A Stakeholder Analysis of the Creation of High Seas Marine Protected Areas within the Antarctic Treaty System

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Abstract:

This study evaluates the utility of stakeholder analysis for understanding the relationships among actors involved in creating a marine protected area (MPA) in the Southern Ocean. It relies on the Australian Centre of Excellence on Risk Analysis (ACERA) method of critical stakeholder analysis, a concise, step-by-step model to identify stakeholders, assess their perceptions and values, and reveal power relations. The study uses the first two steps of the ACERA method to analyze stakeholders—in this case individuals speaking on behalf of organizations—within the Australian delegation of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) concerning the establishment of an MPA in the Southern Ocean. The study reveals both benefits and weaknesses in the ACERA method. It also portrays conflicting views among these stakeholders, and that the process of identifying and analyzing stakeholder interests is highly complex and dynamic.

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Chapter One: Introduction

This study assesses the strengths and weaknesses of the Australian Centre of Excellence on Risk Analysis (ACERA) model of stakeholder identification. It uses the ACERA method to analyze Australian efforts to create a high seas marine protected area (MPA)[1] network in the Southern Ocean. It first explains the ACERA method of stakeholder analysis before identifying the stakeholders within the Australian delegation of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) concerning the establishment of an MPA in the Southern Ocean.[2] It finally explores the views and interests of those stakeholders.

The study, in essence, asks three interrelated research questions:

1) What is the ACERA method of stakeholder identification and mapping?
2) What are the benefits and disadvantages of using that method?
3) What does the ACERA method reveal about how some individuals within relevant Australian organizations view the creation of an MPA in the Southern Ocean?

The study found that the ACERA method was a useful tool for identifying relevant stakeholders, but less effective at evaluating their interests. Still, the use of the ACERA method did reveal that stakeholders have different reasons for wanting to undertake marine spatial

[1] The World Conservation Union (IUCN) defines an MPA as an area of the intertidal or subtidal terrain, including its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment. See Kelleher (1999).

[2] A list of acronyms is provided in Appendix 1. CCAMLR is an "international regime." Young and Zürn (2006, p. 121) define international regimes as "social institutions created to respond to the demand for governance relating to special issues arising in a social setting that is anarchical in the sense that it lacks a centralized public authority or a government in the ordinary meaning of the term." Krasner's (1982 p. 185) definition of an international regime is "implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given issue-area." Marcus Haward (2008) puts this definition into the context of Antarctica and the Southern Ocean where he explains the region is an area where several different regimes intersect – collectively known as the Antarctic Treaty System (ATS). The ATS is comprised of the following instruments and institutions: the Convention for the Conservation of Antarctic Seals (CCAS), CCAMLR, the Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol), Antarctic Treaty Consultative Meetings (ATCM), Scientific Committee on Antarctic Research (SCAR), Committee for Environmental Protection (CEP), Standing Committee on Antarctic Logistics and Operations (SCALOP), the Council of Managers of National Antarctic Programs (COMNAP), the CCAMLR Secretariat, and the Antarctic Treaty Secretariat.

planning (MSP)[3] and creating an MPA. Consequently, tensions arise between actors concerning the areal extent and the exact location of the MPA. This tension occurs among individuals representing state as well as international organizations. At the state level, stakeholders lobby their positions to their country's respective national representatives at CCAMLR. Internationally, the stage is set at CCAMLR where some countries party to CCAMLR lobby for more conservation; others wish to fully utilize the high seas for extraction of natural capital. Others attempt to strike a balance between both conservation and harvesting.

An exploration of the stakeholders involved in creating an MPA in the Southern Ocean is important for at least two reasons. First, and most specifically, the actors involved with creating an MPA in the Southern Ocean have thus far only focused on scientific endeavors such as bioregionalization and assessment of where an MPA should be located. They have not yet considered all relevant stakeholders nor have they proposed precisely where MPAs should be established. This study can thus contribute to the discussion concerning an MPA in the Southern Ocean at a critical juncture before its plans are finalized and implementation begins. Hopefully, the study can also help illuminate commonalities among potential stakeholders and facilitate discussion and strengthen communications when they consider establishing the eventual location of an MPA in the Southern Ocean.

Second, and more generally, the exercise performed reveals important pros and cons of the stakeholder assessment and evaluation process. Positively, the ACERA method is shown to be a useful step by step process with potential applications in a variety of areas beyond natural resource management. Indeed, the ACERA method, elaborated in detail in this study, could help analyze different interests and motivations wherever social conflicts arise. On the other hand,

[3] "Marine Spatial Planning" (MSP) as defined by Ehler and Douvere (2007. p. 816) is "a way of improving decision making and delivering an ecosystem-based approach to managing human activities in the marine environment. It is a planning process that enables integrated, forward looking, and consistent decision making on the human uses of the sea".

two main negative aspects to the ACERA method exist. First, the ACERA method offers a more descriptive analysis which may identify possible problems related to stakeholders, but does nothing to resolve them. Second, the ACERA method proves useful for identifying stakeholders, but the process is much more challenging at uncovering their interests and motivations.

1.1 Background to the Creation of an MPA

Constituting approximately 15 percent of the world's ocean surface, the Southern Ocean encompasses an area four times the size of the United States, roughly 22,500,000 sq km (CCAMLR 2007). Recognized as the body of water south of roughly 60°S latitude, the Southern Ocean possesses a dynamic, complex marine boundary system. Despite the remote territory and tumultuous seas, the global fishing industry finds the Southern Ocean teeming with marine resources. Exploitation in the Southern Ocean commenced in 1790 with the first explorers and whaling ships (FIRMS 2005). The ostensibly endless supply of living resources provided a new lucrative industry and presented novel commodities for Europe's wealthy elite. Once whales came into short supply in the Southern Ocean, the whalers began exploiting seals and penguins. In the 1960's, the rise of international conservation laws, along with the creation of Exclusive Economic Zones, displaced the Russian fishing fleet from its customary fishing grounds in the northern hemisphere, forcing the fleet to seek new waters where it could legally fish (Heap 1992, p. 49). These events marked the start of large-scale fishing in the Southern Ocean (Lighthouse Foundation 2007). Large fishing fleets from Australia, New Zealand, Norway, France, and Japan are also present in the Southern Ocean.

Overfishing and illegal, unregulated, and unreported (IUU) fishing are problems in the Southern Ocean and other regions of the world (Gewin 2004). In the wake of overfishing impacts, extreme measures implemented by desperate fisheries managers around the world are becoming more common (Williams 1998, p. 809). The consequences of overfishing and IUU

fishing are serious, because fish protein represents 16 percent of global animal protein consumption.

Currently, most of the world's fisheries exploitation is driven by economics, with sound ecosystem conservation a low priority. Economically extinct species, those that are no longer profitable to harvest, are becoming more common around the world (Murawski 2000, p. 652). Traditionally, fishers regard short-term economic profits as more important than long-term economic and ecological security (Jones 2002, p. 204).

In some parts of the world, organizations have tried to address problems of overfishing by creating MPAs. For example, in 1975, the Australian government founded the Great Barrier Reef Marine Park, which protects almost 2300 kilometers of reef (Great Barrier Reef Marine Park Authority n/d). By 2004, the German government had designated 31.5 percent of its coastal areas as an MPA, with plans to increase the protected area by 2009 (ICES 2007). Scientists and researchers view the establishment of an MPA network in the Southern Ocean as integral for conserving the fragile ecosystem, restoring fish stocks, and protecting other fish stocks from collapsing.

To aid in establishing an MPA in the Southern Ocean, CCAMLR, the Antarctic Climate and Ecosystems Cooperative Research Centre, and the World Wildlife Fund of Australia (WWF-AU) brought together in September 2006 a panel of twenty-three experts from around the world. The panel commenced work on a marine bioregionalization process – a scientific approach designed to assign spatial patterns to a marine habitat based on a range of environmental and biological data for better management of the pelagic and benthic habitats (National Marine Bioregionalisation of Australia n/d; Grant et al. 2006, p. 3). With CCAMLR and various other stakeholders recognizing the need to conserve fish stocks from overexploitation in the Southern Ocean, the bioregionalization process was designed to assist stakeholders in finding the optimal location to establish an MPA.

Depending on the location, implementing a high seas MPA could alter fishing grounds and lead to serious consequences for the fishing industry. The Australian government's Department of Agriculture, Fisheries, and Forestry (DAFF) stresses the importance of conservation and environmental issues, yet economic growth and stability inevitably remain high priorities for Australia's fishing industries. Australia's fishing industry brings a domestic income of over AUD $2 billion dollars per year (DAFF 2007a). Moreover, Australia proclaims a high level of pride in its environmental awareness and marine sustainability (NZMFAT 2007; DAFFb 2007). With economics and conservation both high priority issues for Australia, striking a balance between creating effective MPAs and sustainable fishing livelihoods is essential.

Attempting to create an MPA in the Southern Ocean can be viewed in the context of conservation efforts worldwide. Thousands of protected areas exist worldwide to aid in conservation efforts. In 1991, the International Union for Conservation of Nature (IUCN) developed a standard, international categorization system for all protected areas. The categories included both marine and terrestrial protected areas in the classification system (Laffoley et al. 2007). Table 1 lists the IUCN categories of protected areas.

