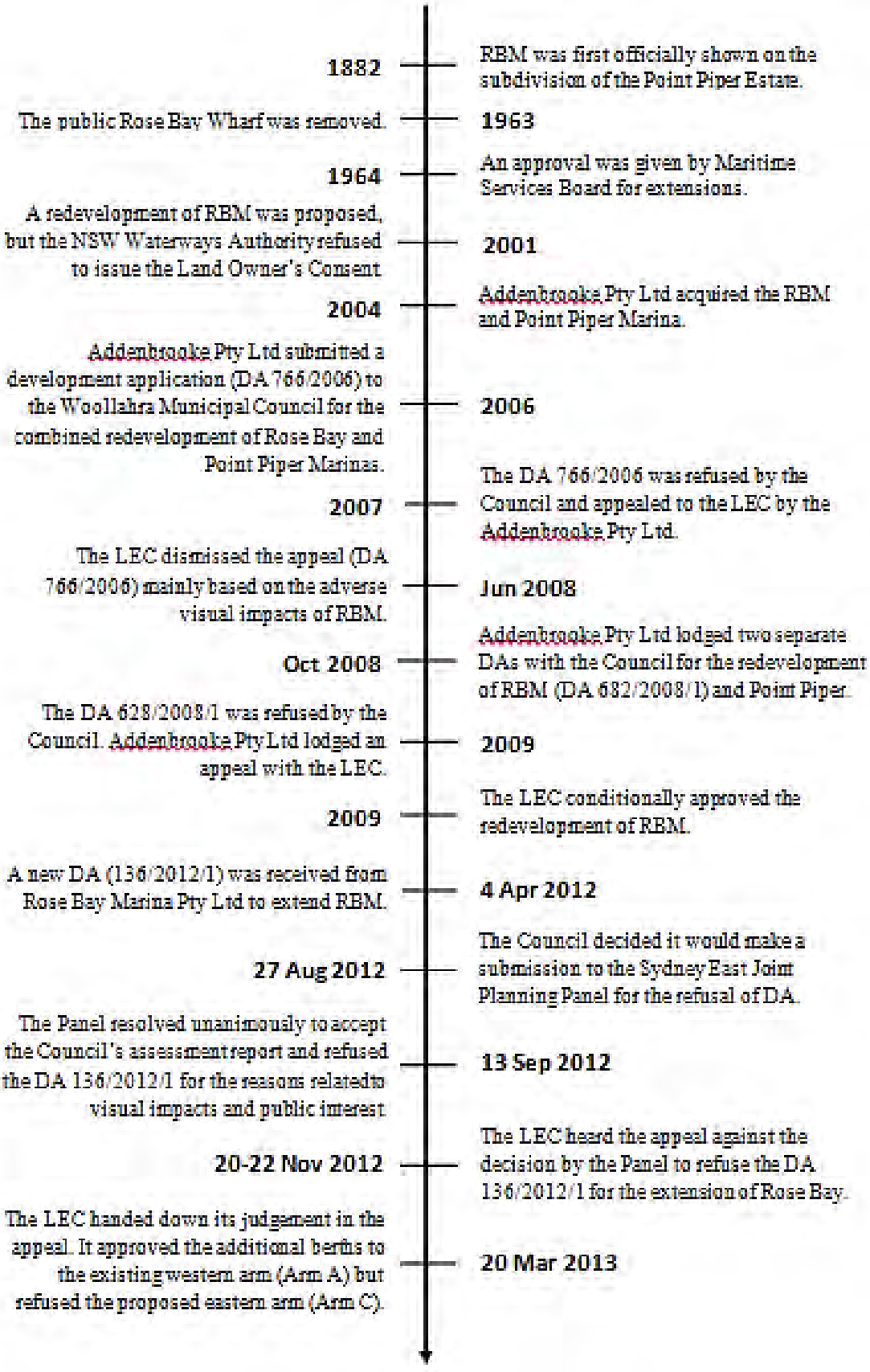


Figure 4.4 History of Rose Bay Marina.

Figure 4.4 shows that RBM's most recent phase of development started from the early 2000s. Figure 4.5 shows the aerial view of RBM before the early 2000s. By 2006, the developer, Addenbrooke Pty Ltd, had lodged a development application (DA) with the Woollahra Municipal Council for the combined redevelopment of Rose Bay and Point Piper Marinas (Figure 4.6). In 2008 revised separate DAs for the two marinas (Figure 4.7), and in 2012 a DA for the extension of RBM (Figure 4.8) were lodged. The Woollahra Municipal Council rejected all the DAs and the developer appealed to the NSW LEC. The NSW LEC rejected the first appeal in 2008, conditionally approved the second one in 2009 and partly approved the third one in 2013. In 2009, the NSW LEC approved two of the three applied arms. In 2013, the NSW LEC approved the additional berths of the western arm but rejected the newly applied eastern arm.

Figure 4.5 Aerial view of Rose Bay before the early 2000s
(Source: Osborne & Britton, 2006 p. 90).

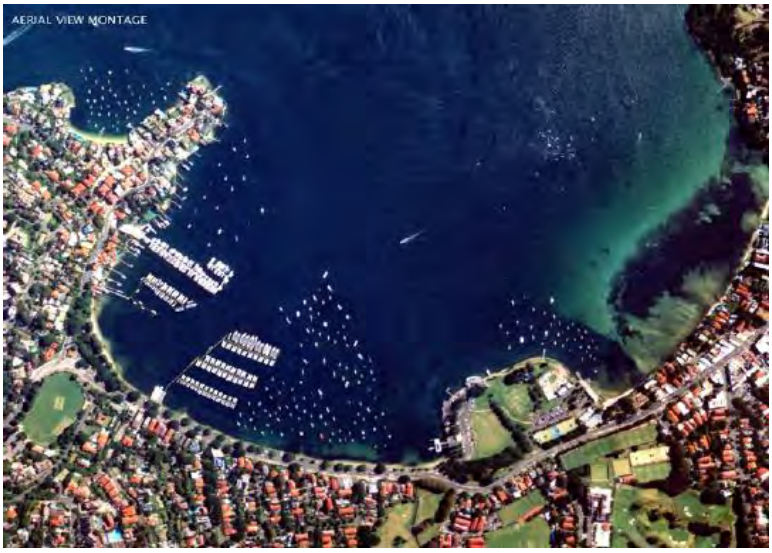


Figure 4.6 Rose Bay Marina proposed in 2006 (DA 766/2006)

(Source: Osborne & Britton, 2006 p. 90).

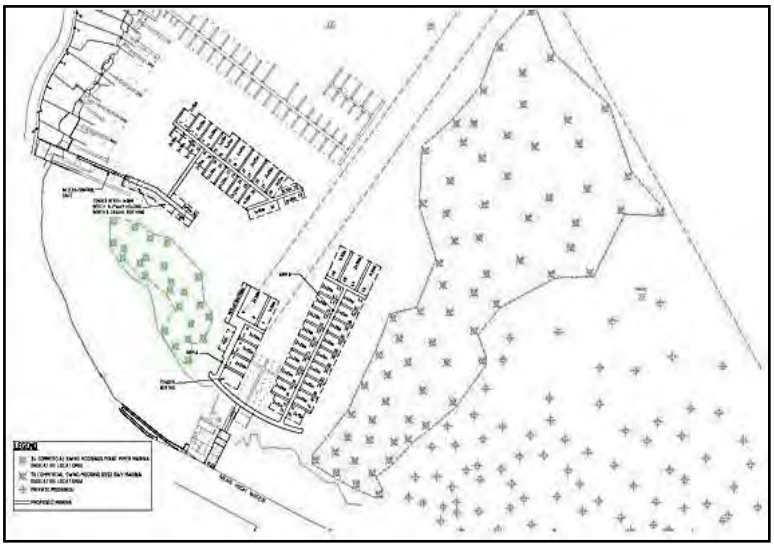


Figure 4.7 Rose Bay Marina approved in 2009 (DA 682/2008/1)

(Source: Osborne, 2012 p. 36).

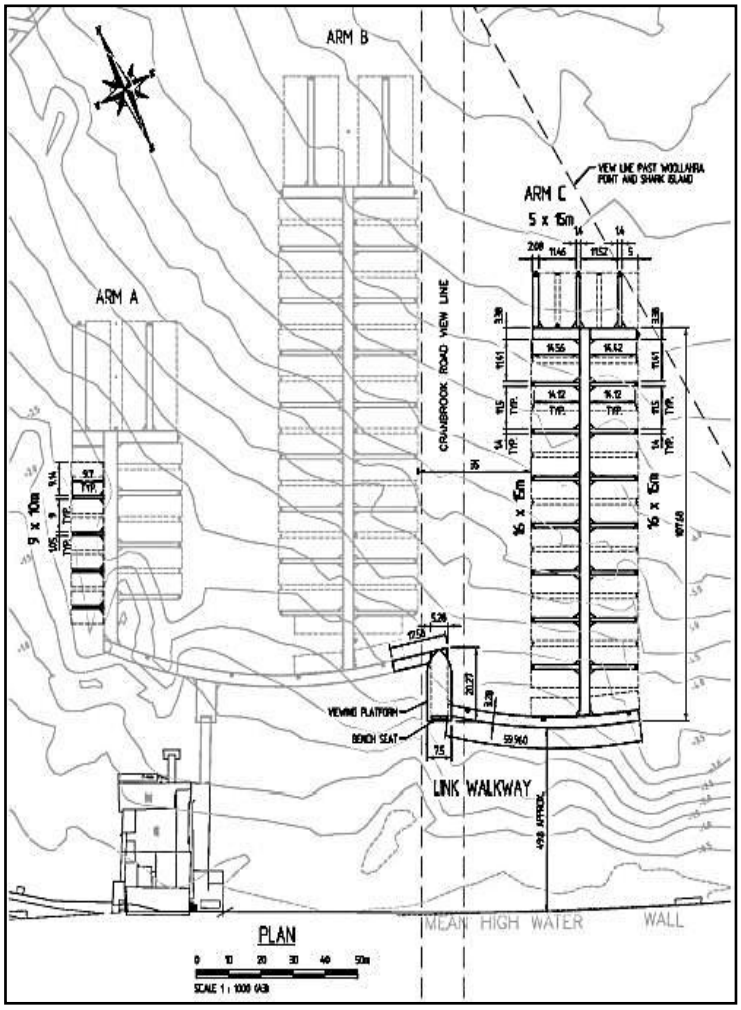


Figure 4.8 Rose Bay Marina extension proposed in 2012 (DA 136/2012/1) (Source: Holbert, 2012 p. 3).

4.1.2 Study areas in China and a brief history of Celebration City Marina

Figure 4.1 shows that Shandong Peninsula is situated in Shandong Province, which is on China‘s eastern coastline. It is the largest peninsula in China and protrudes into the Bohai Sea and Yellow Sea. Shandong Province has a coastline of 3121 km, accounting for one-sixth of the country‘s total coastline. Since the early 1900s, the marine economy has been the focus of economic development in Shandong Province. Shandong Provincial Government proposed the concept of ―Marine Shandong" to develop the marine economy. In 2011, the Chinese State Council officially approved the Development Plan of the Blue Economic Zone of Shandong Peninsula (the Plan) which

was the first regional development strategy focusing on China's marine economy and signalled the upgrading of the BEZ to a national strategy (Chang *et al.*, 2013).

According to the Plan, the main area of the BEZ includes all the offshore areas (159,000 km²) of Shandong Province and the land areas (64,000 km²) of six coastal cities and two coastal counties (Figure 4.9). Figure 4.9 shows that the layout of the BEZ forms ―one core, two poles, three zones and three groups":

- one core: the high-end marine industrial cluster in Jiaodong Peninsula;
- two growth poles: the marine industrial cluster in the Yellow River Delta high efficient and ecological economic zone and the *lingang* (port-vicinity) industrial cluster of southern Shandong;
- three development and protection zones: the coastal zone, the offshore zone and the open sea zone; and
- three urban groups: the group of Qingdao, Weifang and Rizhao, the group of Yantai and Weihai and the group of Dongying and Binzhou.

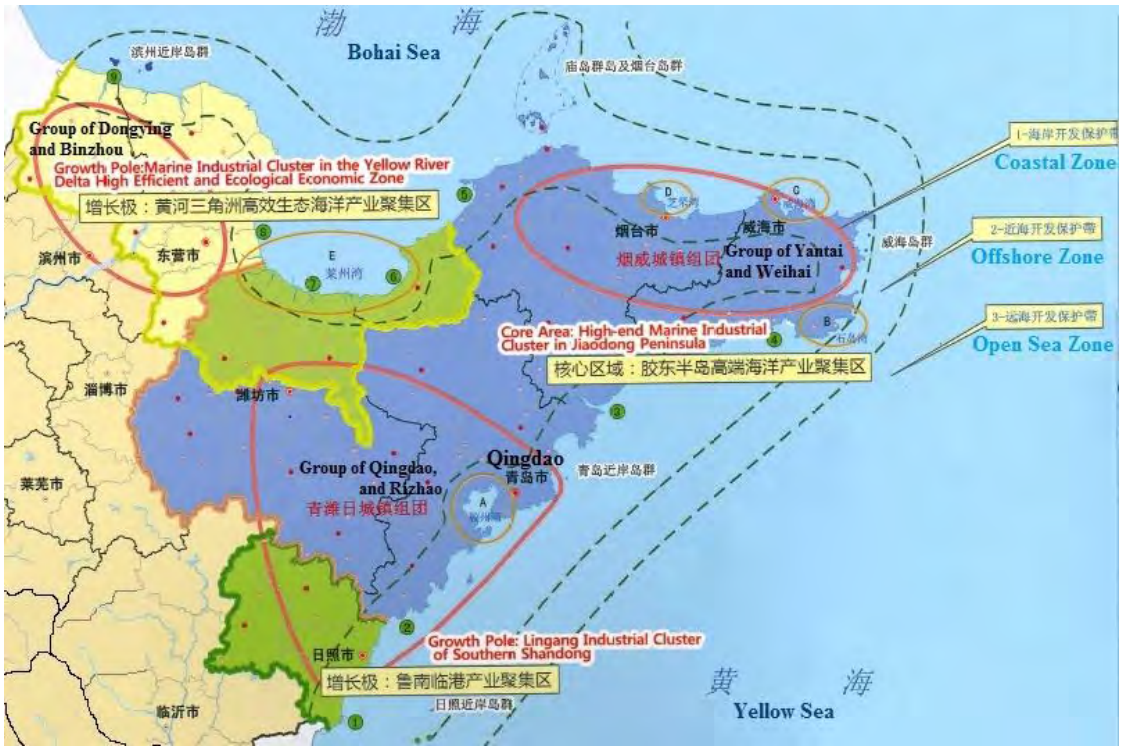


Figure 4.9 Layout of the Shandong Peninsula Blue Economic Zone
(Source: Adapted from The General Office of the Leading Group of the "Two Zones" Development of Shandong Province, nd).

Qingdao was the leading city in the Development Plan of the Blue Economic Zone of Shandong Peninsula and became the core city in the newly established BEZ (Li & Zhou, 2006; Wang *et al.*, 2011b). The continental coastline of Qingdao is about 730 km long, accounting for one-quarter of the total coastline of Shandong Province. There are many capes and bays on the twisted coastline, with Jiaozhou Bay the largest bay in Qingdao (Qingdao Municipal Government, nd).

CCM is on the eastern shore of Jiaozhou Bay in Qingdao (Figure 4.10). Jiaozhou Bay is called the ―mother bay" of Qingdao. The bay and its surrounding coastal areas have port, tidal flat, fishery, tourism and spatial resources (Wu *et al.*, 2011; Zhang & Yang, 1983). The primary coastline of Jiaozhou Bay is a bedrock embayment. The shoreline twists and turns creating natural harbours. Qingdao Port commenced operations in 1892 and is now composed of four port areas (Qingdao Old Port Area, Huangdao Oil Port Area, Qianwan Port Area and Dongjiakou Port Area), with the first three within the bay. It is a world-class large port on China's coast and has maintained international business with over 180 countries and 700 ports (Qingdao Port International Co., Ltd., 2014).

Figure 4.10 Celebration City Marina.

Most of Jiaozhou Bay‘s tidal flats are in the north. They accommodate the development of salt pans, aquaculture, transportation and infrastructure (Wu, *et al.*, 2011). Fishing is a traditional Jiaozhou Bay industry and fishing within Jiaozhou Bay has a history of over 5,000 years (Wu, 1999; Zhang & Yang, 1983). Its first aquaculture farms were established in 1957 and since then many farms have sprung up within the bay. Jiaozhou Bay and its surrounding areas have resources for ecological, geological, industrial and military tourism. Seven scenic tourist areas and eight tourism resort districts surround it. In 2014, Qingdao City received 66 million international and domestic tourists and the tourism revenue was over 106 billion yuan (Zhu & Wang, 2014). Jiaozhou Bay also contributes to the spatial extension of Qingdao City and its highway, cross-sea bridge and undersea tunnel are landmarks.

In pursuit of economic growth and social progress, Jiaozhou Bay has suffered severe environmental and ecological pressures. The tidal water area of the Bay shrank from 578 km² in 1863 to 362 km² in 2006 (Chen *et al.*, 2007b; Wu *et al.*, 2011). The natural coastline reduced from 170 km in 1863 to 20 km in 2002(Wu *et al.*, 2011,Ye *et al.*, 2009). Based on remote sensing image data, 72 $km^2$of wetland was lost between 1988 and 2005. Most of these lost wetlands were developed into salt pans and aquaculture farms (Ma *et al.*, 2008), and more recently were reclaimed for industrial and urban expansion (Li & Liu, 2011; Su *et al.*, 2011). For instance, from 1988 to 1994, the construction of Jiaozhou Bay highway reclaimed more than 6 km^2 of seawater and on average the coastline of Jiaozhou Bay moved 600 m seaward. According to the *Bill of Protection of Jiaozhou Bay Seawater and Coastline* (2005), from 2000 to 2005, more than 20 marine and coastal projects were approved and over 16 km^2 of seawater was reclaimed (Wang, *et al.*, 2006; Ye, 2008). In addition, Jiaozhou Bay has received most of the land-sourced pollution from the surrounding regions, resulting in the contamination of three-fifths of the water area at a moderate or mild level (Wang *et al.*, 2012; Wu *et al.*, 2011).

CCM is one part of Celebration City developed by the Qingdao City Construction and Investment (QCCI) Group. Celebration City is a comprehensive coastal development combining art, culture, fashion, commerce, entertainment and residences. Figure 4.11 summarises the history of CCM on the basis of interviews with its developers, on-the-spot investigations and other data collected from fieldwork.

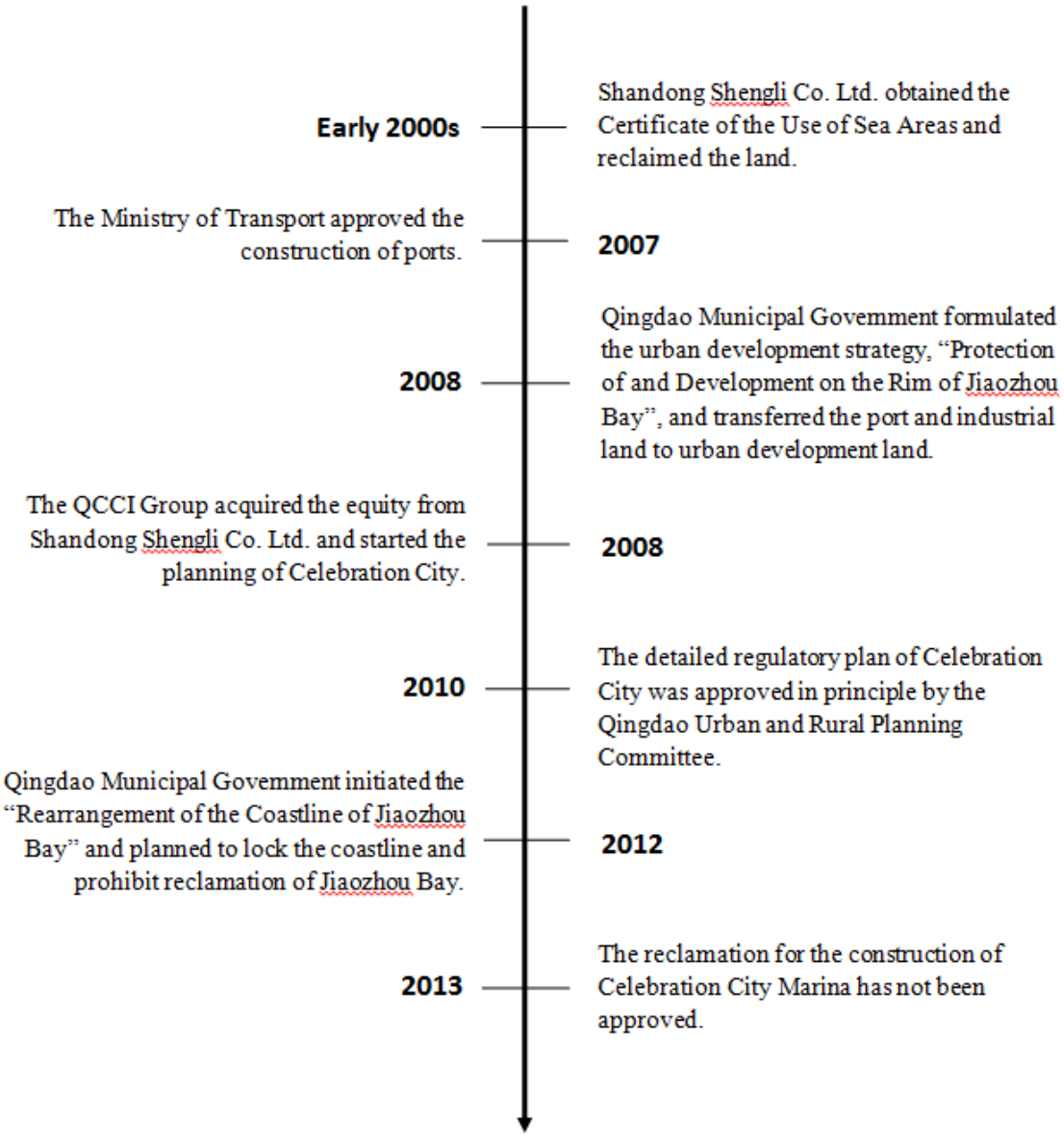


Figure 4.11 History of Celebration City Marina.

4.2 Data collection through fieldwork

This research adopts semi-structured interviews and questionnaire surveys with coastal stakeholders. The interviews and surveys both start with general questions about ICZM and the legal and regulatory framework, and then go to specific questions about the two marinas. Semi-structured interviews are useful for investigating comprehensive opinions and collecting a variety of experiences (Longhurst, 2010). The questionnaire surveys aim to collect quantitative data based on the questions in semi-structured

interviews and provide statistical support for the research. In conducting this research, the researcher inspected the marinas and collected regulatory documents from governments, research materials from academia, case files from marina developers and other data from local libraries. In summary, the sources for data collection in the field include:

- semi-structured interviews;
- questionnaire surveys;
- case inspections; and
- other data from respondents and local libraries.

The Human Research Ethics Advisory Panel of the University of New South Wales Canberra granted ethics approval for the interviews and surveys. In June 2012, the Panel approved the fieldwork in Australia (Approval Number: A-12-22) and in November 2012, the Panel approved the fieldwork in China (Approval Number: A-12-42). The researcher conducted fieldwork mainly in mid 2012 in Australia and early 2013 in China. The researcher tracked news related to this after the fieldwork in both countries. The researcher contacted respondents after the fieldwork when collecting updated information relevant to the research was necessary.

4.2.1 Sampling

This research identified respondents from the representatives of governments, academia, business, NGOs and local communities in order to synthesise information from multiple stakeholders and to have a comprehensive understanding of multiple realities, perceptions and experiences among key players (Sandhu *et al.*, 2012; Storbjörk & Hedrén, 2011; Syme *et al.*, 2012). These five groups of respondents are the most typical stakeholders involved in coastal zone management (Lu & Ai, 2001; Thom, 2006b). Government officials are decision- and policy-makers and have professional experience in ICZM. When doing research, academics often collaborate with other coastal stakeholders, so they usually have a comprehensive and academic understanding of coastal issues. Businessmen drive coastal zone development and look forward to the economic benefits. Since this research was conducted from the perspective of coastal developments, businessmen‘s feedback is worth considering. As they are living on the

coast, local residents often have diverse and first-hand experience concerning coastal development and protection. They also have legal standing in the decision-making process. NGO managers and local residents can represent the public with interests on the coast. These respondents provided the researcher with a comprehensive understanding of the coastal issues in the study areas. The sample of opinions taken during this research represents the key roles and values in ICZM, though the sample cannot be said to represent all possible coastal stakeholders.

To ensure the usefulness of interviews, this research selected respondents according to the purposive sampling approach. It also used a snowball sampling approach to contact respondents for the research. In this approach, the researcher asked the initial-level contact to nominate other prospective respondents (Clifford *et al.*, 2010; Hay, 2005). Table 4.2 summarises the profiles of the 52 respondents (26 each from Australia and China). The researcher gave each respondent a code, in order to clarify the sources of opinions in the presentation of results. RBM and CCM provided the borders for the selection of respondents in Table 4.2. All the officials come from different levels of governments related to the study areas (Table 4.1). Many (A4-A8, C2, C3, C5) are from consent and determining authorities of the two marinas. Most academics are from research and educational institutions in the cities where the two marinas are located. A few (A10, C6, C14) have direct working experience in the environmental assessments of the two marinas. All the business respondents are developers and managers of the two marinas. Nearly all the NGOs (except C21) participating in this research are in the areas where the two marinas are situated. All the public respondents are local residents of the two marina areas. All the Australian public respondents have participated in the public consultation process of RBM applications.

Table 4.2 The profiles and codes used for the respondents.

Respondents from Australia			Respondents from China		
Group	No.	Organisation	Group	No.	Organisation
Governments	A1	State Government Department	Governments	C1	Central Government Ministry
	A2	State Government Department		C2	SOA Branch
	A3	State Government Department		C3	SOA Branch
	A4	State Government Department		C4	Provincial Commission
	A5	Municipal Council		C5	Municipal Bureau
	A6	Municipal Council	Academia	C6	Educational Institution
	A7	LEC		C7	Educational Institution
	A8	State Government Department		C8	Educational Institution
	A9	State Government Department		C9	Educational Institution
Academia	A10	Research Institution		C10	Educational Institution
	A11	Educational Institution		C11	Educational Institution
	A12	Educational Institution		C12	Research Institution
	A13	Educational Institution		C13	Educational Institution
Business	A14	Marina Management Company		C14	Educational Institution
	A15	Marina Industries Association		C15	Educational Institution
	A16	Marina Industries Association	Business	C16	Construction & Investment Group
NGOs	A17	Legal NGO		C17	Construction & Investment Group
	A18	Local NGO		C18	Construction & Investment Group
	A19	Local NGO	NGOs	C19	University NGO
	A20	Local NGO		C20	University NGO
	A21	Local NGO		C21	Environmental NGO
	A22	Environmental NGO	The Public	C22	Local Community
The Public	A23	Local Community		C23	Local Community
	A24	Local Community		C24	Local Community
	A25	Local Community		C25	Local Community
	A26	Local Community		C26	Local Community

The sample size is more than adequate and provides a good representation of the variety of views for analysis. The sample provided a substantial number of the people closely related to coastal zone management and the study areas, and the respondents covered a variety of viewpoints. The researcher conducted interviews until few new ideas were emerging in successive interviews. The sample size is a little larger than many published studies using in-depth analysis (Abeyasekera *et al.*, 2002; Sandhu *et al.*, 2012; Tyndall *et al.*, 2011; Yin, 2009).

4.2.2 Semi-structured interviews

This research used semi-structured interviews to collect qualitative data. It is a less structured and more flexible approach compared with the structured interviews which have a set of closed-ended questions (Kitchin & Tate, 2000; Limb & Dwyer, 2001). In semi-structured interviews, a researcher can ask further and deeper questions according to the respondent‘s responses and can follow the interests of the respondent (Kitchin & Tate, 2000). In this research, the researcher and respondents both appeared to enjoy the greater flexibility of semi-structured interviews. The researcher avoided predetermined outcomes and neglected emerging issues.

The researcher designed a discussion guide (Appendix 1) for the semi-structured interviews. It was based on the research objectives and assisted the researcher in asking questions in a uniform and systematic manner. The discussion guide has three parts:

- general impressions about integrated coastal zone management;
- legal and regulatory framework related to ICZM; and
- marinas‘ impacts vs. ICZM.

The first part was to start an interview and collect general viewpoints on ICZM. Based on the respondents‘ responses to the first questions and their professional and personal background, the researcher could gain insights into their interest and knowledge. This facilitated the following sections of the interview and assisted the researcher in collecting more information in limited time. In the second part, the researcher provided the respondents with a few potential elements, such as laws, regulations and governments, in the legal and regulatory framework. In the first few interviews, the researcher used cards with legal and regulatory element sprinted on them. The respondents selected the elements that should be in the framework and had a further discussion on their selections. Also, the researcher encouraged respondents to add more elements into the legal and regulatory framework and to discuss their additions. After the first few interviews, the researcher became familiar with the prepared elements in the legal and regulatory framework and more skilled in doing interviews, so the researcher freely communicated with the respondents without the assistance of cards. In this free model, the respondents could give more diverse responses. The last part aimed

to give an insight into the legal and regulatory framework for ICZM from the perspective of marinas.

The questions under these three topics were inter-related, so they were discussed according to the respondents‘ real-time responses. In the interviews, the researcher asked the questions from the discussion guide in a flexible order and spent more time on the questions that were interesting and familiar to the respondents. In the semi-structured interviews, different respondents shared their opinions with examples on the basis of their professional backgrounds and personal experience. For example, government officials usually provided more information on government management and the legal and regulatory documents, and businessmen were more interested in coastal developments. Thus, the responses from all the respondents contributed to a complete story of coastal management issues.

Most respondents, and particularly government officials and academics, provided abundant information on ICZM and the legal and regulatory framework for ICZM. They linked their professional background, academic knowledge and personal experience to the two marinas. Such efficient linkage between general knowledge and specific developments was not surprising given the deliberate selection of respondents. If the responses to the first two parts in the Discussion Guide (Appendix 1) had no direct linkage to marinas, they would be presented independently. If the responses were to specific questions about marinas or the respondents established linkage between their knowledge and the two marinas, the marinas would be used to illustrate respondents‘ knowledge. Chapter 5 shows how and why marinas are relevant to vertical and horizontal integration in each case.

The researcher conducted 49 interviews, including 26 interviews with 26 Australian respondents and 23 interviews with 26 Chinese respondents (Table 4.2). Most interviews were face to face (43 out of 49 interviews) and occasionally over the phone (6 out of 49 interviews). Interviews ranged from approximately 30 to 110 minutes in duration and were around 55 minutes on average. Following ethics approval, the researcher digitally recorded most interviews and took notes for a few.

4.2.3 Questionnaire surveys

Interviews possibly result in recording extreme views and researchers may shape the understanding of the respondents (Alvesson, 2011; Silverman, 2006). In order to mitigate the risk of distortions and provide opportunity for quantitative analysis, this research used questionnaire surveys to collect quantitative data from the respondents.

This research used the quantitative data to verify the responses in interviews, gather considered opinions and complement logical gaps in interviews. The respondents participating in semi-structured interviews undertook questionnaire surveys and the key questions in the questionnaire were partly derived from the discussion guide. The researcher also designed other questions based on the literature review and information available before the fieldwork. However, it was impossible to predict all the potential and specific questions in semi-structured interviews. After the fieldwork, it was clear that the questionnaire contributed relatively little in comparison to the large amount of qualitative data from semi-structured interviews.

The researcher sent one questionnaire to each respondent in Australia and China. In Australia, 24 out of 26 questionnaires were returned, and in China, 22 out of 26 were returned. The questionnaire is attached in Appendix 2. The questionnaire was in two languages (English and Chinese) for the convenience of surveying in Australia and China. It used the five-point Likert scale to indicate how respondents agreed with each statement from "strongly disagree" to "strongly agree". The ranking aimed to suggest the degree of importance of each item listed in the questions.

4.3 Data analysis

Having completed the data collection, the researcher aimed to assemble the data to achieve a meaningful interpretation of research findings. The researcher combined the data from interviews and questionnaires as well as documentary sources from the field and the literature. In order togain more objective results, the researcher drew from semi-structured interviews, questionnaire surveys, case inspections, legal and regulatory documents, publications and other data from fieldwork to create research triangulation

(Figure 4.12). It is an appropriate tool kit for qualitative researchers to ensure the reliability of results (Neuman, 2006; Silverman, 2006). The results drawn from various sources in research triangulation could limit personal and methodological bias and strengthen the research generalisability (Decrop, 1999; Foss & Ellefsen, 2002). The researcher used Microsoft Excel to deal with the qualitative data from semi-structured interviews. For the questionnaires, the researcher used the Statistical Package for the Social Sciences (SPSS) to analyse the raw data and Excel to obtain a graphical description of the data.

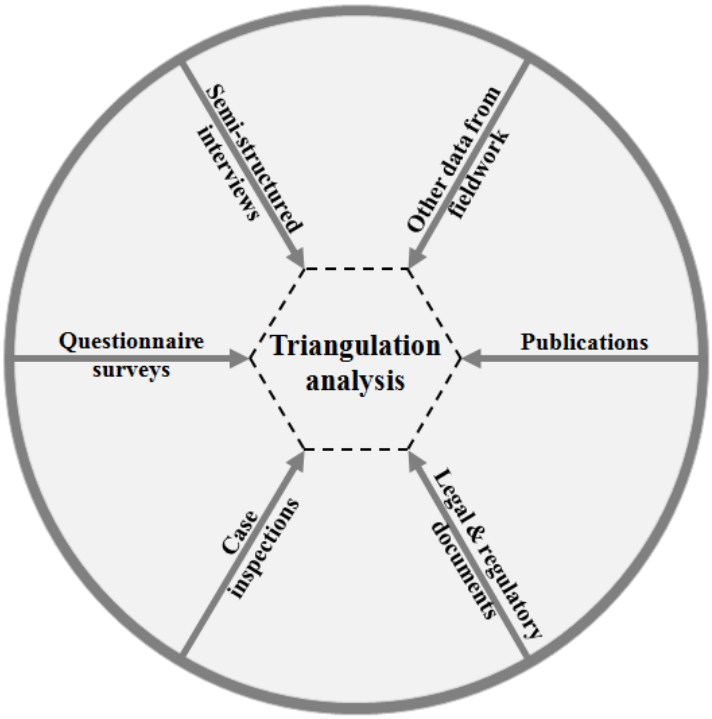


Figure 4.12 Research triangulation.

4.3.1 Qualitative analysis of semi-structured interviews

The researcher digitally recorded most interviews and did a literal transcription in Excel. For the interviews without recordings, the researcher organised the notes taken in the field and typed them into Excel. All these data were analysed by structuring them in the following columns: timing, speaker, transcription, level-3 codes, level-2 codes and level-1 codes (themes) (Figure 4.13).

