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국제학석사학위논문

**Imperatives for Integrated Coastal Management**  
**The Role of Integrated Coastal Management Legislation**  
**in a Chilean Context**

연안통합관리 필수요소

칠레 ICM 법제의 역할

2014년 8월

서울대학교 국제대학원

국제학과 국제지역학전공

권 희 윤

**Imperatives for Integrated Coastal Management  
The Role of Integrated Coastal Management Legislation  
in a Chilean Context**

**A Thesis Presented**

**By**

**Hee Yoon Kwon**

**To**

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**Seoul National University**

**Seoul, Korea**

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**Imperatives for Integrated Coastal Management:  
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연안통합관리 필수요소:  
칠레 ICM 법제의 역할

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## **ABSTRACT**

*Integrated coastal management is a key tool for achieving sustainability in coastal and ocean policy. The method or strategy by which policy integration is pursued is as diverse as the various coastal / marine environments in different parts of the world. Some of the various strategies are effective, while some are not.*

*Chile has an extensive coastline to the Pacific and its economy relies heavily on activities in the coastal area. Regarding policy integration, however, Chile hasn't seen much success. The endeavor towards integration clearly needs a breakthrough.*

*In order to determine how Chile can achieve further integration of its coastal management policy, this research examines various cases of ICM practices around the world. From the examples arises the imperative of a national ICM legislation that can harmonize and integrate various elements of coastal management policy. In a concluding section, specific methods and considerations are proposed whereby Chilean ICM legislation can be drafted and implemented abiding the Rio philosophy of sustainability and inclusiveness.*

**Key Words:** Integrated coastal management, ICM legislation, Integrated policy, Chile, Sustainable development

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## Table of Contents

<b>Abstract</b>	-----	<b>i</b>
<b>Table of Contents</b>	-----	<b>ii</b>
<b>List of Tables and Figures</b>	-----	<b>iv</b>
<b>I. Introduction</b>	-----	<b>1</b>
<b>II. Integrated Coastal Management: Concept and Philosophy</b>	----	<b>3</b>
1. 1992 Earth Summit and Rio Philosophy	-----	3
<i>i. Intellectual Foundations</i>	-----	3
<i>ii. Chapter 17 of Agenda 21</i>	-----	4
2. Interdependence and Sustainable Development	-----	5
3. Integrated Policy and Coastal Management	-----	9
<b>III. Integrated Coastal Management in Chile</b>	-----	<b>16</b>
1. Country Overview	-----	16
<i>i. Geographic Traits</i>	-----	16
<i>ii. Politics and Administration</i>	-----	17
<i>iii. Economy and Trade</i>	-----	20
<i>iv. Marine and Coastal Environment</i>	-----	21

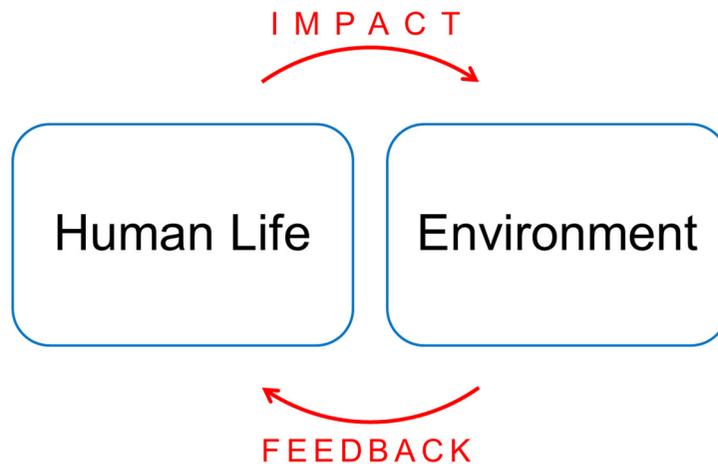
2.	ICM Regime in Chile -----	22
i.	<i>Main Issues</i> -----	22
ii.	<i>Institutional Framework</i> -----	23
<b>IV.</b>	<b>Imperatives for Integrated Coastal Management -----</b>	<b>29</b>
1.	Cases of ICM Practices -----	29
2.	The Role of Law in ICM-----	37
3.	The Need for a Designated ICM Legislation-----	38
4.	ICM Legislation in Chile: Status and Prospect -----	39
<b>V.</b>	<b>Conclusion -----</b>	<b>44</b>
	<b>Bibliography-----</b>	<b>46</b>
	국문초록 -----	49
	<b>Acknowledgements-----</b>	<b>51</b>

## List of Tables and Figures

<b>Table 1.</b> Major Environmental Stresses-----	6
<b>Table 2.</b> Dimensions of Policy Integration (following Underdal)-----	13
<b>Fig. 1.</b> Interdependence between human life and the environment-----	1
<b>Fig. 2.</b> The Interdependence of environment and development-----	7
<b>Fig. 3.</b> Interdependence in a coastal area-----	10
<b>Fig. 4.</b> Continuum of policy integration-----	15
<b>Fig. 5.</b> Chile's administrative regions-----	19
<b>Fig. 6.</b> Government efficiency of select countries-----	43

## I. Introduction

Sustainable development, formulated and established as an international environmental paradigm at the end of the previous century, has granted a new way of looking at the coastal/marine environment. Whereas in the past the coastal/marine environment was viewed from the terrestrial side seaward, now it is viewed from the ocean landward. This important shift in perspective is based on a solid realization of the interdependence between human life and the environment, and the constant exchange of impact and feedback, simply visualized in Figure 1.



**Fig. 1. Interdependence between human life and the environment.**

This study aims to determine the imperative for a successful national integrated coastal management strategy and assess the possibilities and opportunities of a Chilean ICM program. The first of the three broad sections of this research will provide the background of sustainable development as an international environmental paradigm; concepts of integrated policy, and the deriving concept of integrated coastal management. The second section reviews Chile's realities regarding geography, administration, economy, and coastal/marine environment; and later major issues for ICM and institutional framework. In the third section, various cases of national coastal management are assessed to determine the imperative for successful ICM. Furthermore, the most appropriate approach for Chile will be proposed.

## **II. Integrated Coastal Management: Concept and Philosophy**

### **1. 1992 Earth Summit and Rio Philosophy**

#### *i. Intellectual Foundations*

The 1992 Earth Summit (United Nations Conference on Environment and Development (UNCED)) held in Rio de Janeiro was a historic event that bore the paradigm of sustainable development. It was a big shift and a fundamental change in thinking that “recognizes the need to see development and environment differently than before”.

Sustainable development was not an entirely novel concept, since it was originally taken into global consideration at the UN Conference on Human Environment (held in Stockholm, 1972), where the international community met for the first time to consider global environment and development needs.<sup>1</sup>

The World Commission on Environment and Development, established in 1983 and also called the Brundtland Commission, produced “Our Common Future” (a.k.a. the Brundtland Report) in 1987. It later formed much of the 40 chapters of Agenda 21 and Rio Declaration. The significance of the Earth Summit is that it

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<sup>1</sup> Earth Summit 2002 Briefing Paper, <http://www.earthsummit2002.org/Es2002.pdf>, accessed 7 July 2014.

combined the intellectual basis of sustainable development and integrated management and presented a paradigm that serves as the guiding principle for countries to consider in every step of achieving sustainable development.

