Implementation of a marine protected area in Chile: consequences of neglecting local socio-cultural factors

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A thesis submitted for the degree of

Doctor of Philosophy

At the University of Otago, Dunedin

New Zealand

April 2012
To my family
Abstract

Through ethnographic enquiry and an anthropological approach this thesis provides insights into the socio-cultural dynamics surrounding local communities’ participation in a Multiple-Use Marine Protected Area (MUMPA). Using a broad range of sources, this research illustrates the different nuances of local relationships. The methodology included small-scale group settings facilitating an in-depth anthropological study that offers a privileged understanding of the social realm of MUMPA. The assessment focuses on elements of Integrated Conservation Development Projects (ICDPs), employing Lafken Mapu Lahual (LML) MUMPA as a case study—in Chile—that shows the applicability of this type of project in a specific Latin American context.

The research examines the reasons why inclusion of human aspects, including the implications of social and cultural characteristics, has not received much attention in Marine Protected Areas (MPAs). In addition, the consequences and effects of this exclusion are discussed. The analysis shows that the local reality is more complex than portrayed by the LML MUMPA staff, including their failure to adequately learn about the social and cultural way of organising, interests and history of local communities. This oversight hindered the local people’s engagement in the LML MUMPA. This thesis specifically addresses the project’s exacerbation of conflict over resource access between the indigenous communities included in the LML MUMPA project and the historical artisanal fishers that were excluded from it. The LML MUMPA regulated resource rights to an area providing the former group free access while simultaneously denying such access to the latter group.

The ICDP approach, which provided the framework for the LML MUMPA, established prescriptions of who would be the appropriate participants in a marine conservation area: the indigenous people. However, the approach uses only one idea to describe and define indigenous social and cultural characteristics. This thesis shows that
diverse culturally defined resource use practices—as an element on which project staff based their selection of main stakeholders and to allocate benefits of the LML MUMPA—challenge the simple application of ICDPs to marine and coastal areas.

The conclusion drawn from the analysis of the research is that different situations obstructed the LML MUMPA deployment. These different situations are important in that they show the complexity of the concepts of ethnicity and local stakeholders. At a superficial level, several seemingly successful and representative organizations failed to fulfil the role of project stakeholders. Also, the official commitment of the regional authorities was not fulfilled, which hampered the viability of the LML MUMPA. This analysis outlines the importance of managing the local participants’ expectations of the benefits from their involvement in the project. This is paramount for long term engagement. These issues are important in that they help to develop arguments about the complexity of social and cultural concepts in marine conservation projects based on biological parameters.
Acknowledgements

I would like to acknowledge my supervisor Chris Rosin who believed in me and my research. He encouraged and helped me with great exertion with all his intellectual guidance. He was always happy to answer any of my questions and always gave a significant amount of comments about my work which helped me a lot. I am his first PhD student and I’m sure I won’t be the last. To my supervisor Hugh Campbell for all his logistical support in taking important decisions and his time for writing support letters throughout the PhD. To my supervisor Jim Williams for his guidance and insights regarding indigenous communities.

I owe many thanks to the people in the town of Bahía Mansa and all through Chile who shared their opinions and experience in their interviews. All the people in my fieldwork site who with humility and cheerfulness let me into their lives.

To Alonso Hinostroza for all his help as a local in my fieldwork and for the contacts he provided me in the field and his friendship. For making me brave enough to go through the adventures to get to my interviewees during fieldwork.

Thanks to all the people that helped with the proof-reading of my thesis; Bojun Chiswell, Michelle Willmott, Jenny Chamberlain, Jill Harland, Jennifer Angelo, Margaret Finney and especially Anne Ford, without whose help during the last months of my thesis writing, I just could not have made it. Many thanks as well to Cecilia Ramírez, the geographer who made the maps presented in this thesis.

To my mentor, the archaeologist Andrea Seelenfreund, for her example in doing a PhD in Dunedin 25 years ago, for her contacts and guidance, and for always being supportive, very prompt, efficient and available at any time.

To Mauricio Gálvez for letting me know about the place that ended up as my case study and his insights and information about the topic of marine protected areas.
To my dear ex-officemates in the Anthropology Department - Marsa, Anne and Ron - and my friends in Dunedin - Sumana, and Mauricio Cubillos - who always have been supportive, understanding and have cheered me up in all the shortcomings and drawbacks I went through with this PhD. Also thanks for their advice from their own experience in their Master and PhD theses.

Also my family for their support and for caring all through the process of my academic life in New Zealand.

I want to thank my partner Mariano Rodríguez for his encouragement and being so caring and thoughtful during all my ups and downs in this process. Also he was my technical support in all the thesis formatting and structure. Especially for his emotional support and not letting me give up when he also was having difficulties with his own PhD. Undertaking this journey of doing a PhD in a foreign country has been a great challenge.

To my dear meditation instructor and friend Simon Luna, who helped me with writing my thesis proposal to be able to apply for the scholarship that funded my PhD. He passed away in 2007 but he always will be in my heart.
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<td>ABWC</td>
<td>Alaska Beluga Whaling Committee</td>
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<tr>
<td>CBD</td>
<td>Convention of Biological Diversity</td>
</tr>
<tr>
<td>CDP</td>
<td>Project Board Committee</td>
</tr>
<tr>
<td>CI</td>
<td>Conservation International</td>
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<tr>
<td>CIID</td>
<td>Centro de Investigaciones del Desarrollo</td>
</tr>
<tr>
<td>CMT</td>
<td>The Customary Marine Tenure</td>
</tr>
<tr>
<td>COICA</td>
<td>Coordinating Indigenous Organizations of the Amazon</td>
</tr>
<tr>
<td>CONADI</td>
<td>National Corporation of Indigenous Development (Chile)</td>
</tr>
<tr>
<td>CONAF</td>
<td>National Forest Corporation (Chile)</td>
</tr>
<tr>
<td>CONAMA</td>
<td>National Environmental Commission (Chile)</td>
</tr>
<tr>
<td>CONAPACH</td>
<td>National Corporation of Artisanal Fishing (Chile)</td>
</tr>
<tr>
<td>CORE</td>
<td>Regional Council</td>
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<tr>
<td>COREPA</td>
<td>Artisanal Fisher Regional Corporation</td>
</tr>
<tr>
<td>CORFO</td>
<td>Chilean Economic Development Agency</td>
</tr>
<tr>
<td>CPALO</td>
<td>Osorno Shoreline Artisanal Fisher Council</td>
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<tr>
<td>EAF</td>
<td>Ecosystem approach to fisheries</td>
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<tr>
<td>EBAFM</td>
<td>Ecosystem-based approaches to fisheries management</td>
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<tr>
<td>EBM</td>
<td>Ecosystem-based approach characteristics</td>
</tr>
<tr>
<td>ESBA</td>
<td>Base Line Study of loco resource</td>
</tr>
<tr>
<td>FAGA</td>
<td>The Fishing and Aquaculture General Act</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization (United Nations)</td>
</tr>
<tr>
<td>FEDEPESCA</td>
<td>Fishing Federation</td>
</tr>
<tr>
<td>FNDR</td>
<td>National Fund for the Regional Development (Chile)</td>
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<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographical Information System</td>
</tr>
<tr>
<td>ICDP</td>
<td>Integrated Conservation and Development Projects</td>
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<tr>
<td>ICM</td>
<td>Integrated Coastal Management</td>
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<td>ICZM</td>
<td>Integrated Coastal Zone Management</td>
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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>IFQ</td>
<td>Individual Fishing Quotas</td>
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<tr>
<td>ITQ</td>
<td>Individual Transferable Quotas</td>
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<tr>
<td>IUCN</td>
<td>International Union for the Conservation Union</td>
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<tr>
<td>LEK</td>
<td>Local Ecological Knowledge</td>
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<tr>
<td>LME</td>
<td>Large Marine Ecosystems</td>
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<tr>
<td>LML</td>
<td>Laftken Mapu Lahual</td>
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<tr>
<td>MEABR</td>
<td>Management Exploitation Areas of Benthic Resources</td>
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<tr>
<td>MPA</td>
<td>Marine Protected Area</td>
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<td>MRMP</td>
<td>Marine Resources Management Plan</td>
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<tr>
<td>MUMPA</td>
<td>Multiple Use Marine and coastal Protected Area</td>
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<tr>
<td>NFS</td>
<td>National Fisheries Service (Chile)</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NOAA</td>
<td>National Oceanic and Atmospheric Administration (USA)</td>
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<tr>
<td>NZAID</td>
<td>New Zealand Aid and Development Agency</td>
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<tr>
<td>NZCPS</td>
<td>The New Zealand Coastal Policy Statement</td>
</tr>
<tr>
<td>PA</td>
<td>Protected Area</td>
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<tr>
<td>PDF</td>
<td>Project Development and Preparatory Facility</td>
</tr>
<tr>
<td>RCF</td>
<td>Research and Conservation Foundation</td>
</tr>
<tr>
<td>RPA</td>
<td>Artisanal Fisher Registration (Registro Pesca Artesanal)</td>
</tr>
<tr>
<td>SERCOTEC</td>
<td>Technical Cooperation Agency</td>
</tr>
<tr>
<td>SERNAPESCA</td>
<td>National Fishing Service (Chile)</td>
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<tr>
<td>SUBPESCA</td>
<td>Under secretariat of Fisheries (Chile)</td>
</tr>
<tr>
<td>TEK</td>
<td>Traditional Ecological Knowledge</td>
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<tr>
<td>TEKMS</td>
<td>Traditional Ecological Knowledge and Management Systems</td>
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<tr>
<td>TEKW</td>
<td>Traditional Ecological Knowledge and Wisdom</td>
</tr>
<tr>
<td>TNC</td>
<td>The Nature Conservancy</td>
</tr>
<tr>
<td>TURF</td>
<td>Territorial User's Right in Fisheries</td>
</tr>
<tr>
<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UNEP</td>
<td>United Nations Environment Program</td>
</tr>
<tr>
<td>USAID</td>
<td>Agency for International Development (USA)</td>
</tr>
<tr>
<td>WCS</td>
<td>Wildlife Conservation Society</td>
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<tr>
<td>WWF</td>
<td>World Wide Fund for Nature (formerly World Wildlife Fund)</td>
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Chapter 1

Introduction

The complex relationship between indigenous communities and ecological conservation has become a compelling issue for scholars interested in how to make conservation more responsive to local needs. These issues arise around new reserve areas, like Marine Protected Areas (MPAs), which are an important conservation strategy in countries like Chile. Through ethnographic enquiry and an anthropological approach this thesis provides insights into the socio-cultural dynamics surrounding local communities’ participation in a Multiple-Use Marine Protected Area (MUMPA). Using a broad range of sources, the research illustrates the different nuances of local relationships. The methodology included small-scale group settings facilitating an in-depth anthropological study that offers a privileged understanding of the social realm of MUMPA. The assessment focuses on elements of Integrated Conservation Development Projects (ICDPs), employing Lafken Mapu Lahual1 (LML) MUMPA as a case study in Chile that shows the applicability of this type of project in a specific Latin American context.