Table 1: IUCN Protected Area Classifications

IUCN Category		Main objective or purpose
IA	Strict Nature Reserve	Managed mainly for science
IB	Wilderness Area	Managed mainly to protect wilderness qualities
II	National Park	Managed mainly for ecosystem protection and recreation
III	Natural Monument	Managed mainly for conservation of specific natural/cultural features

IV	Habitat/Species Management Area	Managed mainly for conservation through management intervention
V	Protected Landscape/ Seascape	Managed mainly for landscape/seascape conservation and recreation
VI	Managed Resource Protected Area	Managed mainly for the sustainable use of natural ecosystems

Source: Laffoley et al. 2007

Management strategies, involvement of legal agencies, reliance on funding agencies, levels of protection, and stakeholder involvement vary widely in relation to protected areas (National Marine Protected Areas Center, 2006). Trying to fit a range of MPAs into the IUCN classifications is difficult, given that the IUCN categories cover multiple ecosystems. As a result, MPA terminology presents a challenge to managers, policy makers, and stakeholders.

Irrespective of terminological issues, many view the creation of MPAs as having significant environmental benefits. Noted positive impacts include safeguarding targeted single-species, protecting species from by-catch mortality, reducing resource overexploitation, and providing increased fishery harvests outside MPA borders (Sanchirico 2000, p. 3; Agardy et al. 2003, p. 359; Greenpeace 2004).

Others dispute the alleged benefits of MPAs. Bohnsack et al. (2004, p. 190) assert that the impacts of fishing vessels being displaced from MPAs to other areas imposes greater concentrations of fishing vessels in those other areas, thus shifting negative impacts to different locations. Additionally, “marine reserves do not protect against climate change, regional pollution, natural disturbances, or human disasters” (Bohnsack et al. 2004, p. 186). Enforcement

of MPAs also remains a concern, as remote locations are difficult to monitor (Stump and Kriwoken 2006, p. 298).

If the majority of stakeholders in the Southern Ocean are involved in the creation of an MPA and have a "buy-in" into the process, an MPA will likely be more successful, especially if coupled with long-term enforcement (Pollnac et al. 2001). Thus, understanding stakeholder involvement in planning for an MPA in the Southern Ocean is important.

1.2 Thesis outline

The study proceeds as follows. Chapter Two offers a literature review of the history, advantages, and disadvantages of stakeholder analysis. Chapter Three presents the methodology of the study, and justifies the selection of the Australian Delegation within CCAMLR and the use of the ACERA model. Chapter Four summarizes the use of the ACERA model applied to discussions with members of the Australian Delegation of CCAMLR and demonstrates that disagreements remain over what to call an MPA and whether fishing restrictions should be strengthened or relaxed. Chapter Five offers the study's conclusions.

Chapter Two: Literature Review

This chapter introduces the concept of stakeholder analysis, traces how the process of stakeholder analysis has emerged, and considers how researchers have used stakeholder analysis. It also discusses the ACERA method and the benefits and weaknesses of stakeholder analysis.

2.1 Stakeholders and Stakeholder Analysis

The first recorded use of the term "stakeholder" appeared in 1708 with a definition of "a person who holds the stake or stakes in a bet" (Ramirez 1999, p. 101). Since then, the Stanford Research Institute officially coined the word stakeholder in 1963 as "those groups without whose support the organization would cease to exist" (Cooper et al. 1998, p. 612). In R. Edward Freeman's 1984 hallmark book *Strategic Management: A Stakeholder Approach,* he applied the term to the context of commerce, defining a stakeholder in the eyes of a corporation as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman 1984, p. 46). Evan and Freeman (1988, p. 97) asserted that the role of the stakeholder must be reassessed and that the stakeholder "must participate in determining the future direction of the firm in which [it has] a stake." The process of stakeholder analysis typically begins by identifying relevant stakeholders for a given project or event, maps out their interests, and assesses the broader context in which they interact (Jones and Fleming, 2003).

2.2 Use of Stakeholder Analysis in Geography and Other Disciplines in Environmental Contexts

Geographers have used stakeholder analysis in various research initiatives. Stakeholder analysis can be a powerful tool for geographers because the method allows a visible representation of both variations of power, as well as the different spatial scales in which the

stakeholders operate (Rockloff and Lockie 2004). Mushove and Vogel (2005) used stakeholder analysis for forest reserve conservation management in Mozambique to better understand land-use disputes. Suárez de Vivero et al. (2007) used stakeholder participation analysis when assessing a hypothetical development of a private offshore wind farm in the Gulf of Cadiz, Spain. Stump and Kriwoken (2006) examined the views, perceptions, and attitudes toward the Tasmania, Australian government's "Tasmanian Marine Protected Areas Strategy." These views were assessed to understand the values that propel commercial fishermen to either support or oppose the initiative (Stump and Kriwoken 2006). Varjopuro et al. (2008) discuss the various relationships among the environment, commercial fishermen, and stakeholder participation in the context of an ecosystem-based approach to fisheries management.

One example of successful stakeholder integration into marine spatial planning occurred over the course of a three-year planning process that culminated in the creation of the Tortugas ecological reserve in the United States. Cowie-Haskell and Delaney (2004) assert that the key ingredient to the success of the ecological reserve was the involvement of scientists and their open relationship with other key stakeholder groups when designing the reserve. A working group that encompassed members of 25 different stakeholder groups was present during the design phase. The successful implementation of the Tortugas Ecological Reserve is an illustrative example of assimilating policy, science, and multiple stakeholder groups into the design process.

2.3 The ACERA Method

The ACERA method is a clear, step-by-step approach to identify and analyze stakeholders initially developed by Gilmour and Beilin (2007). Specifically, the first use of the method involved mapping the stakeholders of Biosecurity Australia by hosting a workshop to identify

potential stakeholders within a hypothetical situation[4]. To assure that Australia remains at the forefront of risk analysis techniques, ACERA actively engages governments, scientists, and the broader community to raise the understanding, awareness, and measurement of perceived versus actual risk (ACERA 2008). A foundational aspect of their work includes stakeholder identification and relationship mapping.

The first step of the ACERA process is to identify stakeholders. According to Gilmore and Beilin (2007), all stakeholders who have the capacity to affect the policy or project, or those who may be affected by the policy, should be included as a stakeholder. Whereas Step 1 of the ACERA model simply concerns identifying stakeholders, Step 2 involves the analysis of the perceptions and influence of the stakeholders. In particular, this step of stakeholder analysis deals with the interests of stakeholders as well as their attitudes toward certain policies or issues (Gilmour and Beilin 2007). Step 3 involves mapping stakeholder interests as well as the power relations between them. Mapping stakeholder influences and interests visually displays attitudes towards a specific project or policy and serves as a useful guide for further discussions (Gilmour and Beilin 2007). There are numerous ways to map stakeholders and include (but are not limited to) interest and influence, relationships, attitude towards the project, or various combinations of each. In ACERA's model, an influence and interest map, stakeholder relationships, and stakeholder attitudes and relationships towards the issue are each used as tools to exhibit patterns. Displaying the positions or attitudes of stakeholders with a given issue proves useful to identify potential alliances. As this is a static snapshot of the stakeholder and identification analysis, one must keep in mind that the progression is iterative and may need to be modified throughout the process (Gilmour and Beilin 2007). Step 4 concerns the use of stakeholder maps to advance an organization's or project's objectives.

[4] ACERA hosted a workshop titled "Integration of Risk over Volume of Trade and Time." The tools used in ACERA's stakeholder analysis method were applied to a hypothetical situation to simply demonstrate the merit of the application and process.

2.4 Benefits of Stakeholder Analysis

At least three key benefits to undertaking stakeholder analysis exist. First, using a stakeholder analysis approach facilitates inclusion of stakeholders that would otherwise be overlooked or marginalized. Second, there is a descriptive and normative approach to the process that reveals power relationships and ensuing values. Third, the process can contribute to democracy by improving decision making as well as bringing legitimacy to the process by incorporating a wide array of stakeholders' knowledge.

The process of stakeholder analysis allows researchers or managers to identify those stakeholders who would otherwise be marginalized or not included at all. According to Özesmi and Özesmi (2003), numerous stakeholder groups need to be directly involved to attain successful conservation and biodiversity outcomes. Failing to do so leads in disappointing results, as occurred in relation to the Kizilirmak Delta in Turkey. This initiative was considered unsuccessful because governments and NGOs did not incorporate local communities' views within the conservation planning process; the exclusion of stakeholders lead to eventual public opposition and abandonment of the project (Özesmi and Özesmi 2003). Identifying stakeholders creates a more inclusive atmosphere when managers and planners involve the various groups of stakeholders. And according to Billgren and Holmén (2008), in doing so, it is much more difficult to ignore less powerful stakeholders. A key benefit of stakeholder participation is the empowerment of groups that would otherwise be marginalized. Therefore, public and local community participation must be coupled with top-down decision making to have a more encompassing and inclusive outcome (Mushove and Vogel 2005, pg. 186). The benefit of collaborative management where both top-down and bottom-up approaches converge is that the successful management of a protected area depends on the cooperation and level of involvement

between stakeholders. Fisher and Jackson (1998) argue that there needs to be fair and equitable treatment towards the people who directly use the resources.