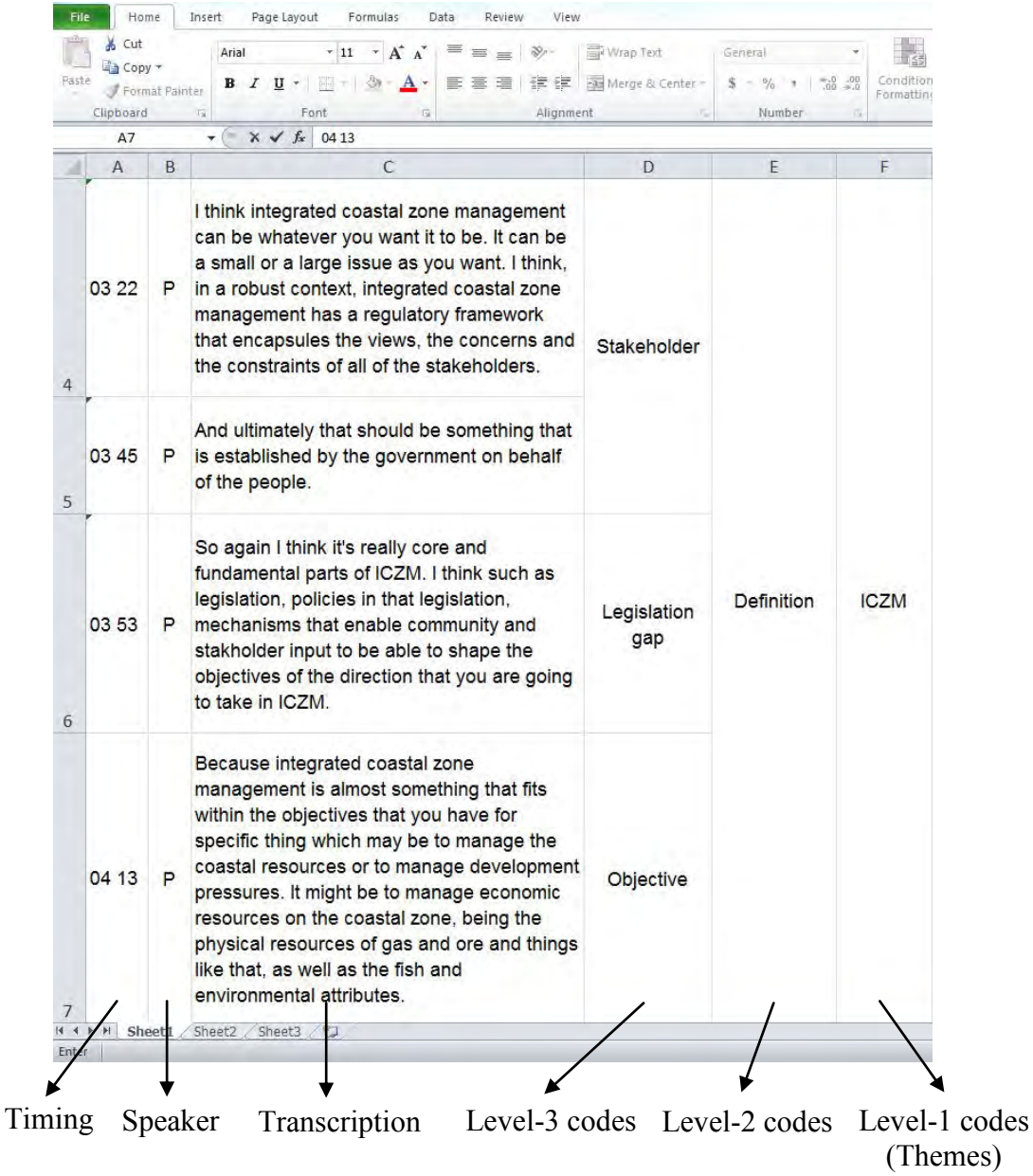


Figure 4.13 Printed screen version of coding in Excel.

As suggested by Hahn (2008), the researcher made a three-level coding system to have a logical and consistent organisation of the semi-structured interviews. Coding is not a linear process with standardised or step-by-step instructions, but involves multiple readings and consideration as well as tentative coding during data analysis (Cope, 2010). This is a widely used method in analysing data from interviews and involves subdividing the data and assigning the raw data into categories (Basit, 2003; Cederborg *et al.*, 2000; Joo, 2011; Peevers & Secord, 1973; Weinfield *et al.*, 2000). In this research the level-1 codes were most general and used as ―themes" in the results chapter of the

thesis. —The process of theme building is central to qualitative, interpretive work because it allows for the organisation of information into trends, categories and common elements that are theoretically important" (Cope, 2010 p. 448). The research distilled five themes:

- integrated coastal zone management,
- legal and regulatory documents,
- governments,
- courts, and
- public participation.

The level-1 codes represented the themes extracted from the discussion guide and the analysis by the researcher after data collection. The level-2 and level-3 codes referred to the sub-codes under level-1 codes and were further divisions of the codes. Some content in the semi-structured interviews could make sense in different contexts, so these were coded under a few different codes and analysed in specific contexts. The researcher could review the context easily, since in Excel it is convenient to read the transcription above and below. An excerpt of the coding system (Figure 4.14) follows.

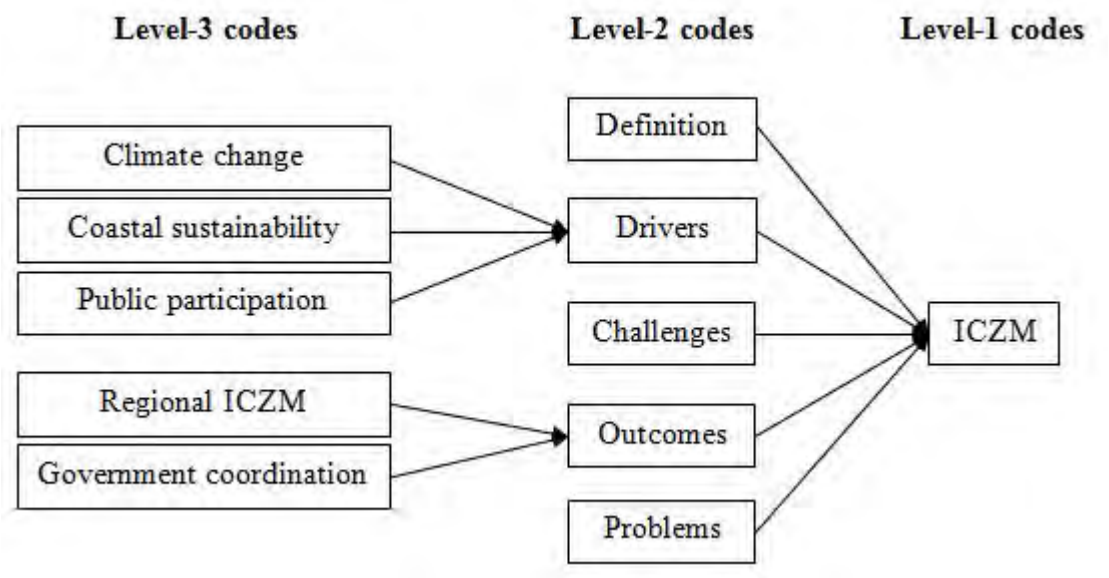


Figure 4.14 An excerpt of the coding system.

The researcher coded the interviews in Australia and China using the same coding system to allow for comparison between the two countries. Since the researcher used the same discussion guide in interviews, the level-1 codes (themes) were the same for

Australian and Chinese data and the level-2 codes had minor differences. Most differences occurred in level-3 codes which represented the respondents‘ specific responses. Taking the drivers of ICZM as an example (Figure 4.14), the respondents from Australia and China raised both similar and different drivers. Hence, the level-3 codes under the drivers of ICZM were reasonably different for Australian and Chinese data. In general, the similarities reflected the two countries‘ shared interests and are worthy of further research and evaluation; the specific differences and gaps between the two countries enlarged the researcher‘s insights and sharpened the understanding of the coastal management issues in each country.

Microsoft Excel helped to link the codes with each part of the transcription. Thus, the results obtained from the qualitative data were categorised with the coding system. The quantitative data collected from questionnaire surveys can generally verify the qualitative results. The researcher‘s linguistic background aided the qualitative data analysis.

NVIVO and other computer-assisted qualitative data analysis software are frequently used for qualitative data analysis to link codes with specific words and expressions (Bazeley, 2007; David & Sutton, 2004). In the semi-structured interviews of this research, the researcher and respondents usually implied one code through several different ways of expression and even without mentioning specific words. Software such as NVIVO is less effective in analysing such qualitative data from semi-structured interviews (David & Sutton, 2004) and so this research did not use it.

4.3.2 Quantitative analysis of questionnaire surveys

This research used the SPSS for the quantitative analysis of raw data. The SPSS generated descriptive statistics. This research used Microsoft Excel to obtain graphical descriptions of the data produced by the SPSS. The questionnaire had two types of questions, five-point Likert scale questions and ranking questions. The researcher discussed the quantitative data analysis with a statistician from the University of New South Wales, Canberra, in order to ensure that the methods used in the analysis of the results were appropriate and valid. The following section will explain the methods used to analyse the two types of questions.

Five-point Likert scale

The five-point Likert scale with statements from ―strongly disagree", ―disagree", ―neutral", ―agree" to ―strongly agree" collected one form of ordinal data which should be analysed with methods to use the ordinal information in the responses (Bryman, 2008; Clifford *et al.*, 2010). To deal with this form of data, this research used contingency tables that summarised the data by showing the counts in each possible category. Since this research had five groups of respondents in each country and five points on the Likert scale, it created a 5×5 contingency table. Table 4.3 gives an example of the contingency table for the Australian data of Q2A (Question 2A).

Table 4.3 5×5 contingency table.

	SD	**D**	**N**	**A**	**SA**	
Governments	1	3	0	3	1	**8**
Academia	1	2	0	0	0	**3**
Business	0	0	1	0	2	**3**
NGOs	2	1	2	0	1	**6**
Local community	0	2	1	0	1	**4**
	4	**8**	**4**	**3**	**5**	**24**

Note: SD, D, N, A and NA respectively represent ―strongly agree", ―agree', ―neutral", ―agree" and ―strongly agree".

Table 4.3 shows that the contingency table gives counts in each of the possible categories for the data outcome (25 categories for a 5×5 contingency table) and also provides totals for each of the rows and columns and an overall total. In the SPSS, the researcher constructed a contingency table for each five-point Likert scale question and used the descriptive statistics to report the counts and the percentage within each group. The researcher reorganised all the results from the SPSS in Excel for graphical description of the data. Figure 4.15 shows an example of Q2A with counts and percentages exported from the SPSS and reorganised in Excel.

	A	B	C	D	E	F	G
1	**Q2A: There are sufficient legal and regulatory measures to protect the coastal zone values and users.**						
2		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
3	Total of all	6	17	10	7	6	46
4		13.0%	37.0%	21.7%	15.2%	13.0%	100.0%
5	Total of Australia	4	8	4	3	5	24
6		16.7%	33.3%	16.7%	12.5%	20.8%	100.0%
7	Total of China	2	9	6	4	1	22
8		9.1%	40.9%	27.3%	18.2%	4.5%	100.0%
9	Australian Governments	1	3	0	3	1	8
10		12.5%	37.5%	0.0%	37.5%	12.5%	100.0%
11	Australian Academia	1	2	0	0	0	3
12		33.3%	66.7%	0.0%	0.0%	0.0%	100.0%
13	Australian Business	0	0	1	0	2	3
14		0.0%	0.0%	33.3%	0.0%	66.7%	100.0%
15	Australian NGOs	2	1	2	0	1	6
16		33.3%	16.7%	33.3%	0.0%	16.7%	100.0%
17	Australian Public	0	2	1	0	1	4
18		0.0%	50.0%	25.0%	0.0%	25.0%	100.0%
19	Chinese Governments	0	1	1	2	1	5
20		0.0%	20.0%	20.0%	40.0%	20.0%	100.0%
21	Chinese Academia	0	4	2	1	0	7
22		0.0%	57.1%	28.6%	14.3%	0.0%	100.0%
23	Chinese Business	0	1	1	0	0	2
24		0.0%	50.0%	50.0%	0.0%	0.0%	100.0%
25	Chinese NGOs	1	2	0	0	0	3
26		33.3%	66.7%	0.0%	0.0%	0.0%	100.0%
27	Chinese Public	1	1	2	1	0	5
28		20.0%	20.0%	40.0%	20.0%	0.0%	100.0%

Sheet1 Sheet2 Sheet3

Ready

Figure 4.15 Printed screen version of Q2A results in Excel.

Figure 4.15 shows the results of each five-point Likert scale question reorganised in Excel with the total of all (Australia and China), total of Australia and total of China. There were also counts and percentages for the totals and groups in each country. The reorganisation of results laid the foundation for the graphical description of the quantitative data using Excel.

Since most counts in each category were less than five, this research used Fisher‘s Exact Test (critical value 0.05) to test the significant difference (Field, 2009). SPSS is usually used for the Fisher‘s Exact Test of 2×2 contingency table (Field, 2009), but the five-point Likert scale has five different statements from ―strongly disagree” to ―strongly agree”. For example, when comparing the total of Australia and total of China in Figure 4.14, the SPSS should be capable of analysing a 2×5 contingency table which is outside SPSS‘s capacity. Therefore, the researcher used online software (critical value 0.05) to

test the 2×5 contingency table on the website of Quantitative Skills (http://www.quantitativeskills.com/sisa/statistics/fiveby2.htm).

Considering the effect of sample size on the power of the test and p values, this research only applied the Fisher's Exact Test to compare the total of Australia and total of China to determine if there were significant differences between the two countries. The five groups of respondents could contribute to the effectiveness and validity of the comparison. However, in practice, most p values from the Fisher's Exact Test were extraordinarily large. The large p values reasonably indicated that the sample size was too small to test significant differences, according to the statistician from the University of New South Wales, Canberra. Therefore, in order to illustrate the quantitative data clearly and reasonably, this research used Excel to produce graphs for quantitative data description in the chapter of results.

Ranking

The questionnaire has four questions that gathered ranked responses to specific items. The researcher analysed these ranking questions in two steps – the researcher firstly calculated a rank statistic (R), and secondly used a Fisher's Exact Test (critical value 0.05) to test if the R was significantly different (critical value 0.05) between respondents in Australia and China. Following is the process of analysis for the quantitative data collected by the ranking questions.

The researcher transferred the raw data in ranking questions to a rank statistic (R) using the formula:

R = Number of rankings below – Number of rankings above

Taking Q7 (Question 7) as an example, the raw data given by one respondent were transferred into R values by the formula (Table 4.4).

Table 4.4 Transfer from raw data to R values.

	Governments	Industries & businesses	NGOs	The public
Raw data	2	1	1	3
R value	-1	2	2	-3

The R values for governments, industries and businesses, NGOs and the public will form separate 2×7 contingency tables (14 categories for a 2×7 contingency table) to compare the results of Australia and China. With R values, the researcher transferred the raw data to ordinal data which can be analysed in the same way as the five-point Likert scale. Then the researcher used the Fisher's Exact Test (critical value 0.05) to test the significant differences between Australian and Chinese respondents. However, similar to the restriction caused by the small sample size, Fisher's Exact Test was not effective in dealing with the data in this research. Therefore, the researcher simply analysed the rankings by counting "1" to find the most popular option among respondents. In order to present the quantitative data from ranking questions, this research adopted the graphical description similar to that for five-point Likert scale questions.

4.4 Conclusions

The comparative approach provides the researcher with a broader horizon and deeper understanding of the coastal management issues in the two countries. The two marinas, RBM and CCM, bring a new research perspective and a manageable research focus. The research triangulation in data collection and analysis contributes to more effective and objective results. The wide involvement of respondents with diversified professional backgrounds and personal experience provide the researcher with abundant information to obtain a comprehensive understanding of coastal zone management.

In the process of data collection and analysis, the researcher realised that a larger questionnaire would produce more quantitative data to verify the qualitative results drawn from the semi-structured interviews. Future studies are planned to address this opportunity.

Chapter 5
Results

5.0 Introduction

This chapter presents the results from semi-structured interviews, questionnaire surveys, case inspections, legal and regulatory documents and other data collected from fieldwork. It only demonstrates research findings from the fieldwork and does not contain findings in previous research or comments on these research findings.

The results are arranged in the following five themes:

- Theme 1 – respondents‘ understanding of ICZM,
- Theme 2 – laws and regulations related to coastal zone management,
- Theme 3 – government performance in ICZM,
- Theme 4 – judicial performance in coastal disputes, and
- Theme 5 – public participation in coastal zone management.

The results in the first theme are critical to understanding the way respondents understand the definitions, drivers and implementation outcomes of ICZM in Australia and China. It is a summary of the information gathered during the fieldwork and provides essential background for understanding the other results. The last four themes are results distilled from the responses to the discussion guide (Appendix 1). They address the issues raised by the legal and regulatory framework for ICZM.

5.1 Respondents’ understanding of ICZM

> … the coastal zone deserves its own recognition and its own focus, because it is such an important region for economic growth, population, land use, tourism recreation…It is very complex management – involving almost all segments of our society. (A9) (Annotations here and elsewhere were explained in Table 4.2.)

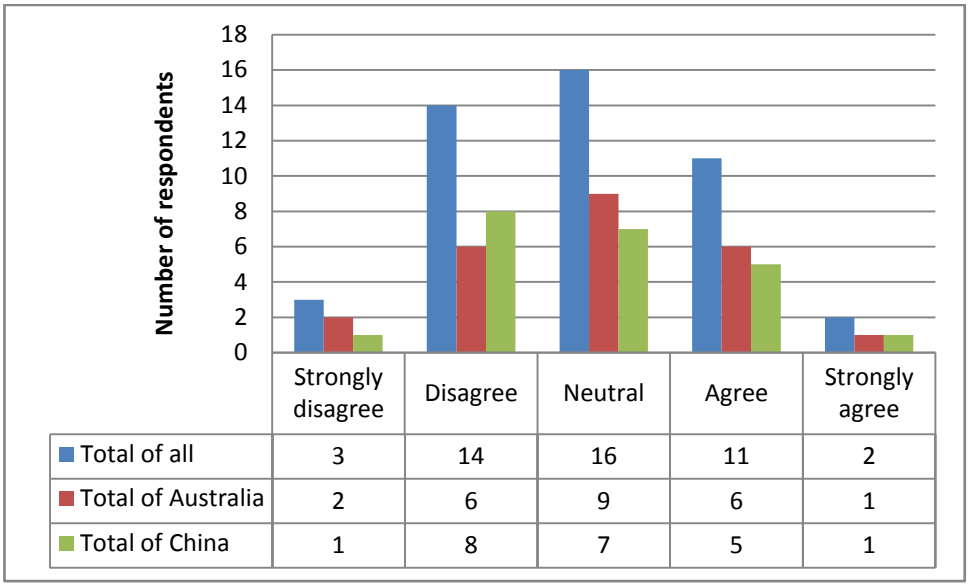
> China pays great attention to the coastal zone, because its location is very important. There are many specific reasons involving the economy, society, environment, etc. (C13)

All the Australian and Chinese respondents recognised the importance of the coastal zone. In China, respondents (ca 80%) repeatedly mentioned that the coastal zone‘s importance is derived from its value for the economy and society. They said in interviews that China‘s coastal zone, with its economic development and favourable natural environment, is attracting a growing population. In Australia, respondents replied that the coastal zone is also important in terms of its contribution to national identity, recreation and lifestyle.

The respondents from both countries agreed (ca 80%) that the importance of the coastal zone and the complexity of coastal management require a more integrated approach to coastal zone management. One respondent articulated the importance of integrated management:

> The fundamental [problem] is that we cannot manage pollution, fisheries, recreation [and] tourism development separately. They have implications for each other …We need to put the different physical environment together, particularly around policies and management. So you know agriculture, forestry, river management, estuary management, beach protection, recreation [and] tourism. These all have implications for each other. So that's the fundamental logic of integrated coastal zone management. (A11)

However, neither Australian nor Chinese respondents showed any tendency to agree or disagree with the statement that ICZM is the current practice in their countries (Figure 5.1). This is consistent with their responses in interviews.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	3	14	16	11	2
Total of Australia	2	6	9	6	1
Total of China	1	8	7	5	1

Figure 5.1 Distribution of the responses to Q2B: Integrated coastal zone management is the current practice in Australia/China.

5.1.1 Respondents' definitions of ICZM

In interviews, Australian respondents rarely asked clarifying questions about what the "coastal zone" was. However, over half of Chinese respondents sought clarification of the meaning of "coastal zone". Respondents raised several reasons for their confusion about the concept of the coastal zone. Firstly, according to the responses of Chinese academics (C11, C13, C14), the coastal zone in physical sciences is usually defined as a part of the ocean. In responses from China's legal professionals and management scientists, the coastal zone has a variety of definitions that reflect different regulatory purposes and serve to facilitate actions. Secondly, the coastal zone is not clearly defined in many laws and regulations. The tidal zone in China is one typical example. Physical science divides the tidal zone into the supratidal zone, intertidal zone and subtidal zone, but there is no clear legal definition on the intertidal zone since it can disappear and reappear with ebbs and tides (C10). Thirdly, one Chinese academic (C7) stated that Chinese culture has roots in land, so traditionally China has no clear concept of ~~"~~coastal zone".

The Australian and Chinese respondents defined ICZM as a management mechanism which aims to achieve more sustainable coastal development with wider involvement of coastal stakeholders and better integration among governments and government

agencies. The following will further explain this definition using quotes from the respondents.

Both Australian and Chinese respondents spoke about sustainable coastal development. Sustainability for the coastal zone is underpinned by the conservation of natural resources (C1, C12, C19), protection of ecosystems and biodiversity (A13, A22, C6, C12), intergenerational equity (A25, C23), as well as improving quality of life through economic and social development (A15, C7, C14, C26).

> Basically, it makes no environmental harm. It should not affect environmental values. It should allow things like public access to the coast. It should be financially viable. (A9)

> [Question] So our goal or objective is to achieve the sustainability of coastal management, the economic, environmental and social effects?
> [Answer] Yes, the three major issues are environmental, social and economic [issues]. Then the three important factors need to be sustained, because if you cannot sustain the financial [or] economic [factors] of a development, then you probably cannot sustain the environment either. So they are all important. (A15)

> We human beings have to live in a sustainable way on this planet. There are finite resources and we have to ensure that we use them in a way where [our] children and future generations are able to[use them]. (A25)

These quotations show that, to the respondents, ICZM aims to achieve sustainable development and tries to preserve all coastal values in a complex context. In interviews, both Australian and Chinese respondents provided examples showing that they expect decision-makers to consider sustainable development when deciding on a development. For example, one judge (A7) in the NSW LEC cited the case of *Walker v Minister for Planning [2007] NSWLEC 741* to show that government decisions could be invalid if the decision-makers did not give sufficient consideration to sustainable development.

Both Australian and Chinese respondents stated that ICZM is about the management of human activities. Respondents said that ICZM involves the people who have influences and interests on the coastal zone and encourages the wider involvement of coastal stakeholders to work in a coherent and coordinated way. This was more frequently

posed by Australian respondents (ca 60%), but was also indicated by Chinese respondents (ca 30%):

> I think, in a robust context, I think integrated coastal zone management has a regulatory framework that encapsulates the views, the concerns and the constraints of all of the stakeholders. (A1)

> I think it‘s more about integrating in terms of the players, the people who are involved [in coastal management], like [those from] the different levels of government, [and] the private and public interests. (A3)

> Integrated management, I think it [depends on how] you define it. [It] involves the players, the managers working in a coherent and coordinated way to achieve integrated outcomes. (A10)

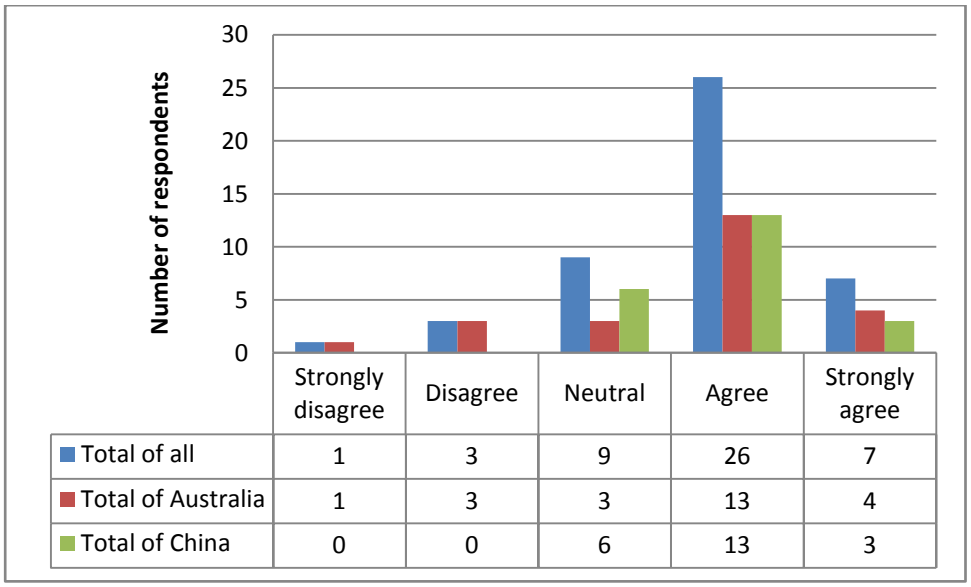
Most government officials in both countries (7 out of 9 in Australia and 5 out of 5 in China) stated the importance of stakeholder involvement in coastal zone management. Some of them (A1, A3, A5, A9, C1, C5) said that wider stakeholder involvement can provide broader information for decision-making and facilitate the implementation of new policies and decisions. NGO managers (A18, A20, A21, C21) and local residents (A24, A25, C22, C25, C26) said that ICZM strengthens the view that all the coastal stakeholders should be living together without negatively influencing each other‘s interests. These local residents clearly indicated their expectations for the protection of public use on coasts, such as the visual beauty and passive water use in Rose Bay. One Australian local resident (A26) stated, ―All stakeholders should consider all the issues together on the coastal zone".

In China, many respondents (ca 70%) identified the functional division and cooperation among governments and government agencies for ICZM. Chinese academics (C6, C8, C9, C10, C11, C13, C14) interpreted ICZM as the administrative management mechanismthat focuses on coordination among government agencies. One Chinese academic (C6) clarified that integrated management is for joint participation and wide consultation of government agencies. This respondent (C6) further explained that vertical integration stresses the deployment of tasks from higher-level governments to lower-level governments, and the division of powers and responsibilities among

governments. Higher-level governments deal with larger issues, while lower-level governments deal with smaller issues. Another Chinese academic (C14) responded that for horizontal integration different government agencies should work in accordance with their own functions and then work in an integrated approach. This respondent (C14) clarified that in practice, such a horizontal integration in Chinese government agencies only takes place for special management programs, such as the construction of Shandong Peninsula BEZ (Section 4.1.2).

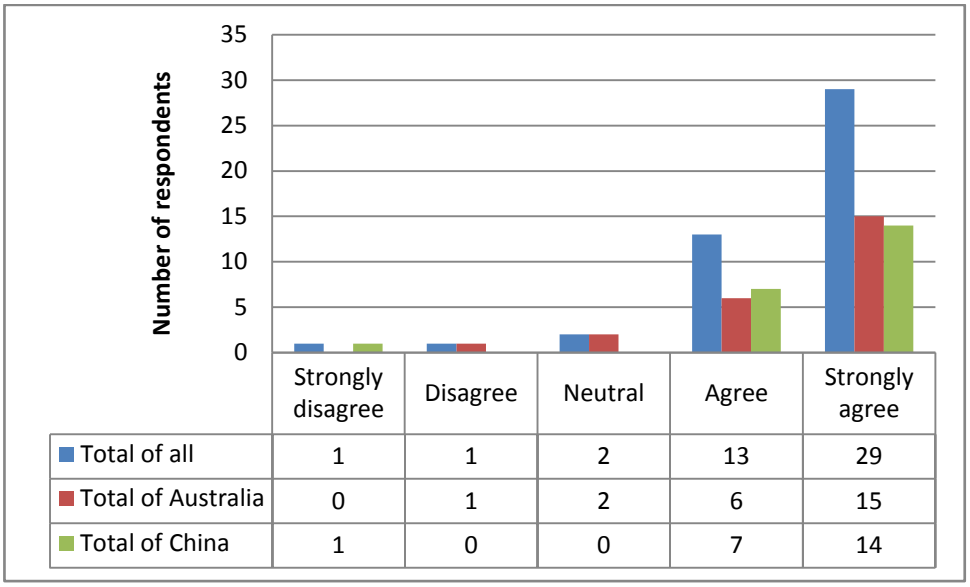
5.1.2 Main drivers for ICZM raised by respondents

Figure 5.2 shows that most respondents (33 of 46) in both countries strongly agreed or agreed that the coastal zone environment is deteriorating. Figure 5.3 shows that nearly all respondents in Australia (21 of 24) and China (16 of 22) strongly agreed or agreed that the coastal zone is under increasing pressure from human activities. This section, using the results of interviews, will summarise the main drivers for ICZM in Australia and China.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	1	3	9	26	7
Total of Australia	1	3	3	13	4
Total of China	0	0	6	13	3

Figure 5.2 Distribution of the responses to Q2J: The coastal zone environment is deteriorating.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	1	1	2	13	29
Total of Australia	0	1	2	6	15
Total of China	1	0	0	7	14

Figure 5.3 Distribution of the responses to Q2D: The coastal zone is under increasing pressure from human activities.

AUSTRALIA

Australian respondents raised the following drivers for ICZM:

- specific coastal regions and programs with the objective of ICZM,
- growing number of coastal stakeholders and their enthusiasm in coastal management,
- different perceptions and conflicts among coastal stakeholders,
- complexity and conflictsin social, economic and environmental development,
- climate change and its effects on coasts, and
- accumulation of scientific knowledge for coastal management.

Australian government officials (A1-4, A9) said specific coastal regions and programs with the objective of integrated management are the direct driver for ICZM.

> …integrated coastal zone management is almost something that fits within an objective that you have for a specific thing, which may be to manage the coastal resources or to manage development pressures. It might be to manage economic resources on the coastal zone, being the physical resources of gas, ore and things like that, as well as the fish and environmental attributes. (A1)

To paraphrase this respondent's (A1) opinion, reviewing coastal history, observing the current situation and predicting the coastal future help to identify the objectives of ICZM. Then a range of management measures are fitted into ICZM to meet the objectives of specific coastal regions and programs. These management measures may result in achievements or mismanagement. This respondent (A1) clarified that in the process of management evolution, specific coastal regions and programs with an explicit objective of integrated management contribute greatly to the achievement of ICZM. Australian respondents frequently cited the example of the Great Barrier Reef Marine Park (GBRMP) Authority. In China, Xiamen, respondents gave Shanghai, Quanzhou cities and the Shandong PeninsulaBEZ as typical regions.

Australian respondents (ca 80%) said that the growing number of coastal stakeholders and their increasing enthusiasm in coastal zone management are driving a more integrated approach to considering their ideas and interests. As described in Section 5.1.1, ICZM is a mechanism to widely involve stakeholders in coastal management. It is important to have coastal stakeholders‘ voices heard and to enable them to feel involved in the management process, according to academics (A10-A13), NGO managers (A17-A22), local residents (A23-A25) and also businessmen (A15-A16). In addition, Australian government officials (A1, A3-A6, A9) said they have realised that government resources are limited to a command and control approach and it is impossible to achieve integrated management simply through regulation. They also said that there is a need to engage more coastal stakeholders and get support from the stakeholders who participate in coastal activities.

According to Australian respondents (ca 50%), another driver for ICZM is the coastal stakeholders‘ different perceptions of coastal development and their conflicts in the use of coastal land and waters.

> As you say, there are so many different stakeholders involved [in coastal management]. Then there needs to be some coordination between these stakeholders. And sometimes in Australia there are more powerful groups like development industries and so forth, and the fishery industries. And sometimes they seem to have held more sway where there is a public interest and community interest to have healthy beaches and [a] healthy marine environment. (A17)

> You can see that in China and you can see that here too where a lot of these values [on coasts] have not been identified. This is one of the main problems. Or [there are a lot of values on coasts that] have not been valued. And often they are in the public good. And often there is [no advocate] to represent their interests. Who represents the beach? Who is the owner of the beach? …You probably like to go to the beach, so you appreciate its recreational value. When that stands up against the major port development, which is a national interest, how do you balance these things? That is why we have this term called ~~"~~integrated coastal zone management" which is mainly an ideal. (A9)

As a contested place, the coastal zone requires people to address the contrasting and conflicting demands of various interest groups. An Australian government official (A9) further explained that managing the stakeholders' different perceptions and conflicts requires ~~"~~a comprehensive thought complex". Over half the Australian respondents said that ICZM is indicates a number of differences and connections between people and takes the coastal zone as a system considering all the values and ideas on coasts. They also expected that ICZM would help guide people to conceive a broader concept involving a number of activities.

The complexity and conflicts of social, environmental and economic values on the coastal zone also drive ICZM. Australian respondents regarded coastal urbanisation, sea change (rapid population and tourism growth at coastal areas) and industry development as challenges to protecting coastal values. According to government officials (A2-A4), the Australian coastal zone carries over 80% of the total population and 90% of GDP. One government official (A9) stated that Australia has the best assets on the coastal zone and obtains billions of dollars every year from tourism, but the country has seldom considered what is most valuable. This respondent (A9) added that ICZM may get people to think about it.

As shown in Figure 5.4, Australian respondents shared the view (22 out of 24) that environmental impact needs the most attention and action among the environmental, social and economic impacts on the coastal zone. All the respondents expected a better coastal environment, but Australian respondents from NGOs (A17, A19, A22) and local communities (A23, A25, A26) explained that in Australia the market has overwhelming

influences because the society is driven by the market, and the environment needs money to support it. ―The government doesn‘t want to make any rules that upset the market" (A19).

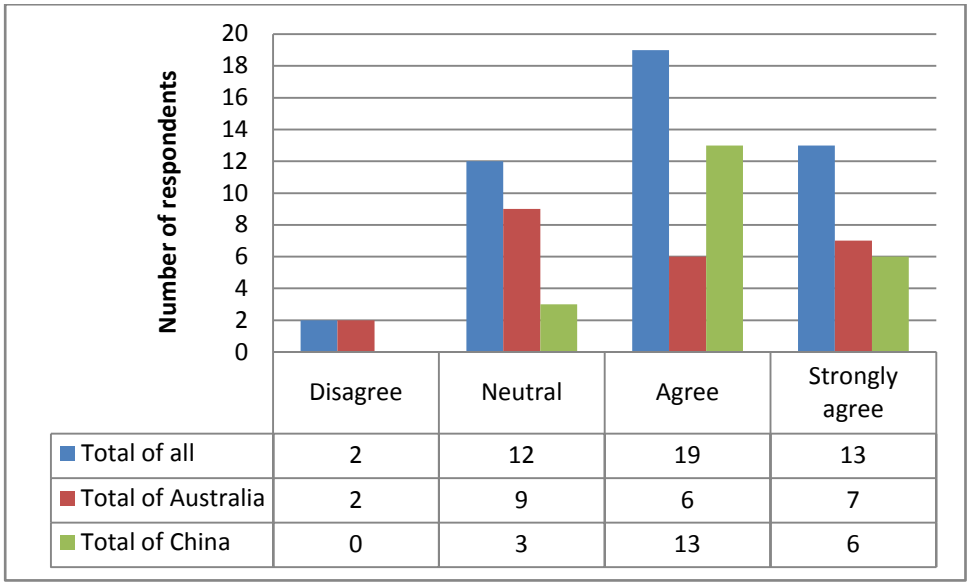


Figure 5.4 Distribution of the responses to Q2I: Among the environmental, social and economic impacts on the coastal zone, the environmental impact is the one that needs most attention and action.

Some Australian respondents accepted climate change and its effects on the coastal zone as driving force for ICZM.

> I think in the coastal zone, climate change has been a trigger, because it makes people realise that they need to maybe think about coastal development more. And the fishery stocks are dwindling and there are a multitude of effects. And in Australia, climate change is going to have effects in terms of sea level rise and flooding, and effects on different species. So I think that kind of thing has been a trigger making people think they need to do better management and they need to be integrated. (A17)

In the responses to Q3, four out of the six Australian NGO managers (A17-A20) ranked ―climate change and sea level rise" as the biggest negative influence that affects the coastal zone. In interviews, these NGO managers said that the anticipated effects of climate change had driven people to think about ICZM. Australian government officials (A1-A4, A9) stated that climate change has human origins and it has driven coastal

policy-making. However, according to the responses in interviews, not all the people living on the coastal zone believe in climate change and its effects. For example, some Australian local residents (A23, A25) do not believe in climate change, because they cannot see the sea level rising. The Australian businessmen (A14-A16) said that they have a particular interest in coastal developments and expect to continue doing what is habitual.

–ICZM framework is underpinned by the knowledge of the natural system"(A1). Another government official (A4) explained that the accumulation of scientific knowledge on the coastal zone and the physical linking of the catchment, coastal zone and ocean drive the need for spatially integrated management:

> I think one of the reasons why it becomes more integrated is because, over the last 20 years, people have come to understand more of the spatial linkages. So for instance, I can imagine [that] 20 years ago catchment management was a new concept. I can remember being in a [university] [where] catchment management was a very new idea, that you manage the whole catchment. That [is], whatever you do at the top of the catchment influences the bottom of the catchment. And I think it is similar with integrated coastal zone management. I think over the years, over the last 10 to 15 years, we have realised that you cannot [manage the coastal zone separately].For instance, if you got agriculture accruing on the land, that will influence the estuary which will influence the fishing that occursin that area. (A4)

CHINA

Chinese respondents raised the following drivers for ICZM:

- the direct driver for coastal reclamation and deterioration,
- the primary driving force of conflicts in sharing responsibilities among governments and government agencies, and
- the conflict between environmental sustainability and economic growth.

Chinese respondents (ca 70%) stated that the direct driver for the rising expectation for ICZM is the rapid rate of coastal reclamation and deterioration. According to a Chinese geologist (C12) who has been working in the field for decades, there is almost no

natural coast from Yangtze River Delta to the most northern coast of China, and people are continuing to reclaim the coast a few hundred metres seaward each year. He said:

> All the coasts are artificial and they are reclaimed for the construction of dykes and the aquaculture of fish, shrimps and abalone.(C12)

This respondent (C12) provided many examples of coastal reclamation. Along the loess coast of the southern Bohai Sea, local people excavate the seabed for sand and then build aquariums for mariculture. These human activities promote local economic growth but lead to unrecoverable seawater erosion on the coastal land. In the Laoshan Mountain area of Qingdao City, fishermen have reshaped the coast and used explosives to build aquaculture ponds. Jiangsu Province has reclaimed the muddy coast further into the sea each year for urban construction. In many coastal areas, the artificial coast has received dump to prepare for further reclamation. This respondent (C12) predicted that people will further reclaim the artificial coast if governments do not ban coastal reclamation. In interviews, Chinese respondents also raised other coastal problems caused by human activities. Reclamation and overfishing have caused the sharp decline and even exhaustion of fishery resources (C1, C6, C9, C21, C26). Rapid development of coastal tourism has resulted in environmental pollution and natural environmental destruction (C2, C3, C6, C21, C26). Pollutant discharge from industries and local residents has created a burden of land-based pollution into coastal waters (C1, C6, C10, C21, C23).