The research examines the reasons why inclusion of human considerations, as well as the implications of social and cultural characteristics, has not received much attention in MPAs. In addition, the consequences and effects of this exclusion are discussed. The analysis shows that the local reality is more complex than portrayed by the LML MUMPA staff, including their failure to learn adequately about the history of local communities, as well as, the social and cultural way of organising, interests, needs and the local political dynamics. This oversight hindered the local people’s engagement in the LML MUMPA.

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1 Lafken Mapu Lahual is the name of the MPA.
This thesis specifically addresses the project’s exacerbation of conflict over resource access between the indigenous communities included in the LML MUMPA project and the historical artisanal fishers that were excluded from it. The LML MUMPA regulated resource rights to an area providing the former group free access while simultaneously denying such access to the latter group. In undertaking this enquiry, the overall intention of this thesis is to demonstrate the value of ethnographic research in making a potentially positive contribution to conservation projects which are attempting to combine both ecological conservation and social development.

The first task of the thesis is to provide the broad background context to the Global Environmental Facility (GEF) Marino project and the kinds of concerns about such projects that are emerging in the international literature on ICDPs.

### 1.1. History and political context of the GEF Marino project

Sixty percent of the population of Latin America and the Caribbean lives less than 100 kilometres away from the coast. In addition, since 2010, 80 percent of the world’s population lives 100 kilometres away from the coast. These figures suggest a great threat to the coastal and marine resources necessary to provide a strategic basis for sustainable environmental development. Through multiple assessments of the world’s coastal areas, it can be established that 29 percent of the shoreline in Central America, together with 50 percent in South America, are under high and medium threat of depletion due to natural resources overexploitation and lack of the natural environmental conservation. During the government of Ricardo Lagos (2001-2005), Chile assumed the responsibility and the commitment to carry out concrete and effective actions to protect its biodiversity. To accomplish this task, the government planned a network of MPAs. Notwithstanding, the Lagos presidential vision consisted of a new approach to nature conservation in which the goal is to integrate the biological environment, including the people and the communities as a main participant in the conservation actions in these areas, through the establishment of sustainable activities. This vision was the basis of the Biodiversity Protection National
Strategy created in 2003, in which the main premise was to integrate development and nature conservation (Gobierno de Chile/Proyecto GEF Marino/PNUD\(^2\), 2006).

The Chilean MUMPA was a project funded by the GEF based on the Biodiversity Protection National Strategy and was part of the MPAs network Lagos’s government planned to carry out. Previously, Chilean marine and coastal protection legislation were separated. As a result, the Chilean Government created a new regulation specifically developed for the establishment of the MUMPAs, which simultaneously protected the sea and the coast. MUMPAs are seen as “Multiple Use”, that is, both marine and coastal areas used for several purposes, including eco-tourism, fishing, and no-take areas (conservation). The government's goal via this legislation was to remove legal and institutional barriers to the establishment of the MUMPAs. In order to remove these barriers in a practical sense, the MUMPA staff had to define and implement an integrated management system for coastal and marine biodiversity. This objective was carried out by establishing MUMPAs in sites of global importance (UNEP\(^3\)/CBD\(^4\), 2006).

The GEF is a partnership among Non-Governmental Organizations (NGOs), international institutions such as the UNDP, the UNEP, the World Bank, 178 countries, and the private sector that contributes funds to palliate environmental issues by implementing GEF projects worldwide (GEF, 2008). The GEF has been one of the most important global promoters of conservation projects, and takes a socio-economic development approach to the conservation of marine and coastal resources (Nakashima, 1997; Chapin, 2004). GEF administrated the MUMPA project in partnership with both the UNDP and the Government of Chile in a program called “Conserving Globally Significant Biodiversity along the Chilean Coast”, also known as the GEF Marino project. This project was designed to assist the Chilean Government in managing marine and coastal biodiversity through the establishment of protected areas (PAs) along the Chilean coast focussed on the conservation and sustainability of fishing practices. In 2005, the Chilean government created three MUMPAs in different critical sites of Chile in the III, X and XII regions (Figure 1.1).

\(^2\) United Nations Development Program (UNDP).
\(^3\) United Nations Environmental Program.
\(^4\) Convention of Biological Diversity.
Figure 1.1: Map of Chile and location of three MUMPAs established

According to the National Environmental Commission of Chile (CONAMA), the objectives of the GEF Marino project were as follows (CONAMA, 2004):

- Establish the MUMPAs physically and legally
- Create administrative and governance structures
- Develop an adaptative management system
- Generate a pilot tourism project
- Promote environmental awareness and education
- Repeat this initiative regionally
- Repeat this initiative nationally.

As indicated above, the main objective of the MUMPA is to protect and conserve biodiversity. One of the strategies mobilised to achieve this conservation task was to develop socio-economic strategies for local communities that depended specifically on that biodiversity. The pilot tourism project mentioned above as a primary objective constitutes
the MUMPA’s socio-economic strategy. This pilot tourism project was based on the idea that, by developing eco-tourism projects, environmental conservation could be encouraged. Eco-tourism would then generate revenues for creating monitored MPAs. Thus, the MUMPA was going to protect marine and coastal resources by restricting the access to the area except for sustainable fishing and eco-tourism practices. The latter would also contribute to alleviating poverty for local people and creating a non-consumption-based alternative to resource use. Thus, eco-tourism was an alternative that would contribute to the economic development of the local communities. Eco-tourism was sought as an alternative because, in developing countries like Chile, environmental depletion is related historically to a wide range of problems, such as multiple use conflicts, poverty and unequal access to natural resources (Taylor, 1998).

The GEF Marino utilises an approach based on projects that integrate conservation and development, which reflects an alternative to conservation approaches that operate solely for the purpose of natural resource preservation. Often, these conservation approaches do not consider whether biodiversity protection inhibits access to the natural resources on which local communities depend. Under this approach, local use of resources was frequently ignored and prevented (McElwee, 2010). On the other hand, socio-economic development projects typically did not focus on environmental issues. There was a move, however, towards the integration of both approaches in developing countries such as those in Latin America. This approach has been called by many names with one of the most used being Integrated Conservation Development Projects ICDPs (for example Hughes and Flitman, 2001; Jeanrenaud, 2002; Chapin, 2004; Well and McShane, 2004; Fisher et al., 2005; Johannesen, 2006; Sodikoff, 2009; Sandker et al., 2009; Blom et al., 2010; Mistry et al., 2010, Winkler, 2011; Zhang et al., 2011). This term is used in this thesis to indicate this kind of integrated approach to conservation and development.

The World Wide Fund for Nature (WWF) was the first organisation that introduced ICDPs in the late 1980s (Hughes and Flitman, 2001; Chapin, 2004; Sodikoff, 2009). These projects focus on environmental conservation while simultaneously attempting to introduce socio-economic developmental measures. These types of projects are an important approach to environmental conservation that relies on the support of environmental NGOs for small-scale conservation projects, often including the participation of indigenous people. However, ICDPs have received criticism largely due to
the fact that they do not allow complete local participation in the overall project development process (design, implementation, and evaluation), a criticism which also raises the question of how participation is conducted in these types of projects (Mistry et al., 2010; Blom et al., 2010). The lack of proper local participation is augmented by difficulties encountered working with indigenous and non-indigenous local resource users, as their engagement with conservation projects is not always an easy process. In the case of indigenous people, not all of them intrinsically value conservation. Instead, more economic concerns may take priority, such as retaining rights to land and natural resources.

At times, in order to achieve economic well-being and to sustain their livelihoods, indigenous and non-indigenous local resource users may choose unsustainable access to and exploitation of natural resources (Adams, 2009). Part of the criticism of ICDPs has therefore centred on the ability of this approach to achieve effectively the inclusion of local populations’ social and cultural aspects, and to encourage and allow their full participation in conservation projects (Chapin, 2004; Mistry et al., 2010). However, despite such criticism, this approach is still promising and relevant to conservation projects (Hughes and Flintan, 2001; Mistry et al., 2010), especially if mechanisms to better incorporate the participation of local populations are employed.

In 2002, Chile was awarded a grant worth US$310,000 from GEF. The purpose of this grant was to design a project that would support a national sustainable biodiversity initiative. Further, this grant money was to be used to realise compliance with the Convention on Biological Diversity (CBD) agreement which Chile ratified in November 1994. This agreement resulted in the MUMPA initiative. In order to transfer the funds to Chile, staff of CONAMA-Chile were required to provide a detailed plan to GEF outlining the aims of the project and what activities would be funded by the grant, together with letters of agreement from the Chilean government, which co-funded the project.

The GEF Marino project design was executed by Alvaro Rodríguez between 2000-2003, and was called the Project Development and Preparatory Facility (PDF-B). Rodríguez is a Chilean biologist who worked for the Ministry of National Lands before being hired by the CONAMA as the National Coordinator of the GEF Marino PDF-B.

5 The funding for the MUMPA was an incentive to encourage Chile’s ratification of the CBD.
6 Ministerio de Bienes Nacionales.
1.1. History and political context of the GEF Marino project

Rodríguez was in charge of selecting the marine/coastal sites where MUMPAs would be established and implemented under the full GEF project as pilot sites. In the PDF-B it was stated that two MUMPAs would be created. However, the project actually implemented three MUMPAs after Rodríguez discovered the Mapu Lahual Indigenous Park Network.

According to CONAMA (2004, p. 8), the following variables were used to assess and select the pilot sites in the PDF-B:

- “Global significance and uniqueness of biodiversity represented in the sites (species and habitat diversity and conservation status).
- Review of proximate threats and underlying causes of biodiversity loss and assessment of the urgency, nature and manageability of threats (for example, pollution sources, distance to cities, ports, and other sources of disruption).
- Condition of sites and state of conservation.
- Accessibility of site.
- Willingness of stakeholders, including local communities, to participate.
- Feasibility of establishing MUMPAs at the site based on socio-economic issues (such as land tenure).”

These variables situate this particular project within the ICDP approach, with the three first variables representing the importance of the conservation aims and the last two the relevance of socio-economic elements considered as necessary to address development aims. All these elements were requested in the GEF grant application and were fulfilled in the PDF stage, which thus allowed Rodríguez to submit the project to the GEF office in New York City. After submitting the PDF-B, CONAMA authorities and Rodríguez waited for six months to obtain the funds. The scheme was approved on the 8th of June 2005, with the project planned to take place between June 2005 and June 2010.