Stakeholder analysis can also enhance cooperation. One strength of revealing stakeholder interests is that it gives managers the ability to facilitate communication amongst the stakeholders (Billgren and Holmén 2008). Additionally, Gilmour and Beilin (2007, p. 27) cite that demonstrating coalitions of power gives stakeholder analysts the ability to see where potential conflicts may arise and thus prepare for negotiations or mediation. Understanding stakeholder relationships can therefore contribute to conflict resolution and sound decision making that democratically involves all stakeholder groups. Bringing such conflicts, interests and motivations to the surface allows for multiple stakeholder values and objectives to come together (Rockloff and Lockie 2004).

2.5 Weaknesses of Stakeholder Analysis

Despite the potential benefits of stakeholder analysis, certain weaknesses also exist. One concerns definitions related to stakeholder analysis. Another is the complex issue of who is actually considered a stakeholder (including whether the natural environment and species of animals and plants should be considered "stakeholders"). Also, undertaking a stakeholder analysis can be financially costly and time consuming.

In the field of natural resource management, researchers and managers often neglect to define what an actual stakeholder is (Billgren and Holmen 2008, p. 554). Further, Mushove and Vogel (2005) criticize the current stakeholder literature because despite the great array of literature on public participation and stakeholder involvement, there is no one single definition of what "public participation" actually entails. Because a stakeholder can be virtually anyone or anything, Wu (2007, p. 416) further asserts that researchers' definition of a stakeholder varies according to how researchers classify themselves. For instance, marketing researchers view

stakeholders through a "market-oriented lens". On the other hand, business researchers may define a stakeholder as one who is interested in profits and various corporations. Likewise, Billgren and Holmen (2008) criticize the wide-ranging research on stakeholder analysis/participation literature because rarely is a formal definition of a "stakeholder" actually included.

There are also questions about how many actors ought to be included in such an analysis. For example, including any and all stakeholders may paradoxically complicate the process by having too many people or organizations to successfully manage. In another view, Turner and Weninger (2005) warn that if stakeholder participation is voluntary, then it may lead to an over-representation of industry actors. In a similar vein, some forms of the stakeholder analysis are anthropocentric if they only include human actors and organizations. Although some, such as Phillips and Reichart (2000), claim that only humans can be legitimate stakeholders, Starik (1995) believes that the environment and species should be included as a stakeholder and given a "voice" in the process. Since the notion that a stakeholder can be anyone or anything, managers and researchers struggle with the notion of including species of animals and plants as actual stakeholders (Billgren and Holmen 2008, p. 553).

In addition, a thorough stakeholder investigation and analysis involves collating numerous data through interviews and survey methods, which can be costly to both researchers (who must expend money) and participants (who must give their time) (Weible 2006). Prell et al. (2008) criticize stakeholder analysis and participatory methods on the basis that even if all stakeholders are adequately identified, not all stakeholders may make it to the collaborative process because of time or financial constraints. Thus, a potential bias may result from only allowing those institutions or individuals into the process that are able to afford the time and financial burden.

Chapter Three: Methodology

This section describes the project's research methodology. It justifies the unit of analysis used in the study, the selection of the Australian Delegation of CCAMLR, and the study's use of purposive sampling.

3.1 Unit of Analysis

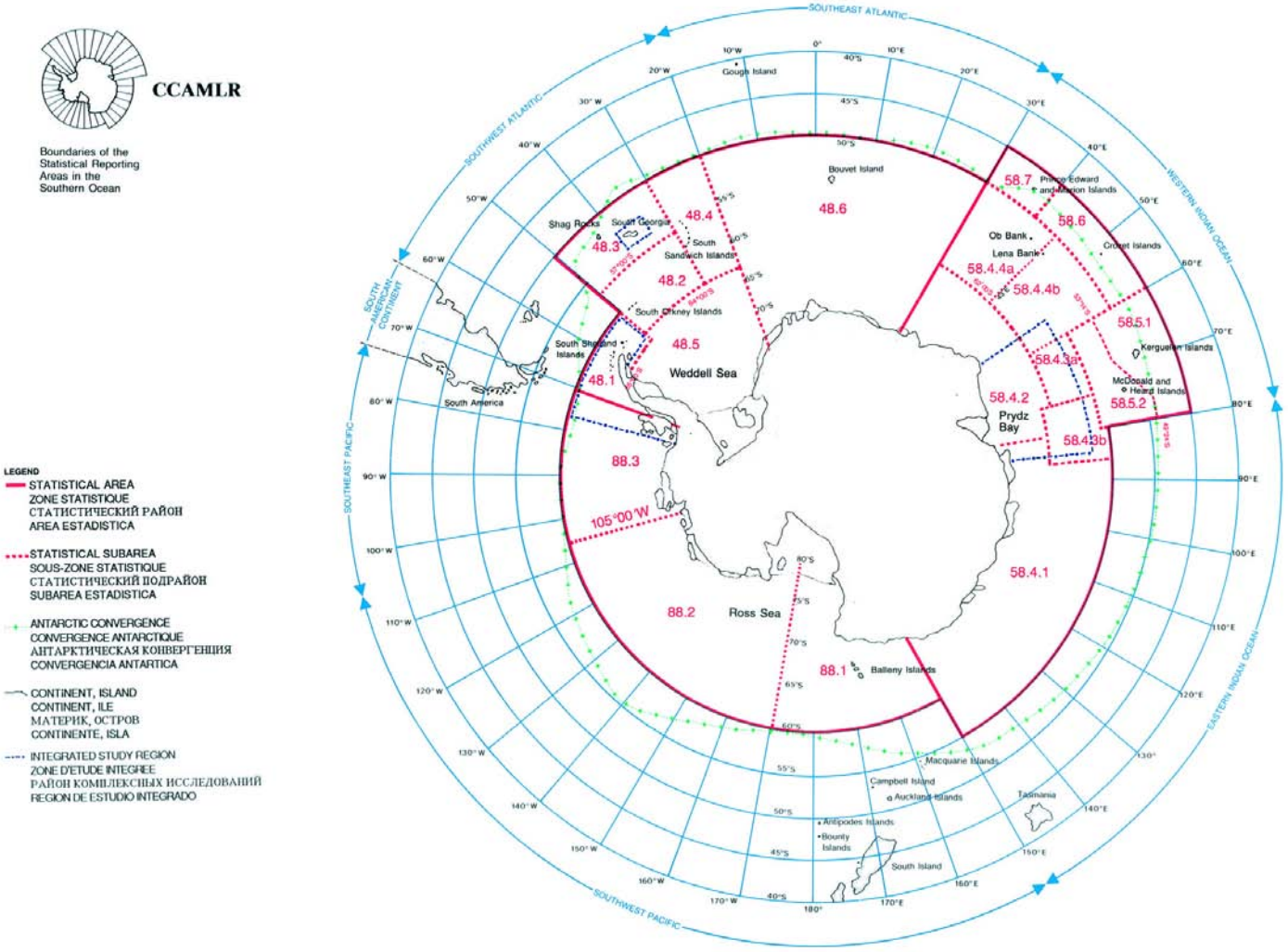
The author first selected the unit of analysis. Given a limited amount of time and resources, the author decided to select the institution as the unit of analysis. While the author was sensitive that this selection was anthropocentric (i.e., it focused only on human institutions as stakeholders rather than including other elements of ecosystems), it was deemed necessary to limit the potential range of possible stakeholders. The author, furthermore, did not select individuals as the unit of analysis because individuals are only relevant stakeholders in the MPA process to the extent that they are attached to formal organizations. Institutions are the primary unit of analysis that influence and are influenced by the process of creating MPAs in the Southern Ocean. So individuals matter for this study, but only insofar as they serve as a proxy to speak for institutions.

This study used the results of interviews with individuals of organizations as proxies for the views of those organizations. It must be realized that individuals within organizations may express different viewpoints, and thus no one individual is likely to be representative of all views within an organization. However given the time constraints in fieldwork and the likelihood of individuals being aware of their organizations' official positions on issues, the choice is justifiable.

3.2 Site Selection

Rather than focusing on the entire MPA process in the Southern Ocean, the research presented here focuses on the Australian stakeholders within the Australian delegation of CCAMLR (See Map 1 for a depiction of the CCAMLR management area). Again, time and financial constraints prevented the author from including all fishing companies, every conservation NGO, and all governments party to CCAMLR that are involved in creating a high seas MPA in the Southern Ocean. The author selected Australian individuals and organizations because they speak English and are transparent with their data on CCAMLR and MPAs. Ideal locations for implementing this research project included Hobart and Devonport, Tasmania, and Perth in the Western Territory of Australia (see Map 2). The author conducted fieldwork between the dates of January 29, 2008 and February 20, 2008 in Tasmania and February 20, 2008 and February 29, 2008 in Perth. Three primary reasons exist for choosing Tasmania and Perth as site locations.

Map 1: CCAMLR Management Boundaries (as of January, 2008)



Source: CCAMLR (n/d)

Map 2: Locations of Research Interviews in Australia

Source: Geographic Guide (n/d) and Author.

Tasmania and Perth contained the majority of identified organizations involved. Australian stakeholders with a vested interest in the Southern Ocean, including CCAMLR, WWF-AU, the Commonwealth Scientific and Industrial Research Organization (CSIRO), and most other relevant Australian governmental agencies, reside in Hobart, Tasmania. Petuna Fisheries, one of two Australian companies that fish for toothfish, is also located in Tasmania. Austral Fisheries Pty. Ltd., the other Australian company that fish for toothfish, is located in Perth, Australia. Likewise, several fisheries policy researchers were based in Perth.