Many Chinese respondents (ca 70%) said that the conflicts among government agencies are the primary driving force for ICZM in China. One Chinese respondent (C17) stated, ―the location of the coastal zone is special, so an extraordinary number of government agencies can be involved". Developers (C16-C18) clarified that a large number of Chinese government agencies are involved in the application, construction and operation of coastal developments. Government officials (C1-C3, C5) and businessmen (C16-C18) observed that there is no single government agency mainly responsible for the application of coastal developments.

The conflict between environmental sustainability and economic growth is another driving force for ICZM in China (C1, C4, C5, C6-10, C14, C20, C21, C24-C26). The Chinese government has claimed that environmental sustainability is the premise for

any future economic development. As shown in Figure 5.4, no Chinese respondent disagreed that the environmental impact needs the most attention and action among the environmental, social and economic impacts on the coastal zone. However, rapid and continuous economic growth is currently the top priority in China. Section 5.3 will explain this in detail. A geologist (C12), who has been working in the field for decades, gave an example to show the imbalance between environmental protection and economic development. Laizhou Bay of Shandong Province is surrounded by saline soil. In order to develop the economy, the local people extracted groundwater through the saline soil. This caused seawater intrusion and aggravated soil salinisation of the coastal land. This respondent (C12) said that the salinised land cannot be recovered in the short term, although the local government has been investing in recovery.

5.1.3 Implementation outcomes of ICZM at regional levels

Australian and Chinese respondents pointed out that there are successful cases of ICZM at regional levels, such as the GBRMP in Australia and the ICZM program in Xiamen, China. However, respondents did not have a shared opinion on ICZM at the national level.

AUSTRALIA

In Australia, it seems impossible or extremely difficult for respondents to provide examples of national ICZM. In Australia, ICZM at regional levels has produced outcomes:

> So, if you ask me if integrated coastal zone management is possible in Australia, I will say yes, and at a local level where the stakeholders‘ interests and all the interests can easily recognise value in what integrated management will achieve. So there at Lake Macquarie you had commercial fishing. As part of the program, they paid for the removal of the fishing. So there‘s no more commercial fishing …That was part of the funding program integrated with a whole range of other things.(A10)

> [Question] Currently what kind of management do you think is the best one or the most practical and efficient one to manage the coastal zone?”
> [Answer] … from observation, if [ICZM] is the commitment by all stakeholders

> to long-term regional plans. I think a long-term regional planning framework is [a sort of way to go], because at a regional level, you can generally get more binds by like local stakeholders. (A16)

One Australian academic (A10) said that from 1998 to 2008, Lake Macquarie received a 10-year investment from the federal, state and local governments to deliver an integrated plan. This 10-year program aimed to improve the environmental health and amenity of the lake. This respondent (A10) added that, for Lake Macquarie, it is possible to integrate the environmental, social and economic sectors and to consider stakeholders‘ interests to achieve greatest value. Other Australian respondents (A9, A11) clarified that programs such as Lake Macquarie only can be handled in a local area where the community identifies the benefits, but it is not possible for the whole country. The GBRMP was seen as an exemplar program involving ICZM in Australia (A10, A11, A26). It aimed to ensure an integrated and collaborative mechanism between the Australian Federal Governmentand Queensland Government for the long-term protection and conservation of marine and land environments within the Great Barrier Reef World Heritage Area.

The Sydney Coastal Councils Group (SCCG) in NSW is a coastal organisation consisting of 15 local councils adjacent to Sydney marine and estuarine environments. According to its website, it aims to coordinate member councils on environmental issues for sustainable urban development. The SCCG has a technical advisory group to share information and knowledge and takes care of the funding for regional-scale projects to inform integrated approaches to coastal management in the member councils.

ICZM at the federal (national cross-state) level is difficult or close to impossible in Australia. Over half the Australian respondents mentioned this. They explained that it is difficult to achieve agreements for ICZM nationally, since the physical environment, regulatory arrangements, planning issues and regional priorities are different. For instance:

> If [ICZM] is a state or national plan, that can be good but in terms of detailed actions under that, it is pretty difficult to achieve that nationally. You might have a national framework or some national objectives, but then have more detailed regional plans. (A16)

> The response [to ICZM] will vary according to the environment which you are operating in … Australia is such a large country, expanding from Tasmania up to the tropics. Your responses and your problems and issues [of coastal management] are going to be very different [in different regions]. Therefore, you cannot, I think,take a global view of the response in Australia. (A18)

CHINA

Chinese government officials (C1, C5) and academics (C6, C10, C11, C13, C14) said that coastal zone management in China combines integrated management and sector-based management. According to their responses, both "integrated management" and "sector-based management" refer to the inter-relationship between governments and government agencies. They insisted that, compared with sector-based management years ago, this combined mechanism is a big improvement. Over half the Chinese respondents indicated that as time went on, more coastal stakeholders have recognised the benefits of an integrated approach to coastal zone management.

> People have recognised the benefits of integrated management. Now the problem is how to achieve it.(C9)

> For example, integrated management is embedded in the National Economic Development Plan … Also, laws claim integrated management, communication of information and on-the-spot investigations. (C6)

Like Australia, there are regional ICZM programs in China. Chinese respondents (ca 50%) raised that regional ICZM is more feasible and practical at the regional and local scales:

> Integration at the national level is the worst. If integrated management occurs, it is likely to be at local levels … China may not have such terms as "integrated coastal zone management", but in reality ICZM happens at local levels. (C14)

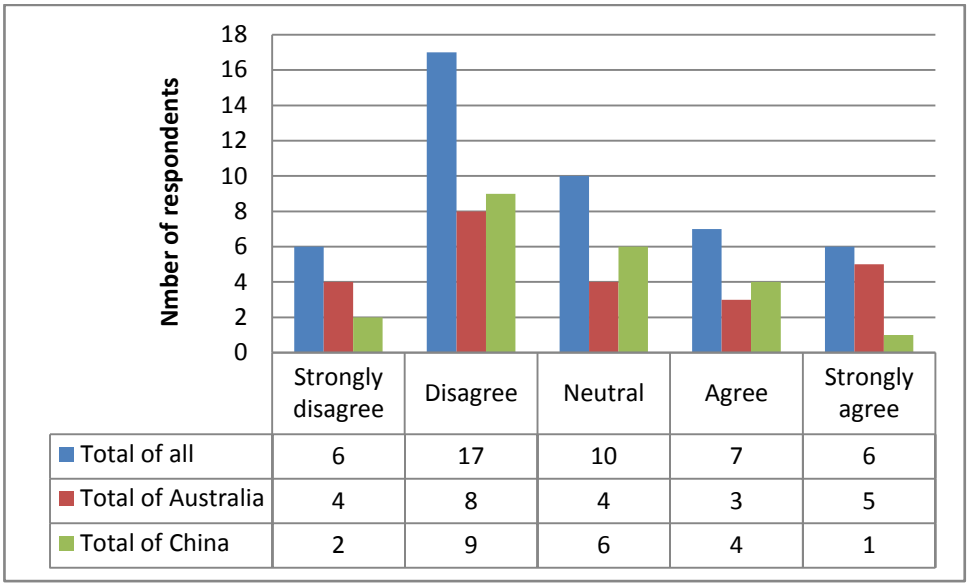
As noted in Chapter 3, Xiamen is the first site to implement ICZM in China, and Quanzhou, Hainan, Shanghai, Shandong and other coastal cities and provinces are practising more integrated management on the coastal zone. In Shandong Province, the BEZ was established with the aim of integrated management among all the cities and

counties on the coast of Shandong Peninsula. A BEZ Officer (C4) described the purpose of the BEZ Office as being to improve coordination among government agencies in the Shandong Provincial Government and among the governments of coastal cities and counties within the BEZ.

During fieldwork in China in April 2013, a national or cross-scale integrated approach was on trial. Since 2013, the Chinese Central Government has attempted to establish the NOC as a high-level consultation and coordinating body to formulate marine development strategies and handle important marine affairs (C1, C6, C11). Although it is too early to judge the effectiveness of the NOC, its existence verifies the strong involvement and commitment of the Chinese Central Government in oceanic integrated management and indicates the possibility of ICZM increasing in importance at the Chinese national level.

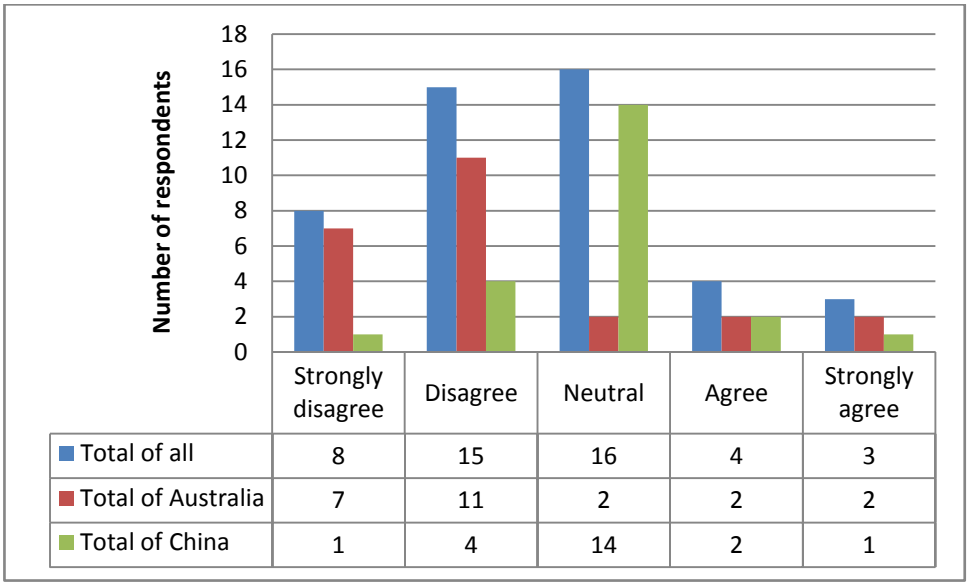
5.2 Laws and regulations related to coastal zone management

In interviews, all the Australian and Chinese respondents strongly agreed that laws and regulations are indispensable components, and provided additional information on the legal and regulatory framework for ICZM. Both Australian and Chinese respondents tended to disagree with the statement that there are sufficient legal and regulatory measures to protect the coastal zone's values and users (Figure 5.5). More specifically, most Australian respondents disagreed with the statement that the laws regarding new marinas are too harsh (Figure 5.6).



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	6	17	10	7	6
Total of Australia	4	8	4	3	5
Total of China	2	9	6	4	1

Figure 5.5 Distribution of the responses to Q2A: There are sufficient legal and regulatory measures to protect the coastal zone values and users.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	8	15	16	4	3
Total of Australia	7	11	2	2	2
Total of China	1	4	14	2	1

Figure 5.6 Distribution of the responses to Q6B: The laws regarding new marinas are too harsh.

5.2.1 Laws and regulations involved in coastal zone management

Both Australian and Chinese respondents (ca 90%) stated that laws are the legal foundation for government management, judicial judgement, business involvement and public participation. Regulations deal with more specific items under the primary laws and give effect to what governments expect from laws:

> Laws are underpinned by regulatory documents/policies. Policies actually give effect to or describe what the government wants from laws. (A1)
>
> Laws are more general. It may just put forward protecting the marine environment. Each government department and agency will make specific procedures [for day-to-day management] considering both laws and departmental responsibilities.(C23)

According to respondents, laws set up the primary objectives and high-level provisions, and regulations provide details, drawing on the primary laws. For instance, the *Coastal Protection Regulation 2011* (NSW) is further explanation of the *Coastal Protection Act 1979*(NSW). The *Marine Environment Protection Law of the PRC* (1982) has five administrative regulations providing further explanation (Section 3.3.1.1).

AUSTRALIA

As noted in Chapter 3, several laws, regulations, policies and inquiries have advocated ICZM at Australian national and state levels. Australia also has a long history of national inquiries and investigations into coastal zone management, such as the Resource Assessment Commission Coastal Zone Inquiry in 1993. One Australian academic stated:

> There is a long history of national-level inquiries and investigations into coastal management which always come up [with ICZM]. We need to integrate more and this is the sort of things we should do. And it's a rather repetitious history. (A11)

Section 3.2.1 enumerates and explains the major coastal laws and regulations at the Australian national level and NSW state level. As stated by Australian government officials (A1-A4, A7-A9) for NSW, the *Coastal Protection Act 1979*, *Coastal Protection Regulation 2011* and *NSW Coastal Policy 1997* are the primary laws, regulations and policies for coastal zone management. These government officials also said that these coastal laws and regulations mainly function as guidelines for coastal zone management.

Section 4.1 explains that the coastal developments of RBM and CCM helped to set borders and make the focus for this research manageable. Both RBM and CCM have long histories of development (Figures 4.4 and 4.11). Their applications reflect the

changes of legal instruments in this research's study areas (Table 4.1). Therefore, it is appropriate to use the two developments to show these changes and to illustrate how the changes affect coastal management.

In 2001, the developer proposed a redevelopment of RBM, but the NSW Government rejected the proposal due to a prohibition of large marinas in Sydney Harbour (Osborne & Britton, 2006). According to one NSW Government official (A3), in the early 2000s, development of large commercial marinas was prohibited mainly because of their environmental impacts. He (A3) added that there were two preconditions to the lifting of the moratorium: one was the introduction of a new *Land Owner's Consent Manual 2005* and the other was the promulgation of the Harbour REP. NSW Maritime (now known as NSW Roads and Maritime Services) was the owner of the Sydney Harbour bed. The developer needed a Land Owner's Consent from NSW Maritime before lodging a DA. Both the NSW Government and Woollahra Municipal Council officials (A2, A3, A5) explained that due to the moratorium, NSW Maritime refused to give the Land Owner's Consent to any large marina in the early 2000s.

In 2005, the Department of Planning in the NSW Government made the Harbour REP, which aimed to balance use between a prosperous working harbour, a sustainable waterway environment and recreational access to the foreshore and waterways. The Harbour REP zoned all the waterways in Sydney Harbour into nine zones in order to match the land use of Sydney Harbour with differing environmental characteristics. RBM is located in Zone No W5 – Water Recreation (Holbert, 2012). According to Clause 17 of the Harbour REP, the objectives for the W5 zone include giving preference to public water-dependent development and allowing commercial water-dependent development which provides benefits to the public use of waters. One Woollahra Municipal Council staff member (A5) said that after NSW Maritime's review of the *Land Owners' Consent Manual* and the promulgation of the Harbour REP, the lifting of the moratorium on large marina developments in Sydney Harbour resulted in the Council receiving a lot of marina applications.

Another important change in the NSW took place prior to the DA for the RBM extension in 2012. This change was the repeal of Part 3A of the EP&A Act. Before the repeal, a development such asRBM could go to the NSW Department of Planning

which would ask the Minister to determine it, according to both NSW Government officials (A1-A4) and marina developers (A14, A15). In June 2011, the NSW Legislative Assembly introduced and passed the *Environmental Planning and Assessment Amendment (Part 3A Repeal) Bill 2011*. Since the repeal of Part 3A, Part 4 of the EP&A Act handles marinas and other developments that are not significant state development or infrastructure. That is, the local council decides on the proposed development, or the Joint Regional Planning Panels make decisions.

When the NSW Government officials were asked ―why did the government abolish Part 3A of the EP&A Act?", one responded:

> … People didn't like it … There is a perception that local decisions, like if you want to have a marina in your council area, it should be the local people who decide whether [it is right] to go ahead. Part 3A took that power away from the council and brought it in to the Minister who decided those things. The principle was that it's a significant enough proposal to be bigger than just one local council area's interest, because quite often you will find maybe people don't want a marina there, but maybe the state or maybe the city, the whole city needs a marina there. (A3)

NSW Government officials (A3, A4) said that the local council and residents had more say without Part 3A.However, local government officials (A5, A6), academics (A10, A11), marina developers (A14-A16) and local NGO managers (A17, A19, A20, A22) opposed that the NSW Government was pushing decisions back to local councils through the repeal of Part 3A. One academic (A10) and one NGO manager (A20)complained that it was not reasonable to let Woollahra Municipal Council make a decision on RBM which covers nearly half of Rose Bay andto spend millions of dollars to defend its decisions in the NSW LEC. One marina developer (A15) clarified that the RBM did apply directly to the Minister of the Department of Planning before the repeal of Part 3A. This respondent (A15) said that the Minister did not want to determine the application of the RBM extension for political reasons, so the application was pushed back to Woollahra Municipal Council. Therefore, there were two reasons why the RBM application came to Woollahra Municipal Council: one was the repeal of Part 3A of the EP&A Act; the other was the Minister pushing it back to the council.

CHINA

Section 3.3.1 enumerated and explained the major laws and regulations related to coastal zone management at the Chinese national level and Shandong provincial level. In interviews, the laws and regulations for coastal management which were most frequently raised by Chinese government officials and academics were the *Marine Environment Protection Law of the PRC* (1982), the *Law of the PRC on the Administration of the Use of Sea Areas* (2001), the *Law of the PRC on the Protection of Offshore Islands* (2009) and the five administrative regulations under the *Marine Environment Protection Law of the PRC* (1982) (Section 3.3.1.1).

As explained in Chapter 3, China has no national law or regulation with a focus on coasts. Only a few coastal provinces and cities have promulgated coastal regulations and policies, such as the *Regulations on Coastal Zone Planning and Management of Qingdao City* (1995). However, no Chinese respondent spoke of any coastal regulations and policies as key guidance or compliance in coastal management. Chinese respondents (ca 50%) said that the reasons for their ineffectiveness mostly rested with the legal inadequacy of these regulations and ignorance of the coastal zone as an independent unit.

Chinese government officials (C1-C3, C5), academics (C6, C7, C10, C11, C13) and businessmen (C16-C18) said that many laws and regulations are involved in coastal decisions. Businessmen (C17, C18) complained that the application for coastal developments requires a range of consents and approvals. They (C17, C18) added that these consents and approvals refer to the laws and regulations for both terrestrial land and marine waters, since there is no particular law or regulation for coastal development application.

Similar to the Australia, the changes in legal instruments have significant impacts on coastal management in China. The history of CCM (Figure 4.11) shows the changes in the Chinese study areas and how they affect coastal management. In 2008, the Qingdao Municipal Government formulated the urban development strategy, Protection of and Development on the Rim of Jiaozhou Bay, in response to the reduction of water areas and natural coastline and land-based pollution from surrounding areas. The guiding principle was to allow development on the premise of protection and to protect the

environment in the process of development. It aimed to establish new functional zones on the rim of JiaozhouBay, set up the environment management system for industry development and speed up the law-making and law-enacting process to provide legal protection for the implementation of the strategy. During implementation of this strategy, Shandong Shengli Co. Ltd. transferred the reclaimed land for port and industrial development to the QCCI Group for the urban and recreational development of Celebration City. Government officials (C2, C3, C5) and businessmen (C16, C18) explained that compared with ports and industrial development, Celebration City is more environmentally benign and better conforms to the guiding principle of environmental protection of Jiaozhou Bay.

In 2012, the Qingdao Municipal Government initiated a program called Rearrangement of the Coastline of Jiaozhou Bay and promulgated the *Three-year Action Plan of Rearrangement and Protection of Jiaozhou Bay Coastline (2013-2015)*. The Qingdao Municipal Government planned to ―lock the coastline" and prohibited further approvals of reclamation in Jiaozhou Bay. Reflecting this tightening since 2008, the design of CCMwas revised a few times prior to fieldwork in April 2013. In each iteration of the design the water area has decreased, but no water area has been approved.

5.2.2 Constraints in existing laws and regulations for coastal zone management

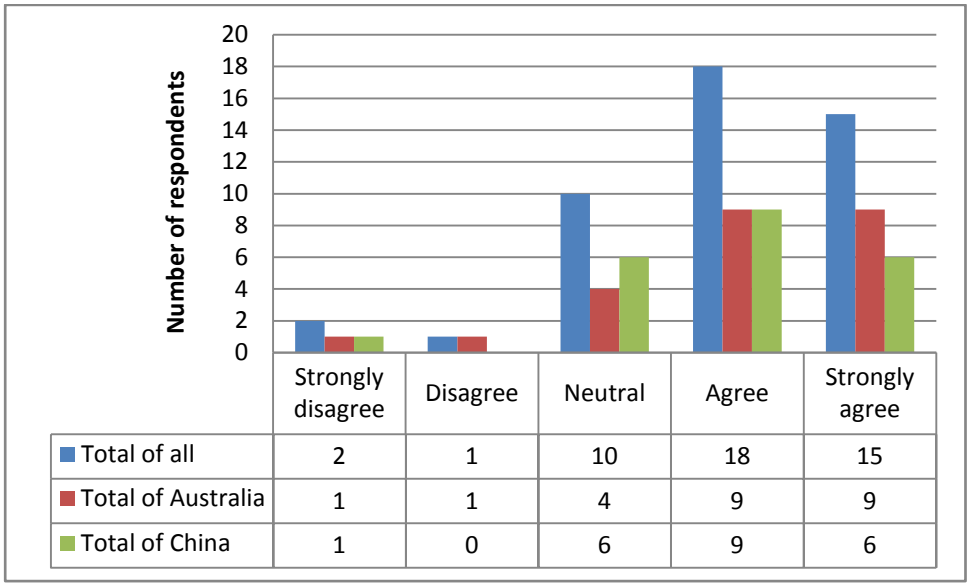
Both Australian and Chinese respondents said that the promulgation and amendment of laws, regulations and policies usually lag behind need. One Australian NGO manager (A19) stated that law-makers and policy-makers tend to ―bury their heads in sand". This NGO manager (A19) added that property (private developments) is still being developed intensively along the Australian coastline with knowledge of the risk of rising sea levels. He (A19) said that the planning laws have been used for decades and still allow coastal developments to take place in inappropriate areas. Australian academics (A10-A13, C7-C10) and NGO managers (A17, A19, A20, A22, C20, C21) stated that without timely amendment and addition of legal instruments, bad coastal management decisions will continue to be made.

In China, existing laws and regulations for coastal zone management are conflictive. The conflicts lead to gaps and overlaps in coastal zone management (C2, C3, C6, C11,

C13). For example, under the *Marine Environment Protection Law of the PRC* (1982), there are the *Administrative Regulations Concerning the Prevention and Control of Pollution Damages to the Marine Environment by Coastal Construction Projects* (1990) and the *Administrative Regulations on Prevention and Control of Pollution Damage to the Marine Environment by Marine Construction Projects* (2006). According to these regulations, the coastline determines coastal construction projects and marine construction projects. The Administrative Regulations on Coastal Construction Projects is for projects with their principal parts on the landward side of the coastline. For such projects, the environmental protection bureau is the determining authority. The Administrative Regulations on Marine Construction Projects is for projects with their principal parts along the seaward side of the coastline. For such projects, the oceanic bureau is the determining authority. Chinese government officials (C2, C3, C5) and academics (C6, C14) said that in real management activities, it is difficult to define the coastline and the principal part of a project. One Chinese academic (C11) stated that for coastal developments without a definite location, the environmental protection bureau and the oceanic bureau could struggle to be the determining authority if the development brings benefits, or could refuse to be the determining authority if the development is troublesome.

5.2.3 Special laws and regulations for coastal zone management

Both Australian and Chinese respondents tended to agree that special laws and regulations were needed to achieve ICZM (Figure 5.7). Government officials (A1, A4, A8, C1, C5) and academics (A10, A13, C6-C9, C11, C13) expected the special laws and regulations to regulate business operations; businessmen (A15, A16, C16-C18) expected the special laws and regulations to simplify the application process of coastal developments; and NGO managers (A17, A19, A20, A22, C21) and the public (A23, A25, C22-C24) wanted to have more legal standing and legal protection in new laws and regulations. This section will demonstrate the primary constraints for the promulgation and implementation of coastal laws and regulations in China.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	2	1	10	18	15
Total of Australia	1	1	4	9	9
Total of China	1	0	6	9	6

Figure 5.7 Distribution of the responses to Q2O: Special laws and regulations are needed to achieve ICZM.

According to Chinese academics (C10, C11, C13), the conflicts among government agencies are the main barriers for promulgating and implementing coastal legislation and regulations:

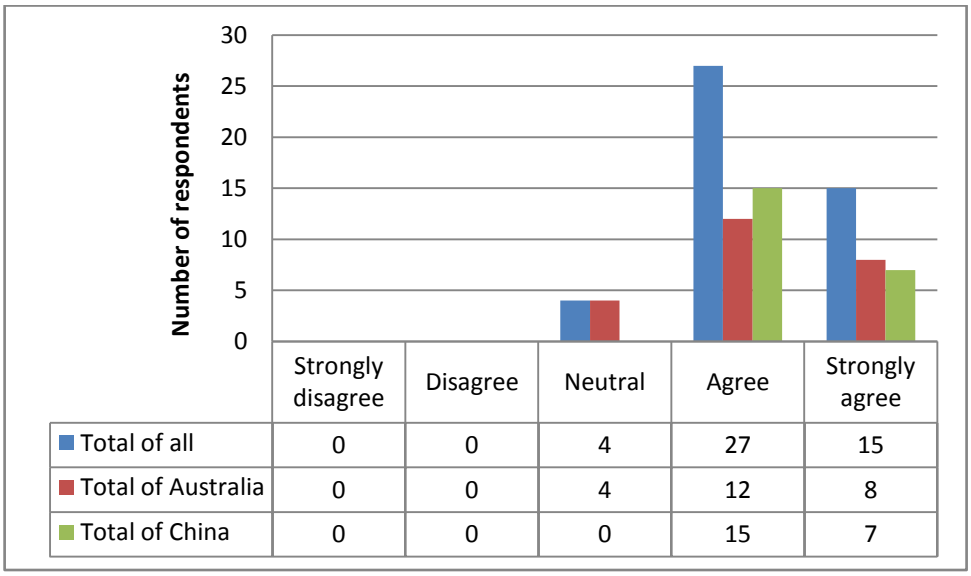
> Law-making involves the contestation of benefits among government agencies. Currently, the sector-based management on China‘s coastal zone makes it difficult to promulgate a comprehensive law [for coasts]. The difficulties in promulgating such a law further deteriorate the sector-based management [on coasts]. (C10)

A few legal professionals (C6, C11, C13) clarified that in China‘s law-making process, a law or regulation is drafted by a leading agency, consulted by other relevant agencies and confirmed by authorities with legislative power. Chinese respondents (ca 70%) said that when it comes to human activities on the coastal zone, such as fishery, tourism and wetland protection, a large number of government agencies have authority. Chinese academics (C6, C11, C13) explained that in practice it is difficult to unify these government agencies‘ thoughts on law-making, since they all have existing powers over the coastal zone and expect benefits through exercising their powers. Two Chinese academics (C11, C13) stated that the failure to promulgate coastal laws at the national level is a typical case. The law was drafted by the SOA but refused by other agencies and rejected by the NPC. According to one Chinese academic (C13), who participated

in the coastal law-making process in 1984, the main reason for the failure was that the SOA entrusted itself with too much power and interfered with other agencies‘ existing benefits on the coastal zone. Chinese government officials (C1-C3, C5) and academics (C7, C14) said it is not necessary to have a special law or regulation for coastal zone management, because the existing laws and regulations have covered most coastal issues. One Chinese academic (C7) stated that the essential question is not how to make laws and regulations specifically for coasts, but how to amend the existing ones and to make them more effective for coastal zone management.

5.3 Government performance in ICZM

Figure 5.8 shows that nearly all respondents (42 out of 46) in Australia and China strongly agree or agree that the coastal zone needs more attention and investment from governments. This section will show respondents‘ understanding of the roles of governments in coastal zone management, the influential factors in the decision-making process, the existing problems of government performance and several potential independent institutions and management mechanisms for coastal zone management.

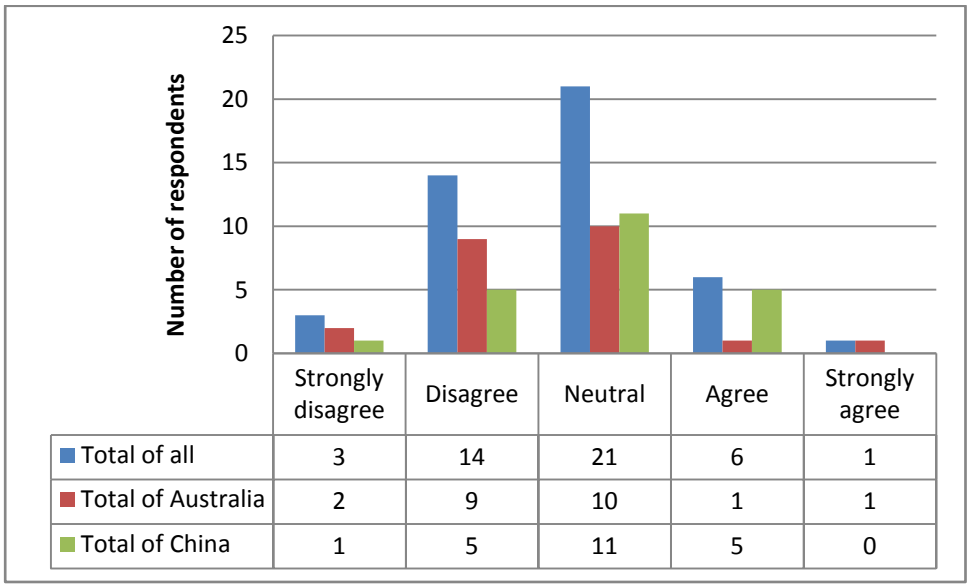


	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	0	0	4	27	15
Total of Australia	0	0	4	12	8
Total of China	0	0	0	15	7

Figure 5.8 Distribution of the responses to Q2K: The coastal zone needs more attention and investment from governments.

5.3.1 Governments' roles in coastal zone management

When the respondents considered whether the government was doing a good job concerning ICZM, nearly half (47%) the respondents chose "Neutral" and most (38%) of the others chose "Disagree" and "Strongly disagree" (Figure 5.9). Figure 5.9 shows that Australian respondents were more negative about the performance of governments in ICZM.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	3	14	21	6	1
Total of Australia	2	9	10	1	1
Total of China	1	5	11	5	0

Figure 5.9 Distribution of the responses to Q2E: The government is doing a good job concerning ICZM.

AUSTRALIA

According to the Australian Constitution, the Australian Federal Government does not have constitutional authority to manage most of the Australian coastal zone. Constitutionally it is the states' responsibility to manage the coastal land and coastal waters within 3 nautical miles. Academics (A10, A11, A13) expected more federal government involvement in coastal zone management, but they said it is not feasible to confer more constitutional power to the Federal Government. They also warned that too much federal involvement may interfere with the states' legal rights on coastal zone management.

> In terms of the legislature, it is the states. The laws of the states apply [to coastal zone management]. And under that the local government has a limited amount of

> legal power for planning decisions, but it is completely controlled by the states both legally and financially. (A11)

> Government agencies play a big role in all marina developments. And these government agencies [in the NSW State Government] play a role: [the] Department of Lands, Fisheries, Maritime, [the] NSW Maritime and [the] Department of Planning. There are quite a lot of government departments who are required to have some inputs into marina developments... [The] Environment Protection Authority, the Department of State Development, [the] Department of Industries… So, yes, the [state] government agencies play an important role. (A15)

Government officials (A5, A6), academics (A10, A11), NGO managers (A18, A20, A21) and local residents (A23, A25) said that the local government plays a linking role between the state government and local community. Over half the Australian respondents agreed that a local government is a legal and financial creature of the state government.

> The states have power over land use, so the planning legislation is vested in the states. So [the] local government is a creature of the states. (A10)

> [Question] So which kind of power [can] the local government use in the management [of coasts]?
> [Answer] Well, it can develop a local environmental plan which specifies protected areas but then it's bound by the state or it needs approval from the state government. (A11)

> Because at the moment the state government sets the laws but the local governments do the day-to-day management. (A17)

CHINA

Nearly all (ca 80%) Chinese respondents stated that the government is the strongest driving force for coastal zone management in China. These respondents said that they definitely rely on the government to manage the coastal zone:

> The Chinese government typically constructs large projects. Chinese people cannot play a role, but the government makes decisions. (C7)

> [Question] What is the most important way to achieve integrated management? [Answer] The driving force is the government. (C9)
>
> In China, the government holds the initiative. Academia just explains [what the government advocates] accordingly.(C10)
>
> Definitely the government has a leading role. Only if the government dominates, it will provide funding or let others pay. No enterprise or individual will take the initiative to protect the environment. (C23)

These quotations are evidence that Chinese respondents recognised the immense power and leading role of the Chinese government in coastal zone management. Chinese respondents also provided other evidence. For instance, the government can guide industrial development by making policies and allocating funds (C4, C16, C18, C26). The government has the power to dominate coastal developments, especially giant projects, such as the Jiaozhou Bay Cross-Sea Bridge in Qingdao (C6). The government can lead public participation by providing more information to local communities and more approaches to participation (C11, C24). The government can guide the acquisition of new knowledge through the allocation of funds for scientific research on coastal issues (C7).

China‘s government structure and function is a top-down hierarchy. According to Chinese academics (C6, C9, C11, C13, C14), the Central Government in China has the most power and makes policies for governments at lower levels to implement. These academics and government officials (C1-C5) explained that the Chinese Central Government seldom steps into day-to-day coastal management, but it can control and guide coastal development through policy-making, division of powers, adjustment of responsibility systems and establishment of supervision systems in lower-level governments. They (C1-C6, C9, C11, C13, C14) said that the governments at provincial, municipal, county and township levels in China make local rules according to higher-level government policies and their particular local circumstances:

> The Chinese Central Government [State Council] makes guidelines and policies, and the governments at inferior levels implement them. Provincial governments, in accordance with national policies and provinces‘ circumstances, promulgate

> provincial regulations. Municipal governments, in accordance with national and provincial policies and local circumstances, make local rules. County and township governments are responsible for implementation. (C11)
>
> The Chinese Central Government does not directly manage [the coastal zone], but it can [guide and influence coastal zone management] through policy-making, division of powers, [and] establishing responsibility or supervision systems. The Central Government's policy can direct coastal development. (C9)

In addition, the Chinese governments at different levels share powers in accordance with the scale and significance of particular issues. For example, different levels of Chinese government examine the use of sea areas in terms of the reclamation area. According to article 18 of the *Law of the PRC on the Administration of the Use of Sea Areas* (2001), the State Council has the authority to approve a project that involves filling more than 50 hectares of sea area and an enclosure of more than 100 hectares. According to article 14 of the *Regulations on the Administration of the Use of Sea Areas of Shandong Province* (2003), the Shandong Provincial Government has the authority to approve a project that involves filling less than 50 hectares of sea area and an enclosure of more than 60 hectares but less than 100 hectares. Articles 14 and 15 of the *Regulations on the Administration of the Use of Sea Areas of Shandong Province* (2003) promulgate that municipal governments and county governments examine a project with an enclosure of 10 to 60 hectares and less than 10 hectares respectively.

5.3.2 Factors in the decision-making process of coastal developments

AUSTRALIA

Laws provide and control the decision-making process. NSW Government officials (A1-A4, A8) said that the state government agencies refuse, accept or defer an application based on the legal instruments and the process they describe. The local government officials (A5, A6) in the Woollahra Municipal Council also stated that they assessed the application by considering the planning laws and the legal position of the public. The Sydney East Joint Planning Panel staff (A8) said that the Panel must make a lawful decision whether or not they refuse or approve an application.

The planning system guides the decision-making process in practice. The current planning system in NSW is mainly based on the EP&A Act, according to government officials (A1, A3, A5, A7, A8) and academics (A10, A11). This legislation has been operating for over 30 years. These respondents (A1, A3, A5, A7, A8, A10, A11) explained that the EP&A Act is important in determining what development can happen in an area, who has a say in the decision-making process, how governments and developers consider and protect the environment, how communities participate and how to balance public and private needs and interests. The planning system also requires the DA to be assessed with social, economic and environmental considerations and fosters public participation and deliberation (A11):

> The place where the assessment of the DA should happen is in the planning regime. That planning is where social, economic and environmental considerations should be brought together. That's probably where we fail. (A11)

One Australian government official (A4) stated that if there were wrong decisions, it was not because the government lacks information or knowledge, but because the planning system was not adaptive enough. One businessman (A14) gave an example of the lack of adaptation in the planning system. NSW Roads and Maritime Services (formerly known as NSW Maritime) has issued licences to boats for the past 40 years. The emerging problem is that larger 25-m boats have replaced older 10-m boats, changing the possible mooring types and dramatically changing the visual impacts of moored boats. This businessman (A14) said that NSW Roads and Maritime Services still gives licences to boats without considering the changes in boat size.