As stated by CONAMA (2004, p. 5), two of the development objectives of the proposed GEF Marino project were “to provide incentives to local communities to adopt sustainable alternative livelihoods and to improve awareness of local communities who rely heavily on marine resources, on the value of biodiversity and the long-term benefits of protected areas”. These objectives to be achieved by developing eco-tourism depended

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7 Information provided by the interviewee Alvaro Rodríguez.
largely on the project receiving co-funding support. Besides writing the project proposal, therefore, Rodríguez’s duty was to obtain the required co-funding from the regional governments (Intendencias) in the areas where the three MUMPAs were to be located. Thus, he required a letter	extsuperscript{8} of support from the three regional Intendentes	extsuperscript{9}, committing them to obtain the co-funding from different sources such as FNDR	extsuperscript{10} and other national government institutions. The original agreement between GEF and the Chilean government was that Chile needed to raise 70% of the total amount of the project, equivalent to US$7,913,121. Sources for such funding included regional government funds, CONAMA, and WWF collaborations. The CONAMA contributions for the GEF Marino project were to consist of staff time, office space and facilities (such as computers, telephone, fax), and logistical support. In addition, previous work done by the WWF-Valdivia in the territory intended for the MUMPAs was counted as part of the co-funding for the GEF Marino project. Hence, the GEF Trust Fund allocated a grant of 30% of the GEF Marino money, US$4,082,432, with a total project cost of US$11,995,554.

The success of the MUMPAs project also depended on the coordination and engagement of local authorities, local communities, and private interests. The Chilean government had never before taken on such a level of coordination for the establishment of a PA project. The government’s intention was to focus on facilitating the project by removing barriers: “It is expected that, by removing barriers, the successful demonstration of win-win approaches for private sector and community benefits linked to strong biodiversity conservation efforts will permit the replication of these approaches and methodologies in Chile and elsewhere in the region” (GEF, 2008a). “Removing barriers” was, in part, illustrated by the three stages on which the programme was planned to perform.

First, at a national level, the idea of the MUMPA as a concept had to be installed and implemented. At this level, eighteen institutions and organizations were involved as members of a cross-institutional board known as the Comité Directivo del Proyecto (CDP)	extsuperscript{11} (Table 1.1). Second, at a regional level, institutional structures had to be created to facilitate

\textsuperscript{8} The letter in Spanish and a translation of a portion of the pledge letter that the Intendente of the X region hand delivered to Rodríguez can be found in appendix E.

\textsuperscript{9} For administration purposes, Chile is divided into regions and the Intendente is the head of the regional government.

\textsuperscript{10} National Fund for Regional Development; in Spanish Fondo Nacional de Desarrollo Regional.

\textsuperscript{11} Project Board Committee.
the process of allocation of co-funds from the regional institutions. Third, at a local level, interaction with local communities had to be planned and incorporated into the design of the project. All of these stages were the overall responsibility of the GEF Marino staff local coordinators.12

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<tr>
<th>Table 1.1: Member’s institutions of the Comité Directivo del Proyecto GEF Marino</th>
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<tr>
<td>Under Secretariat of Fisheries (SUBPESCA)</td>
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<tr>
<td>National Fishing Service (SERNAPESCA)</td>
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<tr>
<td>Ministry of Lands/Ministerio de Bienes Nacionales</td>
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<td>Marine Under Secretariat/ Subsecretaría de Marina</td>
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<td>General Direction of Marine Territory and Merchant Marine (Directemar)</td>
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<td>Ministry of Planning and Aid (Mideplan)</td>
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<td>Ministry of Foreign Affairs/ Ministerio de Relaciones Exteriores</td>
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<td>National Tourist Service (SERNATUR)</td>
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<td>Regional Governments of III, X and XII Regions</td>
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<tr>
<td>World Wide Fund for Nature (former World Wildlife Fund (WWF))</td>
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<tr>
<td>The Nature Conservancy (TNC)</td>
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<td>National Forest Corporation (CONAF)</td>
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<td>United Nation Development Program</td>
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<tr>
<td>National Environmental Commission (CONAMA) Regional Head, III, X and XII Regions</td>
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An open-application selection process to choose the National and Local Coordinators was implemented after the project was approved. Roberto de Andrade, a Brazilian fisheries engineer who undertook his university studies in Chile, was appointed as the National Coordinator of the GEF Marino project. His role was to coordinate the three MUMPAs from CONAMA-Santiago. The National Coordinator of the PDF stage, Alvaro Rodríguez, was appointed as local coordinator for the MUMPA located in the northern III Region of Atacama, called Isla Grande de Atacama. Andrea Cabezas, a geographer with postgraduate studies in biodiversity conservation and eco-tourism, was appointed to manage the Francisco Coloane MUMPA, located in Carlos III Island, XII Region of Magallanes and

12 Information provided by interviewee Cecilia Godoy.
Chilean Antarctic. Cecilia Godoy, a biologist with twenty years experience working with artisanal fishers’ organizations and on the management of marine resources was appointed for the LML MUMPA in the X Region of Los Lagos.

1.2. Indigenous participation, indigeneity and consequent difficulties in GEF Marino project implementation

Ultimately, the LML MUMPA became the only MUMPA in which the participation of indigenous communities was possible. The LML MUMPA of Los Lagos X region is located in the Río Negro County, Osorno Province (Figure 1.2), adjacent to the temperate rainforest along the Valdivian coastal range area known as the Mapu Lahual Territory. The WWF has designated this rainforest as a priority area for conservation, and it is characterized by enormous biodiversity, including endangered endemic flora and fauna (WWF, 2007). The total PA of the LML MUMPA is 5,431 ha, including approximately 4,463 hectares of sea. It is 32 kilometres long and extends one nautical mile from the highest tide on the coast. The LML MUMPA also includes the rivers Huellelhue and Cholguaco.

During the GEF Marino PDF stage, Rodríguez, the coordinator, actively sought the involvement and participation of the indigenous communities located adjacent to the LML MUMPA in order to engage them in sustainable activities. Rodríguez assured the indigenous people that, with the implementation of the LML MUMPA, their community would receive village improvements such as road construction, tourism infrastructure, ports, and power. Gaining indigenous communities approval for the LML MUMPA was vital both in order to receive the GEF grant and for the implementation of the project. The GEF Marino needed the participation of indigenous communities living adjacent to the LML MUMPA, because they would protect and police the marine and coastal resources. One significant issue for the required participation of indigenous people in implementing this MUMPA was that most indigenous people have low education levels and are even
illiterate. Furthermore, their needs and perceptions of the LML MUMPA were closely associated with their livelihood, particularly because their entire lives have consisted of surviving in poor and very hard conditions. To grasp fully the implications of the LML MUMPA, these people needed to be able to process the information in their own time-frame and to participate on a regular basis throughout the LML MUMPA implementation process.

Nine communities of the Mapu Lahual Territory are considered for the purposes of this research (Figure 1.2). The logging of the larch tree (in Spanish *alerce*) is the main source of income for most of these communities. In Mapuche-Huilliche indigenous language, “Mapu Lahual Territory” can be translated as “Mapu” = Land and “Lahual” = *Alerce*, thus, the name of this territory means “land of the *alerce*”.

**Figure 1.2:** Location of the nine indigenous communities and the management and protected areas.

Despite the fact that these indigenous groups were established relatively recently, and some members are of European descent, they are legally recognised as indigenous communities. This status allowed them to receive benefits and privileges from the GEF Marino project.

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13 This language is called Mapudungun-Chesungún
One of Rodríguez’s important missions, therefore, was to engage the four local indigenous communities mentioned and to obtain from them an endorsement of the project, including a written agreement. This endorsement was an integral element of the ICDP approach. If the communities declined to participate in the project, the development component of the GEF Marino project could not continue. Rodríguez obtained this endorsement in June 2002. Prior to 2002, indigenous communities were not interested in their marine resources except for personal consumption. Conflict over access to marine resources arose, however, when conservation organizations began campaigning against the purchase of alerce products, which eventually undermined indigenous economic activity. Consequently, the decline in consumption of alerce products forced these four indigenous communities to turn to fishing activities for their livelihood. However, fishing requires knowledge and skills that the majority of the indigenous inhabitants lacked within the LML MUMPA. The shift of indigenous people to fishing activities also clashed with the interests of artisanal fishers who had historically made use of marine resources.

The LML MUMPA was therefore intended to alleviate the poor economic situation of local indigenous groups which had been created by the enforcement of access restrictions to forest resources before the LML MUMPA was established. However, as outlined above, as Rodríguez was negotiating with the indigenous communities, tensions also existed with other non-indigenous local groups in regards to access rights to benthic resources.

Today, legal indigenous communities have successfully claimed the right to access these marine resources. However, they are still working to gain rights to the forest and land resources. The central issue at this point is that indigenous communities have based their claims on their indigeneity; on being the ancestral users of those lands. However, in reality they have only lived there periodically during, at most, forty years, some even less. Moreover, they have arguably already experienced massive transformation of their indigenous culture and now primarily identify culturally with their main occupation as “alerce workers”, or alerceros in Spanish.

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14 Information provided by the interviewee Alvaro Rodríguez.
15 Benthic: The collection of organisms living on or in sea or lake bottoms (Diccionario de la Lengua Española 1986, author’s translation).
16 Through the Management Exploitation Areas of Benthic Resources (MEABRs) and the MUMPA.
These indigenous communities have extensive influence in negotiating the terms of governance and resource access in the LML MUMP, relying on their status as indigenous people and as the dwellers of the land adjacent to the LML MUMP. However, most of the indigenous communities’ inhabitants actually live for most of the year in Bahía Mansa town\textsuperscript{17}, not in their communities. In addition, these indigenous people come from different areas of southern Chile, hence, they are not originally from the Mapu Lahual Territory, and neither are they the legal owners of those lands. Despite these facts, the GEF Marino staff granted more influence in the LML MUMP negotiations to this group.

For the historical artisanal fishers, the indigenous communities adjacent to the LML MUMP are not only removing the resources of the land, such as the \textit{alerce}, but are now also accessing the marine resources which have been used for the last forty years by established artisanal fishers of the region. The problem has been intensified by the fact that other government institutions and conservation NGOs such as the WWF-Valdivia have allocated diverse benefits to these indigenous communities on the basis of their possessing legal indigenous recognition. Even though many historical artisanal fishers have equivalent claims to indigeneity as the people from these indigenous communities, because they have not organized themselves as an indigenous community, they have not been able to access those benefits and the benefits of the GEF Marino project.

The involvement of the WWF-Valdivia also had a strong influence on the implementation of the LML MUMP project. The WWF-Valdivia started to work with the nine indigenous communities of the Mapu Lahual Territory when they received official status as indigenous communities\textsuperscript{18}. The WWF-Valdivia did not work with those communities before they were legally constituted. Indigeneity is an important criterion when the WWF decides whether to collaborate in conservation programs with a community, because since mid-1980s the foundation has been working on ICDPs. Indigeneity has been a framing device for the type of conservation projects WWF promotes and implements (Sanjayan et al., 1997; UNDP, 2000; Mistry et al., 2010).