3.3 Purposive Sampling and Research Interviews

Purposive sampling[5] and directly pursuing key individuals proved a satisfactory method for interviewing representatives. An initial problem with collecting data for the study was the absence of an adequate sampling frame that listed all elements of the population under study, which would optimally include many individuals from a wide array of organizations associated both with and without creating an MPA in the Southern Ocean. The author established initial contacts between the dates of September, 2006 through December of 2007 to solidify future interviews. Most individuals with whom the author spoke suggested that they would introduce me to other people upon my arrival. This snowballing technique[6] proved essential in conducting the rest of my interviews. All interview respondents were promised confidentiality (Appendix 2 provides a sample of the author's solicitation letter).

After obtaining permission from Virginia Tech's Institutional Review Board, the author completed a total of 13 formal, semi-structured interviews in Australia (Appendix 3 offers a sample of the informed consent document). The author conducted additional informal interviews, which supplemented the information from the 13 formal interviews. Those individuals from organizations and groups participating in the interviews included Austral Fisheries Pty. Ltd., Petuna Fisheries, CCAMLR, the Australian Antarctic Division, CSIRO, the Antarctic and Southern Ocean Coalition (ASOC), WWW-AU, and a range of academic institutions. Each one-on-one interview was set to last approximately 30 minutes; however, the interview times

[5] As defined by Babbie (2005, p. 189), purposive sampling is a non probability technique and is "appropriate when selecting a sample based on the knowledge of a population, its elements and the purpose of the study."
[6] Snowballing is a "non-probability sampling method often employed in field research, whereby each person interviewed may be asked to suggest additional people for interviewing" (Babbie 2005, p. 190). Snowballing also carries risk of judgmental values by the researcher to select those individuals deemed most appropriate for the project (Krathwohl 1998, p. 173). Additionally, Gilmour and Beilin (2007, p. 15) warn of the propensity to create "coalitions of interest" whereby there may be an over representation of various groups.

varied between 18 minutes to 2 hours and 10 minutes.[7] To enable the collection of a broader set of data, websites of relevant organizations were also visited to supplement the primary quotations from the research interviews.

During the interview process with various stakeholders, a number of anecdotes emerged that elucidated much of the marine spatial planning process. These emergent anecdotes are highlighted in the next chapter.

The information from the interviews was used to complete the first two steps of the ACERA method. This study was limited to the first two steps because of the limited time available for fieldwork.

[7] See Appendix 4 for complete interview transcript.

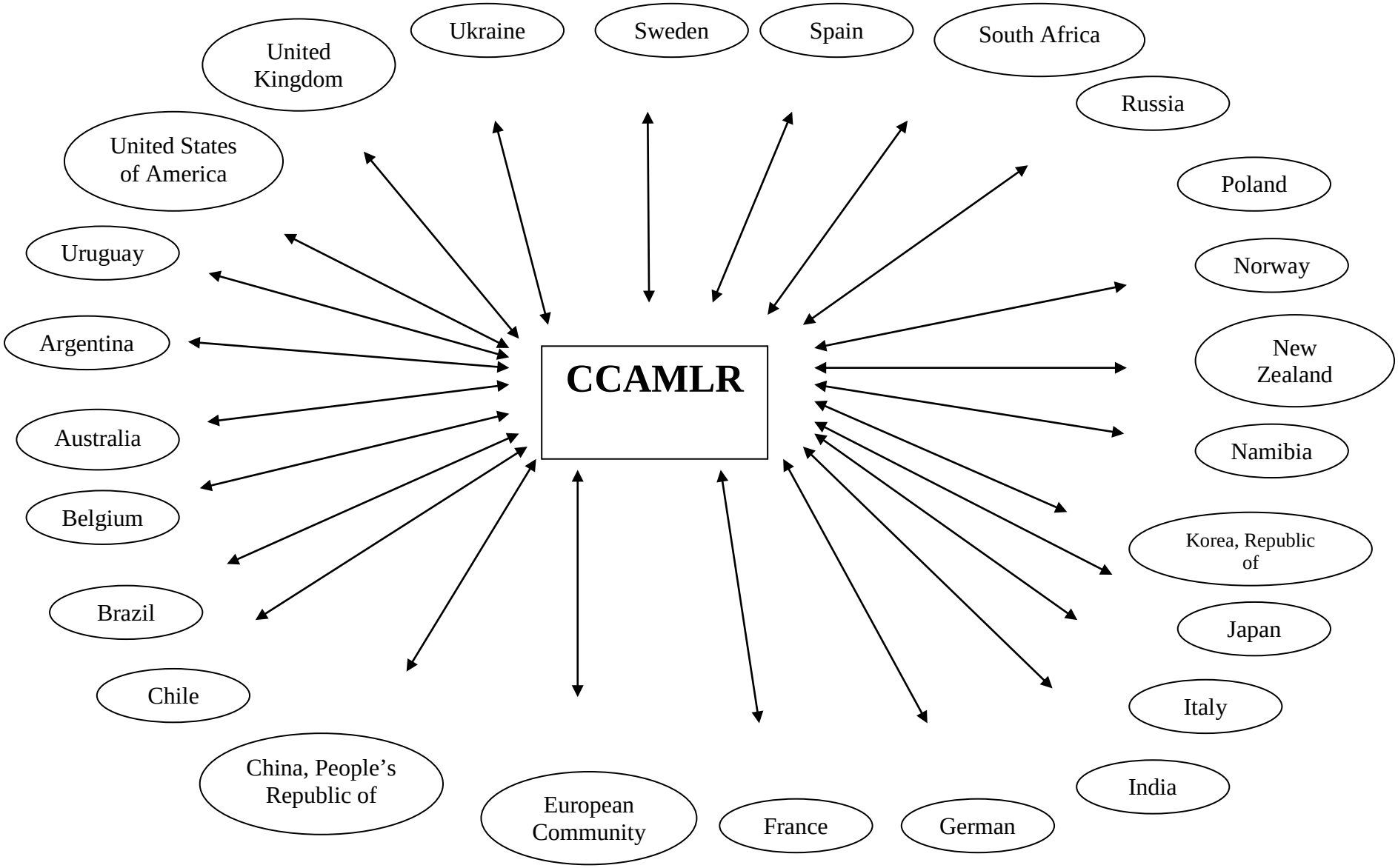
Chapter Four: Application of the ACERA Method

This chapter summarizes the use of the ACERA model applied to discussions with members of the Australian Delegation of CCAMLR about their views on the creation of an MPA in the Southern Ocean. It begins by identifying relevant stakeholders, assesses their different interests, and then maps those interests.

4.1 Stakeholder Identification

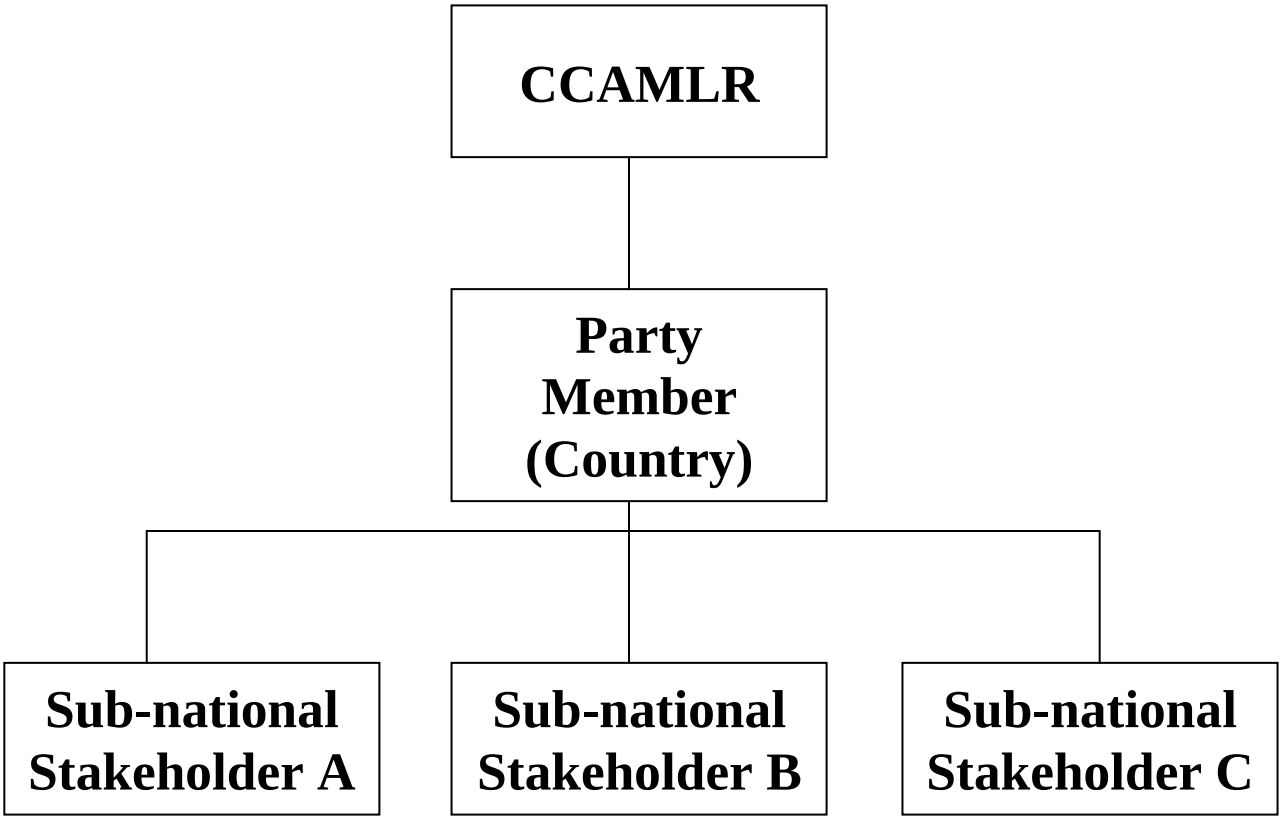
The first step within the ACERA process is to identify stakeholders. As Figures 1 and 2 show, CCAMLR is constituted by a number of Party Members (each one a country). These states are the representatives of CCAMLR. Within each state's delegation are a number of other stakeholders within that state. This is an important distinction to make for two reasons. First, CCAMLR and its Party Members will have different stakeholders. Second, it highlights a distinction that each of the Party Members has a different set of stakeholders. Since CCAMLR is a multi-national organization, the application of the ACERA method showed that there were two main levels of stakeholders involved: the States that are Party Members to CCAMLR that hold voting status and those involved in each of the States' delegations (at the sub-national level). This stakeholder identification and analysis focuses on the Australian delegation.