Among the various outputs of the Earth Summit, Agenda 21 provides policy guidance for environment, development, and social issues that mankind must confront. In the course of 20 years since the Summit, the world's commitment to Rio principles was further developed into specific action plans in the following meetings as well as in the Johannesburg Plan of Implementation (JPOI) in 2002. Most recently, it was reaffirmed in the 2012 Rio+20 report *the Future We Want*.<sup>2</sup>

## ***ii. Chapter 17 of Agenda 21***

Issues regarding oceans and coasts are discussed in Chapter 17 of Agenda 21. Chapter 17 lays out seven major program areas: (A) integrated management and sustainable development of coastal and marine areas, including Exclusive Economic Zones; (B) marine environmental protection; (C) sustainable use and conservation of living marine resources of the high seas; (D) sustainable use and conservation of living marine resources under national jurisdiction; (E) addressing critical uncertainties for the management of the marine environment and climate change; (F) strengthening international, including regional, cooperation and coordination; and

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<sup>2</sup> UNCSD (United Nations Conference on Sustainable Development, held in Rio de Janeiro, July 2012). [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/66/288&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E), accessed 7.7. 2014.

(G) sustainable development of small islands.<sup>3</sup>

Chapter 17 calls for member countries' commitment 'to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction (par.17.5)' <sup>4</sup> by means of: (a) integrated policy and decision-making process, (b) application of preventive and precautionary approach, and (c) full public participation, among others.

## 2. Interdependence and Sustainable Development

The essence of Rio philosophy is rigorously extracted and translated into general guidelines by Cicin-Sain.<sup>5</sup> Cicin-Sain finds two most important themes from the Earth Summit: *interdependence* and *integration*. According to Rio philosophy, sustainable development is based on the reality of *interdependence*. Realizing that the world is facing various environmental crises that pose significant threat to the quality of life, some even to the very viability of life on earth, Cicin-Sain shows the major environmental stresses of the world, indicating where they are

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<sup>3</sup> UN, *Chapter 17 of Agenda 21*.  
[http://www.un.org/depts/los/consultative\\_process/documents/A21-Ch17.htm](http://www.un.org/depts/los/consultative_process/documents/A21-Ch17.htm), accessed 7 July 2014.

<sup>4</sup> *Ibid.*

<sup>5</sup> Cicin-Sain, B., *Sustainable development and integrated coastal management*. Ocean & Coastal Management, 1993. **21**(1–3): p. 11-43.

mainly manifested, who is thought to bear primary responsibility for them, and who is thought to have the major responsibility or capacity for solving them,<sup>6</sup> as shown in Table 1. In turn, Figure 2 shows the interconnection among the economic patterns contributing to these environmental stresses in the framework of environment-development interdependence.

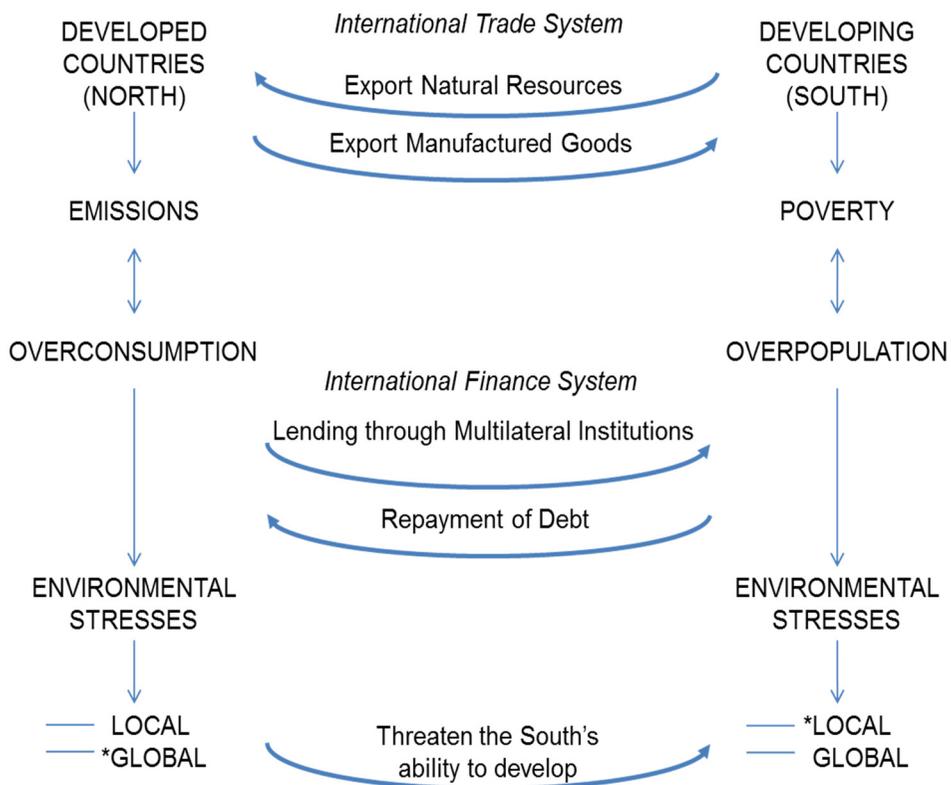
<i>Environmental stresses<sup>a</sup></i>	<i>Where are effects manifested?</i>	<i>Who bears primary responsibility?</i>	<i>Who should / can solve?</i>
Greenhouse gases	North, South	North	North
Ozone depletion	North, South	North	North
Acid rain	North	North	North
Nuclear waste	North sometimes South	North	North
Toxics	North, South	North	North
Water and air pollution	North, South	North, South	North, South
Deforestation	Mainly South	North, South	North, South
Desertification	Mainly South	North, South	North, South
Species depletion	North, South	North, South	North, South
<sup>a</sup> Environmental stresses are linked to one another; environmental stresses and patterns of economic development are linked to one another.			

**Table 1. Major Environmental Stresses.<sup>7</sup>**

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<sup>6</sup> *Ibid.*, p.13

<sup>7</sup> Reconstructed from Cicin-Sain, 1993, p.13



**Fig. 2. The Interdependence of environment and development.** Asterisks indicate level at which most environmental stresses occur.<sup>8</sup>

Sustainable development, as defined in the WCED report *Our Common Future*, is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.<sup>9</sup> Achieving sustainable

<sup>8</sup> Reconstructed from Cicin-Sain, 1993, p.14.

<sup>9</sup> Report of the World Commission on Environment and Development: *Our Common Future*. <http://www.un-documents.net/our-common-future.pdf>, accessed 7 July 2014.

development entails a continuous process of decision-making in which certain questions are asked and whereby the ‘right’ choices and decisions are made.<sup>10</sup>

Cicin-Sain points out three major emphases to take into consideration when making decisions regarding environment and development:

- *Economic development to improve the quality of life of people*: ‘Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature’ (Principle 1, Rio Declaration of Principles)
- *Environmentally appropriate development*: development that is environmentally sensitive and makes appropriate use (and sometimes non-use) of natural resources. Development that protects essential ecological processes, life support systems, and biological diversity
- *Equitable development*: equity in the distribution of benefits from development:
  - *intrasocietal equity* (e.g. among groups in society, respecting the special rights of indigenous peoples, etc.);
  - *intergenerational equity* (not foreclosing the options of future

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<sup>10</sup> Cicin-Sain (1993), p.15

generations);