The project staff of the LML MUMP stated wrongly in their reports that the indigenous communities inhabiting the areas located by the LML MUMP have been there

\textsuperscript{17} Bahía Mansa is approximately two hours away by boat from the indigenous communities.

\textsuperscript{18} This status is applied to the collective, to all of the communities as a whole.
from ancestral times and have firmly-held traditions and practices concerning the protection of the environment. According to Moreno-Bonilla\textsuperscript{19} (2006, authors’ translation), the Mapuche-Huilliche ethnic group inhabiting the coastline and lands near the LML MUMPA area have used an ancestral model enabling them to make sustainable use of the forest and its resources. These indigenous people are therefore seen as having traditional ecological knowledge (TEK) and TEK is a key element of ICDPs. This type of knowledge is accumulated and learnt by indigenous people over many generations to provide useful and effective solutions to adapt to their environment (Ford and Martínez, 2000). As a result, some indigenous groups have protected and exploited nature in a sustainable way, but this is not the case of the indigenous communities of the Mapu Lahual Territory.

The issues reported above indicate that the planning of the LML MUMPA project relied on limited understanding of indigenous knowledge and the dynamics of local communities, such as their organizations, social relations, history, and cultural background. Consequently, the success of the LML MUMPA was hindered due to a lack of understanding of “indigeneity” and of several other particular social and cultural characteristics of the indigenous communities\textsuperscript{20}. This key issue forms the starting point for the analysis that will be undertaken in this thesis.

\subsection*{1.3. Thesis objectives}

During the implementation of LML MUMPA, tensions have arisen between the two main local stakeholders, namely the historical artisanal fishers and the indigenous communities. In this thesis, it is argued that the tensions between these groups are caused because the socio-economic development aims of the LML MUMPA were not focused on both groups. In addition, localised socio-cultural characteristics assumed by the GEF Marino staff did not accurately represent the indigenous communities. As a result, the indigenous communities did not engage comprehensively in the implementation of the project.

It is also argued that a more in-depth assessment of the social, cultural and economic values of the artisanal fishers and indigenous communities is absolutely essential to

\textsuperscript{19} Miguel Moreno-Bonilla was part of the team led by Cecilia Godoy coordinating the LML MUMPA.

\textsuperscript{20} What these characteristics include is described in Chapter 5.
understand the process of implementation of the LML MUMPA project. This process includes the ways in which the project was unable to meet all its objectives, the importance (and misunderstanding and under appreciation) of socio-cultural dynamics, and the non-participation of the artisanal fishers and indigenous communities in the achievement of these objectives.

This thesis describes and analyses the socio-economic and cultural dynamics involved in the obstacles, failures, and achievements that developed during the implementation of the LML MUMPA. Through a case study of the issues arising from the implementation of this MUMPA, the specific objectives of this thesis are twofold, (1) namely at a case study level, to address the relevant elements in the deployment of MUMPAs that refer to the participation of local peoples, and (2) to use this project as an example to assess the extent to which ICDPs consider social and cultural factors when developing and implementing projects.

To address these objectives, this thesis employs the LML MUMPA to analyse the legitimacy of ICDPs through this particular case and thereby provide a critical perspective on better implementation of ICDPs. Here, legitimacy refers to whether ICDPs follow acceptable and reasonable established standards (Farlex, 2011) in terms of the potential positive effect or outcome for both the environment and local socio-economic development. Legitimacy also refers to the ability to assist in solving conservation and development issues in locally-acceptable ways without creating further problems. As an important corollary, this thesis assesses the extent to which the objectives of the ICDP approach successfully supported the early development of the project in the region. Part of this assessment involves the identification of the international actors (agencies) and the description of their degree of involvement in the project, as well as that of Chilean national, regional, and local actors. Once stakeholders were identified, their different narratives were collected in order to analyse and, specifically, contextualize the history and processes of this MUMPA with an ICDP approach.
1.4. Narratives in the thesis

The theoretical framework of this thesis draws from environmental anthropology as a sub-discipline of anthropology; an approach which facilitates a focus on socio-economic and cultural elements of local communities in environmental projects such as the GEF Marino project. Environmental anthropology addresses cultural and social dynamics and interactions with the natural environment. The anthropological nature of this thesis is demonstrated by emphasising the aspects of a specific conservation project that relate to human interaction, culture, and social dynamics.

Extensive literature exists assessing the impact and the potential integration between combined conservation and development initiatives (for example, Hecht, 1999; Cereceda and Czischke, 2001; Chapin, 2004; Barkin, 2003; George, 2007; Shrivastava et al., 2007; Adams, 2009; Pereira, 2010). Several journals also specialize in the topic, such as The Journal of Environment & Development; The Journal of Environment, Development and Sustainability; and Human Ecology, among others. Literature has already emphasised the importance of local communities’ participation and impact of conservation projects (among others, Chapin, 2004; Agrawal, 2005; West, 2006; St. Martin et al., 2007; Carneiro, 2012). This thesis extends these approaches by assessing an example of an ICDP in practice in a context including diverse groups, nuanced identities, and volatile relationships among local groups, together with complex and particular social, cultural, and political characteristics and dynamics.

Anthropological research in this context is used to investigate the extent to which the GEF Marino project facilitated an ICDP approach aimed at conserving coastal and marine resources and enhancing socio-economic conditions. In particular, this research examines the socio-cultural characteristics and discourses of the local indigenous and the artisanal fishing communities.

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21 The discourses of the project team, the government representatives, and the relevant international organisations were also collected but have only been used to complement that of the local communities when appropriate.
1.5. Chapter outline

This thesis is divided into seven chapters. Chapter 2 presents the literature review and conceptual framework. The Chapter starts with a discussion of the literature focused on environmental anthropology, explaining its origin and scope, as well as examining case studies through which it has been used to criticize the environmental movement and ICDPs. In addition, the Chapter includes discussions within the literature about TEK and local ecological knowledge (LEK) and their role in complementing scientific knowledge. Second, it reviews the origin of conservation ideologies. This part also includes the rise of PAs as important conservation tools and the current literature on ICDPs; the historical context; key issues related to environmental and socio-economic development; and the relationship between local communities and conservation plans throughout the world. The last section of this Chapter provides a review of the challenges of MPAs to the integrated and Ecosystem-based (EB) approaches where the lack of attention to social issues such as local participation is reviewed to a greater extent as it is considered more important for the topic of this thesis.

Chapter 3 provides a description of the ethnographic approach to this research. This Chapter describes the methods and the techniques involved in the research, including unstructured and semi-structured interviews; text and document searches; participant observation and field notes, and how these tools were appropriate for the questions/issues addressed in the thesis. The sample of chosen interviewees is explained, together with the ways in which this method allowed the identification of problems relating to the apparent absence of understanding of local socio-cultural dynamics in the LML MUMPA deployment.

Chapters 4 (artisanal fishers) and 5 (indigenous communities) present descriptions of ethnographic data, narratives, and analysis of information collected during fieldwork. In addition, these chapters include quotations in Spanish from interview transcriptions conducted in the field which are translated in English. These chapters establish the extreme complexity in the separation of the two groups based on their main economic activity, and also explain what insights have been gained from an analysis of the fieldwork, participatory observation, and interviews.
Chapter 1.- Introduction

Chapter 6 consists of a discussion of the implications of the ethnographic research findings for the implementation of the GEF Marino Project and Chapter 7 consists of the conclusion and summarizes the main findings of the research.
Chapter 2

Literature review and conceptual framework

The first section of this chapter introduces the relevant theoretical perspectives drawn from anthropological assessments of human inclusion in conservation projects, especially in relation to the implementation of MPAs and the subsequent issues that emerge. The second section establishes the emergence of ICDPs as a specific approach for environmental conservation in the developing world. This review starts by describing the background, influences, and context of the environmental movement. This movement emerged from the need to protect nature and promoted the first understandings of and ideas about how to achieve conservation. This early approach is critically evaluated, demonstrating that the ICDPs emerged from this context.

The third section of this review starts in the beginning of the second part of this chapter and describes the emergence of marine conservation as a more general concept that has developed alongside terrestrial conservation. The fourth section discusses the definition, characteristics, and history of MPAs. There are types of MPAs which provide a significant example of the integrated and EB approach, which are also discussed in this section. Finally, assessments of MPAs are discussed in relation to how effectively they incorporate socio-cultural dynamics, including the key challenges posed to MPAs by the integration of socio-economic development goals, alongside common recommendations.
2.1. Anthropological perspectives

2.1.1. Environmental anthropology and conservation

Environmental issues are inherently interdisciplinary as the natural environment is affected by social, cultural, chemical, physical, political and economic factors (Milton, 1993). Environmental anthropology is a sub-field of social and cultural anthropology which concentrates on the study of the dynamic interaction between human beings and their natural environments (Sievanen, 2009; Carrier and West, 2011). This sub-discipline emerged in the 1980s, and, although it attracted relatively little popularity from 1985 to 2005, currently enjoys a high level of interest (Dove and Carpenter, 2008). Environmental anthropologists play a role not only in creating knowledge related to the field, but also in bringing personal engagement and advocacy to resolve environmental problems (Townsend, 2000). One of the characteristics of this advocacy is the unique capacity to identify the social and cultural impacts of conservation projects because of the specific ontologies that the environmental anthropologists bring to bear and the qualitative research methodologies they use.

Early anthropological approaches to the environment that illustrate the importance of this topic include the work of Julian Steward, who placed human beings within their ecosystems, and Fredrik Barth, who saw subsistence and social organization as based on competition for resources among ethnic organizations. On the other hand, Clifford Geertz noted culture and social interaction are not only constrained by nature, but also actively shaped by it (Dove and Carpenter, 2008). This initial environmental approach portrayed by Steward, Barth and Geertz (between 1940s and 1950s) views the natural environment as having value for humans, but also conceptualizes it as an objective realm outside of human existence and hence without social and personal meaning, which constrained human life. In this view, the natural environment is separate from the social and cultural world, which is subjective, full of meaning, and shaped by nature (Carrier and West, 2011). Environmental anthropological studies were concerned with what humans did in the natural environment and how this affected them, but it still implicitly understood the world as organised into the
two realms of nature and society (for example Evans-Pritchard, 1940; Netting, 1964 and 1968; Rappaport, 1968; Netting, 1972).

The ‘new’ environmental anthropology commenced with a deconstruction of the separation of society and nature into binary ‘realms’. Motivational studies were completed of local populations involved in conservation projects which aimed to modify their modes of economic production, and thus alter subsistence level lifestyles. In the last decades of the twentieth century, and influenced by postmodern anthropological theory, environmental anthropology studies shifted to a view incorporating human motivation in their interaction with the natural environment as a main concern (Carrier and West, 2011). This shift into motivational studies allowed environmental anthropology, as a discipline, to stress both the negative and positive impacts on local communities of environmental ideologies in which the main objective is to protect the environment.