Figure 1: CCAMLR Party Members (with voting status)



Source: Author

Figure 2: CCAMLR Party Member Relationships



Source: Author

Following ACERA's method, Table 2 and Figure 3 offer an initial snapshot of those identified as Australian institutional stakeholders involved in creating an MPA in the Southern Ocean. Table 1 lists all stakeholders identified by those formally interviewed. Academic researchers and the Australian Antarctic Division provided the majority of the completed research interviews for Table 2. An inspection of Table 2 reveals which organizations are similarly aligned in their views and which groups hold a wider range of opinions concerning who should be included as stakeholders. As Table 2 illustrates, individuals from CCAMLR and the Australian Antarctic Division possessed relatively similar views. As the Australian Antarctic Division takes the lead on many of these issues within CCAMLR, this result is not surprising. However, the table reveals the divergence of interests among a wider range of stakeholders. Some researchers, as well as WWF-AU, suggested that IUU fishers and their families should be included as stakeholders, while others interviewed did not. Some took a more narrow view. For instance, individuals in the two fishing organizations interviewed named CCAMLR, government bodies and other industries, such as tourism and mining, as main stakeholders. Interestingly, there was little agreement by the two fishing companies concerning those identified. Academic researchers mentioned the highest number of different stakeholders most likely because their research extends into numerous facets of Antarctic geopolitics. Also, institutions such as CCAMLR and the Australian Antarctic Division (AAD) have specific aims, objectives, and agendas when carrying out their functions. Researchers, on the other hand, possess autonomy to pursue analytical research on the Antarctic within numerous realms of academia.

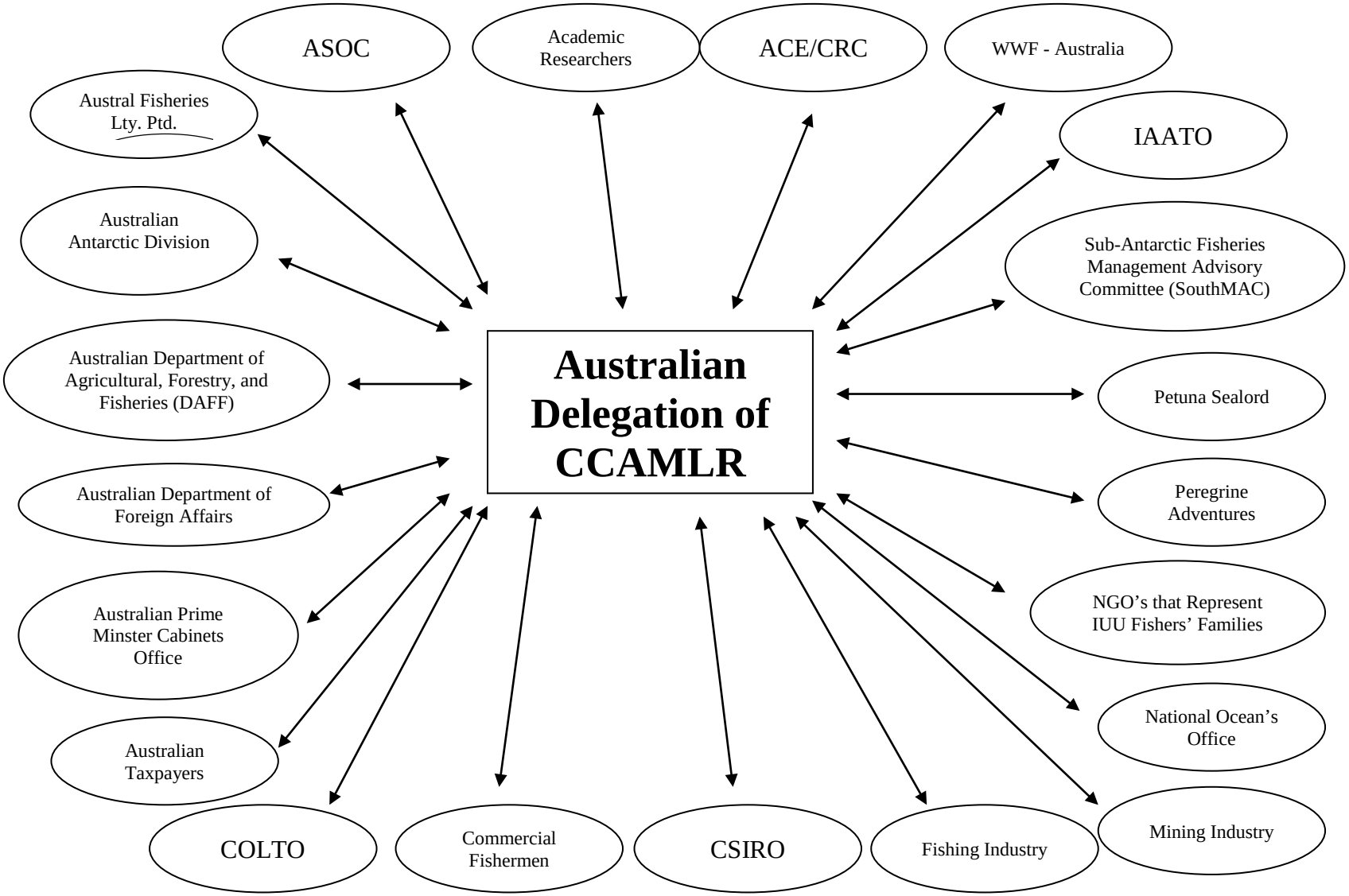
Table 2. Stakeholder Analysis of an MPA in the Southern Ocean

Initial Stakeholder List (a)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
CCAMLR – Secretariat (1)		●		●	●	●	●		●									●	●	●	●	●					
Australian Antarctic Division (4)	●		●	●	●	●	●	●								●	●	●	●	●	●						
CSIRO (1)	●	●		●	●								●		●												
Petuna Sealord (1)	●				●							●	●					●			●						
Austral Fisheries (1)	●	●		●			●	●	●													●	●				
WWF-AU (1)	●			●	●					●			●								●	●		●	●		
Academic Researchers (3)	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●		●	●			●	●	●	●
ASOC (1)	●	●	●			●	●		●									●			●						

(a) Number of interviews completed ● = suggested by the interviewee

1 CCAMLR Secretariat
2. Australian Antarctic Division
3. CSIRO
4. Petuna Sealord
5. Austral Fisheries
6. WWF
7. ASOC
8. Academic Researchers
9. Peregrine Adventures
10. Actual Commercial Fishermen
11. Australian Taxpayers
12. Australian Dep't of Foreign Affairs
13. DAFF
14. Australian Prime Minister Cabinets
15. National Ocean's Office
16. Countries interested in conservation and marine biodiversity
17. Stakeholders interested in conservation and marine biodiversity
18. 25 Party Members to CCAMLR
19. ATCM
20. UN General Assembly
21. Coalition of Legal Toothfish Operators
22. Tourism Sector
23. Mining Industry
24. IUU Governments
25. IUU Fishers and families
26. NGOs representing IUUs
27. SOUTHMAC

Figure 3: Stakeholders within the Australian Delegation



CCAMLR, as the main governing body of Antarctic marine living resources, named each of its Party Members as primary stakeholders. The CCAMLR Secretariat answers to each of the 25 Party Members and as such, CCAMLR holds an obligation to represent the views of those members. CCAMLR also works very closely with the Australian Antarctic Division and other government agencies. The two main fishing organizations (Petuna Sealord and Austral Fisheries), as well as the Coalition of Legal Toothfish Operators also work closely with CCAMLR to assure the sustainability of their businesses and are considered main stakeholders by all other parties. The WWF-AU, as well as Peregrine Adventures (a group of tour operators), was specifically mentioned by individuals within CCAMLR because they helped sponsor workshops on MPAs in the Southern Ocean. It comes as no surprise that the CCAMLR representative gave politically correct answers to each of the questions asked, cautiously aware to include all government agencies involved, those who sponsored the bioregionalization process, each of the Party Members, as well as fishing organizations.