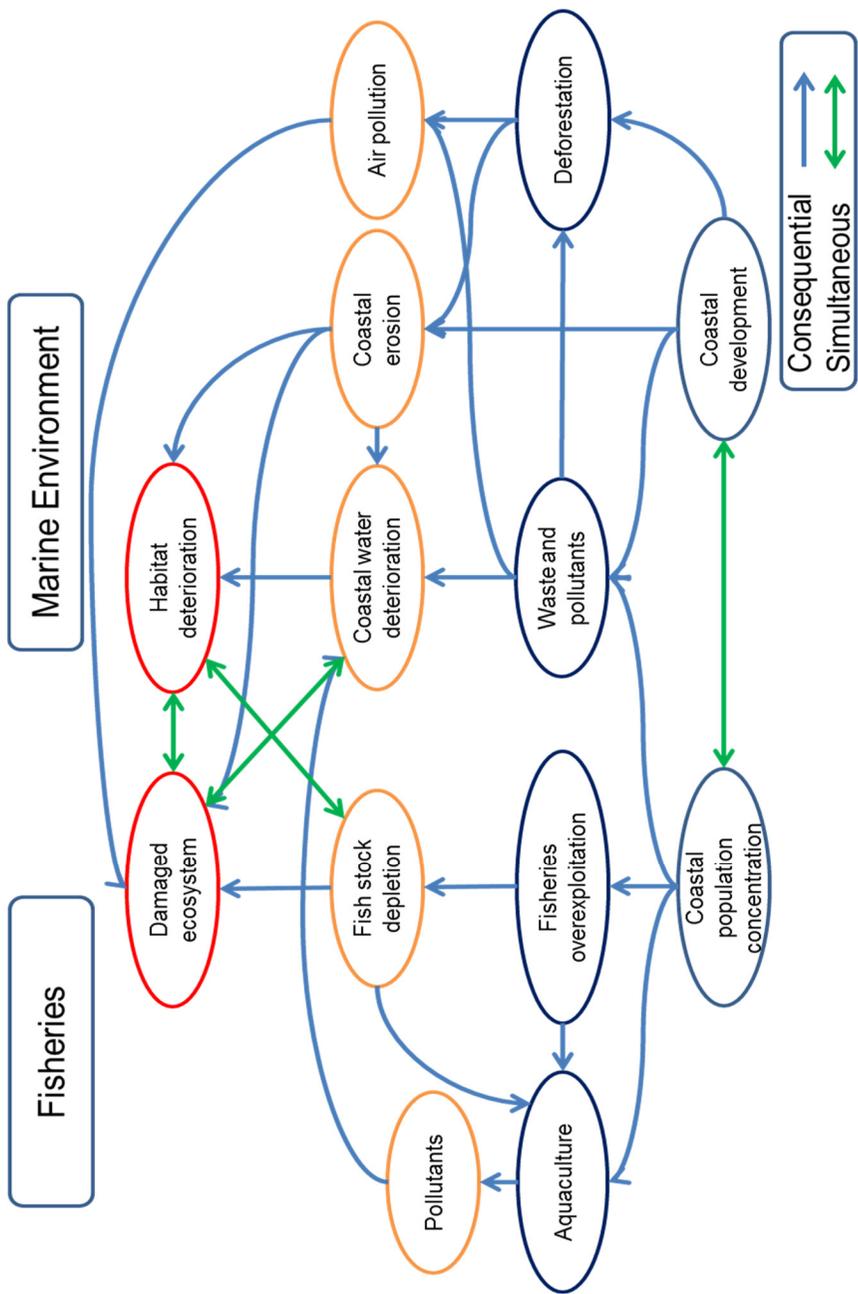
- *international equity* (fulfilling obligations to other nations and to the international community, given global interdependence).<sup>11</sup>

### **3. Integrated Policy and Coastal Management**

In the coastal area, where terrestrial and marine environments encounter, a complex system of interdependence is present. While the precise causalities and interrelations between issues is a subject for further scientific research, a general idea can be represented as follows, in Figure 3.

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<sup>11</sup> *Ibid.* p.16.



**Fig. 3. Interdependence in a coastal area.**

The reality of interdependence calls for integration: between environment and development, and among sectors and nations. In a 1980 article, Arild Underdal lays out the fundamentals for coastal management policy integration. According to Underdal, policy integration must meet three basic requirements: comprehensiveness, aggregation, and consistency.

Comprehensiveness is a matter of scope. It can again be measured by four dimensions: time, space, actor, and issue. Integration of policy over *time* entails a long-range view by which policy alternatives are evaluated. It means that a policy is devised with considerations on not only the immediate but also the distant future. *Space* refers to the extension of the geographical area for which consequences of policy are recognized as relevant. An easy example of lack of spatial comprehensiveness would be the carving up of ocean space by nations, when fish stock has the least intention of abiding by the territorial limits. The *actor* dimension calls for all the relevant interests to be incorporated into the policy decision. The bottom-up process or stakeholder engagement would make a good example. The *issues* dimension refers to the need to consider the interdependence of issues, so that all interconnected issues are incorporated. Underdal states that policy comprehensiveness should be measured considering the knowledge on consequences available at the time of decision, for sometimes better integration can be achieved by

a swift response to new cause-effect relationships.<sup>12</sup>

Aggregation calls for an overall perspective in evaluating policy alternatives, basing decisions on an aggregate evaluation of consequences. Commonly, the expansion of government via establishment of new specialized agencies will cause disintegration as the increasing scope and range build up centrifugal forces in public policy.

The consistency requirement is, basically, a call for harmony with the policy itself; accordance of different policy components. In a vertical aspect, different policy levels must accord, conforming to general guidelines and policy goals. In a horizontal aspect, only one policy must be pursued in any given issue or policy level by all involved agencies. The dimensions of policy integration delivered by Underdal are translated into Table 2 by Cicin-Sain.<sup>13</sup>

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<sup>12</sup> Underdal, 1980, p.161.

<sup>13</sup> Cicin-Sain, 1993, p.24.

<i>Stages in the policy process</i>		
<i>Inputs</i>	<i>Processing of inputs</i>	<i>Consistency of outputs</i>
COMPREHENSIVENESS	AGGREGATION	CONSISTENCY
<i>Over time—</i> Long-range perspective	Extent to which policy alternatives are evaluated from an overall perspective rather than from the perspective of each actor, sector, etc., i.e., basing decisions on some aggregate evaluation of policy	Consistent policy = different components accord with each other
<i>Space—</i> Extent of geographic area for which consequences of policy are recognized as relevant		<i>Vertical dimension—</i> consistency among policy levels; specific implementary measures conform to more general guidelines and to policy goals
<i>Actors—</i> Relevant interests incorporated		<i>Horizontal dimension—</i> for any given issue and policy level, only one policy is being pursued at a time by all executive agencies involved
<i>Issues—</i> Interconnected issues incorporated		

**Table 2. Dimensions of Policy Integration (following Underdal)**

As for why policy should be integrated, Underdal sets the general purpose of policy integration as ‘to improve outcomes’.<sup>14</sup> Fragmented decisions produce externalities. Fragmented approaches in public institutions more than often create overlaps or void in jurisdiction, responsibilities, and authority. The problem of

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<sup>14</sup> Underdal, 1980, p.163.

collective inefficiency also takes part.<sup>15</sup> Empirical evidence of fragmented policy inefficiency is abundant: I will come back to this point later.