Environmental ideologies do not pay attention to the interests, values, needs and cultural and social patterns involved in the interaction of humans and the environment, which are part of the main focus of study in environmental anthropology. Environmental anthropology also demonstrates an engagement in the environment by questioning and analysing the development of the environmental movement and its implications for local communities (Milton, 1993).

Environmental anthropology also points to the absence of socio-cultural criteria to elucidate local socio-economic and cultural dynamics in conservation projects. The definition of social dynamics used in this thesis refers to the mode of living with others whilst simultaneously considering both their needs and the dynamic qualities of human relationships (Ingold, 1995), alongside the investigation of social processes (Wordiq, 2010).

The usual planning situation for conservation projects only includes biological data, with the occasional inclusion of economic data. However, there is a consistent lack of social and cultural data, particularly related to local communities, because obtaining such data requires in-depth research that is often time-consuming to undertake. However, a broad literature critiquing conservation projects exists which establishes that the inclusion of local populations’ social and cultural factors in the development of conservation and management projects for natural resources is paramount (among others: Guha, 2000;
Nepal, 2002; Chapin, 2004; West, 2006; Ross, 2009; Schmidt and Paterson, 2009; Wapner and Matthew, 2009; Durand and Vázquez, 2011).

While the literature has emphasised the need to acknowledge the role of social and cultural factors, and the policies of funding agencies have reinforced this recognition, it is not always evident in practice. West (2006), for example, examined environmental plans set by NGOs in Goroka, Papua New Guinea, noting conservation initiatives involved the history and social effects of conservation and development and the ways in which local communities understood the environment and society. In this case, locals expected the managers of the conservation project to provide government services related to education, health, and socio-economic development, amongst others. The governmental role, however, was not fulfilled and local communities were disappointed with managers of the conservation project. Project organizers were mainly concerned about conservation of biological biodiversity, and the project was planned and implemented using a top-down\(^{22}\) approach, without input from the local community. In this case, the use of local socio-economic and cultural data would have provided key information to mitigate the high expectations of locals.

Furthermore, social and cultural data can contribute to addressing and rectifying environmental problems. For instance, Milton (1993) notes that environmental problems and solutions can be comprehended through encompassing and incorporating elements of other cultures which can contribute not only to new understandings, but also to applied actions. Thus, culture is an important element to consider in the implementation of environmental projects. Interpretation across cultural boundaries is recognized as a distinctive specialty of anthropologists. As Dove and Carpenter (2008) noted, about Barth and Geertz work, culture can affect and modify the environment but, conversely, the environment can also affect and shape important dimensions of the social and cultural world of a human group making them to adapt to it (McCay 1978; Wallman 1992). The culture of local communities, and the impacts of environmental problems and conservation

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\(^{22}\) A “top-down” approach is one where a manager or similar person in a position of authority makes a decision directing the way the decisions are deployed and carried out. This decision is disseminated under their authority to lower levels in the hierarchy. This contrasts with a “bottom-up” approach, in which a large number of people working together make a decision which arises from their joint involvement (Epmforum, 2010).
projects on them, are a main concern for environmental anthropology because people understand their natural environment through their culture (Milton, 1993).

There is no one singular definition of culture utilised by all anthropologists. The definition of culture considered here is that provided by Harris (1975, p. 144), namely “A culture is the total socially acquired life-way or life-style of a group of people. It consists of the patterned repetitive ways of thinking, feeling, and acting that are characteristic of the members of a particular society or segment of society”. Thus, human relationships with the environment form part of culture.

The current approach of environmental anthropology “blends theory with political awareness and policy concerns” (Haenn and Wilk, 2006, p. 40). According to Milton (1993), human interaction with the environment not only constitutes a source of environmental problems, but it can also be a solution. For example, human interaction with the environment is regulated by government policies. Environmental anthropology addresses the effect of such environmental policies on local communities. When determining and designing environmental strategies at the international level, those responsible need to remain engaged with the ways in which these policies can impact on local community livelihoods and economies which are based on natural resources. Environmental policies, therefore, should acknowledge and consider locals’ necessities and economic requirements in order to be able to address their concerns and avoid negative effects. However, environmental policies have historically been influenced by the environmental movement which cites humans as the main agents of environmental destruction and loss of biodiversity. This belief in universal human degradation of the environment has negative political and economic consequences for indigenous people, even though some cultures have the potential to protect nature more than others due to their own unique cosmovision and ethnic religions (Durie, 2005; Dove and Carpenter, 2008).

As this discussion suggests, ethnicity is therefore a centrally important concept for environmental anthropology and for conservation projects. To illustrate how ethnicity can be related to the achievement of environmental policy goals, Das and DiRienzo (2010) established a relationship between ethnic diversity or ethnic fractionalization and environmental actions. They noted that countries with lower ethnic diversity have better
environmental performance because they have more cohesion and communication. Thus, high ethnic diversity/fractionalization can hamper the performances mobilized to resolve environmental issues, due to ethnic groups having different values that could hinder the possibility of achieving nationwide environmental goals. Hence, ethnic diversity should be a socio-cultural factor considered in the design of environmental policy and projects.

According to Marshall (1998), ethnicity refers to people who share the same language, religion, economy, or politics which associates them as a different group from others present in the same society, and who are considered distinct by others and by themselves. An ethnic group is identified according to their characteristics and specific cultural behaviour. Ethnicity also refers to people with shared cultural patterns, territory, myths of origin, and history (Ingold, 1995). Dove and Carpenter (2008) refer to an example from Nuaulu, of Seram, Indonesia, where very different attitudes toward conservation exist according to ethnic differences. These ethnic differences operate between those indigenous groups who have developed representations of themselves as resource managers, and other indigenous groups who do not have these self-representations.

Previously, indigenous people have often been designated as peasants or tribesmen. However, indigeneity has now attained an important status worldwide, as reflected by official terms created by the United Nations in 1986 and the International Labor Organization in 1989, which stress a distinctive identity, governance, and history, together with on-going marginalization (Dove and Carpenter, 2008). However, the ethnic characteristics of indigenous people can be misconceived or misunderstood, potentially affecting conservation projects. For instance, Bjorkan and Qvenild (2010) note that in some conservation projects run by NGOs, indigenous culture may be misrepresented in order to ensure indigenous groups conform to a standard “correct” identification as an ecologically indigenous group of people in order to help these groups develop and become empowered. This highlights the importance of using an anthropological perspective to understand these conceptualizations of indigeneity.

For this thesis, indigeneity is understood to be derived from “indigenous”, meaning produced, coming from, or belonging in a land, place, or region. It is a noun that refers to the characteristic of being indigenous (Waldron, 2003). “Indigenous people” is a term adopted collectively by particular groups of people, who may also be called “Aboriginal” or
“First Nations” (Hendry, 2008, p. 4). Expanding this definition, indigeneity can have different meanings depending on context. For instance, indigeneity can refer to the first inhabitants of a territory. However, it can also refer to the last inhabitants of a territory, before colonization by others. More precisely, indigeneity can denote specific historical, social, cultural, political, and physical features of indigenous peoples (Henry, 2008; Maaka and Fleras, 2009).

In addition to indigeneity, a broader concept of traditional peoples also exists. For example, “Traditional peoples includes non-indigenous groups that are long-standing residents of wilderness areas, such as the rubber tappers of Brazil and long-term Ladino and Creole residents of the Caribbean coastal region of Central America” (Chapin, 2004, p. 17). This is an important expansion on the concept of indigenous people, which can, for instance, include more recent immigrants. The definitions form a starting point, and are useful primarily to introduce the concept of indigeneity which is seen to become more complex as the thesis narrative unfolds.

Despite indigenous groups having the characteristics explained above, in many cases they may have lost the parts of their culture relating to their religion and social organization that promoted the protection of nature. Thus, different cultural behaviours among ethnic or indigenous groups can be found in relation to the protection of the environment, with some groups promoting environmental protection and others not (Trusty, 2010). Both ethnic realities are used to hold a discourse in favour of or against the inclusion of indigenous people in conservation projects.

Curtin and Prellezo (2010, p. 823) outline a conceptual shift in which concerns about human impacts on nature have progressed to a more positive view in which humans are seen as part of the ecological system rather than existing in a binary relationship between society and nature. Thus, humans have the potential to find ways of interacting in a harmonious way with the natural environment, without causing its depletion. In a parallel fashion, the “modern” environmental movement promotes the inclusion of indigenous people in conservation projects often by using the notion of indigenous people as “ecological”, albeit in ways that sometimes do not reflect local realities and knowledge (Brosius, 1997). Milton (1993) reports how the larger NGOs are empowered by funds they
receive from private donors and governments to produce campaigns using ideas based on indigenous cultures, on the wisdom of the “noble savage” or “ecological Indian”\textsuperscript{23}.

On the other hand, other researchers critique this more positive perspective, used for many years by indigenous people and their advocates, particularly conceptions of the stereotypical “noble ecological savage”. This stereotype has been useful in order to justify land and resource rights. However, its use can be seen as a flawed strategy because it does not always reflect the real nature and intention of some indigenous groups, who may promote this stereotype to obtain support from conservation organizations (Redford and Sanderson, 2000).

Nevertheless, including human aspects and some level of participation by local communities in conservation projects represents progress, as environmental anthropology and other disciplines have advocated. However, this new approach faces additional complexities, including how to address and comprehend adequately the social and cultural aspects of conservation activities. For social science disciplines, especially environmental anthropology, this new approach to conservation is more socio-culturally appropriate because it includes stakeholder involvement (for example; Hutton et al., 2005; Curtin and Pellezzo, 2010). This new approach also considers the relationship between humans and marine resources in order to implement better strategies for fisheries management and conservation (McGoodwin, 2000; Cooley, 2003; Aswani and Hamilton, 2004; St. Martin et al., 2007; Hall and Close, 2007; Hall et al., 2009; Acheson, 2010b, Fox et al., 2011 among others). The anthropological perspective of this thesis offers privileged insight into the role of local participation, as an element of culture, in the implementation of conservation areas.

2.1.2. Applying anthropology to the conservation of marine resources

The new approach of including local participation and considering socio-cultural elements in marine conservation projects has been adopted because past approaches addressing management of marine resources have failed. Part of this failure has been related to the

\textsuperscript{23} This term was coined by Shepard Kretch III in 1999.
absence of social and cultural factors in the deployment of these projects: “It is becoming increasingly clear that managing fisheries is as much about understanding people as it is about understanding ecological processes” (Cinner et al., 2010, p. 22). As a discipline, anthropology specialises in “understanding people” through studying social and cultural human behaviour. However, so far, despite its usefulness in being able to elaborate upon cultural aspects of behaviour, anthropology has primarily been reduced to a socio-economic category in MPA.