A democratic government and its expectations for long-term power through democratic appeals also influence the decision-making process. In Australia, the government is elected through regular elections. One Australian NGO manager (A19) explained that the election and advertising campaigns are sponsored by business and industry sectors, and the government‘s job is in a sense to weigh up the public and private interests, to balance the social, economic and environmental interests, and to make comprehensive decisions. One Australian government official (A4) stated that decision-making is a matter of weighing up options, costs and benefits (broadly defined) since no decision can satisfy every stakeholder. One developer (A14) of the RBM complained that the

decision-making process was too political and the governments were making decisions for unhappy people who made the loudest outcry. The developer (A14) also said that this political process resulted in great cost to both local governments and developers who went to the LEC to have the marina considered in a non-political atmosphere.

CHINA

Similar to Australia, laws control the decision-making process in China‘s governments. Chinese government officials (C1-C3, C5) said they issue consents in line with relevant legal instruments and established procedures. These Chinese government officials said that they operate in strict accordance with legal instruments and the operational procedures established by laws. For example, the environmental protection bureau (EPB) is mainly in charge of the prevention and treatment of pollution and it authorises pollutant discharge licences and licences for the EIS of construction projects. According to one official (C5) from the Qingdao EPB, the Bureau approves, refuses or defers an application by considering whether it accords with relevant laws and policies and whether it has all the consents from legal instruments. Officials (C1-C3) from other government agencies made similar statements.

The governments‘considerable power together with officials‘ enthusiastic pursuit of career achievement significantly influence the decision-making process in China. Section 5.3.1 explains that governments in China are very powerful in various aspects. According to Chinese academics (C6, C7, C10-C15), NGO managers (C20, C21) and local residents (C24-26), the Chinese governments are currently giving high priority to economic development, so the promotion of officials to a large extent depends on the growth of local GDP. Over half the Chinese respondents indicated that when making decisions on DAs, especially those bringing great economic benefits, governments tended to focus on the economic development and GDP growth. The staff (C4) from the BEZ Office stated that although the newly established BEZ considers social and environmental impacts, its major objective is to promote economic development.

5.3.3 Existing problems of government performance in ICZM

AUSTRALIA

In Australia, the federated government system with fractured administration creates difficulties in achieving vertical integration of coastal zone management. Australian respondents gave several examples to show that there are coastal issues that require federal involvement. However, the Australian Constitution regulates that the coastal land and waters within 3nautical miles are state responsibilities, and there is no overall commitment to a national framework for coastal zone management. For instance:

> The Murray-Darling river system drains to the sea in Coorong, South Australia. Coorong is a Ramsar site which is an international agreement on the protection of wetlands. The Federal Government does have some powers with respect of managing Ramsar, but then how does it exercise those powers …Because, again it deals a game with the powers of states who have responsibility [for the management of wetlands], but they don't have responsibility for Ramsar. (A10)

Another typical example in Australia is the GBRMP Authority. One Australian academic (A10) explained that the Authority has produced many good outcomes within the GBRMP through the cooperation of the Australian Federal Government and the Queensland Government. However, this respondent (A10) said that the GBRMP Authority does not manage the catchments of the rivers flowing into the Great Barrier Reef lagoon, which carry pollution particularly from agriculture. He (A10) said that the Commonwealth has powers within the Park, but it has no power over the catchments. He (A10) added that the coastal areas of the Park have been taken away or damaged, since ports are spreading along the coast of Queensland with the development of coal and gas mining.

Australian government officials and academics (A3, A6, A7, A9, A10) said that RBM‘s three applications in the 2000s are typical examples that illustrate the changes of coastal governance in NSW. In the past decade, RBM‘s owner lodged DAs for the construction and extension three times in the years 2006, 2008 and 2012 respectively. Table 5.1summarises the consent, assessing and determining authorities for RBM‘s three applications in different periods. Table 5.1 shows that in this evolutionary process, the

assessing and determining authorities changed, but the NSW government agencies kept the power to authorise consents for DA lodgements and assessments.

Table 5.1 Consent, assessing and determining authorities for the RBM.

	Consent authority	**Assessing authority**	**Determining authority**
Before 2006	NSW Government	NSW Government	NSW Government
2006-2012	NSW Government	Woollahra Municipal Council	Woollahra Municipal Council
2012 to now	NSW Government	Woollahra Municipal Council	Sydney East Joint Planning Panel

Note: Sydney East Joint Planning Panel is one of the six Joint Regional Planning Panels established by the NSW Government in 2011. The panel provides independent, merit-based decision-making on regionally significant developments. Each panel has five members: three independent experts appointed by the NSW Government and two appointed by the local government involved in the development.

Table5.1 shows that the Woollahra Municipal Council originally had no power in authorising consents for lodging and assessing a DA. However, the NSW Government gradually shifted the responsibility to Woollahra Municipal Council to assess and determine the RBM applications. According to local government officials (A5, A6), one academic (A10), NGO managers (A17, A20-A22) and local residents (A23, A25), it was too difficult for Woollahra Municipal Council to assess and determine a marina development covering nearly half of Rose Bay and to spend millions of dollars to defend its decisions in the LEC. According to local government officials (A5, A6), it was too late for Woollahra Municipal Council to consult with local communities and stop inappropriate developments after the NSW government agencies had issued a series of consents.

One academic (A10) and one NGO manager (A22),who both witnessed the changes in coastal zone management over the last few decades, raised that the NSW Government has tended to provide a faster and easier approach to making determinations on DAs in recent years. They (A10, A22) complained that the requirements for environmental impact assessment and public participation are not as strong as they were 30 years ago when the EP&A Act was introduced. They (A10, A22) stated that such a fast and easy approach is good for establishing more efficient government and it can be more

satisfactory for the developers who expect a ―one-stop shop" to get approvals. However, they (A10, A22) said they were concerned when the decision-making process is too fast and easy because the decisions could be against environmental protection principles and the goal of public participation.

CHINA

The coastal zone in China is managed separately in the model of ―land + water".

> It is not necessary to manage the coastal zone as a separate unit, because the coastal zone is just a narrow strip between ocean and land, and too many government agencies could be involved in its management.(C2)
>
> China has not managed the coastal zone as an independent system, not to say [there is] a coastal zone management mechanism. (C11)

One Chinese academic (C14) explained that in a physical science, the coastal zone refers to the coastal area between high and low water marks; however, coastal users and managers cannot easily recognise this scientific demarcation. Over half the Chinese government officials and academics took coastal zone management as one part of marine management in practice.

Section 5.3.1showsthat the government in China is powerful in a wide range of areas, and particularly the Chinese Central Government has the power to control other governments at lower levels in a top-down hierarchy. One Australian academic (C15) doing research on China's environmental management stated that there are political constraints on China's civil society, where Chinese people generally follow but rarely challenge the government's direction. This respondent (C15) said that China is different to Australia where civil society can both follow the government and also criticise the government. This academic also expressed the opinion that:

> … to get balance between the economy and environment, you [China] have to get balance between the state and society. At the moment, you [China] have too much government, but not enough society, too much economy and not enough environment. (C15)

This academic (C15) added that it appears to be an advantage that the Chinese government can make decisions without spending too much time on negotiating with different interest groups. She (C15) said that, theoretically if the government, especially the Chinese Central Government, decides to implement sustainable development, it has considerable power to achieve it.

One Chinese academic (C6) stated that in China the state owns all the waters, but local governments are responsible for examining and approving the sea use within certain areas. Another Chinese academic (C14) explained that local governments without ownership of natural resources and with limited power over natural resource management tend to maximise use of the state‘s natural resources without considering potential negative outcomes.

Complex and conflictual relations exist between government agencies related to coastal zone management:

> No agency is willing to manage complicated issues [on coasts]. It‘s not their expectation to deal with bad outcomes. Government agencies are usually happy to be involved in coastal issues which benefit them. So, overlaps, interplay, overstepping and gaps all exist [in coastal zone management]. (C11)

Chinese businessmen (C16-C18) complained that for a DA, the developer needs to get a large number of consents from a variety of government agencies. One businessman (C17) who has been engaged in coastal developments for two decades, said that the coastal DAs are much more complicated than the developments just on land or in the ocean. Chinese businessmen (C16-C18) explained that the application for coastal developments is a very complicated and messy process. For one thing, coastal developments cover both land and waters, so more government agencies are involved. Also, there is no explicit procedure for application among government agencies, though each government agency claims that it has explicit operational procedures. These businessmen complained that they usually applied for a series of consents simultaneously, since any consent could be the precondition for others.

Chinese government officials (C2, C3, C5) also stated that government agencies in China do not currently operate under integrated mechanisms. One Chinese businessman

(C16) cited the example of a water project at the mouth of Dagu River flowing into the Jiaozhou Bay in Qingdao. Geographically, it is a marine construction project. In China, the marine bureau should be the determining authority, but the water resources bureau examined and approved the project. This was because the project was against the laws and policies in the marine bureau, and was more aligned with the operational procedures of the water resources bureau.

At the current stage of development, economic growth still dominates the decision-making process in the Chinese government.

> … the balance of priorities [in China] is still sided towards economic growth rather than environmental protection. (C15)

> Australians do not worry about food and clothing, so they started to consider the fairness. However, from my point of view, at the moment China needs economic development. If the marina industry and real estate industry can stimulate economic growth and increase people‘s income, it is not bad. (C25)

However, the Australian academic working on China‘s environmental management stated:

> No one can deny that one day China will give top priorities to social and environmental issues, but the timing question is critical. It could be too late when the environment is extremely deteriorated and the economic growth has lost its roots in a socially stable and environmentally sustainable atmosphere. (C15)

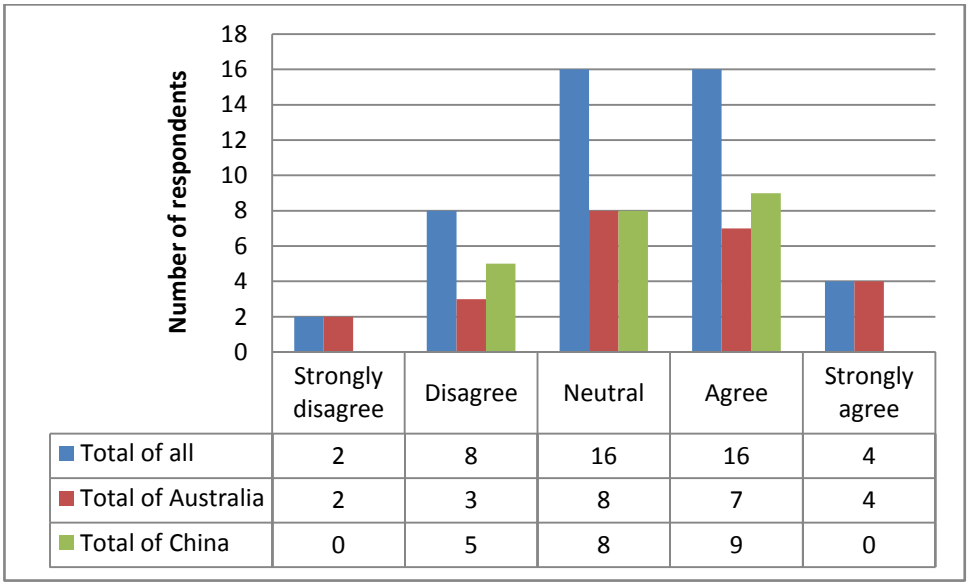
Government officials‘ pursuit of achievements in their official career is one important reason for the unsustainable coastal development. Chinese respondents (C12, C21, C25, C26) said that in China the centralised top-down hierarchy focuses on meeting targets, especially targets for economic growth. Government officials tend to inform the Chinese society of best practice:

> China has been very active in learning: a) learning from its own experience; b) learning from others, bringing new ideas in and trying to adapt them to Chinese conditions. (C15)

This respondent (C15) added that China refuses to envisage failure and learn from mistakes. She (C15) also said that the Chinese government has a weak feedback loop. If government officials expect promotion, they have to tell more "positive stories". She (C15) stated her concern that the Chinese government cannot get real data to make more practical and reasonable decisions for sustainable coastal development.

5.3.4 Potential institutions and management mechanisms for coastal zone management

In response to questions about whether a new government department or agency was needed to achieve the integration of coastal zone management (Figure 5.10), both Australian and Chinese respondents gave responses across the full range. However, as Figure 5.10 shows, 16 out of 46 respondents chose "Neutral" and the rest slightly tended to agree with the statement. In interviews, both Australian and Chinese respondents explained their responses and put forward potential models of independent bodies and management mechanisms for coastal zone management.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	2	8	16	16	4
Total of Australia	2	3	8	7	4
Total of China	0	5	8	9	0

Figure 5.10 Distribution of the responses to Q2N: A new government department or agency is needed to achieve the integration of coastal zone management.

AUSTRALIA

In Australia, respondents identified four categories of institutions and management mechanisms with the potential to achieve better integration in coastal zone management. These are:

- a government agency with administrative power,
- an advisory board without administrative power,
- a long-term coastal plan, and
- a better coordinative mechanism.

In summary, based on the results of the interviews and fieldwork, respondents thought it was unreasonable to establish a new government agency for all the coastal issues:

> [Question] Should we have an independent agency or office just for integrated coastal zone management?
> [Answer] I think the idea of having a separate body that drives [ICZM] is good. However, the actual mechanism making that work inside governments is difficult. That's a reason why [it has] not [been] done before… when you get property titling issues, when you have get planning issues, development approvals, infrastructure provisions, all of these sorts of things everywhere in the community, not only [on] the coastal zone, it is very difficult to tease those things out [and just deal with coastal issues]. (A1)

> I think government agencies work well together and I think we already have enough levels of government. I think setting up a new body will potentially create more confusion. I don‘t mind if it‘s a body that takes powers from other agencies and brings them into a different body. That‘s all right. But I don‘t see actually why we should distinguish the coast … It‘s an issue whether we cut the government agencies via issue or via location. (A4)

> We think integrated coastal management would be a good thing, but we disagree that you should have one agency in charge of resource exploitation like fisheries and conservation, because those two things are conflicting. So you cannot have one agency to try to do both of them at the same time. Because one is about making the profit and the other is about conserving the environment. (A17)

Australian respondents (A1, A3, A4, A17) said that it is good to have tension between government agencies in order to have more balanced outcomes and trade-offs in social, economic and environmental interests. One NSW Government official (A4) said that under the current government structure, adding a specific coastal agency in charge of all the coastal issues might lead to a new layer of government. She (A4) added that such an agency might specialise in coastal issues, but overlap with the functions of many other existing agencies.

Respondents said that compared with a new government agency with administrative power, it was more reasonable to establish an advisory board. One Australian academic (A10), who has working experience in advisory organisations, said that such an advisory board could be similar to the National Water Commission which is an independent statutory authority providing advice to the Australian Federal Government on national water issues:

> So in coming up with a better solution to these problems [about obstacles for ICZM] we have talked about, if we had a national coastal act coming out with a national coastal commission, then some of the problems we are talking about would get solved. (A10)

This academic (A10) added that, depending on specific management requirements, an advisory board could work in different levels of government and involve different coastal stakeholders. He also explained that such a national coastal commission could provide principles and mechanisms to use government funding and to ensure people do not spoil the coast any more.

According to another Australian academic (A11), an advisory board could bring in representatives from different levels of government and lead research institutions, industries and green groups to establish improved discussion and knowledge. He (A11) explained that although an advisory board is usually not as powerful as a government agency, depending on the mandates, it could produce recommendations to fit into the policy process or government management measures. He (A11) added that such an advisory board with a variety of representatives could enhance both vertical and horizontal integration and increase the awareness of potential problems on coasts.

An NGO manager (A20) raised that another approach to ICZM is establishing a long-term plan. This NGO manager (A20) stated that Sydney Harbour was a working harbour, a naval base (for the Australian Federal Government) and then became a public harbour with an appealing environment. He (A20) also complained that there is no coordinated approach to developing or preserving the assets of Sydney Harbour:

> [Question] Do you mean we should have an independent body to [coordinate the coastal stakeholders]?
> [Answer] You don't need to add a bureaucracy, but you need to have a 10- or 20-year plan. It will take some public consultation, listening to different people's approaches and different demands…
> [Question] Are there zoning plans in the government now?
> [Answer] There is but there isn't. In a sense I am not aware of any paper [to] set out a global vision or a 10-year vision for what they want to see changed in the harbour. What they have is a paper that says, ~~"a~~ll these are planning guidelines but they really don't mean anything". They are all ~~"m~~otherhood statements". (A20)

This respondent (A20) expected the ~~"l~~ong-term plan" to have two features. One is to synthesise ideas from coastal stakeholders at an early stage. The other is to predict changes in the future and to ensure a plan's applicability in the long term. This respondent (A20) and another local government staffmember (A5) raised that more specific and clearer standards in a plan could facilitate the decision-making and day-to-day management. They (A5, A20) added that, unlike establishing a new government agency, such a long-term plan is based on the current government structure and does not make a new layer of government.

The coordinative mechanism, in which representatives from various government agencies have regular meetings, also has potential to improve integration of coastal zone management. One academic (A11) said that in NSW, there used to be a chief executive officers' group where the heads of departments met once a month and shared what they had done and where they needed consultation. He (A11) gave another example about the first integrated catchment management initiative back in the 1970s. District officers of different departments got together a few times a year and discussed issues with shared concerns and interests. He (A11) clarified that those coordinative mechanisms

were not very formal but quite powerful, and they were a breakthrough in the history of integration among government agencies.

CHINA

Chinese respondents identified and discussed four categories of potential institutions and management mechanisms for coastal zone management. These are:

- a coastal agency in the government,
- a coordinating and consultative organ with one leading government agency,
- an independent coordinating and consultative agency, and
- a large department system (~~–l~~arge department system" is *dabuzhi* in Chinese; it refers to an institutional system that merges and restructures government agencies).

In interviews, a few Chinese respondents identified the need to establish a new government agency specifically for coastal zone management. However, more respondents, especially government officials (C1-C3, C5) argued against such a new agency. One government official (C1) said that it would be ridiculous for one agency to deal with all the issues on coasts. If the government establishes agencies in terms of natural resources or geographical locations, the government would be reorganised in another form. Another government official (C5) stated that if there is a new coastal agency for all the coastal issues, applicants for coastal developments could still need to get consents from other agencies, plus consents from the special coastal agency. From her (C5) viewpoint, it is not feasible for one agency to manage all the coastal issues under the current government structure.

Setting up a coordinative and consultative organ with one leading government agency is another approach to achieving integrated management on the coastal zone. In 2013, according to the 18th National Congress of the Chinese Communist Party (CCP) and the 2nd Plenary Session of the 18thCCP Central Committee, the Chinese Central Government started to establish the NOC. The NOC is a high-level deliberation and coordination agency to strengthen the overall planning and comprehensive coordination of marine affairs. The specific work of the NOC is now assumed by the SOA. It coordinates relevant ministries in the Chinese Central Government to formulate national

marine development strategies and make overall plans for major marine matters. It is still too early to judge the operation of the NOC and its development needs the test of time.

In this research, most Chinese respondents recommended independent coordinating and consultative agencies for ICZM. The BEZ Office is such an independent coordinating and consultative agency. The following information is from the interview with a BEZ Office staff member (C4) and the documents she provided.

The Shandong Peninsula BEZ is the first national development strategy focusing on the marine economy in China. In the Shandong Provincial Government, there is acoordination and promotion group led by the provincial governor and comprised of the heads of provincial departments. The BEZ Office is an independent agency in the Shandong Provincial Government. According to the BEZ Office staff member (C4), the BEZ Office is responsible for the coordination of relevant agencies in the Shandong Provincial Government as well as the municipal and county governments within the BEZ. She (C4) added that the BEZ Office plays a role in strategic affairs in the BEZ and in comprehensive issues involving a variety of government agencies. The BEZ Office has around 20 staff drawn from different agencies. They have working experience and professional knowledge in various fields. The BEZ Office has three branches, including:

- Blue Economy Coordination Branch,
- Blue Economy Planning Branch, and
- Blue Economy Industry Branch.

According to the staff member (C4), the BEZ Office‘s guideline is ―integration, cooperation, guidance and service”. The Blue Economy Coordination Branch is responsible for the general operation of the BEZ Office, evaluation of the performance of the 7 cities and 51 counties within the BEZ, attraction of investment and public propaganda. The evaluation involves the quantitative assessment of economic growth and the qualitative assessment of local policies, official leadership and people‘s satisfaction. The Blue Economy Planning Bureau takes charge of making plans, appropriating funds for academic research, financially supporting technology development and attracting experts for enterprise innovation. When making general plans for the BEZ, the BEZ Office will draw professionals and representatives from

relevant agencies for collaboration. As for the specialised plans and local plans, the competent agencies and local governments make drafts, then the BEZ Office checks and approves them after consulting with relevant agencies. The Blue Economy Industry Branch is in charge of allocating funds to promising industries, financially supporting the construction of industry parks and implementing policies of financial awards. The main function of this branch is to guide and encourage the development of promising and competent industries in the BEZ.

The Jiaozhou Bay Task Force is an independent coordinating and consultative agency for the comprehensive management of Jiaozhou Bay. The Qingdao Municipal Government developed a three-year (2013-2015) program for Jiaozhou Bay for the remediation and protection of the coastline. According to the program, the Qingdao Municipal Government established the Jiaozhou Bay Task headed by the Mayor and composed of directors of relevant agencies. This Task Force is responsible for the general operation and implementation of the program, the examination and approval of the working plan for each task and the cooperation of involved government agencies.

In China, many respondents also support systematic reform of the large departments system which is an institutional system that merges and restructures government agencies. Chinese businessmen (C17, C18) suggested merging government agencies as an efficient and feasible approach to simplifying the application process for coastal developments. Other respondents (C1, C5, C6, C9, C17) said that merging departments in an orderly and reasonable manner could facilitate integration of government agencies:

> The large department system can assist in reducing agencies and clarifying administrative functions. It can be better than establishing an integrated organisation [for coasts]. (C5)

> [Question] How to improve the current management?
> [Answer] Conduct institutional reforms and unify power. Do not be too sectoral. (C17)

The establishment of the CCG in 2013 is a clear example of the institutional reform. The CCG, serving as the maritime law enforcement agency, is responsible for supervising the use of marine resources and safeguarding the state‘s maritime rights and

interests. The establishment of CCG is a restructure of the maritime law enforcement bureaus:

- the China Marine Surveillance, previously under the SOA,
- the Maritime Police and Border Control, previously under the Ministry of Public Security,
- the Fisheries Law Enforcement Command, previously under the Ministry of Agriculture, and
- the Maritime Anti-smuggling Police, previously under the General Administration of Customs.

The CCG aims to solve the problem of inefficient law enforcement that occurredwith the previous dispersed agencies in maritime issues. The inefficiency was rooted in the single function of each bureau, the waste of resources due to the redundant construction of ports, fleets and other facilities, and the heavy burdens on enterprises because of repetitive certification and checking (Song, 2008).

5.4 Judicial performance in coastal disputes

The three RBM DAs in 2006, 2008 and 2012 all ended up in the NSW LEC. These three cases were respectively *Addenbrooke Pty Ltd v Woollahra Municipal Council* [2008] NSWLEC 190, *Addenbrooke Pty Ltd v Woollahra Municipal Council (No 2)* [2009] NSWLEC 134 and *Rose Bay Marina Pty Ltd v Woollahra Municipal Council and anor* [2013] NSWLEC 1046. These cases illustrate the judicial performance in coastal disputes well. They were the direct driving force for this research to include judicial performance within the legal and regulatory framework for ICZM.

5.4.1 Courts' performance in dealing with coastal disputes

The researcher co-authored a paper with A/Profs Hong Mei and Stuart Pearson titled ―Judicial experience in environmental protection: An interview with the Chief Judge of the Land and Environment Court of New South Wales, Australia". The reference in the text is (Mei *et al.*, 2013). This section reports the respondents' views and also the findings in the co-authored paper.

AUSTRALIA

According to the *Commonwealth of Australia Constitution Act 1990*, the legislative, executive and judicial powers are separated, and only a court can exercise judicial power. According to a judge (A7) from the LEC, in Australia the case *Kirk [2010] 239 CLR 531* made an important decision by stressing that the Parliament cannot take away from the Supreme Court of the relevant state the power to review a decision of the government. Most Australian respondents (ca 70%) said that the court has the authority to adjudicate legal disputes and to decide whether the government is acting lawfully in making decisions. Businessmen (A14, A15), NGO managers (A18, A20, A21) and local residents (A23, A25) directly involved in the RBM cases all trusted the LEC to make independent and lawful decisions.

The judge (A7) said that the LEC mainly decides on two types of cases: judicial review cases and merits review cases. He (A7) explained the operation of the LEC as follows. For judicial review cases, the LEC make judgements only on the lawfulness of a decision and a judge makes judgements on the basis of a particular statute. When the decision-maker does not consider anything obliged by the law, then the decision is unlawful and the court can declare it invalid. For merits review cases, usually no appeal comes to the court when the determining authority in governments has approved a DA. Generally the legislation does not provide for appeals for an approved development (A7). When a decision-maker has refused the application for a development, the developer can appeal to the court. The judge (A7) stated that the LEC —stands in the shoes of the decision-maker" and judges the whole case on its merits.

The *Rose Bay Marina Pty Ltd v Woollahra Municipal Council and anor* [2013] NSWLEC 1046 for the extension of RBM was a merits review case. According to its judgement in 2013, the LEC judged on the case on the basis of the following:

- the planning framework, including the EP&A Act, Harbour REP, *Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005* and *Woollahra Local Environmental Plan 1995*;
- precedents, such as the *Zhang v Canterbury City Council* [2001] NSWCA 167; (2001) 115 LGERA 373 and *Tenacity Consulting v Warringah* [2004] NSWLEC 140; (2004) 134 LGERA 23;

- site inspections conducted by the Judge and Commissioners at several locations in waterways and on terrestrial land. These inspections were especially for the assessment of visual impacts;
- objectors‘ viewpoints, such as the local residents and passive water users;
- expert evidence, such as the visual impact assessment expert reports;
- applicants‘ evidence, which was mainly about the benefits of the proposal; and
- Sydney East Joint Planning Panel‘s determination.

CHINA

In China, courts are the judicial organs (~~–o~~rgans” refers to government institutions; it is the official translation in the Constitution) of the state. Article 126 of the *Constitution of the PRC* (1982) states:

> the people's courts shall, in accordance with the law, exercise judicial power independently and are not subject to interference by administrative organs, public organisations or individuals.

Unlike the separation of three powers in Australia, according to article 128 of the *Constitution of the PRC*(1982), the courts in China are responsible to the organs of state power (People‘s Congress and its standing committees at different levels) that create them.

One Chinese academic summarised the potential solutions when there are disputes among coastal stakeholders:

> Firstly, [coastal stakeholders] can go to the government agency in charge of relevant coastal issues. For example, when the environmental pollution causes losses in fishery, fishermen can go to the environmental protection bureau for mediation and get compensation for losses [from polluters]. If the mediation does not work, or before the mediation in government agencies, the fishermen can lodge appeals to courts for civil compensation. The second approach is maritime arbitration. People can [make a] request for arbitration directly or after mediation in government agencies. The third approach is appealing cases to maritime courts. Since compensation is mostly [involving] civil cases, common courts can judge

> them. Maritime courts mainly judge cases related to ships. In reality, most cases go to common courts, as they are mainly about civil compensation. (C11)

This academic (C11) added that in China the appeals to courts are mainly about disputes between individuals and enterprises rather than disputes against government decisions. However, Chinese government officials (C2, C3, C5) and academics (C6, C11, C13) said that in recent years a growing number of Chinese individuals lodged cases against the government and many have won such cases. These respondents (C2, C3, C5, C6, C11, C13) explained that the cases against governments are mainly based on the *Administrative Procedure Law of the PRC* (1989):

> [Question] In China, is it difficult for individual citizens to sue the government? [Answer] I don‘t think so, particularly after the promulgation of the Administrative Procedure Law. The Law regulates [that] the normal administration of governments cannot be sued, such as [because of] the policy making. However, individual citizens can sue the government when their interests are damaged. Many people win their cases. (C13)

Public interest litigation, in which the litigant is not the victim, is developing momentum in China. The first trial of administrative public interest litigation in China was on 2 September 2009 in Qingzhen People‘s Court. The All-China Environment Federation, a government-backed NGO, sued the Land Resource Bureau of Qingzhen City, in order to request the Bureau to stop and remove a project that would potentially damage the environment (Mei *et al.*, 2013). ―This case contributed greatly to progress China‘s legal system, symbolising that a social organisation could represent the public and bring public interest litigation successfully" (Mei *et al.*, 2013 p. 97).

5.4.2 Constraints for judicial performance in coastal disputes

Both in Australia and China, courts tend to decide on cases on their lawfulness, but they may not have strong obligations to consider the widespread and long-term impacts. One LEC judge (A7) said that for merits review cases, the judge and commissioners do consider the comprehensive impacts of a development. However, lawfulness may play a bigger role in any judgements in courts, according to one government official:

> [Courts and particularly environmental courts]are determining cases on their merits. They‘re trying to interpret what the intention of legislation is, bearing in mind that policies are statements of intent and they are not statute laws. (A1)

This Australian government official (A1) provided an example from Collaroy Beach in Sydney. Collaroy Beach was developing a coastal management plan during storms in the 1980s. A resident constructed, without approval, a sea wall of rocks to protect his own property, but this wall could cause sediment loss to other places including neighbours‘ properties. The local government rejected this case, but the LEC approved it. In such a case, the court mainly considers the lawfulness to protect an individual‘s property, but (in the view of the respondent) did not sufficiently consider the potential impacts on the surrounding environment:

> [The LEC takes legal issues] while the Council will take a lot more social, environmental and community issues into account…That is what happened in Woollahra. (A9)

In interviews, the RBM developers (A14, A15) indicated that they expected to put developments through the legal process with partial isolation from regulations and policies, governments‘ emphases on social and environmental impacts and local communities‘ influences on the decision-making process. These businessmen (A14, A15) claimed that they were tired of the political atmosphere in local government decisions, so they expected more lawful judgements by the LEC.

In both countries, the time and cost of appeals to courts are problematic, especially for the weaker side of the two parties. One Australian academic (A11) pointed out that some cases took years to prepare before going to a court and then another year of struggle in the court. He (A11) added that the strong party in an appeal can hire better legal teams and take cases through the court for years, but the financial cost can be ruinously expensive for the weaker party. Taking the RBM as an example, the developer appealed all three applications in 2006-2013 to the LEC. So far the Woollahra Municipal Council has spent millions of dollars defending its decisions. This expense is a great concern to the Council (A5, A6, A9).

Similar to Australia, the courts in China are the authorities to settle legal disputes, but respondents (C17, C21, C25) said that the independence of courts might not be as strong as declared in the *Constitution of the PRC* (1982). According to the Chief Judge of the LEC who has published working experience training judges and legal experts in China (Mei *et al.*, 2013 p. 99):

> … there were closer links between the executive and judiciary in China than in Australia and people might perceive that the environment courts are not as independent and that this could affect the decisions. People's perceptions that there might be less separation between the executive government, the legislative system and the judicial system may reduce their willingness to bring public interest matters to court.

This judge also added that people's perception of unbounded and negative outcomes potentially discouraged people lodging legal cases in courts (Mei *et al.*, 2013).

5.4.3 Performance of environment courts in coastal zone management

The NSW LEC is a leading exemplar of specialised environment courts (Pring & Pring, 2009). Except for the Australian Capital Territory and the Northern Territory, all the Australian states have established specialised environmental courts and tribunals. Since 1989, China has established a few environmental divisions and tribunals inside existing people's courts. The environmental divisions, people's tribunals, collegiate panels and people's circuit courts are collectively referred to as "environmental courts" in this thesis, though no one independent environmental court has been established in China. Additionally, China has set up a comprehensive network of 10 maritime courts in coastal cities to address maritime disputes, in accordance with the *Decision of the Standing Committee of the NPC on the Establishment of Maritime Courts in Coastal Port Cities* (1984).

The LEC was established in 1980 by the *Land and Environment Court Act 1979* and is the first specialist environmental superior court in the world (Preston, 2008). Figures 5.11 and 5.12 show the LEC's position in the NSW court systems for criminal and civil jurisdiction. These figures show that in NSW, the LEC is one of the superior courts of record. Only the High Court of Australia is ranked above it.

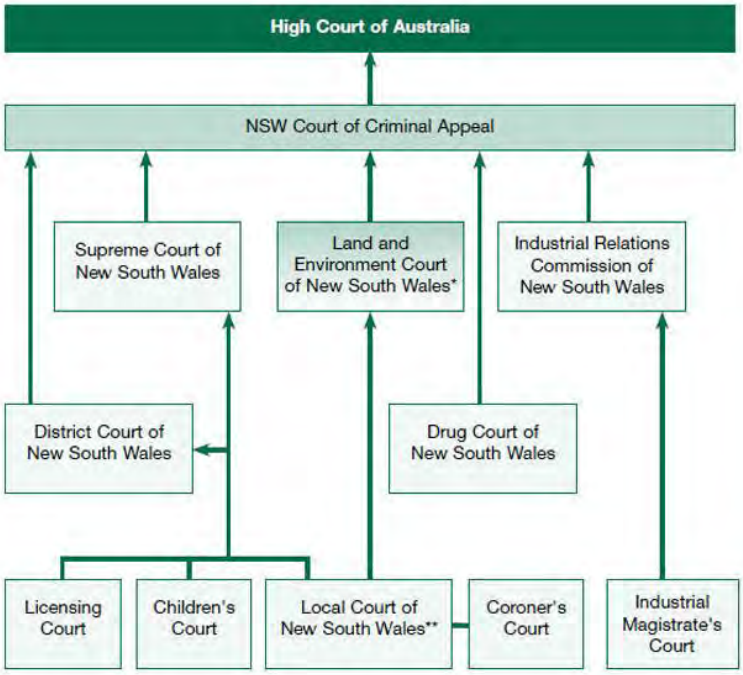


Figure 5.11 NSW court system – Criminal jurisdiction (Source: LEC 2012b).

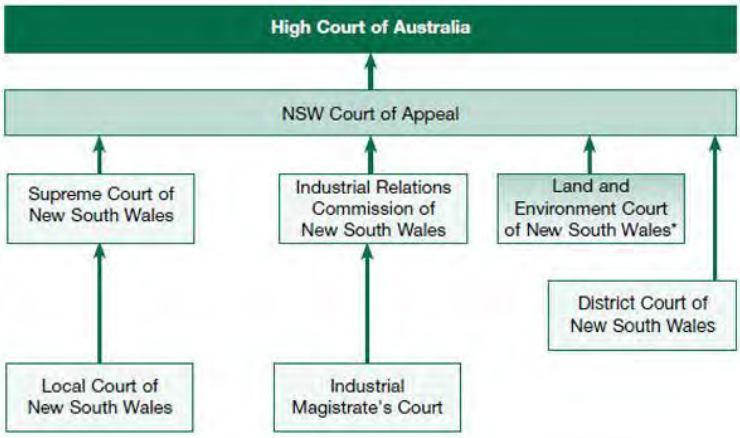


Figure 5.12 NSW court system – Civil jurisdiction (Source: LEC 2012b).

Figure 5.13 shows that China‘s judicial system consists of the Supreme People‘s Court, local people‘s courts and specialised people‘s courts. The local people‘s courts are further divided into higher, intermediate, basic people‘s courts and dispatched tribunals of basic people‘s courts. –Environmental courts” in China are not independent courts like the LEC. They are not parallel to the existing specialised courts either. They are environmental divisions in existing courts or in other forms inside existing courts. Zhang & Zhang (2012) classify the environmental courts in China into four categories:

- environmental adjudication divisions inside existing courts, which can be regarded as the new fourth division equal to the traditional civil, criminal and administrative adjudication divisions in courts;
- environmental people‘s tribunals established by basic people‘s courts;
- environmental collegiate panels which are temporarily on a case-by-case basis and mainly exist in basic people‘s courts; and
- environmental circuit courts which are mostly working closely with local EPBs to promote the enforcement of administrative decisions or in handling administrative litigation.