In coastal management, the context of policy integration must address integration among sectors (among coastal/marine sectors, between coastal/marine sectors and land-based sectors), integration between the land and the water sides of the coastal zone, integration among levels of government (national, subnational, local), integration between nations, and integration among disciplines.<sup>16</sup>

Cicin-Sain clearly states: *policy integration is often best performed at a higher bureaucratic level than sectorial management to insure that an overall, rather than a fragmentary, perspective is pursued.*<sup>17</sup> Generally, however, integrated management does not act as a replacement to existing sectorial management but acts as a supplementary measure, coordinating and harmonizing the fragmented policies.

Policy integration should be understood as a continuum rather than an absolute. The policy integration continuum (Figure 4), as devised by Cicin-Sain, characterizes each stage of integration:

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<sup>15</sup> *Ibid.* p.163.

<sup>16</sup> Cicin-Sain, 1993, p.25.

<sup>17</sup> *Ibid.* p.25



### **III. Integrated Coastal Management in Chile**

#### **1. Country Overview**

##### ***i. Geographical Traits***

Chile stretches north-south from its border with Peru to Cape Horn,<sup>20</sup> on the southwest of the American continent. Its coastline extends up to 6,435 km to the Southeastern edge of the Great Pacific Basin. Being extremely long in shape, with a terrestrial area only 200 km wide in average and some 4,300 km in length, Chile itself constitutes a coastal fringe to the southern Andes.

Some 98% of Chilean territory is composed of cliffs and rocky terrain. The northern regions are dry-semidry, with the Atacama Desert serving as the center of mining activities. The central region is fairly Mediterranean, and houses most agricultural land, cities, and roads. The south is temperate-cold, with low population and high rainfall, and is composed of forests, mountains, lakes, and fjords.

Chile has the smallest continental shelf in South America, which follows the coastline quite narrowly between 18°S and 32°S and widens to the south. Chile has a territorial sea up to 12 nm from baseline, and an Exclusive Economic Zone of 200 NM.

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<sup>20</sup> ACS (Advanced Conservation Strategies), *A Coastal-Marine Assessment in Chile*, 2011, p.7.

## **ii. *Politics and Administration***

The Republic of Chile is a democratic republic, of which president is both head of State and government. The National Congress is bicameral, consisting of the Senate (Senado) and the Chamber of Deputies (Cámara de Diputados). The population topped 17 million in 2013, of which 89% live in urban areas.<sup>21</sup>

Since it returned to democracy in 1990, Chile has been committed to economic growth, proactive social investments, and transparent public administration.<sup>22</sup> Today, Chile's democracy is one of the most stable in South America.

Since 2007, Chile is divided into 15 regions (Figure 5), from north to south, each governed by *intendentes* appointed by the president. Regions are divided into 54 provinces, headed by *gobernadores* – also appointed by the president. The lowest administrative division is called communes, and is governed by mayors.

Regarding its presence in the international arena in relation to oceans, Chile was one of the most active members in the negotiations for the United Nations Conference on the Law of the Sea (UNCLOS). Chile signed the Convention in

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<sup>21</sup> CIA World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/geos/ci.html>, accessed 22 May 2014.

<sup>22</sup> ACS, 2011, p.7.

1982<sup>23</sup> and ratified it in 1997 along with the Agreement relating to Part XI.<sup>24</sup> Fish Stocks Agreement<sup>25</sup> was neither signed nor ratified by Chile.<sup>26</sup>

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<sup>23</sup> The United Nations Convention on the Law of the Sea of 10 December 1982

<sup>24</sup> Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

<sup>25</sup> 1995 United Nations Fish Stocks Agreement (The United Nations Agreement relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks).

<sup>26</sup> Chronological lists of ratifications of, accessions and successions to the Convention and the related Agreements as at 29 October 2013, [http://www.un.org/depts/los/reference\\_files/chronological\\_lists\\_of\\_ratifications.htm#The](http://www.un.org/depts/los/reference_files/chronological_lists_of_ratifications.htm#The) United Nations Convention on the Law of the Sea, accessed 22 May 2014.



**Fig. 5. Chile's administrative regions.**

### *iii. Economy and Trade*

The economy of Chile is highly market-oriented, and is both dynamic and stable. Chile saw its GDP grow at a rate of 6.4% during the period of 1989-1999,<sup>27</sup> and 4.2% per year from 2000 to 2012 (\$269,869,337,788 in 2012).<sup>28</sup> Especially, from 2010 to 2012, the GDP growth rate was 5.8%, 5.9%, and 5.6% respectively.<sup>29</sup> Chile joined the Organization for Economic Cooperation and Development (OECD) in 2009, marking the first in South America.

Chile's economic structure can be characterized by capitalism of resources. The production base is the exploitation of natural resources or primary production<sup>30</sup>; commodities make up three-quarters of total exports by volume.<sup>31</sup> Industry and services are not significant in terms of exports.<sup>32</sup>

Chile is deeply engaged in foreign trade, its main exports being copper,

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<sup>27</sup> Barragán, et al. *Towards Integrated Coastal Management in Chile*, Coastal Management, 2005, 33(1) p.7.

<sup>28</sup> World Bank, World Development Index, 2014.

<sup>29</sup> World Bank, World Development Index, 2014.

<sup>30</sup> Barragán et al. 2005, p.6.

<sup>31</sup> ACS, 2011, p.7

<sup>32</sup> Barragán et al. 2005, p.6.

fruit, fish products, paper and pulp, chemicals, and wine.<sup>33</sup> Copper production alone made 1/3 of GDP and half of export volume, reaching 4.6 million tons in 2000.<sup>34</sup> Recently, however, tourism and leisure is showing the most rapid growth. With the dynamism of new tourist activities, coastal population is showing considerable growth.

#### *iv. Marine and Coastal Environment*

Chile's marine ecosystem is characterized by its vast diversity and high levels of endemism, which owes to the heterogeneity in physical characteristics of the marine environment. The northern part is heavily affected by warm waters from Peru; the central part is a transitional region with north-south variations in the cold Humboldt up-welling current; the south is mainly cold waters from Antarctica.

The presence of an up-welling system from the deep Pacific Ocean contributes to its enormous wealth in fishery. However, the periodic surge of El Niño Southern Oscillation (causing extreme draught or flooding and superficial flooding of warm and highly saline waters from the equator<sup>35</sup>) greatly affects both terrestrial and marine ecosystems, hence the economic output. The country is also frequently affected by earthquakes and tidal waves. According to Paskoff and

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<sup>33</sup> ACS, 2011, p.7

<sup>34</sup> Barragán et al. 2005, p.6

<sup>35</sup> Ahrendt & Courret, *Minutes from the Chile Visit*, Project: Coastal Futures for Chile's Coastlines, Report 1, 2007, pp.6-7

Manríquez (1999), In La Serena-Coquimbo area, 37 tsunamis have been recorded since 1562.<sup>36</sup>

## **2. ICM Regime in Chile**

### ***i. Main issues***

*Fisheries and aquaculture* – Being one of the most significant fishing powers of the world, Chile has a strong tradition of artisanal fishing. Fisheries is the most dynamic sector in Chile, followed by agriculture and forestry, and mining.<sup>37</sup> Unlike Peru, where most of the landings go into fishmeal production, Chile's fisheries industry is oriented towards direct human consumption. Salmon aquaculture takes up a significant position in the export value.

Although there is a total allowable catch (TAC) in place, TACs were set above sustainable levels due to powerful lobbying and politics,<sup>38</sup> leading to overexploitation of industrial fisheries resources.

*Land use and population* – The high frequency and magnitude of the tsunamis pose a major threat to human settlements along the coast of central Chile.