Anthropological scope can go far beyond studying socio-economic elements in conservation projects to explore social and cultural amplifications, for example, those due to “the presence or absence of cooperation and support from fishermen [...] which appears to be concerned with notions of ‘fairness’ and ‘equity’ concepts that require cultural elaboration” (Blount and Pitchon, 2007, p. 103-104). For example, Hall and Close (2007), successfully integrated local and scientific knowledge with the collaboration of anthropologists who assisted in collecting information about harvest areas of fishing to achieve better management and planning of marine resources.

In a literature review of the scientific information available, Mascia et al. (2010) argue, in relation to the relationship of MPAs to local contexts that policy-making should be informed by further investigation into social factors such as political power and social well-being for fishing communities. Despite MPAs appearing to be a good option for improving and empowering local communities and food security, they have also prove to have damaging effects on fisher communities. Anthropology could help to elucidate the social and cultural effects of MPAs on fishing communities. Brooks (2010) stresses that the literature on marine policies and management of marine resources would benefit from the inclusion of “social” elements in evaluations of conservation initiatives.

Curtin and Prellezo (2010), in a literature review of marine ecosystem-based management, also demonstrate how environmental and economic objectives are addressed and achieved whilst social aspects still remain unresolved. Humans are unarguably included in marine and coast ecosystems, which implies that they can affect and transform these systems with their actions. Brooks (2010) also provides an example of the importance of

24 “To support data collection, each interview was undertaken by a fisheries researcher and an anthropologist, trained in qualitative interview procedures” (p. 13).
“social” aspects from a project investigating the sustainable development of the Marine Scalefish Fishery in South Australia. To achieve sustainable development, it is necessary to have success in three potentially overlapping areas: economic, environmental, and social. Here, the last element was noted as the least well developed.

There are many examples as well of how cultural data, combined with biological studies, can help to develop more effective marine resource management plans. Veitayaki (2002), for instance, explains that income can be earned through display of a properly managed marine environment. Success in managing the marine environment could therefore mean an increase in the interest of local communities in the declaration and conservation of marine reserves. This idea was introduced to the community through work based around cultural, economic, and biological information. Curtin and Prellezo (2010) also support the inclusion of different knowledge from all stakeholders (policy-makers, fishers, recreational fishers, scientists, consumer groups, and conservation NGOs, among others) in ecosystem management. The stakeholders’ opinions help in understanding the ecosystem processes, while their participation results in less need for enforcement and monitoring and provides a genuine management structure.

Attaching importance to including humans in marine conservation projects (such as MPAs) is necessary not least because, while marine conservation projects need willing humans to participate, the decision to participate is voluntary. In conservation projects, moreover, people make choices based on issues of power and reference to knowledge and access. Veitayaki (2002) notes how, in Fiji, the participation of a fishing community in a marine resources management project empowered them. This project presents conservation activities as viable economic alternatives for local communities. However, this type of successful participation depends on the nature of the involvement, as input can empower some and, at the same time, disempower others (Fox et al., 2011). Knowledge also plays an important role in management and conservation projects which include human communities.

Even though progress has clearly occurred in the theoretical approach to including local communities in conservation projects, there is still a great amount of work to be done. Part of this progress is described by Chapin (2004), who notes that indigenous people have been in constant contact with ecosystems for a long time and potentially have sound
knowledge about it. Indigenous people and also traditional resource users, such as artisanal fishers, have historically helped maintain many ecosystems and therefore should be considered as equal partners in the design and deployment of any conservation initiatives established in their territories, especially in PAs and MPAs (St. Martin, et al. 2007; Hall and Close, 2007; Hall et al., 2009, Fox et al., 2011; Voyer et al., 2012). However, there are specifics realities, contexts and circumstances where indigenous people or local resource users have a relative knowledge about their ecosystem. This knowledge is explored further in the following section.

### 2.1.3. Anthropology and Traditional Ecological Knowledge/Local Ecological Knowledge (TEK/LEK) in conservation projects

The previous sections of this Chapter have provided the context and discussion which establishes the need for a new approach to address adequately some of the current failings of conservation projects. Anthropology has specifically promoted conservation with the inclusion and respect of local communities, especially indigenous groups and local resource users and their knowledge. Two of the elements anthropology has identified as important to consider in environmental projects are TEK/LEK. Many scholars from both social sciences and traditional sciences advocate the use of TEK/LEK as a valuable complementary input to studies based on scientific knowledge (Johannes, 1993; Ford and Martínez, 2000; Ramakrishnan et al., 2000; Mauro and Hardison, 2000; Klubnikin et al., 2000; Berkes et al., 2000; Turner, 2004; Drew, 2005; Hall et al., 2009, among others).

Although several definitions of TEK exist, the definition noted by Ford and Martínez (2000, p. 1249) is used in this thesis, namely “the knowledge held by indigenous cultures about their immediate environments and the cultural (management) practices that are based on that knowledge”. Berkes et al. (2000) suggest that traditional knowledge is a cumulative knowledge-practice-belief complex about the interaction between living beings and the environment, a complex which is adaptive and transmitted by culture. The related term, LEK, can be defined as the knowledge and cultural practices that non-‘indigenous’, but locally resident, people have about their environment.
Moral, ethical, and spiritual dimensions related to the environment are reflected by TEK/LEK (Ford and Martinez, 2000). One spiritual dimension, mentioned by Klubnikin et al. (2000, p. 1297) regarding Siberian indigenous religious beliefs, is animism, defined as “the belief in landscape features such as rivers, mountains, rocks, lakes, forest, trees, plants and sea as identities or deities with spirits that must be honoured and respected”. These spiritual, moral, and ethical dimensions have been often devaluated by the government and private sector common property resource conceptions, but have more recently been reconsidered and re-evaluated in management regimes for biodiversity protection and to improve local livelihoods (Ramakrishnan et al., 2000). These regimes are known as “community-based” or “people-based” management of natural resources (Jeanrenaud, 2002; Berkes, 2007).

Various authors cite different approaches for taking TEK/LEK into consideration, as well as examples of how its use has resulted in successful conservation methods, or in contrast, how its omission has caused conservation projects to fail (see for example, Johannes, 1993; Mauro and Hardison, 2000; Huntington, 2000; Klubnikin et al., 2000; Berkes et al., 2000; Agrawal, 2005; Durie, 2005; Hall and Close, 2007; Moller et al., 2007; Berkes, 2009). The benefits that TEK/LEK present to conservation projects have been shown to include encouraging participation; motivating engagement; providing useful information that scientific knowledge may be missing; building trust; and influencing and encouraging public environmental protests.

Knowledge can strengthen a conservation project in diverse ways, while the specific sources of this knowledge (scientific, local, or traditional) can also play an important role in improving a project plan or achieving more engagement from local communities. The advantage of using TEK/LEK in government sponsored conservation projects is that local communities will more likely be committed to the resource management system. Conservation among people who are living a semi-subsistence existence can be difficult if the communities are not committed to the policy or concept. As Agrawal (2005, p. 123) shows, “only when villagers saw the forest as theirs and that the condition of the forest was dependent on their actions did they begin to follow protectionist strategies”.

One of the main discussions surrounding the use of TEK/LEK concerns how the position, distinctions, sources, and uses of these types of knowledge relate to scientific
knowledge, which is positioned as the dominant knowledge system in the world. In recent years, the value of TEK/LEK, the need to consider it as part of indigenous rights, and its use as baseline information when scientific data is scarce or incomplete has been increasingly recognised. The challenge is to utilise the synergy of two systems of understanding, namely scientific knowledge and TEK/LEK, in order to create new knowledge that can be used to further develop more holistic understandings of natural resources and their management (Hall et al., 2009).

Huntington (2000) describes an example of this approach where, in Canada, the Alaska Beluga Whale Committee’s research into TEK helped to build a better understanding and management of Beluga ecology and stocks. Another example, described by Hall et al. (2009), demonstrates how integrated geographic information system (GIS) technology, low-tech data, and LEK were used to produce scientific knowledge for oyster fishery resource management and planning at the Bluff oyster fishery, New Zealand. One of the authors used the same approach for conch fisheries in the Turks and Caicos Islands, located at the southern end of the Bahamian Archipelago (Hall and Close, 2007).

Two points of view operate in the discussion about the relationship that indigenous groups have with their environment. On one hand, Durie (2005) notes that indigenous people possess religious beliefs which consider humans are bound to the natural environment, as depicted in oral traditions, healing systems, and socio-cultural traditions, rituals and ceremonies. On the other hand, Johannes (1993) stresses that not all indigenous communities are ecologically-based or live in harmony with the environment, even though their religious beliefs may do so. Some cultures have a conservation ethic which involves the awareness that people can overexploit or damage their natural resources, and these cultures wish to find an alternative to this. However, this is not true for all cultures. Another explanation for the failure of indigenous people to practice sustainability involves the specific circumstances of human-environment interactions. It can be argued that, in some cases, indigenous practices have been misunderstood. Dove and Carpenter (2008), for example, use the example of swidden agriculture, which has been used as an emblematic image of natural degradation caused by humans due to the burning of forests. However, this practice of burning also produces nutrient-rich ash which improves the efficiency and provides a long-term sustainability of agricultural plantations.
Nevertheless, even though controversy still exists about the use of TEK/LEK, the prevailing attitude encourages its incorporation into conservation and management plans over time, including into the conservation of marine resources, and its absence is usually recognized as a failure. Local knowledge gained from ethnographic research can be essential to addressing this aim and can lead to a successful co-management based on participation of local residents and resource users and precautionary criteria (Hall and Close, 2007; Aswani and Hamilton, 2004; Berkes, 2009). As Agrawal (2005, p. 65) notes, “forests were [...] also the basis of an unprecedented historical compromise. They became locations that state officials and rural residents formally began to govern jointly in their efforts to care for nature”. However, the starting point to govern jointly is the incorporation of TEK/LEK in conservation projects.

2.2. The emergence of environmental protection

The concept and practice of environmental conservation has undergone significant evolution. Originally, conservation projects did not include integration between conservation and social development processes and goals. The concepts underlying the ICDP approach and its evolution can be traced in the literature on PAs and MPAs. This literature shows, however, that the essential ideas behind ICDPs tend to obscure the real-world complexity and challenges inherent in the implementation of these projects.

The following section considers the historical development of conservation projects in order to demonstrate the growing awareness of local support and participation as an important element of conservation projects. To understand the emerging integration of development with conservation projects, it is necessary to review the history of conservation as it began as an environmental movement, a genesis which meant that conservation was shaped by environmental ideology or environmentalism. Environmentalism refers to all the ideas related to protecting the environment from pollution, over-exploitation, or extinction of biodiversity. Environmentalism
simultaneously seeks to conserve the environment through sustainable socio-economic activities (Watson, 2003).