NGOs, stakeholders interested in conservation, and more broadly, countries interested in Antarctic conservation, were rarely mentioned as principle stakeholders. This indicates that current stakeholders show a strong bias towards the fishing industry and that industry economic sustainability may be a higher priority than conservation of living resources.

4.2 Stakeholder Interests

The second step of the ACERA method is to identify and analyze stakeholder interests. Table 3 presents an analysis of stakeholder interests and relationships within the Australian Delegation of CCAMLR. When analyzing the identified stakeholders, two main points can be made from Table 3. First, the majority of stakeholders showed they hold positive views for creating an MPA in the Southern Ocean, but that their reasons tend to differ. Second, some

individuals within institutions view the creation of an MPA in a more positive aspect than others. Table 3 highlights each of the identified Australian stakeholders, whether they are in favor of a high seas MPA, and their ensuing motivations. When information was not obtained directly from research interviews, the author searched institutional websites to gain indirect information concerning that institution's stance towards an MPA. One individual from the Australian Antarctic Division remarked: "while the rhetoric of stakeholders may be common amongst each other - and it is *very* (respondent's emphasis) similar across all stakeholders - the desired outcomes differ greatly."

Table 3: Australian Delegation Stakeholders and Motivation for high-seas MPA in the Southern Ocean

	Stakeholder Organization	Source	Respondents	Pro-MPA	Motivation for MPA
1	CCAMLR Secretariat	I	1	✓	To keep in accordance with the ethic of The Antarctic Treaty; environmental awareness
2	Australian Antarctic Division	I	4	✓	"Inter-generational equity"; save untouched regions for research; consistent with Australia's national oceans policy
3	Australian Prime Minister and Cabinets	S		✓	Combat illegal fishing
4	Australian Department of Foreign Affairs	S		✓	Combat illegal catch and trade of Patagonian Toothfish caught in Australia's EEZ
5	National Ocean's Office	S		✓	Consistent with Australia's national oceans policy
6	Australian Fisheries Management Authority (AFMA); Sub-Antarctic Fisheries Management Advisory Committee	S		✓	Combat illegal fishing
7	Australian Department of Agriculture, Fisheries, and Forestry (DAFF)	S		✓	Combat illegal fishing; Consistent with Australia's national ocean's policy
8	Austral Fisheries Pty. Ltd. (affiliated with Kailis & France Holdings and Pescanova SA)	I	1	✓	Long-term economic sustainability
9	Petuna Sealord	I	1	✓	Long-term economic sustainability
10	ACE/CRE	S		✓	To be in accordance with IUCN goal of 20-30% of world's oceans as MPAs by 2012
11	CSIRO	I	1	✓	"conservation measurements"; research collaboration

12	WWF –AU	I	1	✓	Seabird conservation; to be in accordance with IUCN goal of 20-30% of world's oceans as MPAs by 2012
13	ASOC	I	1	✓	Protect krill from a growing fishery
14	Peregrine Adventures	S		✓	Albatross Conservation
15	Academic Researchers	I	3	Mixed	Some were in favor of an MPA to maintain ecological biodiversity; save untouched regions for research although most do not believe it will be successful in order to achieve desired outcomes. Others were against MPAs in the Southern Ocean because they believed it will not work due to IUU fishers; Southern Ocean already technically IUCN IV MPA with current management practices; no enforcement mechanisms
Total			**13**		

I = Interview, S = Secondary source or website

Table 3 clearly demonstrates a tendency for respondents to have varying motivations for implementing an MPA. Many respondents cited intergenerational equity and maintenance of biodiversity as reasons for an MPA. Others, however, expressed concern that an MPA would not be sufficient by itself to protect the marine environment. The views among academic researchers were especially varied, perhaps because they have no direct commercial stake in MPA discussions or play no formal role in CCAMLR discussions.

4.3 The MPA Process

Use of the ACERA method also enabled the author to gain insight into the process of creating an MPA. This section discusses the nature of stakeholder involvement in that process.

The interviews revealed that most stakeholders agree that many elements of the Australian delegation to CCAMLR are inclusive. Although no formal stakeholder analysis had been completed for the Australian delegation in the past, participants stated that Australia sets a good example of stakeholder inclusion within CCAMLR. Representatives from numerous government agencies, the fishing industry, NGOs, and academic researchers do take part in CCAMLR consultative forums. [8] Within CCAMLR, the Australian Antarctic Division is clearly viewed by many respondents as a leader on conservation issues and should be commended on its open door policy and willingness to support inclusion to other groups' views.

The framework for effective stakeholder involvement within the Australian delegation of CCAMLR is in place. According to respondents, the *majority* of stakeholders are identified and involved with CCAMLR issues. CCAMLR consultative forums take place three times per year when government agencies, industry representatives, NGOs, and academic researchers get

[8] CCAMLR consultative forums are convened by the Australian Antarctic Division three times per year. Each is a way to get stakeholders together and engaged to lay forth their respective interests or positions.

together, and the Australian Antarctic Division is clearly open to hearing various perspectives. Numerous respondents, despite acknowledging that fishing interests tend to dominate the outcomes of discussion, did claim that CCAMLR is the best example of a Regional Fisheries Management Organization (RFMO).[9] One conservation NGO respondent elaborated that:

> CCAMLR is interesting as an area to pioneer MPAs … because of the history with the Antarctic Treaty system, you tend to have much more interest by agencies with foreign affairs and much more interest and responsibility from environmental organizations and agencies which tend to be the lead agencies for their governments and the fishers have come along very late. In this institutional process, the fishers actually have to sit around the intergovernmental table and argue their case in front of a chair from an environmental department. As a result, you get good, balanced decisions because there's actually merit debate.

In other words, CCAMLR may not be perfect, but many participants considered it is one of the best institutions yet devised for regional fisheries management.

Despite many of CCAMLR's strengths, however, participants also noted that much disagreement existed within the Australian Delegation of CCAMLR over what an MPA is, how it should be phrased, and what it should accomplish. In accord with Bohnsack's (MPA News 2000, 1:5) statements relating to the global difficulties of MPA terminology, even within the Australian delegation, there were numerous variations in what the high seas MPA in the Southern Ocean should be called. With the 24 other Party Member states, agreed upon terminology is sure to cause debate. According to one Australian Antarctic Division researcher, "While MPAs are important to pursue in this context, it is clear that the term [marine protected area] is unacceptable to many but 'spatial management' is not [unacceptable]". Agreeing with this sentiment is one researcher: "CCAMLR itself could declare MPAs or closed areas and does,

[9] Also known as "Regional Fisheries Bodies" (RFB), RFMOs and RFBs comprise a framework for international interaction and cooperation and form a governance network. They form the backbone of the 1995 UN Fish Stocks Agreement. The multi-lateral Treaty would not have been feasible without the RFMOs and RFBs carrying out the terms of the Treaty. Some RFMOs and RFBs were set up by the United Nations Food and Agriculture Organization (FAO); others were not arranged by the FAO. See Appendix 5 for complete list.

but doesn't call them MPAs, so essentially what you've got here…is a fundamental question about marine protected areas and the terminology." Indeed, echoing the response was another respondent from the Australian Antarctic Division: "You might have particular views or national positions on the term of the use of marine protected areas or in other agreements [that they may be party to] or domestically, so we're certainly not going to only push for a system of marine protected areas – that's where we're about trying to achieve a negotiated outcome that doesn't really matter to us what they're called, so long as the outcome is the same."

Keeping in line with CCAMLR's ecosystem-based management philosophy, one respondent from CCAMLR mentioned: "The solution has always been MPAs, but we don't want to actually give them a name, so that's been part of the problem…They might not be called 'marine protected areas' but they will be objectively defined areas where there is a set of management decisions and management process attached to it that the outcome is not that different". One Australian Antarctic Division respondent optimistically replied: "You can get your result without creating something that's called an MPA ...I think in the next few years there will be MPA or MPA-equivalent in the Southern Ocean, whatever it might be called and we think that's an important objective."

One interesting revelation in determining the actual MPA terminology is that, like the Great Barrier Reef Marine Park, *technically* the entire Southern Ocean under CCAMLR jurisdiction could already be classified as an IUCN category IV protected area in the first place. Several respondents from the Australian Antarctic Division, all researchers and members of CCAMLR, recognized the fact that the Southern Ocean is just one big paper park and as such, one big MPA. In the words of one Australian Antarctic Division individual: "There's been a proposal or an agreement and a concept raised by Australia, but agreed on by other parties that

the whole of the Convention is actually a managed equivalent to an IUCN Category IV because it is – it's actively managed for conservation purposes and there isn't a part of the Southern Ocean that isn't addressed in some way by measures implemented in CCAMLR and/or the Antarctic Treaty". To add to the sentiment, another Australian Antarctic Division respondent states: "In the Antarctic context, given that the entire area is subject to general protection, the specific areas are subject to protection. The fisheries are closed unless they're open, rather than be open until they're closed."

Since CCAMLR's definition of the precautionary principle[10] also includes the phrase "rational use," fishing and extraction of resources are often at the fore of the discussions when it comes to managing resources. So when one researcher suggested that people should not be talking about "marine protected areas," but should rather be speaking of "fish propagation zones," this notion alluded to the question of who is actually driving the quest for the "conservation of Antarctic marine living resources." Thus, the ACERA method of stakeholder identification reveals subjects of potential conflict within the Australian delegation of CCAMLR over what to call an MPA in the Southern Ocean.