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<sup>36</sup> Paskoff & Manriquez, 1999, p108

<sup>37</sup> Barragán et al. 2005, p.6

<sup>38</sup> ACS, 2011, p.15

The central region is seeing a boom in population, making it more vulnerable and more hazardous at the same time. 89% of total population of approximately 17 million lives in urban areas.<sup>39</sup> 1/3 of municipalities and population is concentrated on the coastal areas, in which the biggest cities are located. The capital city of Santiago de Chile was home to 6.034 million in 2010, and the whole Santiago Metropolitan Region housed 7 million.

*Land-based pollution* – The fluvial network of Chile runs from east to west, and most are short and highly torrential.<sup>40</sup> Therefore, effects of human activity reach the sea in a matter of hours. Most cities are located either directly on the coastline or within 100 km from the coast, and the fact that some lack primary sewage treatment plants – or have no treatment at all – makes land-based pollution a serious matter in the central region.

## **ii. Institutional framework**

The General Law for Fishing and Aquaculture of 1991<sup>41</sup> is intended to ensure sustainable fisheries management, and has been consolidated substantially. The Law establishes specific exploitation categories and sets specific zones of artisanal and industrial fishing. According to the Law, the zone from the baseline to

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<sup>39</sup> CIA World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/geos/ci.html>, accessed 22 May 2014.

<sup>40</sup> Barragán et al. 2005, p.5

<sup>41</sup> Ley 18892, <http://www.leychile.cl/Navegar?idNorma=30265>, accessed 10 July 2014.

5 miles seaward is restricted to artisanal fishing, and 5-200 miles is reserved for industrial fishing.<sup>42</sup> A Total Allowable Catch system, accompanied by vessel license system with mandatory GPS use requirement, is also in place.

Fisheries and aquaculture sector is governed primarily by two state agencies: the Undersecretary of Fisheries (Subsecretaría de Pesca, SUBPESCA) and the National Fisheries Service (Servicio Nacional de Pesca, SERNAPESCA), both under the Ministry of Economy. Scientific research required for the assessment and management of fisheries and aquaculture is provided by the Fisheries Development Institute (Instituto de Fomento Pesquero, IFOP).<sup>43</sup>

The strength in fisheries industry led to a strong fisheries management regulatory framework, however with little institutional consideration for conservation and preservation of resources and marine ecosystem. In the terrestrial area, biodiversity and ecosystem is well addressed by the 1984 Law for the Establishment of SNASPE (Sistema Nacional de Áreas Silvestres Protegidas del Estado – National System of Wildlife Protected Areas), of which framework does not encompass marine and coastal ecosystems.

Chile has a long standing history of naval presence in the marine sphere. To this day, the central research institute for marine sector is the Navy Hydrographic

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<sup>42</sup> Ahrendt & Courret, 2007, p.8

<sup>43</sup> ACS, 2011, p.14

and Oceanographic Service (Servicio Hidrográfico y Oceanográfico de la Armada, SHOA). The Navy has the ruling authority to designate marine protected areas via Ministry of Defense Decrees. The Navy also has right to grant concessions, as well as control, inspect, and oversee the coast and territorial sea.<sup>44</sup> The Naval focus, however, is more on scientific research and environmental education, rather than on biodiversity and conservation in its own sense.

Regarding marine protected areas (MPAs), Chile is member to various international conventions, including:

- Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (1941);
- Convention on Wetlands of International Importance (RAMSAR, 1971);
- Convention on the conservation of Migratory Species of Wild Animals (1979);
- Protocol for the Conservation and Management of Protected Marine and Coastal Areas of the South-East Pacific (1989);
- Convention on Biological Diversity (1992); and

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<sup>44</sup> Ahrendt & Courret, 2007, p.8

- Climate Change – Kyoto Protocol (1998, non-Annex I country).<sup>45</sup>

The marine protection regime in Chile is a complex administrative structure with multiple agencies sharing responsibilities. The main agencies include:

- Undersecretary of the Navy, Ministry of Defense;
- SUBPESCA, Ministry of Economy;
- Board of Oceanic Territory and Merchant Marine (Dirección General del Territorio Marítimo y Marina Mercante, DIRECTAMAR);
- Board of National Monuments, Ministry of Education (Consejo de Monumentos Nacionales);
- National Committee for the Use of Coastal Areas (Comisión Nacional de Uso de Borde Costero, Subsecretaría de las Fuerzas Armadas); and
- Ministry of the Environment (Ministerio del Medio Ambiente, MMA).<sup>46</sup>

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<sup>45</sup> ACS, 2011, p.10

<sup>46</sup> *Ibid.* p.10

While Chile has been consciously developing national policy around marine protection and fisheries management, the national policy tends to focus on the coastal fringe and the maritime area, leaving out the aspects of land-use planning. Also, it recognizes primarily the needs of development rather than protection and conservation of resources and environment. The various laws and regulations lack the critical element of interconnection needed for policy integration.

Naturally, then, there is no clear overseeing authority to organize and harmonize the management efforts. The lack of government commitment to financial and human resources is one aspect of the situation. The existing management programs and institutions have a clear top-down decision-making structure, which minimizes the public participation in the process.

The need for a designated ICM law in Chile has been recognized by scholars and experts. Barragán et al. express the need for ‘.....a coastal management law.....with the necessary force to integrate all the efforts of the Public Administration.....would provide new mechanisms of coordination between institutions, mechanisms which should be attractive enough to encourage participation and cooperation’.<sup>47</sup>

Advanced Conservation Strategies also address the shortcomings of the established coastal management policy in Chile, expressing concerns for the conflict

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<sup>47</sup> Barragán et al. 2005, pp.21-22

mitigation and financing, and the need for a long-term strategy that ‘.....*integrate socioeconomics and participation process into the biophysical planning that has historically taken precedent in Chile*’.<sup>48</sup> The importance of financing and high-level political support is also articulated.

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<sup>48</sup> ACS, 2011, p.46

## IV. Imperatives for Integrated Coastal Management

### 1. Cases of ICM Practices

By 1993, shortly after the Earth Summit, there were approximately 142 coastal zone management efforts initiated by approximately 57 sovereign or semi-sovereign states.<sup>49</sup> For the purposes of this paper, cases of ICM realities in Canada, the United Kingdom, Australia, Norway, New Zealand, and USA will be reviewed and analyzed for policy implications.

#### *ICM in Canada*

Canada has the longest shoreline in the world (243,042km marine, 10,014km Great Lakes/St. Lawrence). Despite the economic, social, cultural and political importance, the coastal area of Canada has been given a less important place in the national public policy agenda, partly because the capital city, Ottawa, is tucked well within the terrestrial reaches of the country.<sup>50</sup>

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<sup>49</sup> Sorensen, *The International Proliferation of Integrated Coastal Zone Management Efforts*, Ocean & Coastal Management, 1993. Volume 21, p.45

<sup>50</sup> Ricketts & Hildebrand, *Coastal and Ocean Management in Canada: Progress or Paralysis?* Coastal Management, 2011. Volume 39, Issue 1: p.5

Canada's coastal area and ocean support multi-million dollar fisheries industries and world-class ports. Canada's off-shore oil and gas reserves are largely untapped. Canada is one of the few countries that coast the Arctic Ocean. Coastal and ocean management is a matter of urgency, with its fisheries still not fully recovered from the collapse in the early 1990s, and its Arctic coasts receiving direct impacts from climate change. Many other issues, such as coastal erosion, sea-level rising, institutional errors in land-use planning, etc. are all aggregating to the gravity of the matter.