Adams (2009) explains that, historically, environmental ideas emerged in the 1800s through their promotion in the urban areas of industrialised nations in both Western Europe and North America. These ideas took the form of a global environmental movement. The environmental ideology held by the global environmental movement started to promote environmental conservation in the 1860s (Guha, 2000). The ideas involved in this way of thinking represented the image of nature that people usually held in the cities. There is also an element of ethnocentrism to this movement. According to Grove (1995; 1997), European ideas about nature changed dramatically with European colonization of parts of the world with different environments and landscapes, such as tropical areas during the late 19th and early 20th century. Colonizers idealized these tropical zones as paradise, which needed to be protected from ecological impacts caused by capitalism and colonial rule. Dove and Carpenter (2008) also refer to the “vision of degradation” held by French colonial policy makers who believed that local communities destroyed the forest islands in Guinea. However, in actuality, it was the local people whose land use system generated the island forest, not the colonial population.

The sustainable development paradigm frames the destructive power of human activities as one of its main ideas. The development of this paradigm was influenced by the rise of European science and ideas about the ways that society should treat or manage nature without humans. The development of science, in itself, went together with the separation of humans and nature (Adams 2009). Drayton (2000) discusses the myth of the Profligate Native, referring to the European view of natives as misusing and wasting resources to the extent that they should be excluded from natural environments or at least be ruled by European guidance. This was the state’s rationale for enclosing areas for conservation or leaving protected geographical areas for the use of people seen as better equipped for them. This exclusion was based on the idea that people degrade nature and, thus, nature must be saved from culture. The WWF, for instance, includes an assessment under biological criteria which views local populations as threats (Chapin 2004). In parallel fashion, The World Conservation Strategy of 1980, the Brundtland report of 1987, the Rio Earth Summit of 1992, and the Johannesburg Conference of 2002 have all reinforced what
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was said at Stockholm in 1972, about how human are affecting the environment in a
dangerous way (Holtz, 2003).

Adams (2009) explains that the science of ecology was developed in Europe and
North America in the 19th century. Ecology as a discipline has studied nature in territories
where colonies were established, creating a strong connection between politics and science,
with ecology viewed as the science of colonial governments. These governments, in turn,
used scientific ecological knowledge for the administration of the natural environment.
Ecological science has promoted the conservation movement through scientific support.
Two historical periods of ecological thought can therefore be established. Initially, ecology
began with one significant idea, namely the “balance of nature”, which is to perceive
humans as potential disturbing influences in nature. Second, ecological thought progressed
to conceptions of ecosystems which gave use to the concepts of socio-ecological and
integrated systems in which humans are perceived as integral parts of nature. These two
periods both have characteristics and implications in terms of how ecology and
conservation is understood today. Observing the harm produced by humans in the
“balance of nature”, the division splitting people and nature and the protection of nature
from humans has been exacerbated and imposed by ecological science. This idea
dominated ecology until the 1970s. However, the concept of the “balance of nature”, the
early understanding held by ecologists, is strongly contested today.

Another main contribution of ecology as a science of the environmental movement
has been the concept of an ecosystem. For decades, ecologists have studied and created
modelling tools to support an ecosystem-based approach to natural resource management.
In early conservation efforts, the environmental movement and conservationists applied an
ecosystem approach oriented to conserve single species (DeReynier et al., 2010). At the
time, the most powerful NGOs, including the WWF, Conservation International (CI) and
The Nature Conservancy (TNC), were promoting global approaches to conservation,
which included the single-species approach. The most emblematic symbols of this focus
are the panda depicted in the WWF logo and the whale for Greenpeace. With ecological
science promoting the concept of ecosystems, together with the idea of the “balance of
nature”, conservationists schooled in the discipline were deemed to be the perfect scientific
managers of the environment. Specifically, according to Adams (2009), this was directly
related to their background and understanding which provided them with the knowledge
and skills required to manage environment and the natural and human change in a sustainable way.

In the 1960s, the environmental revolution in ecology urged discussion about environmental protection and economic development. Ecology had traditionally provided the scientific information available to colonial staff in places such as Africa in order to help solve economic dilemmas (Adams 2009). According to Grove (1995), scientific research was needed in the colonies, due to colonial Europeans in the tropics being unfamiliar with the environment and the indigenous inhabitants of those areas. The colonists needed scientists to research and understand future risks and challenges they might face, such as fuel provision, disease, maintaining a water supply, and others.

An additional concept that played an important role in forming attitudes toward conversation was the concept of “wilderness”, usually defined as pristine natural areas left in the world, areas where humans have not built or developed, and which have not been biologically disturbed by humans (The Wild Foundation, 2010). This formed the origin of PA projects. According to the most recent definition by the International Union for the Conservation of Nature (IUCN), a PA is:

A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (Glaser et al., 2010, p. 1215).

According to this definition, therefore, if cultural aspects are included in PAs, local communities should not necessarily be excluded from them. However, this is not always the case, as discussed in the subsection below.

2.2.1. Establishment of Protected Areas (PAs) and local residents

Early ideologies of the environmental movement promoted the exclusion of peoples who might use resources on a long-term and consistent basis from conservation areas. Overall, PAs were a mechanism implemented as part of the approach of the Northern hemisphere environmental movement. Scientists supported PAs as a tool and provided scientific
arguments to governments and international organizations to support their development. Guerreiro et al. (2010) note that PAs were seen as key instruments to resolve the problem of biodiversity depletion and extinction around the world. Several milestones can be identified at the international level that promoted PA adoption worldwide, such as The United Conference on the Human Environment in 1972 and the Convention of Biological Diversity (CBD) in 1992. While some PAs were established before 1972, it was through the CBD that PAs were consolidated as a worldwide plan.

However, despite successful promotion and international support for PAs, academics began to identify some less than beneficial effects of PAs on local communities (Guha, 2000; Nepal, 2002; Hutton et al., 2005; Wapner and Matthew, 2009). Even before these effects were noted, responses to similar events, also involving the prohibition of local communities’ access and rights to natural resources around the world, illustrated the magnitude of the conflicts. Herrold-Menzies (2011) notes how European peasants historically opposed moves by the elite to appropriate their lands in order to protect forests and for hunting. In Asia, similar conflicts have occurred when colonial governments eliminated local communities from forests to conduct ‘scientific forestry’ (Agrawal and Gupta, 2005; Agrawal 2005).

Local residents have similarly been excluded from PAs in a number of countries including the United States (U.S.), India, and Australia. Guha (2000) explains the policy of exclusion of locals from PAs in the U.S., where wilderness protection is an important target. The U.S. policy has involved removing humans and banning their productive activities in these areas for the protection of parks and their fauna. The idea behind this agenda is that human impact is detrimental to achieving protection of biodiversity, thus the ingress of humans to these PAs has to be banned. The outcome of the same policy in India is that “[…] hundreds of thousands of Indian villagers have been uprooted from their homes, and millions more have had their access to fuel, fodder, and small timber restricted or cut off” (Guha, p. 369). Ross et al. (2009, p. 242) also explain that “until the last few decades the establishment of protected areas has contributed to the dispossession and marginalisation of indigenous peoples in Australia”.

The creation of PAs, however, is standard practice in the protection of wilderness by conservationists. According to Wapner and Matthew (2009), the history of PAs is filled
with many cases of poor people evicted in order to create reserves and parks. This was the case, for instance, for Native Americans in the U.S. who were removed to create the Yosemite, Yellowstone, Grand Canyon, and Glacier National Parks. These evictions occur when environmentalists, usually from the developed world and with good intentions, wish to conserve biodiversity through establishing parks and reserves without bearing in mind the needs of local populations. Through a case study of the Mexican Sierra de Huautla Biosphere Reserve, Durand and Vázquez (2011) explain how conservation projects exclude local inhabitants from their initiatives. In this specific case, an analysis conducted by the authors indicated that government authorities and scientists believed that to achieve conservation, nature has to be maintained with the lowest human intervention as possible. This meant that even locals deemed to be significant actors were marginalized from the reserve administration and local inhabitants did not participate in the design of the project.

These examples illustrate situations of exclusion from resource and home (Guha, 2000, and Ross et al., 2009), where arguments of biodiversity conservation were used to justify the displacement of local inhabitants from PAs (Wapner and Mathew, 2009). These displacements also lead to the eventual exclusion of local people from the benefits of the conservation projects (Durand and Vázquez, 2011). The case study used for this thesis is another of these examples, demonstrating that the exclusion of local people is a common response to the idea of local populations living in, and maintaining their livelihoods from, PAs.

The fact that the predominant approach for establishing PAs negatively affects indigenous people has provoked reactions from indigenous organizations. One such response came from the Coordinating Body of Indigenous Organizations of the Amazon Basin (COICA), calling for collaborative action between indigenous people and conservationists when their Amazonian ecosystem was threatened by development and colonization projects including cattle ranching, unregulated logging, and mining operations. The COICA stressed that the conservation movement had left them out of the conservationist vision of the Amazonian Biosphere, and that this exclusion has negatively impacted on them due to not having decision-making participation in the development of this PA. Thus, their interests and needs were not considered, and this was the primary reason that the conservationists’ programs were ineffectual (Chapin, 2004).
Many international efforts have been undertaken to involve indigenous peoples in PA management. Nepal (2002) proposed that in order to resolve conflicts between state agencies and indigenous communities regarding conservation projects, consultations are required with indigenous people and co-management agreements between park authorities and indigenous peoples. However, despite the suggested by Nepal, there are still conservationists who do not agree with the idea of including local people and communities from conservation areas, and advocate for conservation based only on rigorous biological science. The conservation groups who advocate these ideas insist that the inclusion and participation of local peoples and communities in conservation projects will never be successful, regardless of the manner in which these initiatives are carried out. Brandon et al. (1998), for instance, argue that the sustainable use of resources in order to protect them is not a good strategy from an ecological and biological point of view. Rather, they argue it is likely to provoke depletion of biodiversity.

Chapin (2004) provides details of other conservation groups that consider the involvement of indigenous peoples problematic. In countries such as Ecuador, Bolivia, and the Chiapas region in Mexico, groups of conservationists have indicated that some indigenous people are implicated in civil disruption and even aggressive acts. Also, some conservationist groups think that indigenous peoples are not necessarily what they say they are good partners, because their main concern is not to protect the environment. For these conservationists, it is untenable that sometimes indigenous economic needs take precedence over environmental protection. For instance, conservationists against the inclusion of indigenous peoples point to examples where indigenous peoples do not practice good conservation, such as the Kayapó in Brazil who log their forests, and Mayans, who slash and burn the forests of the Petén in Guatemala. However, there are diverse assessments regarding the sustainability of the logging practices employed. By some interpretations, the Kayapó are champions of sustainable exploitation of forest due to the selective harvesting practices they employ. A similar argument can be made about the swidden practices in the Petén. Thus, the sustainability to these peoples’ practices is contested.