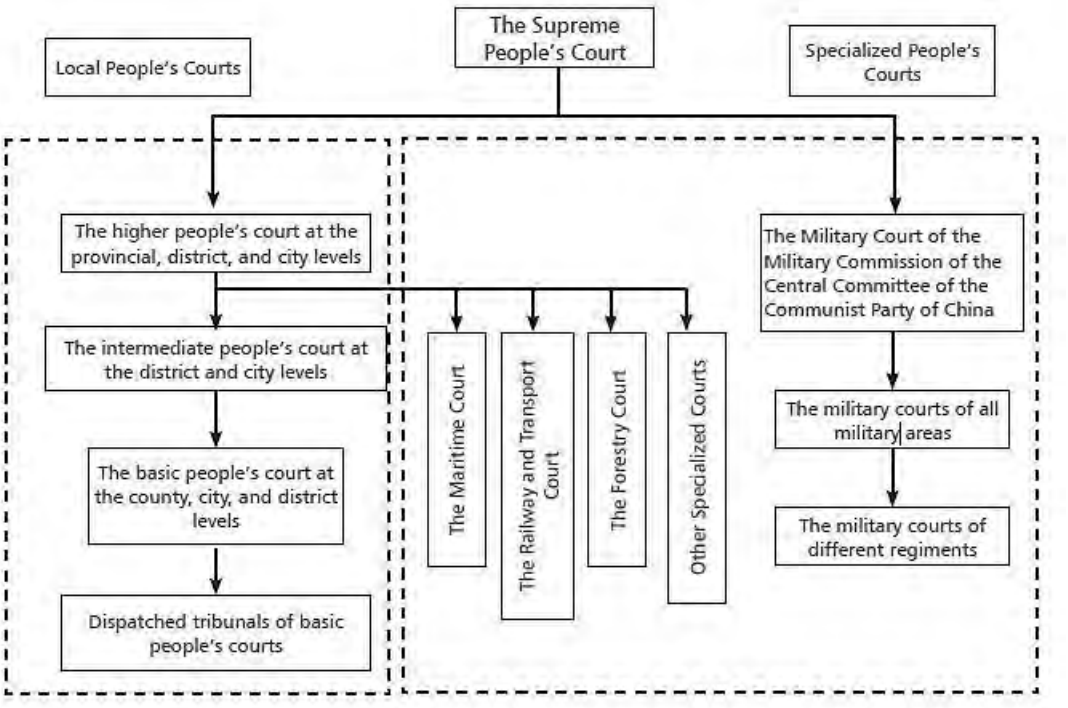


Figure 5.13 The current court system in China (Source: Lin et al., 2009 p. 25).

According to the latest statistics from Zhang (2014) (Table 5.2), most of the above environmental courts are affiliated to basic people‘s courts, some to intermediate people‘s courts and only three environmental adjudication divisions are inside higher people‘s courts.

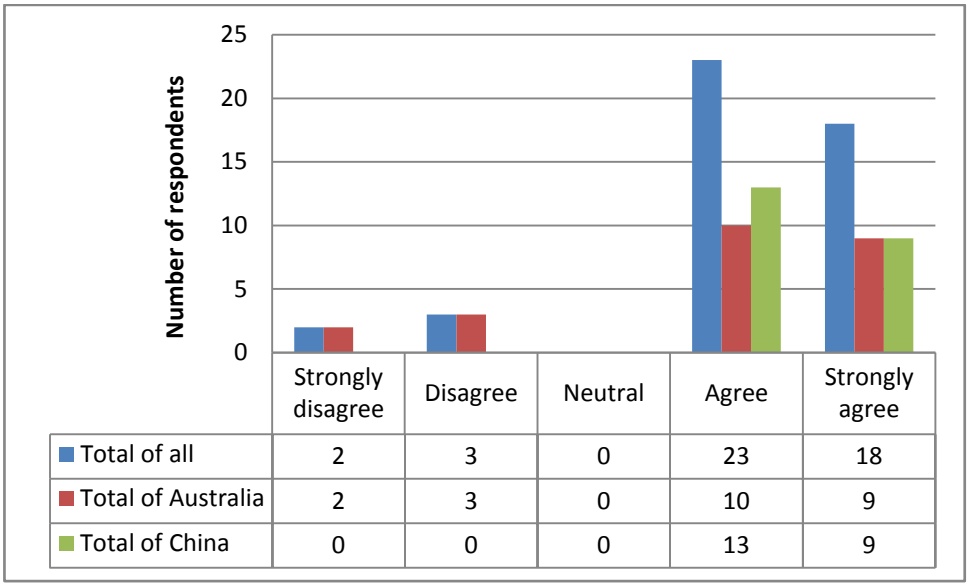
Table 5.2 Numbers of environmental courts in China (last updated: 24 June 2014).

Higher courts		**Intermediate courts**			**Basic courts**			
Divisions	Collegiate panels	Divisions	Collegiate panels	Circuit courts	Divisions	Tribunals	Collegiate panels	Circuit courts
3	3	24	26	2	58	8	175	11

The LEC has a sizeable caseload and its finalised caseload was 1234 cases in 2010 (Preston, 2012). A/Prof Hong Mei who is also an assessor in a Chinese local court observed that only a few cases were heard in the environment courts in China (Mei *et al.*, 2013). Chinese academics (C7, C11) pointed out that most cases are appealed to normal courts rather than specialised courts in China. The next chapter will discuss why the caseload of environmental courts in China is not as large as that of the LEC.

5.5 Public participation in coastal zone management

Figure 5.14 shows that most (19 out of 24) Australian respondents and all the Chinese respondents strongly agree or agree that the coastal zone needs more attention from the public. In Australia, only two government officials (A2, A5) and two businessmen (A12, A13) strongly disagree or disagree with the statement of Q2M. Their responses to the questionnaire survey were consistent with their responses in the interviews.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	2	3	0	23	18
Total of Australia	2	3	0	10	9
Total of China	0	0	0	13	9

Figure 5.14 Distribution of the responses to Q2M: The coastal zone needs more attention from the public.

5.5.1 Reasons for public participation in coastal zone management

The main reasons for public participation in coastal zone management include:

- the public have legal standing to participate in coastal zone management;
- the public are the owners of public resources;
- public participation facilitates the public interest to be known and considered by decision-makers; and
- public participation assists decision-makers in making more reasonable and evidence-based decisions.

Both in Australia and China, the legal statutes provide the public with legal standing to participate in coastal zone management. For example, the objects of the EP&A Act include, ~~–to~~ provide increased opportunity for public involvement and participation in environmental planning and assessment" (section 5). Sections 79, 79A, 89F and 115Z of the EP&A Act respectively provide the detailed requirements and procedures for public participation in designated development, advertised and other notifiable development, state significant development and state significant structure.

In China, the *Law of the PRC on Evaluation of Environmental Effects* (2002) has provisions for public participation in the evaluation of environmental impacts. Article 21 promulgates:

> … except where secrets need to be guarded, as required by State regulations, the unit of the construction project which may cause considerable effects on the environment and for which a written report on environmental effects is required to be prepared shall, before submitting for examination and approval, the report on the environmental effects of the construction project, hold demonstration meetings or hearings, or solicit in other forms the comments and suggestions from relevant units, specialists and the public on the written report.
>
> The construction unit shall attach its explanations on why it adopts or rejects the comments and suggestions put forward by the relevant units, specialists and the public to the written report submitted for approval.

In China, other important regulations for public participation include the *Regulations on the Environmental Protection of Construction Projects* (1998), the *Regulations on Evaluation of Environmental Effects of Plans* (2009) and the *Interim Provisions on Public Participation in the Evaluation of Environmental Effects* (2006). In addition, the *Regulation of the PRC on the Disclosure of Government Information* (2007) and the *Measures for the Disclosure of Environmental Information (for Trail Implementation)* (2007) both have provisions to facilitate public participation. In China, local governments also promulgate specific rules according to the national laws and regulations as well as their local conditions. The revision of the *Environmental Protection Law of the PRC* (1989) in 2014 added a new Chapter 5 of Information Disclosure and Public Participation. It explicitly provides that governments of different levels must make and keep environmental information available to the public and enhance the legal procedure of public participation.

The public are the owners of public resources. Australia has public land belonging to the Crown, private land consisting of freehold land and Crown leasehold land and Aboriginal land (Geoscience Australia, 2011). For instance, Clause 2 of Part 1 in the *Sydney Harbour Regional Environmental Plan (Sydney Harbour Catchment) 2005* states:

> … this plan adopts the following principles:
> (a) Sydney Harbour is to be recognized as a public resource, owned by the public, to be protected for the public good,
> (b) the public good has precedence over the private good whenever and whatever change is proposed for Sydney Harbour or its foreshores,
> (c) protection of the natural assets of Sydney Harbour has precedence over all other interests.

Public participation facilitates decision-makers considering the public's viewpoints and the public interest. There are conflicts between public and private interests. Without public participation, the private sector, particularly the developers may chase economic benefits more recklessly. One local resident stated:

> I don't believe it is the developers [who will pay more attention to or invest in the protection of the coastal zone], because developers will try to get the absolute maximum what they can get. (A23)

Both Australian (A9, A17, A19) and Chinese (C12, C15, C20, C25, C26) respondents observed that coastal developments such as marinas and water-frontage houses are mainly serving a minority of extraordinarily wealthy residents who can afford boats, berth maintenance and sky-high house prices. Chinese academics (C10, C12) said that land reclamation has destroyed natural marine and shoreline ecosystems, and concreted the natural coast. Chinese local residents (A25, A26) added that land reclamation expropriated the coastal land used by local fishermen for their living space and means of survival. One Chinese local resident (C25) warned that the satisfaction of the wealthy minority is likely to infringe upon the interests of the original residents living on coasts and the majority of people who expect to enjoy access to the natural coast at no cost.

Public participation assists decision-makers in making more reasonable and evidence-based decisions. Australian respondents (A7, A12, A20) said that decision-makers gain the public's first-hand information and personal experience through the participation of local communities. The public usually accept decisions more easily if they have participated in the decision-making process:

> People who live in the area know the area. Those environmental plans are basically guidelines. Most people need to be informed. But not just [those who] sit in the council and read those plans. (A20)

> We found actually that public participation is an important tool, often in arriving at a better decision. (A7)

> The coastal strategy and coastal plan all require public input. So people are used to being involved. But I think that's the starting point. If you don‘t have that, then you have to be committed to the consultation. Because otherwise you will find it is very difficult for people to accept the decision. (A13)

5.5.2 Approaches to public participation in coastal zone management

The public can participate in coastal zone management mainly through the following approaches:

- public consultation for laws, policies and regional plans;
- public participation for coastal developments; and
- getting assistance from NGOs.

According to legal provisions, public consultation is necessary in the process of law and policy-making. In NSW, the EP&A Act has one object, that is, ―to provide increased opportunity for public involvement and participation in environmental planning and assessment" (section 5). Section 57 of the EP&A Act provides more detailed approaches to public consultation in making environmental planning instruments for local areas. These detailed approaches include the public exhibition of planning proposals, planning authorities‘ consideration of written submissions, arrangement of public hearings on the issues of significance raised in submissions and feedback with a report of public hearings:

> Generally, there are formal opportunities during the planning process when documents are put on exhibition and considered by the appropriate determining authority … Generally, there are opportunities to participate, firstly in the planning process to determine what sort of development should take place in which location, but also in the process of putting a proposal for public exhibition

> [of specific developments]. So I think there is opportunity for people to participate at an appropriate level. (A2)
>
> If the developer comes along such as a marina or something on land, that will typically be in the local environmental plan which is the council-level plan that sets the zoning for the land … That is the early stage where the community can get involved. (A4)

In China, article 5 of the *Legislation Law of the PRC* (2000) promulgates:

> Laws shall be made in accordance with the will of the people, enhance socialist democracy and guarantee that the people participate in legislative activities through various channels.

In article 34 and article 58, the *Legislation Law of the PRC* (2000) provides that law-makers shall listen to public opinions by holding forums, seminars, hearings, etc. Article 11 of the *Law of the PRC on Evaluation of Environmental Effects* (2002) also promulgates that for special plans, which may cause adverse effects on the environment or have a direct bearing on the public environmental rights and interests, government shall hold demonstration meetings or hearings, or solicit in other forms the comments and suggestions from relevant units, specialists and the public on the draft environmental impact report.

Chinese legal professionals (C6, C11, C13) also said that before the enactment of laws and introduction of policies, the law/policy-maker should consult with government agencies, research institutions and any other relevant units. They (C6, C11, C13) added that the public can provide suggestions to the law-makers and policy-makers through their websites, emails and phone calls during the exhibition period of laws, policies and planning proposals. For example, the *Regulations on the Protection of Jiaozhou Bay in Qingdao City (Draft for Comment)* have been open to the public to give suggestions since 31 October 2013. People could make submissions through the online mailbox on the official website of the People‘ Congress of Qingdao City.

Table 5.3 summarises the major tools for notifying people of coastal developments and involving people in public participation.

Table 5.3 Tools of notification and involvement for public participation.

Australia	**China**
Notice delivered to local residents	Announcement of developments online or in media
Local newspapers and other media	Questionnaires for public opinions
Written submissions during project exhibition	Public notice online or in media
Public hearings in council committees	Public hearings for large developments

Table 5.3 shows that the tools for public notification and involvement in Australia and China are similar. In both countries, before decision-makers approve or reject a DA, there is a project exhibition period for people to make submissions, answer questionnaires and express their opinions in public hearings.

In Australia, there are a few NGOs focusing on coastal issues, such as the Coastcare and the Coastkeepers, and many with expertise in marine and environmental issues, such as the Australian Marine Conservation Society, the Australian Conservation Foundation, the Nature Conservation Council and the Greening Australia. There are many local NGOs that have an interest and enthusiasm for protecting the environment and settling local issues favourably. For example, in the Rose Bay community, the Rose Bay Residents Association, the Residents First and the Sydney Harbour Association are three active local NGOs with continuous engagement in the RBM DAs.

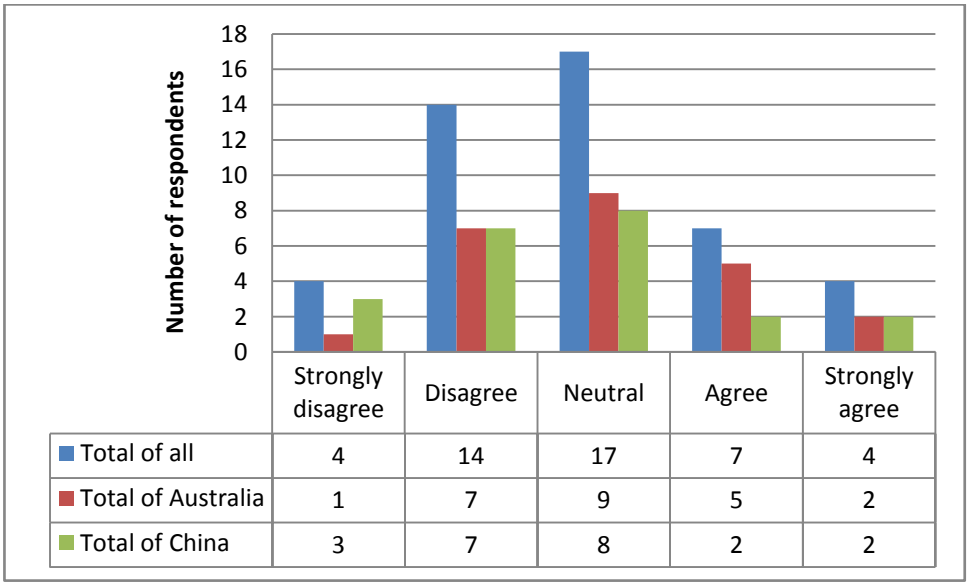
In China, there are about 3500officially registered NGOs working on the environment and they are playing an increasingly active role in enhancing public participation for environmental and social issues (C8). However, there are few NGOs championing coastal issues in China. In the process of contacting respondents, the researcher contacted 31 large and well-known NGOs in China, but just a few (5 out of 31) have expertise on coasts, and Blue Ribbon is the only one with a focus on coastal protection.

According to Chinese NGO managers (C20, C21), GNGOs (NGOs affiliated to government agencies) usually develop better than those without government support. They added that GNGOs have more financial support, broader public recognition, stronger influence and higher levels of expertise. For example, the All-China Environment Federation and the China Environmental Protection Foundation are two

influential nationwide non-profit organisations affiliated to the Ministry of Environmental Protection.

5.5.3 Constraints to public participation

Figure 5.15 shows that both Australian and Chinese respondents tended to disagree that the public have enough say in ICZM. The following will describe the constraints acting on public participation in the Australian and Chinese contexts.



	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Total of all	4	14	17	7	4
Total of Australia	1	7	9	5	2
Total of China	3	7	8	2	2

Figure 5.15 Distribution of the responses to Q2F: The public have enough say in ICZM.

AUSTRALIA

According to Australian NGO managers (A17, A22) and local residents (A23, A25), the window for public participation is too limited. They (A17, A22, A23, A25) added that it is out of the public's capability to fully understand the strategic planning within a short period:

> At the strategic level, sometimes they can feed into local plans and regional plans, but you know they only happen at certain times. So this is only a short window to do that. This is not really ongoing stuff. (A17)

> We need to participate both earlier and continually as the actual developments get proposed at all stages [strategic planning, development planning and development proposals]. They should be for community participation. (A22)

One NGO manager (A17) explained that for strategic planning, the public cannot fully predict the range of impacts within a short period. She (A17) added that there are often unpredictable and unexpected impacts occurring, so it is not reasonable to consult people during a short timeframe and force them to follow issues closely. She (A17) said that this is also one reason why people tend to participate when they know the details of the actual local development proposals.

Another NGO manager (A22) said that the strategic planning is too theoretical and too far away (spatially and temporally) for ordinary people to understand and participate in. He (A22) added that governments get people involved in the strategic planning stage, in order to keep the public out of the decision-making process of actual developments and provide a faster process to approve developments without much public input. This NGO manager‘s (A22) viewpoints were consistent with the opinions of an academic (C10) who has worked on coastal management for decades. This academic (C10) said that opportunities for public participation in both strategic coastal planning and decision-making of developments are much less now than 30 years ago when the EP&A Act and the *Coastal Management Act 1979* had just been introduced.

Over half the Australian respondents in this research said that the government should not restrict public participation to a certain period, but allow people to participate continually. One government official (A3) recommended that more intuitive and simpler expression of the strategic planning, such as 3D technology, would facilitate better understanding of strategic planning by ordinary people.

It may be too late to get the community involved only at the decision-making stage of coastal developments. The RBM example showed that before the public were informed of a development proposal, the developers had received consents from a number of government agencies, a third-party assessment proponent had prepared the EIS and Woollahra Municipal Council had started to assess the DA. Public participation, certainly in this case, was almost one of the last steps in the assessment of DAs and also one last step before the final decisions were made:

> Yes, [it is late to have the public involved] sometimes they don't realise what is happening until there is a proposed development next door to their beach house,

> or you know, when their favourite beach [is involved]. They don't realise until too late. (A17)

> Participation, so that's the last [step] where someone has a proposal. The problem [that] we have a dialogue at that point is [that] the developer or a council or a department has spent five years or something coming up with this proposal. Then they put it out and say, "what you think about it?" …If there has been a mechanism where community preference could be listened to earlier, they [developers] would get the idea that this is not going to go down very well before spending a lot of money and time. (A11)

One Australian academic (A12) said that in some cities, like Perth, the government holds public consultations to answer a broader question, "where do we want the city go?" and involves different stakeholders to discuss what they expect the city to look like in a few years. He (A12) added that such public consultation is similar to strategic planning, but more stakeholders can meet and share their opinions. The developers and decision-makers have chances to know what the public expects before they invest in some developments and issue consents to applications.

Some Australian NGO managers (A17, A20) and local residents (A23, A25) said that information transparency and accuracy are not satisfactory. In Australia, the EIS of coastal developments is available online during the application stage. In the fieldwork, these NGO managers (A17, A20) and local residents (A23, A25) expressed concern about the effectiveness of public submissions to coastal developments and how much the government considered public opinions:

> The problem with coastal zone development is that [if it is awarded] at high level, then sometimes it's not clear that the public submissions are being taken into account. And it is not clear how the process is being assessed by the government. (A17)

> The developer puts an executive summary. That executive summary is very glossy. It's a one-eyed version. Therefore, it will be good to have an independent person being able to give an accurate summary to inform the public what the

> development is. But the difficulty is, who is going to be that independent person. (A20)

Also, a couple of respondents (A10, A22) mentioned that 20 or 30 years ago, the assessing authority publicised the feedback to public submissions in local newspapers or through other ways, but currently they could not see such publications. Some respondents (A17, A20) were worried that the information provided in the EIS may twist the facts about the alternative futures being considered. They said that people expected summative and precise information from the assessing authority.

CHINA

In China, the major constraints for public participation are:

- the government does not have a strong consciousness, focus or awareness of the need to get people involved in decision-making,
- the weak material basis impedes people from having a strong sense of public participation,
- the information on decision-making is not transparent to the community, and
- NGOs have difficulties in their operation and development.

The Chinese government has great power to make decisions, but it does not have a strong consciousness to get people involved in the decision-making process. Over half the Chinese respondents, especially academics (C9-C13) said that the Chinese government could provide a number of approaches to facilitating public participation, if it had a stronger awareness of public participation:

> As long as it is on the government agenda, the government will definitely have solutions to the problem. (C11)

> The government has a leading role. If the government expects public participation [in the decision-making process], it will provide many approaches to facilitating it. (C9)

> Public participation in China needs more time to develop. First, the Chinese government should advocate public participation. After accepting it, the government will make specific and detailed procedures. (C10)

As explained in Section 5.3, the Chinese government appears to be more concerned with economic growth than environmental protection, since the government insists that a prosperous economy is the foundation for social stability and national security. Chinese academics (C6, C12) and businessmen (C17, C18) said that most large coastal developments are predominately the initiative of the government and government-owned businesses, such as the Jiaozhou Bay Cross-Sea Bridge in Qingdao, so expert demonstration meetings and public hearings to some degree follow the government's decisions. One Chinese academic (C6) said that large-scale public opposition might defer a DA temporarily, but the government definitely has the final say in decision-making.

Chinese academics (C11-C13) and businessmen (C17, C18) said that in China, either for large government-dominated developments or for ordinary commercial developments, reasonable financial compensation is the most common and effective way to placate the opponents. Chinese businessmen (C17, C18) added that local governments usually assist with the compensation in order to hasten the process of development application and construction. They (C17, C18) said that governments usually lead the process of compensation and the business is mainly responsible for the financial payment.

In China, the comparative lack of material wealth may stops people from having a strong sense of public participation. One Chinese academic (C7) said that today's China includes a significant portion of people focusing on immediate material needs and the struggle to make a living. He (C7) said that Chinese people's awareness of public participation and environmental protection is at an early stage and that the coastal zone is currently not a great concern to them:

> Urban citizens in China are materially concerned with apartments and cars … People just stepped into good living conditions and started to pursue a good environment. The pursuit is mainly reflected in the issues which directly influence their life such as the [air pollution] haze and also what happens in their surrounding environment. Therefore, Chinese people's environmental awareness is rising, but mainly on issues around them. Some people do have wider concern, but they are mainly those enthusiasts and elites. (C7)

The information related to decision-making is not sufficiently transparent in China. According to Chinese academics (C7, C11) and local residents (C23-C26), there have been improvements in information availability and flows in China; however, insufficient information definitely remains a constraint for effective public participation:

> I always know a development after it has been constructed. I don‘t know when it started to apply for approval or which procedures an application should go through. I think the rate of public participation is low. I have never heard of questionnaires [for public opinions on a development] in my life. Nobody asked me whether I liked or disliked a development. (C25)

Chinese respondents (C7, C25, C26) explained that currently in China people usually put forward their opinions mainly based on the limited information published in the media. They (C7, C25, C26) are concerned that the piecemeal information available in the media misdirects the public and the information asymmetry between the public and decision-makers obstructs people having evidence-based views.

Chinese NGOs have limited impacts on public participation. According to Chinese NGO managers (C20, C21), GNGOs in China can achieve good support from Chinese governments, but civil NGOs in China are confronted with difficulties in official registration, obtaining continuous financial support and the professional talent (staff) for daily operations and in maintaining independence from the government:

> [The major problems include] first, insufficient funding; second, undertaking part of government‘s responsibilities (Civilization Office, Land and Resources Bureau, Marine Bureau …); third, inadequate staffing. (C21)

In China, NGOs should get consents from one government agency in charge of its business and then register with the Civil Affairs Bureau. NGO managers (C20, C21) said that it is not easy to get consents, since most government agencies are not willing to take risk. They (C20, C21) added that without financial support, NGOs cannot employ skilled people, establish long-term management mechanisms or carry out daily activities. One NGO manager (C21) said that those NGOs established or supported by enterprises mainly serve the development of enterprises rather than focus on public participation. Another difficulty for NGOs in China is their independence from governments.

According to NGO managers (C20, C21), both GNGOs and civil NGOs are required to share governments‘ responsibilities and serve governments‘ plans and interests.

5.5.4 Participants’ problems

During the fieldwork, this research also identified some participants‘ own problems impeding effective public participation. Some problems are common in both countries, while some are more evident in Australia or China. The following will respectively explain the participants‘ problems in Australian and Chinese contexts.

AUSTRALIA

This research identified two major problems of the Australian participants. One is that only objectors have the enthusiasm to participate in the decision-making process. The other is that participants are active for specific coastal developments but indifferent to coastal planning and policy-making.

It appears to be human nature that only the objectors are enthusiastic about participating in the decision-making process of coastal developments.

> The unfortunate part of public participation is that it's usually only the objectors who respond. That's human nature. If you want to object, you will certainly be motivated to write to the council expressing your objections. If you think this is good, it‘s going to be a new marina, [then] you don‘t write. So, public participation is good in principle, but in practice it only draws out the objectors, not the supporters generally. It‘s human nature. (A15)

> Our public are very lazy. They often don't care until something suddenly happen[s] and they will complain, why we haven't been told? (A20)

RBM is a good case to show who had enthusiasm for public participation. The researcher read all the 631 submissions to the extension of RBM in 2012 and classified the submitters into four categories:

- enthusiasts (about 5%),
- local residents whose individual interests were damaged (about 15%),

- people who made submissions to oppose the development because they were encouraged by local NGOs to do so (about 50%), and
- people who may have been employed by the developers to write supportive letters (about 30%).

According to their submissions, most letters (about 70%) were written to oppose the development. The first two categories of submitters usually wrote with a great amount of details and evidence. Local NGO managers (A20, A21) said that most residents did not care much about the development, but submitted letters of opposition following continuous encouragement and a great push from local NGOs and individual enthusiasts. The letters in the third category were short and only listed the key words. According to businessmen (A14, A15), developers usually employed people to make letters of support because it was human nature that only the objectors would make submissions. It is clear in these letters of support that people just wrote a few words to show their support without much evidence.

Most people do not care about coastal planning. Australian government officials (A3, A4) gave the example of local zoning plans in Sydney Harbour that involved local resident consultation. They (A3, A4) said that only a few residents had enthusiasm for participating in the consultation:

> But it is just part of human nature. People just don‘t get engaged in broad-scale planning questions. For example, when we were zoning Sydney Harbour, the number of people who would take interest in that would be low. But when it comes to build[ing] a marina, everyone is interested. (A3)

> At the moment [before a development proposal], you don't have any reaction to the people. Very difficult. It's very difficult to get involvement. It's extremely difficult to get involvement from the people. (A18)

> [Question] If there is just a zoning plan for the whole area, will you advise for that plan?
> [Answer] I am not too sure. I think we would, but we have been more interested in [the marina] now because it's taking away our training space and it's against the environmental part. (A23)

CHINA

In China, people have enthusiasm for public participation when their individual interests, especially economic interests, are damaged. Most public participants expect financial compensation more than other outcomes. Normally if the compensation is appropriate, people will agree to move away to make room for new developments (C26). One Chinese academic (C7) said that Chinese people may have much interest in putting forward their opinions for making new policies on house prices, food security or other issues closely related to their living conditions. He (C7) clarified that they are not interested in coastal policies which seem far from their daily life. When it comes to specific coastal developments, local residents are usually more concerned about the economic compensation. This gives rise in China to the ~~"n~~ail house" (Figure 5.16) which is a typical phenomenon appearing in redevelopment areas. People ~~"n~~ailing their houses on the ground" are seldom doing so for environmental or social issues, but for higher and more satisfactory compensation. Businessmen (C16-C18) participating in this research clarified that local communities would not aggressively work against a development, as long as they are satisfied with the compensation.

Figure 5.16 ~~"N~~ail house" (Source: Starr, 2013)

Chinese people are not concerned about coastal issues unless they can see specific developments (C1, C19, C20, C24).

> The public do have the right of supervision and speech, but they seldom use the right on coastal issues … This is the current situation. The public awareness [of participation] cannot be improved soon. On coastal issues, especially at the early stage of the issues, it is not necessary to consider public participation. Only after

> bad outcomes are the public willing to participate and play a role. Even for our Qingdao locals, coastal zone management is very far from our life. (C24)

NGO managers (C19, C20) said that more Chinese people have a stronger consciousness of protecting the environment through their daily behaviour, such as less spitting and less littering. They (C19, C20) were clear that for coastal policies and developments, most people are indifferent. Chinese academics (C7, C15), NGO managers (C19, C20) and local residents (C23-C26) complained that what can be seen in media is mainly about a few enthusiasts participating in environmental and social issues. Most Chinese have poor awareness of public participation and environmental protection.

Another participants‘ problem is related to the silent culture in China. One local resident (C26) in his 50s stated:

> Chinese culture is different from Australian culture. China was a planned economy. Australia is a market economy and democratic system. The middle-aged and aged people are in particular influenced by this culture. (C26)

This respondent (C26) clarified this by saying that, compared with Australians, Chinese people are used to being conservative and reserving their opinions. He (C26) added that the ideas of the middle and old aged are still influenced by the traditional culture and influenced by their memory of Chinese society in the past decades. He (C26) also said that in China some people would be anxious about the unbounded and negative outcomes resulting from public participation, especially from the statements and actions against the government and large private sector.

5.6 Conclusions

This chapter synthesises the results through fieldwork. It draws data from sources used in the research triangulation (Figure 4.12), including semi-structured interviews, questionnaire surveys, legal and regulatory documents, and other data collected from fieldwork. The broad base of sources provides the diversity of views, data and the cross-verification of these sources so that the results can be seen as valid and reliable.

Chapter 6
Discussion

6.0 Introduction

This chapter discusses the major results of this research organised in terms of eight discussion items. These discussion items are a critical consideration of the results and synthesise with research findings in academic and government publications. The eight discussion items are:

- Item 1 – regional ICZM programs and national mechanisms (from theme 1),
- Item 2 – coastal laws and regulations (from theme 2),
- Item 3 – planning systems for coastal zone management (from themes 2 and 3),
- Item 4 – better integration in governments for ICZM (from theme 3),
- Item 5 – other influential factors in coastal governance (from theme 3),
- Item 6 – institutional arrangements for coastal zone management (from theme 3),
- Item 7 – environmental courts (from theme 4), and
- Item 8 – public participation in coastal zone management (from theme 5).

These discussion items are derived from the five themes in Chapter 5 Results (Section 5.0). Table 6.1 summarises the themes and key findings in Chapter 5. The summary aims to assist readers in reviewing the key findings. In order to save space, this table does not cite respondent codes (Table 4.2), but the section numbers will help readers track detailed results and the sources of results in Chapter 5.

Table 6.1 Key findings in Chapter 5 Results.

Theme 1 5.1Respondents' understanding of ICZM	**5.1.1 Respondents' definitions of ICZM**	
	Overall	Australian and Chinese respondents defined ICZM as a management mechanism which aims to achieve more sustainable coastal development with wider involvement of coastal stakeholders and better integration among governments and government agencies.
	5.1.2 Main drivers for ICZM raised by respondents	
	Australia	Australian respondents raised the following drivers for ICZM: coastal programs with the objective of integrated management; the growing number of coastal stakeholders and their increasing enthusiasm in coastal zone management; coastal stakeholders' conflicts in the use of coastal land and waters; the complexity and conflicts of social, environmental and economic values on the coastal zone; and climate change and its effects on coasts.
	China	Chinese respondents raised the following drivers for ICZM: the rapid rate of coastal reclamation and deterioration; conflicts among government agencies in coastal zone management; and conflicts between environmental sustainability and economic growth.
	5.1.3 Implementation outcomes of ICZM at regional levels	
	Australia	ICZM at regional levels has produced outcomes, but ICZM at the national level is difficult or close to impossible due to the federal system.
	China	ICZM has outcomes at regional levels and possibilities at the national level.
Theme 2 5.2 Laws and regulations related to coastal zone management	**5.2.1 Laws and regulations involved in coastal zone management**	
	Overall	Both Australian and Chinese respondents enumerated the key legislation and regulations applied to coastal zone management and spoke about their significance.
	5.2.2 Constraints identified in existing laws and regulations for coastal zone management	
	Overall	The promulgation and revision of laws, regulations and policies usually lag behind need. The existing laws and regulations related to coastal zone management have gaps and overlaps that contribute to conflicts.
	5.2.3 Special laws and regulations for coastal zone management	
	China	Conflicts among government agencies contributed to the failure of coastal legislation. Some Chinese respondents said that coastal laws and regulations are not necessary, as existing laws and regulations cover most coastal issues.
Theme 3 5.3 Government performance in ICZM (continued on the next page)	**5.3.1 Governments' roles in coastal zone management**	
	Australia	The Federal Government does not have much constitutional power over the coastal zone. State governments control most of the power over decision- and policy-making on coasts. Local governments are legal and financial creatures of state governments and are responsible for day-to-day management on the coastal zone.
	China	Governments in China work in a top-down hierarchy. Governments are the strongest driving force for coastal zone management.
	5.3.2 Factors in the decision-making process of coastal developments	
	Australia	Laws provide and control the decision-making process. The planning system specifically guides the decision-making process. The desire for democratic appeal also influences the decision-making process.
	China	Laws also control the decision-making process. Governments' considerable power together with officials' enthusiastic pursuit of career achievements significantly influences the decision-making process.

	5.3.3 Existing problems of government performance in ICZM	
	Australia	The federation creates difficulties in achieving vertical integration. NSW Government and local governments are inconsistent in regard to the power and responsibilities over the coastal zone. The NSW Government has tended to provide a faster and easier approach to making determinations on DAs.
	China	Land and water are managed separately and the Central Government has the power to control lower levels. Complex and conflictual relations between agencies influence coastal decisions. Economic growth dominates the decision-making.
	5.3.4 Potential institutions and management mechanisms for coastal zone management	
	Australia	Few respondents supported establishment of a new government agency for all the coastal issues, although an advisory board is possible. Also, a coordinative mechanism with representatives from various government agencies and a long-term coastal plan may improve ICZM.
	China	Few respondents supported establishment of a coastal agency. Most recommended independent coordinating and consultative agencies for ICZM. Many respondents supported systematic reforms of the large department system. Setting up a coordinative and consultative institution is another suggested approach to ICZM.
Theme 4 5.4 Judicial performance in coastal disputes	**5.4.1 Courts' performance in dealing with coastal disputes**	
	Overall	The legislative, executive and judicial powers in Australia are separated. China has no separation of the three powers, which affects the independence and use of courts.
	5.4.2 Constraints for judicial performance in coastal disputes	
	Overall	The time and cost of appeals to courts are problematic, especially for the weaker side of the two parties. Courts decide on cases on their lawfulness, but they do not have strong obligations to consider the widespread and long-term impacts.
	5.4.3 Performance of environment courts in coastal zone management	
	Australia	The LEC has an important role in handling disputes in NSW, including the RBM lawsuits.
Theme 5 5.5 Public participation in coastal zone management	**5.5.1 Reasons for public participation in coastal zone management**	
	Overall	The public are the owners of public resources and they have legal standing to participate in coastal DAs. Public participation facilitates the public's opinion to be considered by decision-makers and helps to improve evidence-based decisions.
	5.5.2 Approaches to public participation in coastal zone management	
	Overall	The approaches to public participation are summarised in three categories: public consultation for laws, policies and regional plans, public participation for coastal developments, and getting assistance from NGOs.
	5.5.3 Constraints to these approaches to public participation	
	Australia	The timeframe for public participation is too limited. It is too late to get the community involved only at the decision-making stage of coastal developments. Information transparency and accuracy are not sufficient.
	China	Respondents said governments do not have a strong consciousness to get people involved in the decision-making process. The information related to decision-making is not sufficient. NGOs have limited impacts on public participation.
	5.5.4 Participants' limitations	
	Australia	Only the objectors are enthusiastic about participating in the decision-making process of coastal DAs.
	China	People have enthusiasm to participate mainly when their individual interests are damaged, and they expect financial compensation more than other outcomes.

6.1 Regional ICZM programs and national mechanisms

The regional programs and organisations, described in Section 5.1.3 and Section 5.3.4, demonstrate various models of integrated management and confirm the existence of ICZM in Australia and China. The regional scale is critical for effective environmental planning and management (Choy, 2006; Selman, 1999). The GBRMP is a well-known regional program which integrates the Australian Federal Government, Queensland Government and local councils within the Park area of influence.