Canada has passed and enacted the *Oceans Act* in 1997, followed by Oceans Strategy and Policy and Operational Framework for Integrated Management of Estuarine, Coastal and Marine Environments in Canada (DFO 2002) and 2005 *Oceans Action Plan*. However, the level of coordination among different levels of governments is yet to be achieved. Although the Interdepartmental Committee on Oceans (ICO) acts as the institutional coordinator, the actual coordinating rigor is unsubstantial. Also, the focus on ICO is strongly off-shore based, thus excluding various stakeholders in the coastal zone. Due to incompetent federal leadership and an offshore-biased focus, ICM programs and strategies are being developed on the provincial level in a fragmented manner. In short, Canada's ICM show a trend of *short periods of intense and promising announcements separated by much longer*

*periods of neglect.*<sup>51</sup>

### *ICM in the United Kingdom*

The UK coastal area is managed by a multitude of public players that belong to different sectors and levels of government. The lack of any national ICM legislation resulted in “*centuries of uncoordinated decisions and actions at both the national and local level*”.<sup>52</sup> It is also notable that ICM in the UK has never been allocated any significant national funding, which reflects its relatively low profile in the political arena.

The lack of a national ICM policy does not mean that local ICM programs are unsuccessful. Ad hoc coastal partnerships work on the sub-national level in various issues. The lack of a central ICM mechanism can, on the one hand, mean there is no standard approach in ICM implementation – facilitating the inclusion of all stakeholders in the decision-making process. However, in order to achieve sustainable management of coastal areas in the long term, a central body is needed for coordination and harmonization of separate ICM programs.

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<sup>51</sup> *Ibid.* p.4

<sup>52</sup> House of Commons Select Committee Report, HMSO, 1992. Recited from Cummins, O Mahony, & Connolly, *Review of ICM & Principles of Best Practice*, 2003.

### *ICM in Australia*

ICM in Australia has a triple-tier system: federal, state, and local. While the first federal National Oceans Policy (NOP) was enacted in 1998,<sup>53</sup> state and local governments have been active in dealing with coastal issues.

Even before the 1998 NOP, Australia was conscious on coastal management on the federal level. The National Strategy for Ecologically Sustainable Development was passed in 1992, followed by the Commonwealth Coastal Policy in 1995. The tradition of assistance to integrated decision-making and long-term strategies continues in the NOP, which establishes the framework for an ecosystem-based ICM. Australia is one of the first movers in ecosystem-based management (EBM), which bases on rigorous scientific understanding in managing coastal/marine ecosystems.<sup>54</sup> In regard to funding, the government has committed \$50 million over three years for NOP implementation.<sup>55</sup>

Despite the significant achievements in federal ICM legislation, the fragmented management arrangements based on single issues or sectors and the accumulation of small decision consequences – namely the “tyranny of small

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<sup>53</sup> Cummins, et al. *Review of ICM & Principles of Best Practice*, 2003, p.66

<sup>54</sup> For further information on EBM, see: Gelcich, et al. *Marine Ecosystem-based Management in the Southern Cone of South America: Stakeholder Perceptions and Lessons for Implementation*, Marine Policy, 2009. Volume 33, pp.801-806.b

<sup>55</sup> Cummins, et al. 2003, p.66

decisions” – still pose a threat to sustainable use of Australian coasts.

The number of agencies involved in ICM is large (e.g. 21 councils and 31 state agencies with responsibilities under the New South Wales Coastal Policy<sup>56</sup>), and the need for a more rigorous coordination and integration is growing.

### *ICM in Norway*

The need for effective management of coasts and ocean has been growing since the 1970s, with the offshore petroleum industry development. Although the Planning and Building Act was passed in 1985,<sup>57</sup> ICM in Norway largely exists on the county/municipal level through a decentralized planning process.

Norway has a unique traditional Everyman’s Right (allemannsretten) according to which the public is allowed to walk, bathe, fish and land boats anywhere, except in built-up or cultivated areas or places where those activities are prohibited by law (nature reserves, military zones).<sup>58</sup> National policy guideline clearly states that there should be no development within 100 meters from the

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<sup>56</sup> *Ibid.* p.68

<sup>57</sup> *Ibid.* p.63

<sup>58</sup> <http://www.coastalguide.org>, recited from *Ibid.* p.63.

shoreline.<sup>59</sup>

Despite a decentralized approach, the state retains power to overrule municipal planning proposals. The lack of a national policy for ICM causes the success of ICM programs dependent on the capacities of coastal municipalities.

### *ICM in New Zealand*

Coastal management in New Zealand is regulated by the Resource Management Act of 1991. The RMA clearly defines the coastal area as up to the Mean High Water Spring landward and to the outer limits of the territorial sea seaward.<sup>60</sup> The Act also puts emphasis on classification of the coastal area according to scientific research of the ecosystems. With this ecosystem-based approach, New Zealand Coastal Policy Statement (NZCPS) was produced to establish a new coastal management regime.

NZCPS provides guidelines for local authorities in implementing ICM plans on the local level. The RMA specifies the importance of stakeholder involvement, thus including the community-level in the decision making process. However, the rate of progress in regional ICM plans is unexpectedly slow, due to the

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<sup>59</sup> *Ibid.* p.64

<sup>60</sup> *Ibid.* p.70

complexity of including sectorial interests.

### *ICM in the USA*

The Federal Coastal Zone Management Act of 1972 (CZMA) is considered a model for a national ICM approach, in that the legislation was enacted with the specific purpose of implementing ICM.<sup>61</sup> The Federal program established by the CZMA encourages coastal States to enact a coastal zone management program in accordance with the minimum Federal requirements.<sup>62</sup>

The Federal government gains certain amount of control over the State and local project via substantial Federal funding, which is granted only if the proposed project accords with general and specific substantive requirements. The authority to withdraw Federal aid is retained by the Federal government in order to ensure the conforming implementation of the program.

The CZMA consistency provisions work in a way to offset these Federal powers and achieve a balance. The Federal activities and programs must be conducted in a manner which is “to the maximum extent practicable” consistent with

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<sup>61</sup> FAO, *Integrated Coastal Management Law: Establishing and Strengthening National Legal Frameworks for Integrated Coastal Management*, FAO Legislative Study 93. 2006, p.111

<sup>62</sup> *Ibid.*

approved CMPs.<sup>63</sup>

The CZMA authorizes coastal States to choose among the following three approaches to achieve the goals of the Act<sup>64</sup>:

- (a) local government implementation, according to standards established by the State, subject to administrative review and enforcement;
- (b) direct State water use planning and regulation; or
- (c) State review of development plans and projects, and land and water use regulations, prepared by any State agency or by private developers, with the power to approve or disapprove.

Since 1972, thirty-four out of thirty-five U.S. coastal States and territories eligible for participation have implemented comprehensive and Federally approved coastal zone management programs.<sup>65</sup>

#### *Lessons Drawn*

As seen in the cases above, coastal management endeavors tend to drift

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<sup>63</sup> Ibid. p.112

<sup>64</sup> 16 USCA §14555(d)(11) [CZMA §306(e)]. Recited from FAO, p.114.

<sup>65</sup> FAO, 2006, p.115

without proper coordination and integration on a national level. A high-level guidance is crucial in order to achieve integrated policy. Without an overarching policy direction on a national level, the success of coastal management programs, at the very best of circumstances, are dependent on individual capacities of local governments, if not entirely non-viable.