Finally, participants indicated that a tension exists within the Australian delegation of CCAMLR over conserving the environment and increased harvesting of marine living resources. Even with a preliminary analysis of stakeholder motivations and interests of power and influence, allusions of harvesting strongly come to the surface. CCAMLR was formed

[10] The term "Precautionary Principle" or "Precautionary Approach to Management" was formally implemented into the United Nations Environmental Programme through the *Rio Declaration on Environment and Development* in 1992. It states: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (UNEP 2007, p. 2).

predominately in response to the increase in krill catch in the Southern Ocean in the 1970s. [11] With krill being the keystone species of the Southern Ocean foodweb, concerns arose to manage the harvesting of all the living resources. Some countries wanted to get involved in the harvesting; others were primarily interested in conservation. This contentious dichotomy still exists today when there are the prospects of creating an MPA versus a perceived loss of fishing rights. "You've got the motivation to establish marine protected areas based on ecology and science, but then you're actually running against motivations of people to make money or driven to make money," responded one academic researcher.

Indeed, it appears that fishing interests are a main influence within the Australian delegation of CCAMLR and within CCAMLR itself. According to one CCAMLR respondent, whereas about one-third of the delegation in the early 1980s was interested in fishing, more than half of the current 25 Party Members within CCAMLR are now primarily interested in living resource harvesting rights. Many of the respondents expressed concern over the clashing of conservation-oriented principles of CCAMLR with the harvesting of marine living resources. One respondent countered the debate by saying:

> By and large, a lot of these discussions get focused primarily on the fishing interests and they're not focused on how you maintain an ecological sustainable industry…You'll find that most countries that have very strong fishing interests have the same view. That they are supportive of it [a high seas marine protected area] and they all write very glowing reports and all their language is about conservation and marine biodiversity, but when you piece all the words together, it all comes down to setting up scientific committees to do this that and the other thing [to delay the process].

Yet others expressed growing trepidation regarding CCAMLR creating a high seas MPA with its current form of governance structure. As one researcher notes:

[11] CCAMLR has jurisdiction over all marine living resources with the exception of seals, which are managed under the Convention of the Conservation of Antarctic Seals, and whales; the latter are managed by the International Whaling Commission.

> Stakeholders will be anyone on the planet who values the wilderness and biodiversity values that the Antarctic brings, so that effectively means everybody, so you have to narrow that down somehow, obviously, but the narrowing should not be done through the funnel of who does the harvesting. So, I'm not in favor of CCAMLR having sole leadership on this. I'm deeply concerned that the harvesting interests will take control over what the conservation of biodiversity interests want or might want to run with…It's a harvester's club, and you shouldn't feel like there's anything necessarily wrong with that. It's just that you can't put the fox in charge of the henhouse.

Halpern et al. (2004) back this perspective, stating that no-take zones "need not, and perhaps should not, be designated with fisheries management as a primary goal." As Table 3 shows, Austral Fisheries, Petuna Fisheries, the Australian Department of Agriculture, Fisheries, and Forestry, and the Australian Fisheries Management Authority each cite that either curbing illegal fishing or aiming for economic fishing sustainability as a primary reason for creating an MPA.

Lastly, participants suggested that the process of stakeholder inclusion itself has limits. Identifying and analyzing stakeholders does not guarantee that they are represented or treated fairly. One respondent mentioned that the CCAMLR Consultative Forums within the Australian delegation were "done deals" prior to showing up for the meetings; views are stated and stakeholders are used as a "ground-truthing" exercise against the government's positions that were crafted prior to even attending the events.

With this critique of the Australian Antarctic Division and other government agencies, it should be noted that the Australian Antarctic Division also expressed concerns with regards to stakeholder communications. According to one Australian Antarctic Division respondent, the only time they hear from some conservation groups is at the CCAMLR Consultative Forums, noting, "at times we get a bit of deathly silence from conservation groups in particular… the NGO conservation interests are certainly welcome to contact us at any time [of the year]. …We generally don't hear from them too much except around the time of the Consultative forums."

Supporting this notion is a comment from another Australian Antarctic Division respondent in response to being asked if all stakeholders are represented in high-seas MPA discussions: “No, I don’t think all stakeholders are represented. I think primarily in the high seas discussions, the stakeholders that are interested in conservation and marine biodiversity aren’t represented.” Another viewpoint was stated by one NGO respondent regarding the issue of stakeholder involvement related to high seas MPAs: “Stakeholders are not represented so long as the framework of the MPA is bioregionalization. This limits the process to a small number of stakeholders because it hasn’t gone past the technical phase and it hasn’t gone past a political legal agenda. Progress on multiple fronts has not been occurring.” Even in the case of the Australian delegation where stakeholders are well represented, there appears to be room for improvement when it comes to communications, particularly in relation to conservation NGOs, which could liaise throughout the year instead of three times per year solely within the context of the CCAMLR consultative forums.

Chapter Five: Conclusion

This study set out to explore how the ACERA method of stakeholder identification and mapping worked. Its goal was to examine the benefits and disadvantages of using that method. And it attempted to assess what the ACERA method revealed about how individuals within Australian organizations viewed the establishment of an MPA in the Southern Ocean.

The ACERA method is a semi-structured and sequential technique for identifying and evaluating interactions among stakeholders. The method has four steps, two of which have been carried out here. First, identify relevant stakeholders--those that are affected by and can affect a particular project. Second, assess and evaluate their interests and influence. Third, map those interests visually. Fourth, use stakeholder maps to advance the objectives of an organisational or project. In this study, the ACERA method was used to identify and evaluate Australian stakeholders—particularly individuals representing institutions—involved in the creation of an MPA in the Southern Ocean.

The ACERA method proved useful in identifying 27 institutional stakeholders concerned with an Australian MPA in the Southern Ocean. It demonstrated that most of these stakeholders are in favor of an MPA. And it documented that the majority of the 13 respondents interviewed for this study felt that the MPA process was relatively inclusive and representative. The analysis indicated that in relation to critical conservation and geopolitical issues, conducting a stakeholder analysis was a valuable tool for identifying relevant stakeholders, as well as those currently excluded from the process. The relationships among stakeholders revealed in this study drew attention to interactions of power as well as disparities in influence, differences in terminology, and variations in motivations.

However, the author also encountered difficulties in using the ACERA method. The appropriate unit of analysis is subject to debate. It was a challenge determining who really spoke for whom; were the individuals in interviews giving their own views or the views of their institutions? The method also leaves unresolved how to incorporate conflicting views. In at least one situation, the stakeholders within a single group—academic researchers—disagreed about the need for an MPA. The ACERA method tells us little about how to resolve these conflicts. It also offers little guidance concerning who counts as a legitimate stakeholder.

Another complication to using the method is the complex issue of who or which institutions are actually considered stakeholders. The study therefore agrees with the potential weaknesses of stakeholder analyses proposed by Billgren and Holmen (2008), Mushove and Vogel (2005), and Wu (2007) who warn of the hazard of not having a succinct definition of what a stakeholder actually is. Further the research presented here confirms some of the findings from Wu (2007) who argued that a stakeholder can include virtually anything or anyone especially when they are permitted to classify themselves as stakeholders.

Despite these challenges, this research found stakeholder analysis useful. It supports the beneficial views of stakeholder analysis from Özesmi and Özesmi (2003), Billgren and Holmén (2008), and Mushove and Vogel (2005) in that such an approach facilitates inclusion of stakeholders that would otherwise be overlooked or marginalized.

Finally, the ACERA method revealed stakeholders' views that the process of creating an MPA in the Southern Ocean is controversial. More specifically, respondents cautioned that fishing and securing long-term economic sustainability can overshadow stronger conservation measures. Some expressed concern over the lack of involvement or communication from conservation NGOs. As such, disparities in level and types of involvement can be revealed and

rectified accordingly. Emphasizing this fact were numerous respondents expressing concern over a high seas MPA being created through the filter of fishing interests. The central lesson is that striking a balance among stakeholders is key if they are to promote more sustainable fisheries management in the Southern Ocean. Otherwise, stakeholder participation so far amounts to little more than putting the "fox in charge of the henhouse."

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Appendix 1: List of Acronyms

AAD	Australian Antarctic Division
ACE/CRC	Antarctic Climate and Ecosystems Cooperative Research Centre (ACE/CRC)
ACERA	Australian Centre of Excellence for Risk Analysis
ASOC	Antarctic and Southern Ocean Coalition
ATCM	Antarctic Treaty Consultative Meetings
ATS	Antarctic Treaty System
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCAS	Convention for the Conservation of Antarctic Seals
CEP	Committee for Environmental Protection
COLTO	Coalition of Legal Toothfish Operators
COMNAP	Council of Managers of National Antarctic Programs
CSIRO	Australia's Commonwealth Scientific and Industrial Research Organization
DAFF	Department of Agriculture, Fisheries, and Forestry
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization
IAATO	International Association of Antarctic Tour Operators
IUCN	The International Union for the Conservation of Nature
IUU	Illegal, Unregulated, and Unreported
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NGO	Non-Government Organization
RFMO	Regional Fisheries Management Organization

SCALOP	Standing Committee on Antarctic Logistics and Operations
SCAR	Scientific Committee on Antarctic Research
SOUTHMAC	Sub-Antarctic Fisheries Management Advisory Committee
UN	United Nations
WWF-AU	World Wildlife Fund of Australia

Appendix 2: Sample Solicitation Letter

February 2007

Dear Dr. [name],

I am a MS student at Virginia Tech in the College of Natural Resources in Geography. Working under the supervision of Dr. Lawrence Grossman, I am conducting a qualitative research study that seeks to initiate a dialogue about stakeholder involvement when creating a marine protected area. This particular research emerges from Antarctic governance, fisheries management, and conservation literature.