In China, Xiamen is the first ICZM demonstration site in China (Huang *et al.*, 2008; Thia-Eng *et al.*, 1997; Xue *et al.*, 2004). Governments adopted ICZM as a mechanism for coastal zone management in Shanghai, Shandong, Quanzhou and other coastal provinces and cities (Bin *et al.*, 2009; Shi *et al.*, 2004; Wang *et al.*, 2011a; Wu *et al.*, 2012). The inter-provincial Bohai Sea Project (Lau, 2003; Lau, 2005), the project of Partnerships in Environmental Management for the Seas of East Asia (Chen & Uitto, 2007; Chua, 1998) and the international project of Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand (Pernetta & Michael, 2013b; Vo *et al.*, 2013) have all considered ICZM.

Although there are regional ICZM programs in both countries, the regional approach is restricted to spatial scales. Considering both Australia and China are vast countries with extensive coastal zones and expansive catchments, there can be management issues across jurisdictions that involve areas beyond a regional program. Since the cross-boundary impacts have significant influences, managers should consider neighbouring areas in regional programs as far as practical (Kenchington & Day, 2011). For example, rivers carry agricultural pollution from inland catchments to contaminate the GBRMP. This process also took place in the ICZM program of Xiamen (Xue *et al.*, 2004; Zhang & Xue, 2012). The interdependence and continuum demand a national or large-scale mechanism that alleviates the pressure within and beyond regional programs and handles conflicts across jurisdictions.

For regional ICZM programs, it is important to consider how to extend their management experience to other regions and even the whole country. A national mechanism is a potential approach to facilitating the sharing of experience from regional programs to a broader scale. The Chinese Central Government has already

made political and economic reforms through setting up pilot zones and demonstration sites (Xie *et al.*, 2014). These demonstration sites could be pilot tests to pave the way for implementing ICZM in other coastal regions (Bao *et al.*, 2004). In Xiamen, the International Training Centre for Coastal Sustainable Development has disseminated the experience of the Xiamen ICZM demonstration site (Hong & Xue, 2006a).

Respondents said that in Australia a national ICZM program may be impossible due to the limited constitutional power of the Australian Federal Government in coastal zone management (Section 5.1.3). The sharing of experience among states and regions could be difficult, since each state adopts different legislation, strategies and institutional mechanisms for coastal planning and management. This is different from the top-down hierarchy in China where each level of government usually has corresponding legislation and government agencies (Cao & Wong, 2007; Fan & Côté, 1990).

A national mechanism would assist two-way communication among different levels of government and facilitate the sharing of experience. However, it is prudent to adopt other regions‘ experience with consideration of regional characteristics, such as the geographical, demographic, economic and political situations. It is also wise to incorporate precautionary principles in response to the uncertainties of rapid coastal growth (Beyer, 2006; Lau, 2005; Norman, 2009). National legislation, policies and institutions ―create the foundation for a functioning ICZM framework", but local governments and regional programs should attempt different approaches to sustainable coastal development and respond to their regional conditions, threats and opportunities.

Another important recommendation could be to manage the coastal zone as one unit, with both land and waters being considered. The coastal zone is a geographical entity covering both terrestrial and submerged areas along the coastline and it is the interface between the land and sea (Bin *et al.*, 2009; Cao & Wong, 2007; Harvey & Caton, 2010; Li, 2011; Shi *et al.*, 2001; SOAMDSRI, 2011). Therefore, it is important to consider coastal land, coastline and coastal waters as a continuum and to take an integrated approach to managing the issues on the continuum within a unified legal and regulatory framework (Cao & Wong, 2007; Han *et al.*, 2012; Jiang *et al.*, 2011; Lau, 2003). Considering the coastal zone as one unit with both land and waters is of most

significance in achieving more integrated management on the coastal zone. It is true for Australia, China and other coastal countries.

Sections 5.1.1 and 5.3.3 demonstrate respondents‘ statements of the separated management of coastal land and coastal waters. Coastal zone management in China is generally regarded as a part of marine management (Lau, 2003; Lu & Ai, 2001). The key pieces of legislation and the leading agency for coastal zone management in China mainly specialise in marine issues. The *Marine Environment Protection Law of the PRC* (1982) and the *Law of the PRC on the Administration of the Use of Sea Areas* (2001) are to improve the marine environment and establish an authorisation system for sea use. They can only be applied to the coastal waters on the coastal zone.

The SOA is the leading agency for coastal zone management in China (Chang *et al.*, 2013; Lau, 2003; Lau, 2005; Wu *et al.*, 2012). However, the functions of the SOA (Table 3.7) are marine mandates and these are not sufficient to make it a comprehensive coastal governing authority. Lau (2003 p. 121) states that ―SOA may neglect coastal issues on the shore and limit the participation of environmental, economic, agricultural and other agencies. Such a narrow institutional set-up counteracts sustainable development and policy integration in the coastal zone and means that China is not adopting the comprehensive international standards for ICZM”. The failure to promulgate the law on coastal zone management in the 1980s, the development of which was led by the SOA, is strong evidence that one agency, without a comprehensive understanding and experience in dealing with coastal issues, cannot ultimately achieve ICZM.

6.2 Coastal laws and regulations

Coastal laws and regulations are cornerstones for ICZM. Thisseems appropriate given the highly conflictual nature of coastal zone management and respondents‘ willingness to seek legal recourse. Legislation is an important enabler to effective coastal planning, government arrangements and judicial decisions. Researchers advocate new legislation and amendments to existing legislation (Chang *et al.*, 2013; Preston, 2011; Thia-Eng *et al.*, 1997; Wescott, 2002; Wescott, 2009; Ye *et al.*, 2013). This section aims to clarify

the strengths and weaknesses of coastal legislation in each country and inspire Australia, China and other coastal countries to make new legislation or amend existing legislation.

Both Australia and China have advocated national legislation on coastal zone management for decades (Chang *et al.*, 2013; Harvey & Caton, 2010; Lu & Ai, 2001; Wescott, 2009), but neither country has enacted such legislation. In Australia, the House of Representatives Standing Committee on the Environment conducted three coastal inquiries in 1980, 1991 and 2009. All three recommended a national coastal policy and an intergovernmental agreement. The 1991 inquiry (The Injured Coastline) made specific recommendations about national coastal legislation (Clarke & Harvey, 2013). The Resource Assessment Commission's Coastal Zone Inquiry (1993) put forward over 20 recommendations for a national approach for better integration, coordination and consistency. One recommendation was to promulgate a Coastal Resource Management Act (RAC, 1993). According to Harvey and Caton (2010), the reasons for the failure of legislation after the RAC Coastal Zone Inquiry included inappropriate timing, absence of a clear constituency, reduction of government agencies at that time and a lack of political or lobby groups. Another deeper and more consistent reason was the ~~"t~~raditional intergovernmental rivalry" within the Australian federation (Harvey & Caton, 2010). This tradition has roots in the limited constitutional power of the Australian Federal Government in coastal zone management.

The reason why China failed to promulgate national coastal laws in the 1980s and national coastal regulations in the 1990s rests with the conflicts among relevant agencies (Huang & Huang, 2010a; Huang & Huang, 2010b; Lu & Ai, 2001). In the law-making process, the involved agencies tried to pursue more powers and benefits and avoid responsibilities through separate coastal laws and regulations. The leadership by the SOA also led to the failure of coastal legislation in the 1980s. These reasons for the failure of legislative reform in coastal legislation in China are distinct from those in Australia. The failure in China primarily resulted from the defective horizontal integration among government agencies, while the failure in Australia mainly lay in the weak vertical integration of federal and state governments. Therefore, improving horizontal integration among government agencies and vertical integration among governments are respectively the priorities for national coastal legislation in China and Australia if ICZM is an aim.

At the state/provincial level, the Australian states of NSW, Queensland, South Australia and Victoria have enacted coastal legislation as well as coastal strategies, policies and plans. NSW enacted the *Coastal Protection Act 1979* which was the first coastal legislation at the state level in Australia. In the other coastal states and territory (Tasmania, Western Australia and the North Territory), coastal strategies, policies and/or plans have been applied to their coastal zone management for decades (Harvey & Caton, 2010). For instance, NSW has a reasonably clear system of laws, regulations, strategies, policies and plans for coastal zone management (Table 3.1).

Among the 11 coastal provinces on mainland China (excluding Hong Kong, Macao and Taiwan), Liaoning, Shandong, Jiangsu, Zhejiang and Hainan Provinces have enacted one piece of coastal regulation, policy or plan at the provincial level. The *Regulations on Coastal Zone Management in Jiangsu Province* (1991) was the first provincial regulation specialising in coastal zone management. Other coastal provinces in China have not promulgated coastal regulations, policies or plans. In addition, quite unlike the systematic approach in Australia, the existing provincial coastal regulations, policies or plans in China function in an isolated manner. China should develop legal and regulatory documents for coastal zone management and enact them in a systematic approach. This is also related to characteristics of the legislation in Australia (specificity) and China (generality).

Australian legislation provides specific objectives as well as procedures to achieve them, but Chinese legislation emphasises general principles without much explanation of specific objectives and guidance on procedures. The length, language and content all show the specificity of Australian legislation and general nature of Chinese legislation. The Australian legislation is voluminous with hundreds of pages, such as the *Coastal Protection Act 1979* (NSW) and the EP&A Act (NSW), and even thousands of pages, such as the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). In contrast, the Chinese legislation and regulations are usually tens of pages long, such as the *Marine Environment Protection Law of the PRC* (1982). The ~~"h~~ighly general, often vague and aspirational language" is a feature of Chinese legislation and regulations (Beyer, 2006). For example, Chinese legislation often uses "should", where Australian legislation usually uses ~~"s~~hall" and ~~"m~~ust". Since the generality of Chinese legislation has roots in the legislative culture of China, one subtle recommendation is to slightly

and gradually modify the legislation and regulations to be more explicit; the other recommendation is to make policies, plans, standards and other supportive documents to supplement and further explain those key legislation and regulations.

Section 5.2.2 shows the limitations of existing coastal legislation and regulations, including the challenges of retrospectivity and obscurity. One piece of hard evidence is the contradiction between the *Administrative Regulations of the PRC Concerning the Prevention and Control of Pollution Damages to the Marine Environment by Coastal Construction Projects* (1990) and the *Regulations on Administration of Prevention and Control of Pollution Damage to Marine Construction Projects* (2006) (Section 5.2.2). Their contradictions lie in the obscure definitions of coastal construction projects and marine construction projects. Laws should be equal, accessible, prospective, clear, stable and not contradictory (Preston, 2011; Raz, 2009). Laws need to be prospective, so provisions exist at the time of people‘s action (Raz, 2009), but in reality there could be occasional retrospective enactments (Rawls, 1999). The environmental legislation and regulations in China to counter adverse human activities often lag behind their appearance by 10 or more years (Han *et al.*, 2001; Lo & Fryxell, 2005). Retrospectivity may originate from unpredictability and the changes in the real world after legislation, as well as from the time-consuming process of bringing legislation into play. Obscure expressions within legislation, as well as the gaps, overlaps and contradictions among legislation and regulations (Shi *et al.*, 2001; TFEIPOASDCOC, 2013) reported in publications have been supported by the results of this research. In order to reduce the problems of retrospectivity and obscurity, it is reasonable to speed up the legislative process and to ensure timely revisions to remove gaps, overlaps and contradictions in legislation and regulations.

The enforcement of the legislation is also crucial and this research repeatedly observed the lack of enforcement as one reason for continuous environmental pollution and ecological degradation. The lack of enforcement has its roots in obscure legislation, lack of detailed procedures and governance arrangements, inconsistency between powers and responsibilities among governments, and conflicts among government agencies (Section 5.3). Cultural and social traditions may affect the enforcement of legislation. Confucianism influences Chinese society and advocates ―the rule of man” and ―the rule of morality” (Gu & Wong, 2008). Therefore, personal relationships, distorted

interpretations of legislation and regulations by local officials and other characteristics in Chinese environmental governance are obstacles to the development and enforcement of ~~"t~~he rule of laws" (Fan, 2002; Lau, 2005; Wang, 2013).

6.3 Planning systems for coastal zone management

Planning systems have roots in legislation and regulations, and they are significant forces in how governments make decisions on coastal developments. Both Australia and China have established and used planning systems in environmental management.

6.3.1 Planning and spatial zoning

Improving the existing planning system is a practical and efficient way to achieve more integrated management (Lu, 1990; Wescott, 2004). Planning is the process of making blueprints for further development from the desires and possibilities of various stakeholders and it is based on the existing economic, social and environmental conditions (McCleave *et al.*, 2003). Spatial zoning is one cornerstone of planning. As a management tool, it separates conflicting activities through analysing regional characteristics and optimising spatial allocation (Bin *et al.*, 2009). The Shandong Peninsula BEZ in China (Figure 4.9) is a typical example of spatial zoning. The *Sydney Regional Environment Plan (Sydney Harbour Catchment) 2005* divides Sydney Harbour waterways into nine zones. The GBRMP is another typical region using the zoning scheme (Grech *et al.*, 2013).

In Australia and China, planning and zoning share similarities in terms of structure, duration and administration. A series of policies, plans and programs for coastal zone management have been adopted in NSW (Table 3.1). All coastal states in Australia have plans and planning policies for the coast zone (Harvey & Caton, 2010; Wescott, 1998; Wescott, 2004). Based on the *Marine Environment Protection Law of the PRC* (1982) and the *Law of the PRC on the Administration of the Use of Sea Areas* (2001), Chinese governments at different levels have developed and implemented a series of planning and zoning schemes. China has marine functional zoning, marine environmental functional zoning, marine socioeconomic development plans, marine resource use plans

and marine ecological environmental protection plans (Mu *et al*., 2013). In addition, both Australia and China have categorised planning in terms of duration (long-term, medium-term and annual plans) or administrative levels (national, regional and local plans) (Bin *et al.*, 2009; Harris *et al.*, 2007; Lu, 1990).

Planning and zoning should be updated and modified under a long-term scheme in accordance with the changing times. Both Australian and Chinese respondents gave examples to show how the changes of the planning system affect coastal development and management. In Sydney Harbour, the preparation of the *Sydney Regional Environment Plan (Sydney Harbour Catchment) 2005* suspended the development of large commercial marinas. In Jiaozhou Bay, the Shandong Shengli Co. Ltd. transferred the reclaimed land for port and industrial development to the QCCI Group for recreational development, because the local government of Qingdao changed their planning targets for Jiaozhou Bay to the strategy Protection of and Development on the Rim of Jiaozhou Bay. In addition, the recent reforms to Australian and Chinese planning systems tend to reduce complexity and response times in the planning process, especially the cost and time of Das (Section 5.3.3). These reforms increase the role of the private sector in the planning process, and leave less time and fewer opportunities for other stakeholders to respond to the changes in planning systems and Das (Ruming, 2011a; Ruming, 2011b). For better long-term solutions and more sustainable planning systems, the balance between efficiency and sufficient stakeholder participation requires consistent attention.

In Australia, local governments need to make local environmental plans in accordance with state legislation and policies (Gurran *et al.*, 2007; Harvey & Caton, 2010). These local plans integrate the economic, social and environmental attributes with local requirements, and demonstrate the aspirations of local communities (Gurran *et al.*, 2007; Wescott, 2004). However, local governments in Australia, such as the Woollahra Municipal Council in this research, only have a small jurisdiction and limited capacity to proactively plan environmental development and address environmental problems. Taking the *Woollahra Local Environmental Plan 1995* as an example, it refers to state policies and functions as an additional document for the assessment of a DA. These local plans generally fail to provide a detailed interpretation and users must refer to the original state documents in the assessment process (Fogg, 1981; Gurran *et al.*, 2007).

This reflects the conflicts of power and responsibilities between state and local governments in Australia (Section 5.3.3). State governments in Australia should consider reinforcing local governments‘ capability in environmental planning and management by providing additional technical support, refining local planning interpretation and sharing more powers. Moreover, regional integration of local councils, such as the establishment of the SCCG, is another potential approach to reinforcing local planning and management.

China did not appear to have holistic and integrated planning for marine management that was comprehensively analysing and organising all dimensions of marine development and protection (Mu *et al.*, 2013). However, Lü *et al*(2013 p. 347) writes that ―at a national scale, integrated planning and policy instruments that harmonize ecological, environmental, and socioeconomic needs are the most promising approach for solving the conservation and development dilemma”. For coastal zone management in China, governments appear to only apply these marine planning and zoning schemes to coastal waters rather than a continuum of coastal land, coastline and coastal waters, as discussed in Section 5.1. This is different from the planning system in Australia which has specialised planning for the coasts. Considering the significance of the coastal zone to China‘s economy and society, expanded planning and zoning schemes on coasts or the extension of marine schemes further into coastal lands is worthy of consideration ahead of demand. Due to the current government arrangements in China, such a planning and zoning system on the coastal continuum calls for intensive integration among relevant agencies.

The term ―planning” in China is easily associated with the planned economy when from the 1950s to the early 1980s planning was in a centrally top-down hierarchy (Cao & Wong, 2007; Gu & Wong, 2008; Lippit, 2005; Orban *et al.*, 2003). In this period, the Central Government monopolised economic policy-making by allocating finance and resources through the planning system (Orban *et al.*, 2003; Zhang & Wu, 2006). This centralised governance and the austerity of post-war and revolutionary China did not allow for local or regional planning. This started to change through the economic reforms from 1978 that allowed for local autonomy. Since then, the Chinese government has substantially increased the market‘s role and reduced, but not eliminated, government planning and direct control (Gu & Wong, 2008). The traditional

centralised approach in China influences the Chinese planning system. Under such an approach, the lower-level governments may lose their creativity and flexibility in planning and management, and the public may have less environmental awareness and consciousness of participation. There is also ready acceptance of central directives that change the desired outcomes and planning measures. Therefore, for establishing and enforcing a better planning system, a decentralised and broad participation mechanism should be further fostered in China.

6.3.2 Environmental assessment

Strategic environmental assessment (SEA) and environmental impact assessment (EIA) are both legislative requirements for environmental management. In Australia, the *Environment Protection (Impact of Proposals) Act 1974* (EP(IP) Act) aimed to ensure matters with significant environmental impacts be fully examined before making decisions. For both SEA and EIA, the Act was discretionary in nature and left decisions to the Australian Government's Environment Minister (Elliott & Thomas, 2009). In the 1990s, the Act was subject to continuous review, including the involvement of public consultation in SEA and the consideration of more Commonwealth involvement in environmental assessment (Doyle & Kellow, 1995; Ramsay & Rowe, 1995). In 1999, the Commonwealth enacted the EPBC Act to establish a national approach to a wide range of environmental matters. It has been described as "the biggest rewrite of environmental law" in Australia (Elliott & Thomas, 2009 p. 129).

Under section 146 of the EPBC Act, a policy, plan or program can undertake SEA. SEA happens if anyone responsible for the adoption or recommendation of the policy, plan or program recommends it to the Australian Government's Environment Minister and the Minister agrees (section146 of the EPBC Act). Also, the EPBC Act establishes an environmental assessment and approval system that is separate from the EIA systems in states and territories (Elliott & Thomas, 2009). The EPBC Act requires proponents of actions (including projects, developments, undertakings and activities) to seek a determination from the Environment Minister regarding whether or not their proposed action is a "controlled action" where the EPBC Act applies (section 67 of the EPBC Act). Section 3.2.1 explains that the Commonwealth has authority to conduct environmental assessment on the nine matters of national environmental significance.

Otherwise, states or territories will conduct EIA according to legislative requirements in individual states or territories, the federal and state governments make a bilateral agreement. In Australia, each state has individual legal instruments for environmental assessment. In NSW, the EP&A Act forms the legislative basis for EIA and it has provisions for all the developments that may be subject to environmental assessment. Under the EP&A Act, development proposals are assessed under either Part 4 or 5. This Act provides precise direction for the categorisation of developments and nominates authorities for development assessment and determination.

SEA is a ~~–s~~ystematic, on-going process for evaluating, at the earliest appropriate stage of publicly accountable decision making, the environmental quality, and consequences, of alternative visions and development intentions incorporated in policy, planning, or program initiatives, ensuring full integration or relevant biophysical, economic, social and political considerations" (Partidario, 1999 p. 64). SEA is ~~–c~~arried out in a tiered planning framework in order to avoid duplication of effort and address cumulative effects" (Marsden & Ashe, 2006 p. 206). It aims to prevent or mitigate negative impacts resulting from the policy, planning and programs, through considering larger spatial and longer temporal scales and involving as many stakeholders as possible (Bao *et al.*, 2004; SoE2011C, 2011).

SEA could be an effective approach to implementing ICZM, since it aims to widely integrate influential sectors, consider broader and longer scales, involve as many stakeholders as possible, and focus on cumulative impacts and overall outcomes. SEA has been used for over two decades in many countries, but there are limited connections between SEA and ICZM initiatives (Bao *et al.*, 2004; Gurran *et al.*, 2007; Harvey, 2006; Marsden & Dovers, 2002; Wescott, 2004). In Australia, the National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan (2006) was one strategic planning approach to ICZM, but it discontinued after the Council of Australian Governments Standing Council system replaced the NRMMC. The strong potential of SEA to achieve ICZM would require both consistent political will and actions in Australia or China. So far neither country can claim such consistency.

EIA is a practical and effective instrument for environmental management, and it shapes individual developments' planning and approvals. It has been applied widely since the

1970s around the world (Bao *et al.*, 2004; Wang *et al.*, 2003). In contrast to the SEA which focuses on policy, planning and program initiatives at higher and earlier levels, EIA is the evaluation of the impacts of specific developments at the stage of application. Since the 1970s, the EIA has been, at least in the scientific literature, an effective tool facilitating governments‘ decision-making, alleviating developments‘ negative impacts and advocating community involvement (Elliott & Thomas, 2014; Wang *et al.*, 2003).

In 2014, the Australian Federal Government delivered the One-Stop Shop for environmental approvals. It tried to simplify environmental assessment and approval processes by removing duplication between federal and state/territory governments (AGDE, 2014b). On 16 October 2013, the Australian Government Environment Minister, the Hon Greg Hunt MP, announced the framework for delivering the One-Stop Shop through a three-stage process: signing a Memorandum for Understanding, making agreement on bilateral assessments and updating any existing agreement with the state, and negotiating for approval bilateral agreements within 12 months. On 14 May 2014, Minister Hunt introduced the *Environment Protection and Biodiversity Conservation Amendment (Bilateral Agreement Implementation) Bill 2014* into the Parliament and amended the EPBC Act to facilitate the One-Stop Shop policy and the operation of bilateral agreements. The Bill provides that the Australian Government Environment Minister with power to accredit state and territory approval decisions on matters of national environmental significance.

The One-Stop Shop is expected to maintain environmental standards and is to be implemented under bilateral agreements through which states or territories have responsibilities accredited by the EPBC Act for the assessment and approval of matters of national environmental significance. Since the One-Stop Shop incorporates federal and state requirements, no separate Australian Government assessment or approval is required (AGDE, 2014a). The One-Stop Shop strengthens the vertical integration between the Federal Government and state/territory governments. The bilateral agreement does not essentially change the Australian Government and state/territory governments‘ authority on environmental issues but appears to be a practical way for managing DAs. The Department of the Environment has calculated regulatory estimated cost savings for business under the One-Stop Shop as $426 million per year, compromising administrative savings of $9 million and delay savings of $417 million

(AGDE, 2014e). Such calculations stress economic benefits, but do not calculate the environmental and social impacts in the long term. The fulfilment of environmental protection principles and the goal of public participation should be legitimate concerns for the implementation of One-Stop Shop.

6.4 Better integration in governments for ICZM

Governments are key stakeholders in the achievement of ICZM. They play the role of administrators and organisers. ICZM has not been fully achieved in Australian or Chinese governments (Harvey & Caton, 2010; Lu & Ai, 2001; Rothwell, 2011; Wu *et al.*, 2012).This section will focus on governments‘ performance in ICZM and discuss how Australian and Chinese governments can improve their vertical integration among governments at different levels and their horizontal integration among government agencies.

6.4.1 Vertical integration among governments at different levels

Australia has no real vertical integration among federal, state and local governments (Wescott, 2002). Researchers and managers have discussed the national leadership of the Australian Federal Government for decades, but have not achieved substantial outcomes (Clarke & Harvey, 2013). The Australia State of the Environment 2011 (SoE2011C, 2011 p. 870) states, ―[]ow the three levels of government work together to address these cumulative impacts [of climate change and population growth] will be key in determining the future of Australia‘s coasts”. China has strong vertical links between governments for coastal zone management using the centralised governance model (Carter & Mol, 2007; Liu *et al.*, 2012).

From 1979 to 2009, the House of Representatives in Australia conducted four major inquiries related to coasts. They all proposed that the Federal Government should take more of a role in coastal zone management. So far the Federal Government has not created any long-term national coastal regime or adequately implemented the inquiry reports. Currently, it involves itself in coastal issues mainly through proposing and investing in coastal programs, such as the Coastcare, the National Coastal Risk

Assessment and the Coast and Clean Seas Program. These programs are mostly short term. The Australian Federal Government also tends to connect with the state and local governments through volunteer groups, national scientific information collection and national investments in local infrastructure. For coastal developments like marinas, the Federal Government is involved in the application process, mainly when a development involves any of the nine matters of national environmental significance in the EPBC Act.

Section 5.3.1 shows that the Australian Federal Government and the Chinese Central Government have similar features in coastal zone management, as neither of them plays a large role in the day-to-day management or specific planning and zoning on coasts. However, the Australian Federal Government is not as powerful as the Chinese Central Government. The Chinese Central Government plays the role of law-maker and policy-maker, and makes guidelines and standards for local governments to implement. Previous Australian coastal inquiries recommended a range of initiatives, including federal coastal legislation, national coastal policies and strategies, intergovernmental agreements on coasts and independent institutional arrangements for coastal issues (HORSCCCWEA 2009; HORSCEC, 1980; HORSCERA, 1991; RAC, 1993). Many researchers have advocated Federal Government leadership (Clarke & Harvey, 2013; Lazarow, 2006; Thom & Harvey, 2000). However, the Australian Federal Government has not implemented it.

Under the Australian Constitution and the Offshore Constitutional Settlement, the management of crown land and coastal waters within 3 nautical miles offshore is the responsibility of state and territory governments. Unlike the top-down hierarchy in China, the Australian Federal Government does not have authority to direct the state and local governments on coastal issues. That is a key reason why individual states in Australia, in the absence of federal involvement, have their own legislation, strategies, policies and institutional arrangements for coastal zone management. The diversified mechanisms bring about obstacles for national integration and cross-jurisdictional management. This is different from China where provincial and municipal governments are major operators of national policies and decisions, and lower-level governments are supporters and data collectors for the higher-level decision-makers.

In Australia, the Federal Government‘s lack of consistent political will is another obstacle for federal involvement in ICZM. In the 2000s the Federal Government‘s funding and effort moved to climate change and adaptive coastal management (Section 5.3.3).The importance of ICZM in the Australian Federal Government has dissipated since the end of the last century (Clarke & Harvey, 2013; Wescott, 2006). This influences the distribution and longevity of national funding for coastal research and management programs. The sway of political focus is also reflected in the breach of electoral commitment by the Australian Federal Government. The Howard administration promised a National Coastal Policy at the 2001 election, but no significant coastal policy reform was carried out in the early 2000s (Wescott, 2009).

Australian states operate independently in enacting coastal legislation, developing coastal planning policies and making coastal decisions (Glazewski & Haward, 2005). Clark and Harvey (2013), reviewing Australian coastal zone management, say that the Commonwealth has money, states have power and local governments have problems. The Australian Federal Government does not control lower-level governments as the Chinese Central Government does, but a vertical fiscal imbalance exists between federal and state governments (Kay & Lester, 1997). The Australian Federal Government controls the major taxing powers and collects most government revenue, and then allocates part of this money to state governments to fulfill their constitutional obligations. In 2001 a Goods and Services Tax was introduced across Australia with revenue being distributed to states and territories. Although the Federal Government still controls certain financial power over coastal zone management, this fiscal reform has to a large extent reduced the financial imbalance between federal and state governments (Kay & Lester, 1997; Thom & Harvey, 2000; Wescott, 2009).

Under the federal system in Australia, powers over coastal issues are divided between the Federal Government and state or terrirory governments. The Australian Constitution defines the responsibilities of the Federal Government. State and terriorty governments are responsbile for matters not assigned to the Federal Government (Bates & O'Shea, 1992; Carvan, 2005). In Australia, governments independently exercise their power enshrined in the Constitution. The Federal Government cannot interfere with state governments in the exercise of power. The six states and the Northern Territory have different planning laws and regimes for coastal zone management.The state legislation

provides state constitutional foundations and regulatory frameworks for local governments and limits the powers and functions that local governments can perform on coasts (Choy, 2006). If a coastal issue is beyond the federal jurisdiction, the Federal Government has no standing to determine on it.

Local governments in Australia take most responsibility for the majority of coastal planning and development decisions, day-to-day management of coasts and communication with local communities (Section 5.3.3). However, unlike state governments, local governments have little authority in decision-making and lack capacity building for governance. These constraints were discovered in this research (Sections 5.3.1 and 5.3.2) and also noted by government reports and inquiries (HORSCCCWEA, 2009; NSWEPA, 2012; SoE2011C, 2011). Other constraints on local governments include inadequate information and resources, insufficient skilled technical staff and failure to coordinate planning with bordering councils and neighbouring catchments (Crawford, 1992; Harvey & Caton, 2010; Thom & Harvey, 2000; Wild River, 2003). It is clear that there is an imbalance of powers and responsibilities between Australian state and local governments. It is necessary to consider how to modify and reallocate the powers, responsibilities and resources between the different levels of Australian government in accordance with their practical necessities.

The NSW Government developed bottom-up approaches in coastal zone management in the 1990s (Section 5.5.3). This ―bottom-up" approach is also called the ―grassroots-up" and ―community-based" approach to collaboration and integration in natural resource management (Lazarow, 2006; Oliver, 2006; Wescott, 2006). Australian states are currently adopting a combined coastal management model with bottom-up and top-down solutions (SoE2011C, 2011; Wescott, 2006). The provision of public corridors into politics, laws and development approvals broadened the input base for discussions and debates, assisted the establishment of power-sharing relationships and facilitated the enforcement of policies and decisions (Lazarow, 2006; Oliver, 2006).

Section 5.3.1 demonstrates respondents' statement that the government in China is the largest driving force for coastal zone management and Chinese governments can solve most problems on coasts, as long as they are on the government's agenda.China

traditionally adopts a top-down approach in environmental governance on the basis of the command and control regulations, hierarchical political systems and residuals of the planned economy. In China, higher-level governments are the authorities for policy-making and have decision-making powers over larger issues. Lower-level governments take more responsibility in policy implementation, day-to-day management and decision-making about smaller issues (Section 5.3.3). The Central Government also controls the approval of loans from international financial situations to localities, influences the establishment and revocation of agencies at localities, and dispatches work teams into localities to investigate irregularities offending officials and emergencies (Beyer, 2006; Lau, 2005; Lieberthal, 1997). In China, all leadership positions are appointed by leaders one or more levels up in the hierarchy (Lieberthal,1997). Local officials will treat certain issues and policies more carefully if the higher-level leaders pay attention to them. For example, the then Chinese President Hu Jintao‘s two visits to Shandong Province in 2009 initiated the establishment of the Shandong Peninsula BEZ. In such cases, higher-level attention and concerns are decisive elements in shaping how the local officials exercise their discretion in enforcement.

How the political system influences ICZM through power distribution and the decision-making process is worthy of consideration in China (Change *et al.*, 2013; Huang & Huang, 2010a; Lau, 2005). The authority in China‘s political system is held in a strict hierarchy which influences environmental management and decision-making (Gu & Wong, 2008; Lau, 2005; Wu *et al.*, 2012). There is no constitutional separation of powers for governments at different levels. In China, the power distribution among governments focuses on the central-local relations and carries a strong hierarchical dimension (Hong & Xue, 2006b; Huang *et al.*, 2008; Xue *et al.*, 2014). In practice, lower-level governments follow the direction of higher-level governments and are responsible for implementing higher-level governments‘ decisions. From the perspective of ICZM, this hierarchy has an effect of strengthening the vertical integration among governments at different levels.

In the top-down approach, national managers can have a comprehensive picture of the national status quo, gather feedback from local levels and synthesise them into guidelines to share with more localities. The top-down approach may also support and

facilitate those lower-level administrations which have limited capacity and experience in carrying out ICZM. However, the commitment of the Chinese Central Government itself appears to be insufficient to achieve expected outcomes of ICZM. The centralised approach may ―fail to provide adequate mechanisms for stakeholders to negotiate over alternatives and to seek common ground" (Rockloff & Lockie, 2004 p. 86). The top-down hierarchy can lead to ignorance of local characteristics and loss of local enthusiasm (Hsu & Hasmath, 2013; McCleave *et al.*, 2003). It also makes it harder for the general public to approach managers and get their voices heard. This is consistent with one Australian respondent's (C15) recommendation that China should have ―more society but less state" and ―more environment but less economy".

Rapid implementation, consistency, focus and efficiency characteristically flow from China's governance. For ICZM, this is attractive. However, the dominant role of the Chinese government in decision-making means it risks making extreme and centrally rational decisions. These decisions may miss the local characteristics and voices of important stakeholders. In addition, the Chinese Central Government is so powerful that local governments do not have much flexibility and initiative in China. Theoretically, it is easier to achieve vertical integration in China, since there is a strict top-down hierarchy among governments. However, ICZM and sustainable coastal development are platitudes in the light of implementation deficits.

In China, political, administrative and economic decentralisation reforms have been carried out since the late 1970s.These reforms are now both obstacles and catalysts for ICZM in China (Lau, 2003). They transformed traditional central planning to a model with an emphasis on economic incentives (Liu *et al.*, 2010). Since the reform and opening-up policy in the late 1970s, the traditional central governance in China has experienced a slow progression towards decentralisation. Powers and responsibilities are split between central and local governments (Beyer, 2006; Gu & Wong, 2008; McCleave *et al.*, 2003). By the mid-1980s, China conducted a fiscal reform for the division between central and local revenue collection systems. Since then, local governments have been subject to a bottom-up revenue-sharing system where localities only submit a part of revenues to the upper levels and retain most local revenues (Jin & Zou, 2005; Oi, 1992; Xu, 2011). On one hand, the new revenue collection system entrusted local governments with more financial autonomy and spurred local economic

growth; on the other hand, it allowed the Central Government to push the burden onto the local levels (Chen & Uitto, 2007; Jin & Zou, 2005).

From the 1980s, in order to address environmental degradation, the Chinese Central Government devolved authority to local governments to implement new environmental laws, such as adjusting the emission standards and polluter fine rates in accordance with local conditions. Chen and Uttio (2007) explain that this decentralization occurred in response to political pressure for local autonomy and to the ineffectiveness of the Chinese Central Government which faced diverse local demands for environmental protection. Liberthal (1997 p. 3) describes the central challenge of decentralisation reform, ~~"~~much of the environmental energy generated at the national level dissipates as it diffuses through the multilayered state structure, producing outcomes that have little concrete effect". The political and economic decentralisation granted local governments more power to handle natural resource use and economic development, but also more responsibilities to address environmental pollution and social concerns. The Chinese government needs to continue to carry forward the gradual transition from centralisation to decentralisation and to modify the relations of governments at different levels.

6.4.2 Horizontal integration among government agencies

Management and protection of the coastal zone is a matter of shared responsibility involving a variety of government agencies. The operation and decision of one agency can influence other relevant agencies. For example, the submerged land in Sydney Harbour is owned by the NSW Roads and Maritime Service which has power to issue a landowner's consent for lodging a DA. However, it gave consent to the developer before evaluating the potential impacts and consulting with relevant agencies. Such a premature decision by one key agency is likely to cause trouble for other consent, assessing and determining authorities.

Chinese government officials often said that each government agency should focus on its own duties. In practice, such an agency-based focus can cause trouble for the developers and lead to conflicts in government management. For instance, it appears inefficient and ineffective to have no explicit demarcation to define coastal construction projects with the principal part located on the landside of the coastline and marine construction projects with the principal part located on the seaside. For those projects

without a clear location, the EPB and marine bureau in Chinese governments often struggle to be the leading agency in decision-making. This agency-based mechanism may lead to overlaps, gaps and disorder in coastal zone management in China.

Government agencies working directly in economic sectors draw more attention. For instance, EPBs in China are regulated under the dual leadership system where they are answerable to higher-level EPBs and receive financial resources from local governments (Lau, 2005; Lieberthal, 1995; Lieberthal, 1997; Wang *et al.*, 2003). In practice, the attitudes towards environmental protection of the local governments who pay for the operation of EPBs affect the effectiveness of this arrangement (Beyer, 2006; Glasson & Therivel, 2005; Wang *et al.*, 2003). At the local level, there are intense conflicts between environmental protection and economic growth. The EPBs will receive more financial and political support only if local governments take environmental protection seriously. In reality most local governments in China give priority to economic development and ignore the EPB decisions if environmental considerations conflict with local economic growth and political interests (Tilt, 2007; Wang *et al.*, 2003). In China, the EPBs of all levels are suffering from insufficient financial resources, staff shortages and increasing workloads, and struggling with their lack of status (Beyer, 2006; Sims, 1999; TFEIPOASDCOC, 2013; World Bank, 2001). EPBs are usually the subject of claims by Chinese citizens and local businesses through the Administration Litigation Law (Tilt, 2007; Zhang & Ortolano, 2010). Some low-level EPBs rely heavily on pollution levies to cover their operating costs (Morton, 2009; Palmer, 1998; World Bank, 2001).