## **2. The Role of Law in ICM**

As previously mentioned, integrated coastal management does not operate by replacing existing local/community programs, but by coordinating and harmonizing them. Fragmented decisions, with the best of intentions, produce undesirable results that degrade the coastal environment and hinder the sustainable use of the coastal area.

Thus rises the need for principles. Principles convey fundamental values. The Earth Summit served as an integrating measure for national values on an international level. In a national context, comprehensive articulation and clear definition of the values pursued via ICM endeavors are crucial.

National policy, in its formulation and implementation, takes form of, or makes use of, legal document. As expressed in the FAO report<sup>66</sup>:

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<sup>66</sup> FAO, 2006, p.6

*“Law is one of the primary mechanisms used by government to ensure that their policies and programmes are implemented. It is important to appreciate at the outset that laws can play many different functions...”*

Law, in a policy context, works as the primary command and control measure that conveys the national vision to the sub-government and community levels. It sets behavioral standards and penalties for failure to comply. It also constitutes and structures societies and institutions, creating and distributing authority and responsibility. Law has an educational value, given the development of the legislation was conducted in a participatory manner involving the input of stakeholders.

### **3. The Need for a Designated ICM Legislation**

ICM implementation primarily consists of harmonizing existing plans that are based on fragmented decisions and are often short-sighted. This task of integration is often best carried out at the highest political level, at least in the outset of policy integration. Acknowledging that ICM itself is a dynamic process of continuous decision-making, dealing with coastal/marine environment and ecosystem that is also constantly changing, the need for an overarching policy guideline can be recognized. This policy guideline would be best prepared and disseminated by a single agency with overseeing authority and responsibilities.

In formulating a national framework for ICM, the easy way would be to make amendments to an existing legislation that is seemingly closest to the required jurisprudence of an ICM legislation (e.g. land-use planning law or fisheries law). However, this remedy cannot lead the national coastal management policy to integration because it does not entail the creation or designation of an overseeing agency for the sole purpose of ICM. This point is further substantiated by cases presented in the previous chapter.

#### **4. ICM Legislation in Chile: Status and Prospect**

The need for a sustainable management policy for coastal resources and environment has been addressed in Chile from as early as the 1970s. However, the main focus has been in fisheries resource management and coastal development, while the broader national environmental policy revolved around terrestrial/forestral environment and ecosystem.

While legislative attempts have been present, the development of a designated ICM legislation is still not certain. The environmental policy reform that started in 2009 created the Ministry of Environment, but the change in coastal/marine management policy is not yet tangible.

While the General Law for Fisheries and Aquaculture has been

continuously amended, the latest amendment being made in January 2014,<sup>67</sup> the newly proposed bill for establishing the Biodiversity and Protected Areas Service has been under intense scrutiny since 2011.<sup>68</sup>

Regarding the measures for addressing the inefficiencies of fragmented approach towards coastal/marine environment and resources, some countries have enacted a comprehensive legislation with the purpose of sustainable management, while others have consciously chosen not to. Some chose to coordinate existing laws and policies via inter-agency guidelines (e.g. Western Australia), while others chose institutional rather than legal framework reforms, often by creating a government agency with authority over the coastal zone (e.g. British Virgin Islands, Sri Lanka, Western Australia).<sup>69</sup> Some countries such as the United Kingdom and Ireland had given up its considerations for ICM, due to the prospect of legal, institutional, and political complexities of mitigating resistance and inertia of long-established institutions organized on a sectorial basis.<sup>70</sup> However, within the EU framework, the two countries are reconsidering to introduce ICM.

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<sup>67</sup> The latest amendment of Ley 20720 enters into force 10 October 2014. The penultimate amendment was 30 December 2013. LeyChile, <http://www.leychile.cl/Navegar?idNorma=1058072&buscar=20720>, accessed 23 May 2014.

<sup>68</sup> For details of expressed concerns, see: ACS, 2011, p.13.

<sup>69</sup> FAO, 2006, p.109

<sup>70</sup> *Ibid.* p.110

As can be seen in many cases, enacting a comprehensive legislation for ICM is a difficult task that requires rigorous legal review and, in most cases, repeal or amendment of existing legislations and restructuring of established institutions. Those countries that adopted this measure tend to follow one of the following four models<sup>71</sup>:

- the “national integrated coastal management approach” where legislation is enacted for the purpose of implementing or promoting existing ICM policies (e.g. USA, South Korea);
- the “sustainable development approach” which tries to address the wider purpose of sustainable development (e.g. Sweden) or the sustainable management of natural resources (e.g. New Zealand) throughout the country;
- the “extended land-use planning model” that attempts to modify terrestrial planning techniques to achieve more integrated management of coastal areas (e.g. France); and
- the “special region approach” to implement integrated management of coastal resources within particular regions with specific objectives.

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<sup>71</sup> *Ibid.*

Considering that only the first approach is to be considered truly integrated and national in scope, as well as directed towards national ICM implementation, The ICM regime of Chile would be best improved following the “national integrated coastal management approach”.

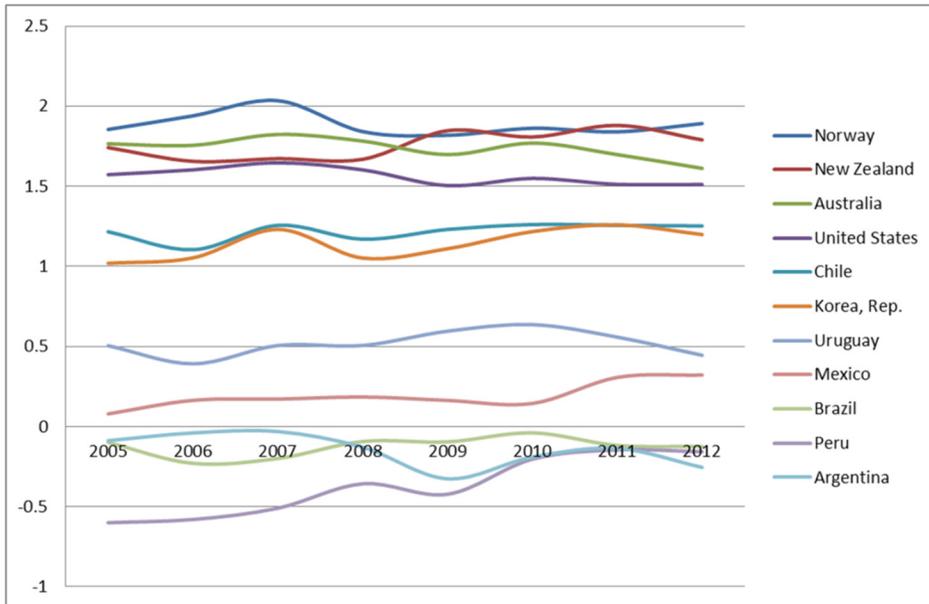
This approach entails a comprehensive legislation enacted specifically for the implementation of ICM. It must encompass both the marine and terrestrial environments, as well as both human activities/resource management and environmental conservation.<sup>72</sup>

The national ICM approach attempts to induce states and local governments to conform to national standards and priorities regarding an area which is predominantly within the jurisdiction of the individual States or local governments.<sup>73</sup> For this reason, governmental capacity and effectiveness are of utmost importance for a successful implementation. According to World Bank, as shown in Figure 6, Chile has been showing an outstanding quality in government effectiveness in the recent years, close to that of the Republic of Korea; much higher than its Latin American peers such as Mexico, Peru, Argentina, etc.