As part of this study, I am conducting interviews with a small number of participants working in the realm of the proposed marine protected area in the Southern Ocean. As part of this research, I would be very interested in speaking to you about your important work on [Insert here].

For this reason, I am inviting you to allow me to interview you. I foresee this process lasting approximately 30 minutes, and it can occur by phone, via an online chat program, face-to-face at your office, or a location of your choosing. This interview may be audio-recorded and transcribed. The notes from our interview will not be made public, although I will draw upon our discussion for my thesis and any resulting publications, which you will have the option to review prior to submission. Respondents will also be guaranteed confidentiality.

You will be free to raise any questions or concerns with me (or my advisors) at any point before, during, or after the interview, and may end the interview at any time if you choose. Please be assured that you are under no obligation to agree to participate.

Although the findings of this study may not benefit you directly, by participating in this study you will be contributing to the production of new knowledge and the training of a new researcher. If you choose not to review the publications that use selections of our interview prior to their submission, you may access the entire dissertation once it is completed if you wish, through Virginia Tech's Electronic Thesis and Dissertation Library (http://etd.vt.edu/).

Thank you for your consideration. Please contact me by phone at 330.389.1814 or by email at Simanke@vt.edu with any concerns or questions you may have.

Sincerely,

Kelly E. Siman

Appendix 3: Informed Consent Document

Title of Project: Overfishing and the Importance of Social Factors in Creating a No-Take Marine Protected Area in the Southern Ocean.

Investigator: Kelly E. Siman

I, _____, understand that Kelly E. Siman wishes to interview me as part of the research project on "Overfishing and the Importance of Social Factors in Creating a No-Take Marine Protected Area in the Southern Ocean" that she is completing as her thesis for the Virginia Polytechnic Institute and State University. I understand that participation in this study may involve answering questions about:

- my work/professional history involving Antarctic and fisheries governance;
- my feelings and/or attitudes towards certain aspects in the field of Antarctic governance

I understand that the interview will take approximately 30 minutes, and that Kelly E. Siman will be making her best possible effort to guarantee me every possible protection, including the following:

1. I am under no obligation to be interviewed if I do not wish to do so.

2. I am not obligated to answer any of the questions. I may decline to answer any or all of the questions, and I may terminate the interview at any point.

3. If there is anything that I do not wish to have quoted, I may say, at any point during or after the interview, what I wish to have kept "off the record," and it will not be quoted.

4. I understand that my identity will be kept confidential, and that full confidentiality will be guaranteed. No quote from or reference to this interview will be published in a way that will reveal my identity without my written consent.

5. I understand that while I may not benefit directly from the study and will not be paid for my participation, the information gained may contribute to creating an MPA in the Southern Ocean.

6. I understand this interview may be tape-recorded and transcribed, with my separate permission. Both the recordings and transcripts are strictly for purposes of the current research project, and will not be shared with any third party.

_____ _____ _____

Name of Participant Signature Date

I hereby give permission to have this interview tape-recorded:

_____	_____	_____
Name of Participant	Signature	Date

Principal Investigator
Kelly E. Siman
330.389.1814
simanke@vt.edu

Project Supervisor
Dr. Lawrence Grossman
540.231.5116
lgrossmn@vt.edu

Appendix 4: Sample Interview Transcript

Date: _____ Time Start: _____ Time End: _____
Location:_____ Recorder Number:_____

I am a graduate student at Virginia Tech conducting research about overfishing in the Southern Ocean. I would like to ask you to participate in my study, which is also a requirement for my Masters degree in Geography. . The interview should take about 30 minutes and participants are guaranteed anonymity and confidentiality. The study will not divulge personal information, and participants are under no obligation to answer questions. I would like to record the interview so that I can transcribe participant responses. If you agree to let me interview you, please let me know if you prefer to skip any questions, and always remember that your participation is voluntary. Presuming you agree to participate, and to have our interview recorded, please sign below.

_____
Signature

_____
Date

_____
Email address

Here is a blank sheet of paper. If you think of anything that pops up during our talk or have any questions , write them down and we can go over them if or when you wish.

I would like to ask you some questions about the following issues.
Here's what we're going to do: first, we'll start with…

A couple general questions about your role in the Antarctic and Southern Ocean
Next, we'll go on to Marine protected areas
And then end with a brief mapping exercise.

RECORD INTERVIEW

1. Can you tell me a little about your background?

    a. (if not already answered) How did you become involved in Antarctic and Southern Ocean issues?

    b. (if not already answered) So I've heard and read a lot about the potential creation of a marine protected area in the S. Ocean. What's been your role?

2. What can you tell me about the proposed MPA?

a. What is the current status of the MPA?

b. I know the term "marine protected area" gets used quite a lot, but that there are different meanings for this – how do you view this term?

**According to the IUCN, the term "marine protected area" is "any area that is part of the marine environment – waters, marine species, and plants - that has been reserved by law or other effective means to protect part or all of the enclosed environment." I have a few more questions about the potential creation of this type of MPA. For these questions, please consider that this is the type of MPA we're talking about.*

c. Can you tell me a little bit about the planning process?

3. What type of MPA would you like to see?

a. What is your primary goal for establishing an MPA in the Southern Ocean?
b. What do you think will be needed to make the MPA successful?

c. Do you believe the MPA will be successful?
   Why?
   Why Not?

d. Do you perceive any threats to the creation of a successful MPA?
   No: Why not?

4. What can you tell me about IUU fishing in the SO?

a. In terms of IUU fishing, who is involved?

b. Do you believe IUU fishers would ever partake in MPA discussions?
   No: why not?
   Yes: Have they been invited to the formal discussions?

5. Who do you think should be involved in the MPA planning process?

a. Who are you closely collaborating with?

b. Are there other groups or individuals not currently involved in the process that you would like to see get involved?

No: So you feel that all involved parties are adequately represented?
Yes: who?

c. Are all groups equally involved in the process?

d. Who is the main driver of this agenda?

e. Are there any groups that do not want an MPA?

f. *If I were a fisher, I'd be pretty skeptical about an MPA. What do you think about this MPA?

g. Are there others involved in trying to create the same type of MPA that you are?

NO: What type of MPA do other organizations wish to create?
Why?

h. Do you think other groups or people have a different vision for the MPA other than yours?

No: so all groups are in accordance with one another?
Yes: Who?
Why?

i. In your view, is there any other organization that should be included in the discussion that is not?

YES: Who?

NO: Why not?

j. Are all parties who want to be included actually included in the discussion?

NO: Why not?

k. Do you feel your organization is being adequately represented in the discussion of an MPA?

NO: why not?

l. Do you feel communications between each group involved in the MPA process are good?
YES: Why?

NO: How do you believe communications could be better?

6. *I am going to show you a map of the Southern Ocean. Would you mind showing me where you would like to see an MPA established?*

    a. Is there a particular reason you would like to see it placed there?

    b. Are there any other locations you could potentially see the MPA being established?

    c. Would you rather see an MPA established near Australia?

    *If Yes: *Here is a map of near Australian waters – could you show me where the MPA would best be placed?*
    Why?

7. Is there anything else you would like to add that we did not discuss today?

    NO: *Here is my business card: if you think of anything else you would like to add, please let me know.

END RECORDED INTERVIEW

Appendix 5: Regional Fisheries Bodies Established under the UN FAO

1. APFIC - Asia-Pacific Fishery Commission
2. CECAF - Fishery Committee for the Eastern Central Atlantic
3. GFCM - General Fisheries Commission for the Mediterranean
4. IOFC - Indian Ocean Fishery Commission
5. IOTC - Indian Ocean Tuna Commission
6. WECAFC - Western-Central Atlantic Fishery Commission

Non-FAO established Regional Fisheries Bodies

1. COREP - Comité Régional des Pêches du Golfe de Guinée
2. CCAMLR - Commission for the Conservation of Antarctic Marine Living Resources
3. CCSBT - Commission for the Conservation of Southern Bluefin Tuna
4. CSRP - Commission Sous-Régionale des Pêches
5. FFA - Forum Fisheries Agency (of the South Pacific Forum)
6. IATTC - Inter-American Tropical Tuna Commission
7. IBSFC - International Baltic Sea Fishery Commission
8. ICCAT - International Commission for the Conservation of Atlantic Tunas
9. IPHC - International Pacific Halibut Commission
10. IWC - International Whaling Commission
11. CTMFM - Joint Technical Commission for the Argentina/Uruguay Maritime Boundary
12. OLDEPESCA - Latin American Fisheries Development Organization
13. NEAFC - North-East Atlantic Fisheries Commission
14. NPACF - North Pacific Anadromous Fish Commission
15. PICES - North Pacific Marine Science Organization
16. NAFO - Northwest Atlantic Fisheries Organization

17. NASCO - North Atlantic Salmon Conservation Organization

18. PSC - Pacific Salmon Commission

19. CPPS - Permanent Commission for the South Pacific

20. SPC - South Pacific Commission

21. SPF - South Pacific Forum Secretariat

Source: UN Oceans and Law of the Sea: Intergovernmental Organizations – Regional Fisheries Bodies