Both in Australia and China, a multitude of agencies are involved in the coastal zone at each level of government. For instance, in NSW and Shandong Province, no less than 20 state/provincial agencies have coastal responsibilities (Crawford, 1992; Wu *et al.*, 2012). It is a challenge to know and execute accurately each agency‘s powers and responsibilities on coastal issues, since coastal zone management is usually one part of an agency‘s functions. Also, the rearrangement of government structures continuously modifies each agency‘s functions. Sector-based legislation also contributes to the fragmented and dispersed institutional arrangements (Glazewski & Haward, 2005). In China, businessmen and local residents complained that the application procedure of coastal developments is ambiguous and confusing, since government agencies are in

what they described as ~~"a~~ buck-passing situation". Academics pointed out overlaps, gaps and interplays in China's coastal zone management, because no agency is willing to manage complicated issues which may cause difficulties if responsibility is not clarified in their statutory mandates.

More investment in coordination can be a practical and effective mechanism to achieve better vertical and horizontal integration in Australian and Chinese governments. There are several reasons for strengthening coordination for coastal zone management: both in Australia and China coastal issues have been traditionally scattered across various government agencies, so it seems impossible to gather them together in the short term; in Australia, the distribution of coastal powers and responsibilities by the Constitution determines that coordinative federalism is a more feasible approach to achieving vertical integration (Fearon, 2006; Glazewski & Haward, 2005);in both countries the legislation and regulations related to coastal zone management are usually enforced jointly, and a variety of government agencies have a role in the enforcement; ICZM may cross different jurisdictions and even countries (Bin *et al.*, 2009; Pernetta & Michael, 2013a; Vo *et al.*, 2013); and poor coordination between agencies may lead to conflicting information and advice being given to its higher- and lower-level governments.

6.5 Other influential factors in coastal governance

Section 5.4 discusses governments' performance on ICZM with a focus on vertical and horizontal integration. In achieving ICZM, a few influential factors are worthy of consideration. This section will discuss the largest driving force in government decisions, cultural and social traditions, and influences from party systems in Australia and China. The differences between these two countries are national characteristics and tendencies, but they are not extreme or clear-cut in either country.

6.5.1 Economy-driven or environment-driven governments

The conflict between economic growth and environmental sustainability is widely considered a primary driver for ICZM (Section 5.2.2). Economic growth openly

dominates decision-making in Chinese governments (Section 5.3.3). This is different from the Australian governments which appear to make decisions with more focus on social and environmental sustainability (Ross & Dovers, 2008; Thom, 2006; Thom & Harvey, 2000). In this research, Chinese respondents consistently said that economic growth was the top priority for today's China. Currently, economic growth remains a priority on the government agenda, which directly influences Chinese governments' policy-making and decision-making. The Chinese government has a strong belief that economic growth and environmental protection can progress simultaneously (Lo & Fryxell, 2005; Shapiro, 2012).

This seems like a contradiction between the powerful Chinese government, which claims sustainable development, and the realities in China's coastal environment. Yet the following discussion provides the rationale for the Chinese government's decision-making being driven by economic concerns. Chinese local governments are facing the question of how to raise revenue, and the answer has allowed economic concerns to dominate. Local government officials have enormous incentives and overwhelming pressures to find opportunities for economic growth, to maximise income, employment and stability within their jurisdictions (Hsu & Hasmath, 2013; Lieberthal, 1997; Lo & Fryxell, 2005). Many local governments sponsor or own industries, and may consider environmental protection incompatible with economic growth (Beyer, 2006).

In China, lower-level EPBs need to report to higher-level EPBs, but they are also subject to financial support and administrative supervision by local governments (Beyer, 2006; Costanza & Liu, 2014; Knudsen, 2013; Shapiro, 2012). That is, the performance of EPBs depends on how much attention and support local governments give to them. This government structure contributes to the dominance of local administration and prioritisation of economic growth. One potential solution is to institutionalise the ecological and environmental factors into local governments' statutory mandates to avoid it falling from view. It is reasonable to evaluate the performance of local governments not only on how the local economy performs, but also on how successfully the social and environmental challenges are handled.

China's economy-driven governments may rest in the dominant involvement of governments in economic development. In China, the government and private

responsibilities within economic sectors cannot be distinguished as clearly as in Australia. As a legacy of history, the Chinese government controls key economic sectors such as energy, natural resource exploitation, railways and financing. This direct involvement in the economy through state-owned enterprises opens opportunities and necessitates countermeasures to avoid perverse outcomes where potential conflicts occur (Costanza & Liu, 2014; Lieberthal, 1997). The QCCI Group, the developer of Celebration City Marina, is a state-owned enterprise approved by the Qingdao Administration in 2008. In coastal development applications and assessments there are no substantial differences between state-owned enterprises and private developers, according to relevant legal and regulatory documents. However, the respondents (C16-C18) from the QCCI Group stated that the government will allocate land at a lower price to the QCCI Group, if it assists the government in constructing and maintaining welfare-related facilities.

Chinese government officials pursue advancement in their official careers (Section 5.3.3). This may add further weight to the primacy of economic considerations in the decision-making process. In China, rapid economic growth, with political and social stability, brings about promotions and other benefits to local leaders. Those officials who failed to boost the local economy would be criticised and punished (Lieberthal, 1997; Liu *et al.*, 2012; Wang, 2013). Economy-based competition leads to the officials‘ pursuit of short-term economic growth but ignorance of long-term social development and environmental protection. According to the *Environmental Protection Law of the PRC* (1989), government officials of all levels and individuals must be responsible for environmental quality and take measures to improve it. The capacity building of officials through education and training can be useful. The capacity building helps to raise local officials‘ environmental awareness in the long term.

6.5.2 Relationship network

In China, the traditional reliance on relationship networks (*guanxi* in Chinese) makes coastal zone management more complex among stakeholders (Gu & Wong, 2008; Lau, 2003). Certainly, the concept of this relationship network is not unique to China, but in China it plays a greater role in politics and society than in many other countries including Australia. In China, relationship networks generate various personal and

social networks on the basis of mutual benefits, and they provide for special treatment from those with power (Bian, 1997; Gu & Wong, 2008; Lau, 2005). Government officials‘ careers mostly need protection and promotion by higher-level officials (Lau, 2005; Lieberthal, 1997). Newly established government agencies often do not have a strong political standing if they do not have a good relationship network with powerful agencies. For example, the Ministry of Environmental Protection struggled for acceptance until it was given ministerial status directly under the State Council in 1998 (Lau, 2003). Most NGOs that get sponsorship or affiliation from governments usually have a relationship network with government officials (Ho, 2001; Hsu & Hasmath, 2013).

In this research, no Chinese respondent explicitly talked about how relationship networks function in the coastal management practice or in the development application process, though usually ―there is a network of connections between business people and government officials to exchange money and power" (Gu & Wong, 2008 p. 18). The silence about this matter has roots in the conservative culture in China. It is also possibly due to the concern that such behaviour is labelled as ―corruption". Using relationship networks is sometimes illegal, yet it is also culturally important. The relationship network is an inevitability in the current political and social systems in China, since bribery and corruption are just excesses of the legitimate relationship network to accomplish tasks (Millington *et al.*, 2006). In extreme forms it also impairs the effectiveness of government management, influences the legitimate implementation of state power and violates the enforcement of legislation.

Australian business respondents (A14, A15) stated that local governments always wait for public outcry before they make their decisions. They said that local communities vote for local government councilors, so they have inordinate power within the legal framework to achieve their goals (Section 4.3.2). The use of relationship networks in Australia is far less serious than in China. However, there are ―lobbyists" in Australia who try to influence the decision-making process through direct personal engagement with the politicians and policy-makers, and existing policies, programs and institutional arrangements (Lazarow, 2006). External actions, events and actors may influence the decision-making in Australia, though the decision-making process is under a legal framework of representative government.

6.5.3 One party or two parties

In contrast to Australia, the separation of legislative, judicial and executive powers is not the model in China (Knudsen, 2013; Mei *et al.*, 2013). These three powers in China are in a practical sense integrated into the leadership of the CCP. In such a political system, the distinction between the CCP and the government is not clear (Lau, 2005; Wang, 2013). The powerful leadership of the CCP improves the administrative efficiency and speeds the formulation and enforcement of policies and programs. However, the one-party system and the government‘s control of superior powers mean that there can be a lack of restrictions, checks and balances to power, which may result in extreme policies and decisions.

Australian respondents explained how hard it is to achieve integration due to the two-party federal system in Australia (Section 4.3.2). The competition between parties in the electoral cycles produces short-term solutions, which can hardly ensure the persistence and consistency of decision-making on the same or similar coastal issues. The efficiency of policy formation and constancy of decisions or enforcement in Australia could be much lower than China. However, compared with China, the two-party system can supervise the use of power and avoid extreme policy decisions.

To summarise the discussion in Section 6.5, China‘s and Australia‘s different concentrations on economic growth or environmental protection have roots in their own political, economic, social and cultural systems. Direct or simple transfers of foreign experience are unlikely to succeed in either country, and that is not the intention here. China should absorb foreign experience as well as be introspective to its own success and failures. Australia needs to know more about the lessons and experience of developing countries such as China. Unsuccessful lessons could be a mirror to reflect current and future conditions and successful experiences may inspire managers in both countries.

6.6 Institutional arrangements for ICZM

Section 5.3.4 describes several institutional arrangements of agencies, organisations and mechanisms that have the potential to achieve ICZM. This section will further discuss these arrangements. No specific recommendations are made for Australia or China. The discussion aims to inspire coastal managers and provide institutional options for their consideration. The following institutional arrangements or options for ICZM will be discussed:

- a new government agency with jurisdiction over the coastal zone and administrative power parallel to other government agencies;
- a leading agency selected from the existing government departments with a mandate to direct the actions of other government agencies on coastal issues;
- an inter-agency commission or task force with authority to coordinate among the existing government agencies and issue guidelines for the integration of existing policies and departmental regulations;
- a regional cross-jurisdictional organisation to reinforce individual authorities and address coastal issues of regional significance and across jurisdictions;
- an advisory body with representatives from government agencies, academia and other interest groups to study coastal issues and advise the government on its policy and decision- making; and
- a large department system to merge or rearrange government agencies into a more reasonable and convenient mechanism.

A new government agency

Currently, neither Australia nor China has a government agency covering all coastal issues. According to one Australian academic (C10) who has worked on the coastal zone for decades, the NSW Government had a coast-oriented department in order to solve the coastal problems caused by storm events in the 1960s and 1970s. It introduced several pieces of legislation, policies and programs, such as the *Coastal Protection Act 1979* (NSW). China recommended the setting of permanent and competent institutions with overall responsibilities on coastal zone management in the 1980s and 1990s (Fan & Côté, 1990; Lu, 1990).

The contemporary coastal zone management involves various issues under the authority of different government agencies both in Australia and China. It is impractical to have one new agency to deal with all the coastal issues, due to the complexity of coastal zone management and the conflicts among government agencies. Such a new agency would be against the current government structure, and cause more conflicts than benefits among the existing government agencies.

A leading agency

Instead of establishing a new agency, several countries designate an existing government agency as the leading one responsible for coastal zone management. The designated agency has additional jurisdiction, and thus bundles various objectives under one governance umbrella (Lau, 2005). For example, in the USA, the National Ocean and Atmospheric Administration functions as the leading agency to supervise the enforcement of *Coastal Zone Management Act 1972* (Cullinan, 2006).

China in the 1980s and 1990s tried to confer the SOA new power through enacting a national coastal act or regulation to examine and approve any other agencies‘ actions in dealing with coastal issues (Fan & Côté, 1990). In China, the SOA is the leading agency for coastal zone management (Chang *et al.*, 2013; Wu *et al.*, 2012), but it fails to coordinate all other agencies for coastal zone management. Usually a leading agency requires high political status and clearly defined leadership (Lau, 2005; McCleave *et al.*, 2003; Ross & Dovers, 2008). The SOA as an agency under the MLR has no authority to coordinate other ministries and agencies for coastal issues. Considering its statutory mandates, the SOA does not have privileged power over economic sectors like the agencies of fishery, transportation and natural resources, nor supreme jurisdiction over marine environmental protection like the Ministry of Environmental Protection. Additionally, the SOA only has authority over the coastal water, as discussed in Section 6.1. The low position the SOA occupies in the government structure and the limited institutional functions the SOA has determine that it cannot fulfill the leading task of coastal zone management in China. The failure of the SOA does not mean that a leading agency can never be an effective institutional arrangement for ICZM. How to make a leading agency adaptive to the existing government structure and functions depends on a country‘s or region‘s specific conditions.

An inter-agency commission or task force

Section 6.4 discusses the lack of integration as one critical problem at the heart of government management. Given the substantial tension between government agencies, an inter-agency coordinative mechanism is necessary. A high-level inter-agency body that organises relevant agencies at the strategic level could be an effective institutional arrangement for ICZM (Jiang *et al.*, 2011; Shi *et al.*, 2001). It has administrative power on coordination. No other government agencies interfere in its day-to-day management. It is composed of high-level managers from relevant departments, but it is not led by any one government agency. Such an agency or mechanism with administrative power will enable forceful decisions when driving coordination. In contrast to an agency led by one particular government agency, an independent agency can consider the overall advantages and disadvantages of developments when making decisions.

This research, taking the BEZ Office and the Jiaozhou Bay Task Force in China as examples, illustrates the performance of an inter-agency commission or task force with administrative power. In the 1990s, Xiamen City established the Xiamen Marine Management and Coordination Committee. The Deputy Mayor serves as the director, and the heads of agencies relating to coastal management are committee members. The Committee holds consultation meetings periodically to review progress of the ICZM program, to handle coastal issues of significance and to deal with inter-agency coastal problems (Xue *et al.*, 2004). It is similar to the operation of the coordinative and promotional mechanism in the BEZ.

In Australia, there are ministerial councils and cabinet committees at the federal and state levels, such as the National Environment Protection Council. These councils and committees are high-level coordination mechanisms for the discussion of inter-agency and inter-jurisdictional issues and thus for horizontal and vertical integrated management (Ross & Dovers, 2008). The Council of Australian Governments (COAG) is a peak intergovernmental forum with members including the Australian Prime Minister, state and territory Premiers and Chief Ministers, and the President of the Australian Local Government Association. In COAG, two councils deal with coastal issues: a Standing Council on Environment and Water and a Select Council on Climate Change. They are both chaired by federal ministers (Clarke & Harvey, 2013). Although

COAG and its councils are not specifically working on ICZM, they play a large role in making coastal initiatives and programs for national direction and funding at the highest level.

Both in Australia and China, the inter-agency commission or task force has the potential to produce forceful decisions and effectively address cross-agency issues for coastal governance (Clarke & Harvey, 2013; Thia-Eng *et al.*, 1997; Xue *et al.*, 2004; Ye *et al.*, 2013). They promote information sharing among government agencies, mitigate the duplication of each agency‘s effort and avoid the drawbacks of one leading agency which tries to pursue more rights and avoid responsibilities. Particularly in China the inter-agency commission or task force appears to clearly satisfy the goals of horizontal integration in ICZM. However, these inter-agency commissions and task forces at high levels are usually not transparent or accountable other than to bureaucratic executives (Ross & Dovers, 2008). They mainly reflect and efficiently implement the administrative priorities of a government in office, but possibly neglect other stakeholders‘ preferences on coastal development.

A regional cross-jurisdictional organisation

The regional scale is critical for effective environmental planning and management (Choy, 2006; Selman, 1999). The SCCG has been successful in sharing information and knowledge through its technical and advisory committees. It also takes care of funding for regional-scale projects and financially supports integrated approaches to coastal zone management in member councils.

In Australia, the National Sea Change Taskforce was established in 2004 as a national body to represent the interests of coastal councils and communities in addressing the impacts of sea change (rapid population and tourism growth in coastal areas). The National Sea Change Taskforce aims to alleviate local councils‘ frustrations with the lack of resources for coastal infrastructure and planning (Clarke & Harvey, 2013). It promotes a coordinated national approach to facilitating individual coastal councils in managing sea change growth. The National Sea Change Taskforce has played an active role in promoting solutions to Australian federal and state governments and providing support and guidance to coastal councils (SoE2011C, 2011).

In Australia, these regional cross-jurisdictional organisations formed by local coastal councils reinforce individual councils‘ capacity and address cross-jurisdictional coastal problems in an integrated manner. However, regional organisations often have limited autonomy and administrative power. Their financial supports and capacity building efforts vary widely (Bellamy *et al.*, 2002; Farrier, 1998; Ross & Dovers, 2008). It seems that explicitly defined roles and responsibilities, reliable funding, consistent capacity building and participative decision-making are important for regional organisations.

An advisory body

An advisory body has the potential to enhance the involvement of various coastal stakeholders, provide decision-makers with sufficient knowledge and strategic opinions and is a means to avoid conflicts between existing government agencies (Section 5.3.4). In Australia, there have been several advisory bodies that focus on coasts in the past decades, such as the Intergovernmental Coastal Working Group (1994-1996), the Intergovernmental Coastal Reference Group (1997-2002), the Intergovernmental Coastal Advisory Group (2002-2010) and the Coasts and Climate Change Council (2009-2011) (Clarke & Harvey, 2013; NRMMC, 2006). These advisory bodies are mainly initiated by significant government reports and initiatives, such as the RAC Coastal Zone Inquiry in 1993.

The Australian Coastal Society is an advisory group on coasts. It provides a platform for the exchange of information and knowledge among coastal stakeholders, transfers a well-informed independent voice to governments and coastal managers, and fosters better understanding and decision-making for sustainable practices on coasts. The Australian Coastal Society is gaining momentum nationally and plays an advocacy role for coasts by lobbying for the reform of national governance on the coastal zone (Clarke & Harvey, 2013). The Victorian Coastal Council is responsible for the strategic planning and management of the Victorian coast. The Regional Coastal Board provides an additional mechanism for ICZM at the regional level by communicating with and linking communities, industries and local governments. Both the Victorian Coastal Council and the Regional Coastal Board report to the Minister for the Environment and provide well-informed advice to decision-makers. Their success depends on the broad involvement of coastal stakeholders, the diverse backgrounds and skills of the members,

and also their efforts on developing the Victorian Coastal Strategy for the state and the Coastal Action Plans in regions (Harvey & Caton, 2010; Wescott, 1998; Wescott, 2004).

China has seldom set up advisory bodies for coastal issues at the national level, except for the taskforce of Countrywide Comprehensive Investigations of the Coastal Zone and Tidal Land Resources in the 1980s. At the local level, Xiamen City established the Marine Experts Group in 1996 as a key component of the coordinative mechanism in the Xiamen ICZM program. It integrates science into coastal management and policy-making through providing scientific, technical and socioeconomic information to coastal managers and policy-makers (McCleave *et al.*, 2003).

It is necessary to consider the potential weaknesses of an advisory body without administrative power. There are gaps between the advice provided by advisory bodies and the required information for government decision-making (Campbell, 2006; Ross & Dovers, 2008). There are divisions between the proposal and acceptance of advice, and between policy- and decision-making and the implementation and enforcement of policies and decisions (Cullinan, 2006). Good and progressive advice could be nullified by the reluctance of government agencies to consider it or act upon it. In addition, advisory bodies mainly depend on government funding and charitable funds. Without long-term mandates and support, such informal mechanisms are easily broken, due either to the accomplishment of a program, or to the changing needs for enhancing administrative efficiency.

A large department system

A ―large department system" is the literal translation of *dabuzhi* in Chinese. It refers to an institutional system that merges and restructures government agencies. In Australia, government agencies are merged, spilt or rearranged every few years, due to the government's transition and changes of administrative focus. There is no clear tendency in the Australian government structure changes. China, since the reform and opening-up policy in 1978, has conducted seven rounds of State Council institutional reform. The number of agencies composing the State Council reduced from 100 before the first reform in 1982 to 25 after the latest reform in 2013 (Song, 2008). Particularly, the recent two reforms in 2008 and 2013 focused on building the large department system.

In China, the large department system enhances administrative efficiency. It is a gentle approach that gradually modifies the current government structure. The integration of marine law enforcement organs to the CCG in 2013 appears to be an example in the reform of the large department system (Section 5.3.4). For decades prior to the establishment of the CCG in China, the merging of existing marine law forces or establishing an integrated body to improve their communication and cooperation had been advocated (Chang *et al.*, 2013), and integrated marine enforcement agencies had existed in the form of the Coast Guard in the USA and the Maritime Safety Agency in Japan.

No single model is suitable for all countries attempting to achieve ICZM. The above discussion only gives insights to inform the selection and application of these institutional arrangements. Policy-makers and managers need to adequately consider the existing government structure, and the social, environmental and economic conditions at national and regional scales.

6.7 Environmental courts

Both in Australia and China, courts play important roles when there are disputes among coastal stakeholders. ―Environmental courts" in China is a collective reference to the environmental divisions, people's tribunals, collegiate panels and people's circuit courts in a normal court. China has no independent environmental court like the LEC in Australia. For more details, please refer to Section 5.4.3.

Section 5.4 explains that courts can be an important force in changing behaviour in environmental matters and in strengthening government agencies' environmental considerations in the decision-making process.In the decision-making process of the applications for RBM, the LEC took an essential role in enforcing laws. According to the LEC Annual Review 2012 (LEC, 2012a), the finalised caseload of LEC from 2008 to 2012 was respectively 1610, 1287, 1234, 1167, 1409.However, in China an inadequate caseload has caused criticisms about the necessity for and threatened the existence of environmental courts. For instance, the first Chinese environmental court established in 1989 (the Trial Court of Environment Protection of Qiaokou District in

Wuhan, Hubei Province) was abolished due to its lack of legal foundations and caseload (Lin *et al.*, 2009). Since 1996, only 2 of the 15 environmental courts in Liaoning Province survive, because most of them have few or no cases to handle (Fan, 2011). This section compares the Chinese environmental courts with the LEC and tries to explain why the specialised environmental courts in China have a small caseload.

Status

Figures 5.11, 5.12 and 5.13 clearly show that the position of the LEC in Australia and the specialised environmental courts in China are very different in their respective systems. This is one reason why specialised courts in Australia and China have different authority in addressing environmental and maritime disputes and receive different public acknowledgement of their importance. Chief Judge Brian Preston (2012 p. 427) states, "establishing an environmental court as a superior court of record enlarges the jurisdiction of the court to include those powers only a superior court of record possesses". Meanwhile, establishing an environmental court as a superior court of record could enhance judiciary independence, since local governments would have no chance of interfering with courts' decisions at higher levels.

Both Australian and Chinese courts handle civil, criminal and administrative cases. The LEC in Australia is an independent court which has jurisdictions in dealing with administrative cases which are merit reviews of governmental decisions. The three cases involving RBM were administrative merit reviews by the Judge "standing in the shoes" of the decision-makers. The LEC has other judicial functions including civil jurisdiction, civil enforcement, judicial review, criminal enforcement of environmental laws and compensation for land acquisition (Preston, 2012). Thus, the LEC can handle civil, criminal and administrative cases. The LEC, as a superior court in the state, also has appellate functions to hear appeals for environmental offences from inferior courts, as well as appeals against decisions of the LEC's commissioners. The LEC can also exercise the jurisdiction of the Supreme Court of NSW in proceedings transferred from it (Preston, 2012).

Environmental adjudication divisions in Chinese courts have authority to handle all the civil, criminal and administrative cases related to environmental matters. However, most environmental cases are handled by the traditional civil, criminal and

administrative adjudication divisions in normal courts or in the manner of ―three-in-one" (three judges respectively from civil, criminal and administrative divisions). One reason is that environmental courts in China are just one new division in existing courts (Section 5.4.3) but not an independent court like the LEC. The other is that most environmental appeals in China are about civil compensation after damage has been done, so normal courts have more experience in dealing with such appeals.

Judicial independence

Section 5.4.1 explains that Australia practises the separation of three powers. In Australia, the legislative, executive and judicial powers are respectively vested in parliaments, governments and courts. The Australian Constitution stresses that no person or body in Australia exercises more than one power. The case *Kirk [2010] 239 CLR 531* cited by one judge (A7) in the LEC proves that parliaments cannot take power away from courts to review a decision of governments. In China, article 3 of the *Constitution of the PRC* (1982) regulates, ―[a]ll administrative, judicial and procuratorial organs of the state are created by the people's congresses to which they are responsible and under whose supervision they operate". The constitutional differences between Australia and China appear to deeply influence the arrangement and operation of the three powers in each country.

As discussed in Section 6.4.1, China has a strong tradition of administrative centralisation that has implications for the way ICZM is implemented. The reliance on the Central Government is based on people's trust in the government's power and Chinese society's tradition of relying on governments. In the long feudal history of ancient China, the government exercised all the legislative, judicial and executive powers. The Chief Judge of the LEC, who had working experience in China, pointed out that the three powers in China have closer links than in Australia (Mei *et al.*, 2013) and accordingly people's perceptions reduce their willingness to appeal cases in courts. Knudsen (2013 p. 448) states that the Chinese government ―gestures at judicial reform to strengthen rule of law, yet China is still an authoritarian state where judges are weak political actors and likely will never be truly independent". In China, governments provided courts with operating expenses and CCP officials have significant impacts on the jurisprudence and promotion of court staff. Local governments' influences on courts

appear to be considerable. Before the mid-1990s in China, the environmental circuit courts were almost working inside local EPBs to enforce uncollected administrative penalty judgements and other administrative decisions (Wang, 2010; Zhang & Zhang, 2012). "The environmental courts are another environmental agency in localities. They collaborate and also compete with the local EPBs to deliver outcomes for citizens" (Knudsen, 2013 p. 452).

In China, the administrative intercession is one of the "outside forces" for courts' refusal to take environmental cases. In some Chinese localities, administrative intercession has privilege over litigation, particularly for those lawsuits which may have serious negative impacts on large enterprises. As discussed in Section 6.5.1, economic growth is the top priority in many Chinese localities. Thus, local governments usually exert pressure on courts not to accept environmental cases against severely polluting but highly taxed enterprises (Knudsen, 2013). Judges in China insist that civil disputes can only be filed after relevant government agencies have tried to handle them (Lin *et al.*, 2009). The regional protection of economic growth by local governments is a significant problem in enforcing court judgements that seek to protect social and environmental values.

Motivations to establish environmental courts

Both in Australia and China, specialised environmental courts are institutional responses to rapid increases in environmental damage and maritime disputes, shortage of expertise in complex environmental and maritime lawsuits, inadequate citizen access to courts and insufficient enforcement of environmental legislation (Knudsen, 2013; Lin *et al.*, 2009; Preston, 2012; Zhang & Zhang, 2012). However, the establishment of specialised environmental courts has quite different motivations in the two countries. The establishment of LEC was a response to necessary environmental reforms in the NSW in the 1970s (Preston, 2008; Preston, 2012). The reforms were initiated by the public expectations about how to manage environmental changes. In the 1970s, the rapid economic development in NSW put unacceptable pressure on heritage, conservation and environmental values. Environmental and planning disputes were dealt with by different courts, such as the Supreme Court of NSW, the Land and Valuation Court, the Valuation Boards of Review, the Local Government Appeals

Tribunal and other local and district courts. Before the LEC, the jurisdiction of these courts overlapped and this sometimes caused delays, confusion and perverse outcomes (Mei *et al.*, 2013). Preston (2012) states that the two principal objectives for the establishment of LEC were ―rationalisation" and ―specialisation". The establishment of the LEC was a response to the growing calls for these reforms and was based on public awareness to protect the environment.

In China, responding to serious environmental pollution and alleviating growing environmental protests to local governments were the immediate reasons for setting up most environmental courts (Knudsen, 2013). Environmental courts in China can symbolically express local governments' strong determination toward improved environmental governance (Li, 2008). For instance, in Guiyang, Wuxi and Kunming, the municipal governments created environmental courts in reaction to water pollution in the ―two lakes and one reservoir" (Guiyang), Taihu Lake (Wuxi) and Dianchi Lake (Kunming). These regions have a history of widespread, visible and geographically concentrated pollution concerns (Ho, 2001; Li, 2008; Wang & Gao, 2010; Zhang & Zhang, 2012). In Hainan Province, the construction of international tourism islands initiated the establishment of environmental divisions in higher and intermediate people's courts, according to the Work Intention on Serving the Construction of International Tourism Island issued by the Hainan Higher Court (Knudsen, 2013). It is clear that immediate and symbolic reasons motivate judicial reforms in China. These motivations and objectives have severe impacts on their performance.

Legislative support for environmental courts

The LEC was established by the *Land and Environment Court Act 1979* (NSW) which regulates the constitution (personnel), jurisdiction, exercise of jurisdiction, appeals and other functions related to this specialised court. This Act lays both substantial and procedure law foundations for the establishment and operation of the LEC (Mei *et al.*, 2013). In China, the environmental court system is mainly regulated by the *Law of the PRC on the Organisation of the People's Court* (the Court Organisation Law) (1979) which is legislation for all the courts in China.

Articles 30, 26 and 23 of the Court Organisation Law provide that the Supreme, higher and intermediate people's courts may add other divisions if necessary, except for the

traditional civil, criminal and economic divisions. It seems there is no legal barrier for establishing environmental divisions in the Supreme, higher and intermediate people's courts in China. Controversies lie in basic people's courts, as there is no clear provision in the Court Organisation Law for the establishment of environmental people's tribunals, collegiate panels and circuit courts at basic people's courts. In addition, article 19 of the *Law of the PRC on the Organisation of the People's Court* (1979) regulates that basic people's courts can set up people's tribunals in accordance with locality, population and caseload. No provision regulates that a people's tribunal can be set up in accordance with subjects, such as for environmental disputes. Therefore, most environmental courts in basic people's courts (Table 5.2) lack substantial law foundations in the existing Chinese legislation.

The absence of independent environmental procedure law is another obstacle for the establishment and operation of environmental courts in China. China currently has the *Civil Procedure Law of the PRC* (1991), the *Criminal Procedure Law of the PRC* (1979) and the *Administrative Procedure Law of the PRC* (1989) respectively for civil, criminal and administrative appeals to courts, but no environmental procedure law exists. Without environmental procedure law, the traditional civil, criminal and administrative divisions handle environmental disputes in China. The establishment and operation of environmental courts reduce their legitimacy in the enforcement of procedural laws.

Personnel in environmental courts

The LEC is composed of both judges within the legal profession and also commissioners (1 Senior Commissioner, 8 full-time Commissioners and 16 part-time Commissioners) with qualifications and experience in various fields specialised in section 2 of the *Land and Environment Court Act 1979* (NSW). Similar to the LEC in Australia, China's judicial system usually allows two people's assessors to assist the judge and make up for the judge's weaknesses in legal matters. Some part-time jurors, who have diversified professional backgrounds and broad knowledge, may assist the judge and assessors in addressing environmental issues. However, their part-time positions mean that they cannot always participate in trials, especially the long-term ones (Lin *et al.*, 2009). It is necessary for Chinese courts to consider the recruitment of full-time jurors equipped with diversified knowledge as the LEC does.

According to section 8 of the *Land and Environment Court Act 1979* (NSW), the judges of LEC hold a judicial office of the superior courts in the Commonwealth, states or territories, or is an Australian lawyer of at least seven years‘ standing. When China reconstituted courts in the 1980s, it recruited many local cadres and military officers to address the serious shortage of judges in courts (Wong, 2000b).Most had not received professional legal training before taking office. According to Wong (2000b), in 1995 only 5% of the judges in China had higher education from universities. In recent years, universities have environmental and maritime law majors. For instance, the Law and Politics School of the Ocean University of China provides courses and master degrees in the law of environmental and resource conservation. However, in the China University of Political Science and Law (a top law school in China), only 5% of the environmental law graduates in the school year of 2004-2005 worked in courts (Lin *et al.*, 2009). The limited number of specialised environmental courts in China is one reason for the low number of environmental law graduates working in environmental courts. Another reason is rooted in the setting up and requirements for positions in the civil servant examination to recruit staff for courts. According to the Chinese court system recruitment advertising, few positions require environmental law graduates, but many require legal graduates or graduates of any major.

In summary, the above discussion highlights the fact that there is an interaction between the development of environmental courts and the professionalisation of court personnel. Environmental courts need judges and commissioners (or assessors and jurors) with special knowledge and expertise to handle complex environmental lawsuits. Meanwhile, a well-developed environmental court can assemble experts with environmental and legal expertise. It appears that a well-developed environmental court is composed of and nurtures specialised environmental judges, commissioners and lawyers.

Overlaps with normal courts

In China, the people‘s courts of general jurisdiction rather than specialised environmental courts deal with most environmental lawsuits (Lin *et al.*, 2009). Their overlaps of jurisdiction have negative impacts on the performance of environmental courts in China. Compared with specialised courts, these general courts have better professional backgrounds and more working experience. This is different from the

–specialisation" of the LEC in Australia. According to section 16 of the *Land and Environment Court Act 1979* (NSW), the jurisdiction of LEC is exclusive and no other court or tribunal can exercise the jurisdiction conferred to it. Additionally, public awareness of specialised environmental courts is very low in China. In the research fieldwork, Australian respondents including local residents were quite familiar with the LEC, while only a few Chinese respondents knew about the environmental courts. It seems that Chinese citizens and lawyers still lack interest in using specialised environmental courts to settle disputes.

Cultural influences on environmental courts

Chief Judge Brian Preston of the LEC raises that the willingness of plaintiffs to bring cases before courts is a product of cultural attitude, and the cultural tradition of a country needs to support rather than inhibit or punish citizens who access justice through lawsuits (Preston, 2013). Chinese people's traditional reliance on governments and governmental mediation weakens the performance of courts in settling disputes. For a long time, the relatives and elders with high prestige often mediated a settlement, and they played a positive role in keeping harmony in a family or a community (Ren, 1987). The traditional preference for dispute resolution is rooted in over 2000 years of Confucianism, which is the most influential philosophical model in Chinese society. Under Confucian philosophy, a society should be governed by moral standards rather than legal sense (Beyer, 2006; Ge, 1996; Wong, 2000a). This deeply influences Chinese people's consciousness and behaviour in handling disputes. Gong's (2008) research shows that less than 20% of the public has an interest in protecting environmental rights through courts. Lin *et al.* (2009) cites research by the China University of Political Science and Law. The research found over half the cases preferred to use non-litigious means to solve environmental problems and only about 3% of all the environmental disputes had been resolved through court proceedings.

The tradition of involving non-litigious third parties in settling disputes is carried forward into today's Chinese society and has developed into the people's mediation system. It also deeply influences people's consciousness and behaviour in handling disputes. Chinese people appear to accept mediation well (Ge, 1996; Zhao, 2004) and their practical process of settling disputes includes three stages: mediation (getting

mediation from competent government agencies), arbitration (lodging appeals for arbitration) and litigation (appealing cases to courts). According to article 51 of the *Arbitration Law of the PRC* (1995), prior to handling cases, the arbitration organ shall first conduct mediation. According to Chapter 8 of the *Civil Procedure Law of the PRC* (1991), the people's courts in judging civil cases, shall address mediation. In practice, Chinese people rely more on governments to settle disputes. For example, when the construction of coastal developments damages the interests of fishermen and local residents, the aggrieved party usually goes first to the relevant government agencies for conciliation and compensation. If unsatisfied, people could then take the developer or the governments to court, but this does not often occur.

6.8 Public participation in coastal zone management

ICZM strengthens the broad involvement of stakeholders in the decision-making process. This section will explain the constraints for public participation in terms of participatory approaches, timing of participation, information transparency, public participants, NGOs, participatory democratic traditions and cultural influences. Recommendations will be put forward for coastal managers to consider.

Participatory approaches

Section 5.5.2 describes the participatory approaches identified in this research. By and large Australia and China adopt similar approaches to public participation, including public consultation for making laws, policies and plans, public involvement in development applications, and getting assistance from NGOs, media and government agencies (Table 5.3). The increasing demand for participation from local communities in both policy-making and development applications is a great driving force for decision-makers to provide more diversified and acceptable approaches for community engagement (Norman, 2009; Thom & Harvey, 2000).

Although Australia and China have similar approaches to public participation, the participatory approaches in China do not work as effectively as in Australia. The effectiveness of existing participatory approaches in China is subject to criticism and debate (Li *et al.*, 2012a; Xie *et al.*, 2014; Zhao, 2010). For instance, the EP&A Act

(NSW) has specific legal provisions to guarantee public participation, such as ensuring an individual notice is sent to each household within a certain distance of a proposed development. In China, the notification is usually publicised in the mass media or online, so awareness of the notification relies on people's attention. A short-term distraction may cause the window for public participation to be missed.