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<sup>72</sup> FAO p.111

<sup>73</sup> *Ibid.* p.115



**Fig. 6. Government efficiency of select countries**

## **V. Conclusion**

Chile's coastal/marine environment is a mixed blessing. Being located at the western coastal fringe of the South American continent, it possesses a lengthy coastline with unmatched biodiversity. The Humboldt Current and various other natural environmental elements also contribute to the marine riches. However, the frequent occurrence of earthquakes and tsunamis is a threat and limitation to the coastal human activities of the country. Also, the fact that the territory is a relatively narrow strip of land in shape, along with the concentration of population in coastal areas, puts the impact of terrestrial human activities in direct contact with the coastal/marine environment via short and torrential estuary system.

While Chile has been consciously devising measures to protect and conserve its environmental resources and ecosystem, the national focus has primarily been on the terrestrial environment and the forests. The coastal/marine environment and ecosystem, in the meantime, had been subject to a developmental perspective and planning under a fragmented institutional system.

Considering the administrative qualities of the Chilean government, the ICM endeavor in Chile will best be improved following the national integrated coastal management approach, pursued by the USA and Korea. In order to achieve a successful transition from current fragmented approach, a rigorous process must be followed. Lessons from preceding experiences dictate:

- A clear, tangible set of objectives must establish a national strategy;
- A wide-ranging perspective must be adopted;
- Fiscal support from the government must be procured for sustainability;
- A focal point must be provided;
- Ecosystem approach must be used;
- Future opportunities must be kept in consideration;
- Local level management must be activated; and
- Voices of stakeholders must be taken into account.

It is important to remember that voluntary approach on the local level will eventually lose momentum in isolation; continuous administrative and fiscal support is vital for success. Also, the importance of stakeholder engagement is paramount. Along with scientific research, it must be taken into the overall process from the planning stage throughout the implementation and assessment.

## **Bibliography**

1. Cicin-Sain, Biliana; 1993. *Sustainable development and integrated coastal management*. Ocean & Coastal Management. Volume 21, Issue 1–3: pp. 11-43.
2. Underdal, Arild; 1980. *Integrated Marine Policy: What? Why? How?* Marine Policy, Volume 4, Issue 3: pp. 159-169.
3. Barragán, Juan M.; Castro, Consuelo; Alvarado, Claudia; 2005. *Towards Integrated Coastal Management in Chile*, Coastal Management, Volume 33, Issue 1: pp.1-24.
4. Advanced Conservation Strategies (ACS), November 2011. *A Coastal-Marine Assessment in Chile*.
5. Paskoff, Roland; Manriquez, Hermann; 1999. *Ecosystem and legal framework for Coastal Management in Central Chile*, Ocean & Coastal Management, Volume 42, Issue 2–4: pp.105-117.
6. Sorensen, Jens; 1993. *The International Proliferation of Integrated Coastal Zone Management Efforts*, Ocean & Coastal Management, Volume 21: pp.45-80.
7. Ricketts, Peter J.; Hildebrand, Lawrence; 2011. *Coastal and Ocean*

*Management in Canada: Progress or Paralysis?* Coastal Management, Volume 39, Issue 1: pp.4-19.

8. Cummins, V.; O Mahony, C.; Connolly, N.; 2003. *Review of Integrated Coastal Zone Management & Principles of Best Practice*, The Heritage Council.
9. Gelcich, Stefan; Defeo, Omar; Iribarne, Oscar; Del Carpio, Graciano; DuBois, Random; Horta, Sebastian; Isacch, Juan Pablo; Godoy, Natalio; Peñaloza, Pastor Coayla; & Castilla, Juan Carlos; 2009. *Marine Ecosystem-based Management in the Southern Cone of South America: Stakeholder Perceptions and Lessons for Implementation*, Marine Policy, Volume 33, pp.801-806
10. FAO, 2006. *Integrated Coastal Management Law: Establishing and Strengthening National Legal Frameworks for Integrated Coastal Management*, FAO Legislative Study 93.
11. Zile, Zigurds L.; 1974. *A Legislative-political History of the Coastal Zone Management Act of 1972*, Coastal Management, Volume 1, Issue 3: pp.235-274.
12. Ahrendt, Kai; Courret, Aldo Palacios; 2007. *Minutes from the Chile Visit*, Project: Coastal Futures for Chile's Coastlines, Report No. 1.
13. Earth Summit 2002, <http://www.earthsummit2002.org/>

14. UNCSD (United Nations Conference on Sustainable Development,  
<http://www.uncsd2012.org/>
15. UN Documents, <http://www.un-documents.net/>
16. CIA World Factbook,  
<https://www.cia.gov/library/publications/the-world-factbook/>
17. UN Division for Ocean Affairs and the Law of the Sea,  
<http://www.un.org/depts/los/index.htm>
18. Biblioteca del Congreso Nacional de Chile, <http://www.leychile.cl/>
19. The Coastal & Marine Union (EUCC) Coastal Guide,  
<http://www.coastalguide.org/>

## 국문초록

‘지속가능한 발전’에 입각한 연안통합관리(ICM) 개념은 연안을 육지의 관점에서 바라보던 과거와는 달리 바다의 관점에서 바라본다는 중대한 시각의 전환을 바탕으로 한다. 1972년 미국을 필두로 많은 국가들이 연안통합관리를 정책목표로 설정한 바 있으나 모두가 성공하지는 못하였다.

칠레는 남아메리카 대륙 남서안에 위치하여 태평양에 접해 있으며, 국토 전체가 넓은 연안역을 형성하고 있다. 연안산업에 크게 의존하는 경제구조와는 별개로, 칠레의 연안관리정책은 그다지 큰 성과를 보지 못하고 있다.

칠레 ICM의 발전을 위하여, 먼저 본 연구는 ICM의 형성배경이 되는 지속가능한 발전, 통합정책 등의 개념을 조망하고, 다양한 국가의 사례를 바탕으로 ICM 성공에 필수적인 요소를 도출해 내하고자 한다. 이후 칠레의 다양한 현실을 고려하여 성공적 ICM 입안 및 실행에 가장 알맞은 접근법을 제시한다.

앞선 연구의 결과 다양한 사례에서 ICM 적용 및 관리를 위한 통합법제의 필요성이 대두되었다. 법은 국가의 가치관과 지향점을 정책수행

의 말단까지 전달하는 매개가 되는 것으로, 분산된 접근을 통합하여 범국가적 통합정책을 수립하기 위하여는 이를 수행하기 위한 적절한 법제의 마련이 필수적이라고 하겠다.

칠레의 경우 라틴아메리카 국가 중에서 가장 민주주의가 안정된 국가이며, 정부효율성 역시 대한민국과 비견할 정도로 여타 라틴아메리카 국가와는 다른 특성을 보인다. 따라서 적절한 통합법제가 마련되고 정책이 입안, 실행되는 과정에서 장기적, 통합적 관점을 유지하고 이해당사자의 의견을 효과적으로 수렴하는 등 중요 원칙을 준수한다면 성공적인 연안통합관리 정책을 기대할 수 있을 것이다.

**주요어:** 연안통합관리, ICM, 통합정책, 연안관리법, 칠레, 지속가능한발전

**학번:** 2011-22387