Another example showing the ineffectiveness of participatory approaches in China is the selection of participants for public hearings. In China, according to the *Interim Provisions on the Public Participation in Environmental Impact Assessment* (2006), the EIA institution and the environmental protection administration have the right to select the participants to attend public hearings, as long as the number of participants and listeners is no less than 15. Allowing this selection of participants may provide the EIA institution and the environmental protection administration with chances to choose participants who are unlikely to make trouble and to ignore those who are strongly opposing a proposed development.

Few people have enthusiasm for participating in making strategic plans, perhaps because they are not capable of predicting or imagining the cumulative impacts of long-term plans. One Australian government official (A3) recommended that a 3D version of proposed plans may help the general public see what would happen to the surrounding environment; thus encouraging and facilitating people to participate at the strategic level. Australian NGO managers and local residents around RBM suggested that individual dialogues can improve the participatory process and encourage people to provide more ideas and information to decision-makers. The current participatory approaches around development applications through written submissions and public hearings cannot completely fulfill people‘s expectations. Individual dialogues between decision-makers and public representatives may better cater to the needs and priorities of local communities, and motivate people‘s ongoing active engagement (Johnson *et al.*, 2004; Lynam *et al.*, 2007). These recommendations raised by respondents are worthy of coastal managers‘ consideration.

Due to the social and traditional differences between Australia and China, simply transplanting one country‘s approaches to public participation into another country could be inadvisable and ineffective. However, the analysis of participatory approaches

comparing between Australia and China can inspire these countries to develop better approaches for their societies.

Timing of participation

Both in Australia and China public participation is almost at the last stage of a DA (Section 5.5.3). For developers, public participation usually occurs just prior to submitting an EIS to the assessing authorities for examination. For governments, public participation in DAs occurs after various consent authorities have issued consents for lodging a DA.

Public participation usually happens too late and is too brief (Zhao, 2010). Both Australian and Chinese academics, NGO managers and local residents also said that it is too late to get people involved, and the window for public participation is too short.The late involvement of the community does not only provide people with too short a time to consider and participate, but also wastes the developers‘ and consent authorities‘ time and resources going through the previous application procedures.

The Yuan Ming Yuan hearing was a large and formal environmental hearing in China‘s environmental management history (Zhao, 2010). This public hearing in 2005 was for the anti-seepage project in the lakes of the heritage garden of Yuan Ming Yuan. The notice to attend the hearing was only six days before the event and the confirmation for participants was two days before the hearing. During the hearing, 30 of 73 participants had an average of five minutes to voice their concerns (Zhao, 2010). The *Interim Provisions on the Public Participation in Environmental Impact Assessment of the PRC* (2006) provides that when public hearings take place, a notice needs to be announced 10 days beforehand, and successful applicants must be notified five days before the hearing. This time before and during the hearing may not be sufficient for participants to prepare beforehand and express their concerns during the hearing. If the participatory process plans to achieve highly qualified and durable decisions, engaging the public as early as possible in decision-making is recommended (Chess & Purcell, 1999; Li *et al.*, 2012a; Reed *et al.*, 2006). It seems that the current participatory processes in both countries are not flexible enough to cope with the true spirit of public participation and increasing expectations of social equality.

Information transparency

Information accessibility and transparency are fundamental preconditions for public participation. In Australia, the full text of the EIS for a development is available online when the development is at its assessment stage. In China, only a summary of the EIS for large-scale and influential developments is available online. For most developments, people have no access to the EIS. In this research, the author did not get the EIS of CCM even after establishing direct contact with developers and government authorities. Currently in China, people can put forward their opinions mainly based on the limited information published in the mass media. In reality, the piecemeal information is quite likely to misdirect public participation. The information asymmetry among decision-makers, developers and the public obstructs people having evidence-based views or providing useful feedback to decision-makers.

In China, public access to information remains limited, although the Chinese government in the past decades has attempted to create a more open and accessible environment for information transparency. In China, the *Regulation on the Disclosure of Government Information* (2007), the *Interim Provisions on Public Participation in the Evaluation of Environmental Effects* (2006) and the *Measures for the Disclosure of Environmental Information (for Trail Implementation)* (2007) all have provisions to facilitate information disclosure. However, all these legislation and regulations could be inferior to concerns about state secrecy and confidentiality of government information. This idea has been raised elsewhere, –China has also been criticized for its culture of state secrecy and insufficient space for the pubic to participate in managing the Chinese society in general" (Li *et al.*, 2012b p. 65). It is confirmed strongly by this research.

In China, both respondents and publications cited cases of chemical pollution in Songhua River and the oil spill in the Bohai Sea. In these cases of urgent environmental disasters in China, the information was not immediately forthcoming and the local governments initially tried to cover up the accidents, which appeared to have caused larger losses to their neighbouring regions (Edmonds, 2011). The controlled media coverage by Chinese governments exacerbates information opacity (Lau, 2005; Li *et al.*, 2012a; Yang & Calhoun, 2007). This seems rooted in China's social and political culture and is fed by governance deficiencies. In 2014, the latest revision of the

Environmental Protection Law of the PRC (1989) added a new Chapter 5 of Information Disclosure and Public Participation. It went to effect from 1 January 2015. The legal provisions regulate that citizens, legal persons and other organisations have rights to receive environmental information and to participate in and supervise environmental protection. Article 56 specifically provides that before preparing the draft EIS, the developer should explain the situation to people who are potentially affected by it. The assessment authority needs to make the full text of EIS available to the public, as long as the proposed development does not involve state or business secrets. This legal revision has the potential to significantly influence information disclosure and public participation for environmental protection in China, but the actual effects and outcomes need the test of time.

Public participants

Section 5.5.2 summarises participants‘ problems in public participation. Both Australian and Chinese respondents said that public participation reluctance has its roots in human nature. Well-off and well-educated people are more active in public participation, as they usually have a stronger consciousness to participate (Song, 2008) and ~~k~~know how to legitimate their concerns as well as how to mobilize broad societal support for counter measures against decisions that threaten valuable ecological systems, human health and property” (Li *et al.*, 2012b p. 71). It would be hard to change people‘s environmental awareness and participation enthusiasm overnight, but public education, use of diverse participatory approaches and enlarged political space are potential ways to bring the long-term benefits of public participation.

Section 5.5.3 shows that one reason for the dearth of public participation in China rests with the comparatively weak material foundation (financial security and wealth); hence, economic compensation is a widely accepted measure to make up people‘s loss caused by developments. Most environmental litigations in China seek economic compensation for the damage caused by pollution to individuals (Goldman, 2007; Wang, 2010). Legislation such as the *Civil Procedure Law of the PRC* (1991) provides that environmental polluters shall make economic compensation to individuals and organisations that suffer direct losses. The *Law of the PRC on State Compensation* (1994) allows Chinese citizens to sue the government for economic compensation when state organs or functionaries, in performing their functions and powers, infringe the

lawful rights and interests and cause damage to citizens, legal persons and other organisations.

Taking participants in the RBM applications as the example, these Australian people mainly struggled for environmental benefits and called for the conservation or recovery of natural beauty. The environmental litigations in Australia focus on prevention, public access issues and clean-up rather than economic compensation after environmental damage occurs (Preston, 2012).In most Australian legal cases, economic compensation is usually not the final goal of litigants and cannot be the final solution to disputes. In the case of *Chief Executive of the Office of Environment and Heritage v Rinaldo (Nino) Lani [2012] NSWLEC 115*, the company of Bombala Investments Pty Ltd and its director, Mr Rinaldo Lani, were sued for damaging a threatened species habitat when clearing land. In the judgment, the defendant paid AU$23,000 to carry out remediation works to mitigate the damage (Walters & Westerhuis, 2013). This case reflects the focus of reparation by the plaintiff and the strength of restorative justice practices in the sentencing of the NSW LEC.

Both Australian and Chinese governments try to achieve ecological compensation through establishing compensation funds and systems at the strategic level. In the GBRMP for example, the Australian Federal Government allocated AU$2-4 million in direct payments for environmental offsets from coastal developments (Grech *et al.*, 2013). The National Forest Conservation Program and the Grain to Green Program in China are the two largest compensation projects of ecosystem service in the world in terms of scale, payment and duration (Liu *et al.*, 2008; Zhen & Zhang, 2011). The newly added Article 31 of the *Environmental Protection Law of the PRC* (1989) in 2014 provides that the state will establish and improve the compensation system for ecological conservation and increase financial support for ecological conservation areas. The strategic compensation system is for negative impacts that cannot be avoided or mitigated and for unpredictable impacts that may be caused by natural disasters. According to the *Environmental Protection Law of the PRC* (1989), the challenges in the strategic compensation system include how to guarantee the use of compensation funds for ecological compensation, how to evaluate the outcomes of the compensation system and how to ensure the ecological conservation areas do not only rely on the compensation funds for their operations.

NGOs

Section 5.5.2 demonstrates that getting assistance from NGOs is a key approach to fostering and improving the effect of public participation. NGOs are important organisers of public participation (Fu, 2011; Morton, 2009; Shapiro, 2012). NGOs in Australia have strong connections with the public and serve to get people‘s opinions known by decision-makers. They play a large role in enhancing public participation and function as a bridge connecting the public with other stakeholders such as researchers and decision-makers. In Australia, there are many grassroots NGOs composed of local residents who have much interest and enthusiasm for protecting the local environment and settling local disputes. This is consistent with other research findings (Duane, 1997; Harvey & Caton, 2010; Oliver, 2006). For example, in the Rose Bay community, the Rose Bay Residents Association, the Residents First and the Sydney Harbour Association are three active grassroots NGOs. They play important roles in encouraging and organising local residents to participate in local issues.

In China, GNGOs play a growing role in environmental protection and social equity through public education programs, volunteer activities and environmental public interest litigations. GNGOs in China are affiliated to government agencies and serve as a bridge between the government and the public. Since GNGOs have close connections with governments, for one thing, they can easily transfer public opinions to the government; for another, governments have a strong influence on their operation and actions.

The term GNGO ―suggests organisations under strict government control, created as the state‘s outposts in society” (Ho, 2001 p. 898). In China, government agencies establish GNGOs to develop certain government functions and attract (foreign) funding (Ho, 2001; Knup, 1997), or to designate them the privilege to mediate with people on behalf of the government (Hsu & Hasmath, 2013). Many scholars have criticised GNGOs in China that have partly lost non-governmental characteristics (Cao & Wang, 2011; Hsu & Hasmath, 2013; Knup, 1997). The close relationship between GNGOs and governments in China is against the original motivations of NGOs which are to improve governments‘ sense of democracy and enhance social fairness through public participation.

Participatory democracy tradition

Section 5.5.3 shows that Chinese governments have power to make decisions but weak consciousness to get people involved in the decision-making process. Ineffective public participation is partly due to the lack of a participatory democratic tradition (Almer & Koontz, 2004; Manowong & Ogunlana, 2006; Xie *et al.*, 2014). Since the 1970s,most developed countries have advocated public participation to improve decision-making and to respond to people‘s needs in their lives (Sanoff, 2000; Xie *et al.*, 2014). Nowadays, public participation has become an internal aspect of democracy in most developed countries such as Australia (Sanoff, 2000). In the western participatory democratic tradition, the government is obliged to inform people of proposed policies and applications, and to guarantee public access to information, policy-making, decision-making and judicial redress (Chen *et al.*, 2007a; Zhao, 2010).

Compared with Australia, Chinese governments‘ consciousness for public participation is weaker. For instance, in Xiamen the public may submit their opinions to the government, but there is no guarantee that the government will consider and include these opinions into decisions (Lau, 2005; McCleave *et al.*, 2003; Ye *et al.*, 2013). ―Many if not most officials worry that public participation in decision-making processes could lead to social disorder and conflict” (Shan & Yai, 2011 p. 158). Chinese officials tend to fear that public participation in decision-making causes negative consequences to social stability and threatens government authority in society (Lau, 2005; Shan & Yai, 2011). In Li *et al*.‘s (2012a) research, 20 out of 24 Chinese interviewees worried that public participation might cause cost increases and time delays in achieving economic targets.

Compared with Australia, China has a relatively short history of public participation. The lack of a participatory democracy tradition and low effectiveness of participation practices are constraints for effective public participation. A strong consciousness and consistent political will from governments is important for public participation. As long as the Chinese government includes enhancing public participation in its agenda, the government has the power and approaches to fulfill it. The change of the Chinese governments‘ mindset is the starting point to achieve better public participation (Wang *et al.*, 2003; Zhao, 2010).

Cultural influences

One challenge in managing coastal disputes lies in the difficulties in changing cultural barriers to public participation. Compared with openness in western culture, Chinese people are immersed in the ideal of moderation and a culture that values silence (Nisbett, 2005).Section 4.5.4 demonstrates that a preference for silence and a socially conservative culture in China may discourage people from participating freely. Section 4.3.3 shows that most Chinese people are used to relying on governments to handle all economic, social and environmental issues. This may also discourage people from participating freely.

In China, the Confucian philosophy of moderation and obedience to power deeply influence people‘s perception of public participation. The PRC, when newly founded in 1949, adopted a highly centralised planned economy where individual interest was inferior to collective/state interest (Tang *et al.*, 2008). The dominant role of government remains strongly embedded in Chinese people‘s consciousness nowadays, especially in the consciousness of the middle-aged and elderly people who personally experienced the full force of the centralised planned economy. The cultural and historical backgrounds appear to weaken people‘s sense of public participation and dampen people‘s enthusiasm to participate in the decision-making process. In China, the development of the market economy since the reform and opening-up policy in 1978 and the reforms of social democracy in recent decades have changed the strong tendency to unconditionally accept government decisions without expressing personal opinions. However, Chinese people, particularly those with memory of Chinese society decades ago, know that unbounded and negative outcomes could come with statements and actions against governments and businesses. Amongst western commentators the recent rise of individualism ("me") over collective ("we") thinking is remarkable (Osnos, 2014).Addressing the cultural influences on participants is a significant enabler for more fruitful public participation in China. Understanding the cultural influences on participatory processes and deliberating on the value systems underlying various cultures can increase the possibility of public participation.

6.9 Conclusions

This chapter discusses the major results of this research in terms of eight discussion items. The critical consideration may not produce recommendations that any country can directly adopt, but it has potential to inspire coastal managers. The comparison of these different national contexts contributes to achieving a broader insight, a greater awareness and a deeper understanding of coastal management issues.

Chapter 7
Conclusions

7.0 Introduction

ICZM has been adopted by countries since the1970s (Sorensen, 1997). Australia was a pioneer for ICZM and developed it rapidly in the 1990s, but the 2000s witnessed Australia‘s focus changing from ICZM to adaptive coastal management with an emphasis on the adaption to climate change and rising sea levels. ICZM in Australia needs a timely update. In China, ICZM has been under consideration and also put into implemented, and China has looked to the international community for management experience. These two countries have strong motivation to enhance coastal zone management and the recognised importance of integrated management offers opportunities for collaboration. The comparative analysis between Australia and China contributed to a greater awareness, a broader insight and a deeper understanding of the social realities in the two national contexts.

Most previous research has put effort into summarising the legislation and regulations for coastal zone management, and the government agencies related to coastal zone management. Yet few researchers have evaluated the effectiveness of the legal and regulatory framework for ICZM. To fill the gap, this research raises three questions:

- What are the contemporary legal and regulatory frameworks for ICZM in Australia and China?
- How and why do the frameworks work effectively or ineffectively?
- How to improve the legal and regulatory frameworks for ICZM?

This research evaluated the legal and regulatory framework for ICZM in terms of coastal legislation and regulations, ICZM in governments, performance of environmental courts and public participation in coastal zone management. In order to answer these questions, this research built on previous literature and drew more deeply from semi-structured interviews, questionnaire surveys, case inspections, contemporary legal and regulatory documents, academic and government publications and other data

from fieldwork to achieve research ―triangulation". It then sought to synthesise the new insights into a discussion of key intractable and emergent issues relevant to coastal zone management.

7.1 Coastal legislation and regulations

Legislation and regulations exert inevitable influence over the process of ICZM. Both statutory and non-statutory means to achieve ICZM clearly function within an established legislative framework. Legislation and regulations are essential enablers to effective coastal planning, government arrangements and performance, judicial decisions and public participation.

Australia and China have failed to enact national legislation or regulations on coastal zone management, even though both countries have advocated it for decades. The failure in Australia primarily appears to be the weak vertical integration between federal and state governments, while China's failure rests with the defective horizontal integration among government agencies. Australia's failure is rooted in the limited constitutional power of the Federal Government in environmental management, so it is difficult to unify the will of Australian states and the Commonwealth on any coastal legislation. China's coastal legislation in the 1980s and 1990s showed that the major barriers for enacting coastal laws were the conflicts among relevant agencies at the horizontal level.

In Australia, most states have enacted coastal legislation and regulations as well as coastal strategies, policies and plans in a systematic approach. For instance, NSW has established a system of legislation, regulations, strategies, policies and plans specifically for coastal zone management. In contrast to the systematic approach in Australian states, only 5 of the 11 coastal provinces on mainland China have enacted an isolated piece of coastal regulation, policy or plan. The other six coastal provinces in China have no legislative or regulatory documents for coastal zone management.

The speciality of Australian legislation is a stark contrast to the general nature of Chinese legislation, as reflected in their different lengths, language and content. Australian legislation provides specific objectives and procedures, while Chinese

legislation focuses on general principles. Since the generalisation of Chinese legislation is rooted in the legislative culture of China, it is probably necessary to make a system of policies, plans, standards and other supportive documents to supplement and further explain key legislation and regulations. In addition, both in Australia and China the unpredictability and changes of the real world after legislation may result in obscure legislation. The time-consuming process for bringing legislation into play may exacerbate it. In order to have effective legal provisions when illegal actions occur, ensuring timely revision and speeding up the legislative process within a rational range are effective ways to promptly remove certain gaps, overlaps and contradictions in legislation.

7.2 ICZM in governments

Governments have responsibility for the achievement of ICZM. They are the practitioners of legislation, policy-makers of regulations, policies and plans, and administrators and organisers for ICZM. The efficiency and legitimacy of government actions are clearly on display to other stakeholders on coasts.

Planning systems are established under legislative systems, and they are useful tools for environmental management in the Australian and Chinese governments. Planning and spatial zoning are cornerstones of environmental management. Australia and China share similarities in terms of structure, duration and administration of zoning. Changes in planning systems influence coastal communities and developments immediately and severely. SEA and EIA are both legal requirements under legislation such as the EPBC Act. SEA is a systematic and on-going process for evaluation and public participation at the earliest stage. It avoids duplication of effort and addresses cumulative effects, so SEA could be an effective approach to enhancing ICZM. EIA is a practical and effective instrument to evaluate the impacts of developments. Since the 1970s it has been widely used for facilitating governments‘ decision-making, alleviating developments‘ negative impacts and advocating community involvement.

ICZM in governments includes vertical integration of governments at different levels and horizontal integration among government agencies. Vertical integration is an urgent

issue for ICZM in Australia. The Australian Federal Government has abundant financial resources but limited constitutional power over coastal zone management. Australian states have the most constitutional power over coastal management, so they operate independently in enacting coastal legislation, developing coastal planning policies and making coastal decisions. Local governments are organisational and financial creatures of state governments. They have limited powers and functions on coasts and sit under the state constitutional foundations and legislative frameworks. The imbalance between Australian state and local governments calls for modification and reallocation of legislative powers, regulatory responsibility and financial and human resources in accordance with practical necessities.

Chinese respondents were unanimous that China‘s governments are the largest driving force for coastal zone management. China traditionally adopts a centralised approach in environmental governance on the basis of a hierarchical political system, command and control regulations and previous planned economy. However, the centralised approach may lead to ignorance of local characteristics and trigger reduced local enthusiasm. Since the reform and opening-up policy in 1978, China has carried out reforms of political, administrative, economic and environmental decentralisation. These reforms entrusted local governments with more power in managing social, economic and environmental issues in localities, and allowed the Chinese Central Government to transfer the burden and responsibility to local governments. There are doubts that reform through decentralisation and growing local autonomy could make it harder to translate high-level legislation into effective controls and intensify the tensions between the centre and periphery. Centralisation still prevails as a default in China, despite reforms of decentralisation since the late 1970s. Therefore, at this stage China needs to continue a gradual transition from centralisation to decentralisation. It is wise to use the centralised political influences for better integration through the vertical dimension when it is possible.

Both in Australia and China, a variety of agencies have a role in coastal zone management at each level of government. The imbalance of horizontal powers and responsibilities exists in their government structure and decision-making process. In both countries, the government agencies working most directly in economic sectors usually draw more attention than those working in other (social and environmental)

sectors. This is particularly true in China. The authority of environmental sectors is often sacrificed for the immediate development of the local economy. In addition, overlaps, gaps and interplays exist in coastal zone management. In both countries, it is a challenge to accurately predict, clarify and execute each agency‘s powers and responsibilities on coastal issues. Coordination can be a practical and effective mechanism to achieve better integration among government agencies.

This research identified and discussed several institutional arrangements of agencies, organisations and mechanisms that have the potential to achieve ICZM. They include a new government agency, a leading agency, an inter-agency commission or task force, a regional cross-jurisdictional organisation, an advisory body and a large department system. These institutional arrangements aim to inspire coastal managers and provide institutional options for managers to consider. Potential strengths and weaknesses of each institutional arrangement have been discussed. Among them, the inter-agency commission or task force, such as the BEZ Office and Jiaozhou Bay Task Force in China, appear to be most effective. This research does no simply recommend any institutional arrangement to any country or region. Instead the local characteristics and regional specialties are worthy of deeper consideration.

7.3 Judicial performance in coastal disputes

The judiciary is crucial in environmental governance. Courts uphold the rule of law and ensure the fairness of government decisions through judgments and declarations. Specialised environmental courts exist globally, but their performance can be markedly different. The NSW LEC in Australia is the first superior environmental court of record in the world and is widely taken as an exemplar. Since 1989, China has established environmental divisions, tribunals, collegiate panels and circuit courts inside existing people‘s courts. They are collectively referred to as —environmental courts” in this research, though none is an independent court in China. In contrast to the sizeable caseload in the LEC, the caseload of Chinese environmental courts is very small. Through comparison with the NSW LEC, this research tried to explain why the caseload in Chinese environmental courts is small.

The LEC is an independent and superior court in NSW, so only the High Court of Australia is above its ranking. It has jurisdictions in dealing with civil, criminal and administrative disputes of environmental cases. The *Land and Environment Court Act 1979* (NSW) provides that the jurisdiction of the LEC is exclusive and no other court can exercise the jurisdiction conferred to it. In China, most "environmental courts" exist as one part of the basic people's courts which are at the bottom of the Chinese court system. It is clear that the ranking of Chinese environmental courts is lower than the LEC and their jurisdictions are less comprehensive.

Australia's Constitution separates three powers. The legislature, executive and judiciary are respectively invested in the parliaments, governments and courts. The establishment of the LEC was a response to the growing calls for environmental reforms in the 1970s and was initiated by the two principal objectives of rationalisation and specialisation. In China, the CCP and government have the dominant power in the legislative, executive and judiciary. The environmental courts in China were established for serious environmental pollution and to resolve growing environmental protests to local governments. They symbolically showed local governments' strong determination toward improving environmental governance. For environmental cases against severely polluted and highly taxed enterprises, the administrative intercession often leads to courts' refusal to take cases.

The *Land and Environment Court Act 1979* (NSW) lays substantial and procedural law foundations for the establishment and operation of the NSW LEC. In contrast to strong legislative support for the LEC in Australia, most environmental divisions in China's courts lack legality in both substantial and procedural laws. The lack of environmental procedural law in China results in environmental disputes being handled under civil, criminal and administrative procedural laws. This is an important reason why environmental cases in China go to the three traditional divisions of the people's courts.

The NSW LEC is composed of judges who have held a judicial office of superior courts or are Australian lawyers of at least seven years' standing. The NSW LEC has full-time and part-time commissioners with qualifications and experience in specialised fields listed in section 2 of the *Land and Environment Court Act 1979* (NSW). When China reconstituted people's courts in the 1980s, the courts recruited many local cadres and

military officers as judges. Most of them had not received legal training before taking office. In Chinese people‘s courts, part-time jurors have diverse knowledge, but their part-time positions cannot guarantee their participation in trials. Professional judges and commissioners with diverse qualifications serve the environmental judgments in the LEC. The LEC nurtures professional judges‘, commissioners‘ and lawyers‘ expertise to handle environmental lawsuits.

Cultural tradition may encourage or inhabit citizens‘ access to justice through lawsuits. In China, mediation and negotiation are traditional ways of settling civil disputes. This traditional preference for dispute resolution has its roots in Confucianism which advocates a society under the guidance of moral standards rather than a legal sense, and a person should aspire to resolve issues as friends rather than victors. The tradition of involving a non-litigious third party in settling disputes influences today‘s Chinese society and has developed into people‘s mediation and arbitration systems that play important roles in reducing litigation in courts.

7.4 Public participation in coastal zone management

The public are important stakeholders in decision-making. Both Australia and China have explicit legal provisions to guarantee the public‘s legal standing to participate in law/policy-making and decision-making processes.

Due to diverse interest groups, multiple resource users and complex environmental problems on the coastal zone, there are conflicts among coastal resource users. Public participation helps policy- and decision-makers become aware of public views and consider public interests. Local communities know more about local areas, so they can provide first-hand information and direct experience to local developments. This local knowledge assists decision-makers in making more reasonable, sustainable and broadly evidence-based decisions. Networking between decision-makers, researchers and communities can facilitate policy buy-in and knowledge flow, and improve the quality and durability of policies and decisions.

Approaches to public participation in coastal zone management include public consultation in law- and policy-making, public involvement in DAs such as

questionnaire surveys, written submissions and public hearings, assistance from NGOs, and appeal of disputes to courts. Participatory approaches in the two countries are similar, but Australia has more mature and diverse methods for public participation. For one thing, Australia has specific provisions to guarantee the implementation of participatory approaches. For another, Australia has developed and adopted a greater variety of participatory approaches.

Information transparency is a fundamental precondition for public participation. Compared with China, Australia has a more transparent and open information system. In China, EIS of coastal developments are seldom accessible to the public. State secrecy and confidentiality of government information leave the public insufficient opportunities to access necessary information for informed participation. In China, control over media may exacerbate information opacity. The recent addition of provisions on information disclosure and public participation in the *Environmental Protection Law of the PRC* (1989) may improve information transparency in China, but the actual effects and outcomes need the test of time.

Both in Australia and China, people expressed their concerns about the consideration and adoption of public opinion by decision-makers. In both countries, public participation is a compulsory procedure in policy-making and decision-making. One potential measure for both countries to ensure the consideration of public opinion could be publicising development information, providing opportunities for contributions and giving adequate feedback to written and oral submissions from the public.

The effectiveness of public participation is related to the participatory democracy tradition and social culture. The international discourse of public participation focuses on the rights of people to be informed, consulted and heard by decision-makers. Public participation is an integral aspect of democracy in most developed countries which have adopted public participation in environmental management since the 1970s. Traditionally, the ―principle of mass participation" in China focused on the obligation of people to support government decisions. It is probably rooted in the Confucian philosophy of moderation and unquestioned obedience to power, and is influenced by the traditional feudal society, planning economy and Cultural Revolution. This cultural and historical background may weaken Chinese people's sense of public participation.

Assistance from NGOs is a key enabler for public participation. In Australia, NGOs have strong connections with the public and help people get their opinions known by decision-makers. Grassroots NGOs in Australia have an important role in improving community involvement in localities. In China, GNGOs obtain the most financial support and development opportunities from governments, dominate NGO development in China and act as a bridge between governments and people. However, in China the strict government control over GNGOs leads to the loss of their non-governmental characteristics and may weaken GNGO‘s performance in improving public participation.

7.5 Conclusions

Successful achievement of ICZM needs a proper legal and regulatory framework. Through a comparative study between Australia and China, this research has investigated the legislation and regulations, government management, environmental courts and public participation in the legal and regulatory framework for ICZM. The comparative design provides Australia, China and other coastal countries with a useful synthesis of lessons and experience for achieving ICZM. Although it is not possible to give a single recipe for successful ICZM and not wise to simply transfer one country‘s experience to another, the findings in this research should be a source of inspiration for coastal managers when they consider measures propitious for their own national or regional contexts. This research has also contributed to understanding important ways that coastal stakeholders can respond to the opportunities and challenges in the coastal management process.

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Appendix 1

Discussion Guide

Research on the Legal and regulatory framework of integrated coastal zone management in Australia/China

Introduction - 2 minutes

- Thank you for participating.
- Self-introduction: My name is Shengnan Chen. I am a PhD student from UNSW Canberra. I am doing a comparative research on the legal and regulatory frameworks related to integrated coastal zone management (ICZM) between Australia and China.
- Purpose: To discuss the ICZM in China, how to improve the coastal zone management.
- Our discussion will be confidential and anonymous. Audio-taping is for research purpose only and will be used with your permission. If necessary, it can be turned off.
- This interview will take no longer than one hour. There is no right or wrong answer. It is your opinions concerning my questions.

General impressions about integrated coastal zone management - 15 minutes

I'd like to start by talking broadly about *integrated coastal zone management* (ICZM). In my opinion, this is the management mechanism with the integration and cooperation among all stakeholders to achieve sustainable coastal development. It makes a good balance among the economic, social and environmental impacts.

Do you agree with my definition? What is your opinion about ICZM?

[If not mentioned] How do you understand 'integration' in ICZM?

China has a long coastline and extensive coastal regions. In recent decades, the economic development and population growth on coast are rapid. Will this rapid development bring about any problems? (economic, social, environmental … …)

Which coastal management mechanism or method does China adopt now?

Is ICZM being applied in China now?

[What triggered the application of ICZM?]

[What are the major changes after applying ICZM?]

Do you think the *integrated* approach works well?

[If not mentioned] Where does it work well? Where does it not work well? Examples.

In China or in your job, what has been done to achieve sustainability of coastal zone development?

How does China integrate sciences into coastal management?

Legal and regulatory frameworks related to ICZM - 15 minutes

I think the legal and regulatory framework is an important tool to achieve the integrated coastal zone management and the sustainability of coastal zone development.

Here I have some cards, on which I write some possible components of this framework.

Could you please separate out the cards that you'd include in the legal and regulatory framework of ICZM?

Do you want to write other options on these new cards?

[Cards] Courts and Judiciary, Legislature and laws, Government agencies, Regulatory documents, Decision-making process, Public Participation, Business and Industries involvement. Others (specify):

[If not mentioned] Explain the above arrangement and give examples.

Do you have examples where this Chinese framework has improved/impede ICZM and sustainable coastal zone development?

Some people say that an independent agency is needed to implement ICZM. What do you think about that idea?

Are there other independent bodies for natural resource management in China? Do they work well? Examples.

Marinas' impacts vs. ICZM - 15 minutes

I think the marina is a special opportunity to understand the relationship between the coastal zone and human activities.

How does the construction and operation of marinas affect the coastal zone? (economic, social, environmental … …)

[For developers]

Why do you construct and operate this marina?

Compared with Australia and some other coastal countries, the amount of marinas in China is small.

In your opinion, why are they so different? What are the prospects of marinas in China?

What do you think a marina can do for the public? Are they any undesirable impacts?

Some people say a marina benefits the minority like boat owners at the expense of the public interest.

How do you see the current legal or regulatory framework working to make a balance between the private interest and the public interest? (e.g. compensation mechanism and public participation)

What is the application process for a marina project? Is this process under the public supervision? Are there any related laws or regulations? (e.g. assessment of environmental impacts, online publication through the application process, public consultation within a specific period and publication of results)

In the planning, application, construction and operation of a marina or coastal project, is public participation a legally compulsory procedure?

Currently, how can the public participate in a coastal project in China? Can you provide an example where it shows what you mean?

Is public participation helpful for coastal projects and sustainable coastal development?

How can we use the legal and regulatory framework to improve and guarantee the public participation?

Recommendations – 5 minutes

From our discussion, so far I have learnt more about ICZM in China and your examples are useful. However, I believe the ICZM still needs to get better. If we identify problems and try to address them, it might help.

I am keen to talk to other people - could you recommend other people or agencies I should contact?

I am also keen to read more to understand these issues – what would you recommend?

Questionnaire – 8 minutes

This questionnaire is a summary of our discussion. It may include some questions besides our discussion. The questionnaire will be helpful to know more about your opinions and show clear research results to the readers. It will take you only several minutes. Thank you very much.

Appendix 2

Questionnaire

Research on the Legal and regulatory framework of integrated coastal zone management in China

Introduction

This survey is about the integrated coastal zone management (ICZM) and it will be used in a PhD research project by a student (Shengnan Chen, shengnan.chen@student.adfa.edu.au) of the University of New South Wales, Canberra.

You have been invited to participate in this study because your job is closely related to ICZM. This survey will be conducted with your consent. Your cooperation is important to the study. The data collected from the survey will be kept securely and confidentially and only accessed by the researchers involved in this study. At all times in the research process your privacy will be well protected. Any data collected will be used for a PhD thesis and other scholarly journal publications.

It will only take several minutes to complete this questionnaire. Please mark the option(s) in proper operation(s) that correspond(s) to your appropriate level.

Q1. The following are important *resources for the environment.* If you have other options to specify, please list them first. Afterwards please rank all the resources according to the priorities for them to be protected, with 1 meaning highest priority.

	Water	Coast	Ocean	Flora & Fauna	Land	Others (specify and rank)		
Ranking								

Q2. The following statements are about the *integrated coastal zone management (ICZM)* in China. Please rank your response:

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
A	There are sufficient legal and regulatory measures to protect the coastal zone values and users.					
B	Integrated coastal zone management is the current practice in China.					
C	Integrated coastal zone management is effective in achieving the sustainability of coastal zone development.					
D	The coastal zone is under increasing pressure from human activities.					
E	The government is doing a good job concerning ICZM.					
F	The public have enough say in ICZM.					
G	Sustainability has been achieved with ICZM.					
H	On balance the environmental, social and economic conditions are getting better in the coastal zone.					
I	Among the environmental, social and economic impacts on the coastal zone, the environmental impact is the one that needs most attention and action.					
J	The coastal zone environment is deteriorating.					
K	The coastal zone needs more attention and investment from governments.					
L	The coastal zone needs more attention and investment from private developers.					
M	The coastal zone needs more attention from the public.					
N	A new government department or agency is needed to achieve the integration of coastal zone management.					
M	Special laws and regulations are needed to achieve ICZM.					
O	In your work or interest, integrated coastal zone management has attracted enough attention and action.					

Q3. The following issues affect the coastal zone *now*. If you have other options to specify, please list them first. Afterwards please rank all the issues, with 1 meaning biggest negative influence.

		Ranking
Climate change and sea level rise		
Overexploitation of natural resources, such as fishing and mining		
Population growth and intensification of urbanization		
Tourism and industrialization		
Marine and catchment pollution		
Natural dynamics and uncertainty		
Others (specify and rank)		

Q4. Now thinking about who should be mainly responsible for *the integrated coastal zone management (ICZM)* in China. The following are some stakeholders related to ICZM. If you have other options to specify, please list them first. Afterwards please rank all the stakeholders, with 1 meaning most responsibilities.

		Ranking
International community		
Central government		
(Shandong) Provincial government		
Local government		
Industries and businesses		
Non-governmental organizations		
The public		
Others (specify and rank)		

Q5. Thinking about the current *legal and regulatory framework* of ICZM. How confident are you in it to achieve the integration of coastal zone management and the sustainability of coastal zone development?

Very confident.....A

Fairly confident.....B

Neutral……C

Not too confident.....D

Not confident at all.....E

Q6. Now about the marinas in China. The following statements are mainly about marinas. Please rank your response:

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
A	The balance between public and private benefits of marinas is about right.					
B	The laws regarding new marinas are too harsh.					
C	A marina should be open to the public.					
D	The current number of marina berths (in this area) is about right.					
E	The government should allow more marinas to be built (in this area).					
F	The public have enough say in the planning of marinas.					
G	The public have enough say in the operation of marinas.					
H	With regard to marina-related decisions (in this area), the court is doing a good job.					
I	With regard to marina-related decisions (in this area), the (Shandong) Provincial Government is doing a good job.					
J	With regard to marina-related decisions (in this area), the local government is doing a good job.					
K	The (Shandong) Provincial Government should do more to promote new marina developments.					
L	The local government should do more to promote new marina developments.					
M	The marina-related decisions (in this area) are about right.					
N	Marinas need to be designed for sea level or wave changes.					
O	Marinas decrease water pollution risks.					
p	Marinas increase noise pollution.					
Q	Marinas decrease the risk of weedy and exotic species.					
R	Marinas decrease the aesthetic beauty (in this area).					

Q7. Now thinking who should be mainly responsible for managing marinas. The following are some stakeholders related to marinas. If you have other options to specify, please list them first. Afterwards please rank all the stakeholders, with 1 meaning most responsibilities.

	Governments	Industries & Businesses	Non-governmental organizations	The public	Others (specify and rank)		
Ranking							

Q8. Now thinking about the environmental, social and economic impacts of a marina. Please select the most important impact at a marina's planning, construction and operation stages.

	Environmental impacts	Social impacts	Economic impacts
Planning Stage			
Construction Stage			
Operation Stage			