For some conservationist groups, it is significant that certain indigenous people who have had a significant amount of conservation projects implemented on their lands have rejected these conservation projects and even expressed opposition to them. Chapin (2004)
2.2. The emergence of environmental protection

notes the reasons why indigenous people may develop hostility towards some conservation projects, such as PAs. Specifically, he suggests that these PAs have caused them to be evicted from their lands; customary land use by indigenous people is also sometimes declared illegal; and some conservation organizations have become partners with multinational corporations (gas, mining, oil, and pharmaceuticals) which are themselves destroying indigenous communities’ forest areas.

Due to the negative reactions of, and impacts on, local communities evicted or affected by PAs, a new approach for conservation projects was needed that included local participation and socio-economic development aims.

2.2.2. The emerging integration of development with a conservation ideology

In this thesis, ICDP is used to refer to the projects, programmes, or other types of initiatives for biodiversity conservation and sustainable management of natural resources that include the socio-economic development of local communities in their aims (Hughes and Flintan, 2001). These communities may be indigenous or non-indigenous. However, Schmidt and Peterson (2009, p. 1458) point out that “indigenous people inhabit approximately 85% of areas designated for biodiversity conservation worldwide”. Thus, the development component of such biodiversity conservation initiatives when those initiatives are community-based, is generally oriented toward the involvement of indigenous communities. This is important for this thesis because the case study points to the fact that the local (non-indigenous) resource users are not recognised as such.

The ICDP concept originated from the idea that a strong relationship exists between problems of development and the need for environmental conservation. Currently, academics from both the social and biological sciences recognize that, especially in developing countries, poverty and environmental issues are related (Robinson and Redford, 2004). Sometimes poverty, frequently associated with a lack of education, may lead to environmental problems or, conversely, an environmental issue can result in the impoverishment of communities living in a specific environment (Taylor, 1998; Barkin, 2003; Herrold-Menzies, 2006; Gasper et al., 2011). These approaches, however, have only
been applied to biodiversity conservation projects since the mid-1980s. Chapin (2004) notes that in the 1970s, and through much of the 1980s, little understanding existed between conservationists and indigenous peoples.

As these points suggest, the approaches applied to conservation projects have changed over time. According to Rinzin et al. (2009), since the 1990s it has been a common practice for Western countries to implement development-based nature conservation programmes in developing countries as part of their aid schemes to sustain human well-being, which implicate both conservation and consuming natural resources which is part of the nature-society relationship. Jeanrenaud (2002) also notes the shifting paradigm in conservation away from exclusive PAs towards more people-centered approaches and community-based conservation projects. Ross et al. (2009) also point out that recently PAs have recognized the land or water enclosed as indigenous peoples’ land and marine territories, which has resulted in new policies, together with government measures to incorporate indigenous peoples in the management and design of such PAs. Chapin (2004) refers to the role of indigenous peoples in PAs as a primary theme at the IUCN-sponsored IVth World Congress on National Parks and Protected Areas, held in Caracas, Venezuela, in 1992. Both the WWF and the IUCN have started to work on guides, protocols, and other documents for marketing, increasing the importance of indigenous people’s traditions and TEK, and to promote agreements with indigenous people. However, this literature makes no reference to non-indigenous locals, which is an important absence because it demonstrates that indigenous people, to the exclusion of other local resource users, are the focus of community participation in conservation projects.

Although there has been a general tendency over the last twenty years to implement community-based, people-centered or development-based conservation projects (Rinzin et al., 2009, Jeanrenaud, 2002, Ross et al., 2009, Chapin 2004), Meza (2009, p. 155) notes that in Chile “this conservation fashion (community-based conservation projects) has not been promoted, either by governmental agencies or by conservation NGOs”.

As the two following examples illustrate, a socio-economic development approach for locals is pivotal to conservation efforts. First, Kabiri (2010) examines the relationship of poverty and wildlife protection. He observed that in Kenya wildlife tourism, established for conservation purposes, has not resulted in much profit for landowners. Consequently, a
balance needs to be reached between wildlife conservation (animals) and socio-economic development (people). If sufficient development is not achieved, which needs private resource use, landowners will not be engaged in helping in wildlife tourism projects. Second, Rinzin et al. (2009) assess Bhutan’s nature conservation policy in two national parks, where they found that local communities support nature conservation on the basis of Buddhism even though they are not allowed to use some forest products and despite loss of fodder for animals. Conservation managers should also consider the negative impacts of their conservation initiatives on these Buddhist local communities and to include socio-economic development alternatives to compensate the loss of natural resources imposed by enclosing areas for nature conservation.

Notwithstanding the social impacts identified in the literature, by 2001 there were over three-hundred ICDPs world-wide absorbing the greatest amount of conservation funding (Hughes and Flintan 2001). The application of the ICDP approach has led to criticism and some authors have suggested stopping the implementation of these types of projects (for example Wells, 2003; Engel et al., 2008). However, despite such criticism, ICDPs are still an important approach for conservation projects, “whether conservation projects are explicitly labelled as ICDPs or not” (Blom et al., 2010 p. 165). The following sub-section identifies some evidence of the constraints associated with ICDPs mentioned in the literature.

2.3. Constraints of integrated conservation development projects (ICDPs)

Although agreement exists in the international arena about the relationship between the environment and socio-economic development, this relationship has met with unexpected constraints in practice. Chapin (2004) explains that between approximately 1990 and 2000, a significant number of projects around the world failed in their attempts to integrate conservation and the development of indigenous communities. Chapin (2004) notes that one mistake occurred when indigenous people were left out of the administration and design of conservation projects and were not allowed to carry out their own projects with
their needs and interests. Another failure was that several projects, run by conservationists, featured poor designs due to little experience with indigenous communities. The outcomes were therefore not in the best interests of the indigenous communities. For instance, they could not market what was produced from their organic gardening and agroforestry projects, and weather and soil conditions were not appropriate for the crops they were encouraged to plant. The awareness regarding local and/or regional markets and environmental conditions could have been achieved by interacting and collecting this information from local communities.

There are other issues apart from not providing decision-making participation and control over the implementation of conservation projects mentioned by Chapin (2004). Partly, ICDPs fail because of the neglectful or misguided attitude of project staff towards the internal political and socio-cultural issues of local communities. Schmidt and Peterson (2009) list the main struggles of indigenous peoples: the recognition and preservation of indigenous livelihoods, traditions, identity, and culture, coupled with self-determination over natural resources and land. These indigenous groups’ struggles are priorities for them, yet conservation project staff usually overlook them in their development agenda.

The constraints mentioned by Chapin, Schmidt and Peterson above can also be extended to include local communities that are not necessarily indigenous. NGOs have not commonly considered non-indigenous members of local communities as main stakeholders because they do not fit with the aims of their marketing campaigns to obtain funds from donor agencies. For the case study of this thesis, this situation has implications for the historical artisanal fishers who were excluded from the LML MUMPA project. Examples in the literature from Australia, Bolivia, Southern African countries, Brazil and China further underline the failures and challenges of ICDPs of excluding indigenous people or local, non-indigenous resource users in their projects.

Ross et al. (2009) note that Australia was one of the first countries to establish PAs in a co-management administration scheme. However, the entire country has not adopted those endeavours in identical ways. Further actions should be taken on fostering agreements and activities to incorporate the rights and interests on indigenous people in the management of MPAs, considering the implication of indigenous people’s involvement in order to achieve meaningful and practical benefits, social and environmental, for them.
Another problem of ICDPs is that environmental social discourses obscure the complexity of realities regarding indigenous conceptions of ethics toward the environment. This is apparent in the context of the Madidi PA in Bolivia, as highlighted by Trusty (2010). She notes that the conception of the “noble savage” portrays indigenous people residents as more environmentally-concerned and caring about nature than non-indigenous people, an assumption that is not necessarily correct.

Metcalfe and Kepe (2008) explain how conservation and development projects encounter difficulties in most Southern African countries due to rural communities not feeling as if they receive much benefit from these projects. Projects there integrate wildlife protection, tourism, and rural development. For example, in the conservation initiative Kavango-Zambezi, rural communities feel that while the government has appropriated their lands to promote tourism and wildlife conservation, the profit goes primarily to the private sector of tourism.

Pereira (2010) discusses another example of ICDPs. Pereira analysed a programme of market-based incentives using two case studies in the Amazon, namely the Bolsa Floresta Program in Brazil and the Noel Kempff Mercado Climate Action Project in Bolivia. These initiatives motivated local communities who inhabited forest environments to conserve their forest by paying them an equal or higher rate than they would earn by other activities that would deplete the forest, effectively paying locals for environmental services. This is supposed to contribute to the alleviation of poverty. However, these environmental services have not been defined by local communities, nor have these communities incorporated their perspectives.

According to Herrold-Menzies (2006), research conducted at Caohai Nature Reserve in China provides an example of failure in achieving the win-win goal of ICDPs of integrating conservation and socio-economic development of local communities which implies: “To create a win-win situation for both endangered species and marginalized peoples” (Herrold-Menzies, 2006., p. 382). In Caohai, there were positive outcomes in that local participants in the reserve had improved their incomes and their relationship with the Caohai reserve managers and on the other hand, there were also negative outcomes in that these ICDP programmes could not accomplish the goal of reducing the environmentally damaging use of local resources. Thus an important question is how can conservation
projects with a socio-economic development approach achieve success? George (2007) concludes that the creation of suitable projects with this win-win approach for conservation (of the global commons) and development requires social science research. In addition, a necessary element of success involves major changes in economic structures and governance policy systems at national and global scales.

As noted by the above examples, significant discussion has occurred between a conservation approach and indigenous people’s aims on “partnerships, alliances, co-management of protected areas, participatory management, and a variety of other working relationships” (Chapin, 2004, p. 20). The latter is due to governments requesting that, in order for conservation projects to obtain funds, these projects must incorporate in their agenda the socio-economic development of communities in their vicinity. Development must, by implication, include the alleviation of poverty. However, these examples have also illustrated that there should be more progress to develop new protocols and policies. The implication of these studies is that development agencies, groups and initiatives should aim to implement socio-economically aware conservation schemes realistically, without naïve misconceptions about indigenous people and their ways of life and also to be aware of non-indigenous local resource users. The challenge is to provide better benefits and to fulfil the expectations of local communities in conservation initiatives; to improve the aim of sustainable development in order to avoid the loss of biodiversity; and to conduct more research in social sciences disciplines to achieve both conservation and development.

### 2.3.1. Policy capture of management and conservation projects

Conservation projects with socio-economic development objectives have arisen from demands to include local people’s participation and socio-economic dimensions in the agenda of conservation. In many countries, these demands have been incorporated within governmental policies. Rinzin et al. (2009) argue that the demand to carry out socio-economic goals in conservation initiatives is key in some South American and African countries where the alleviation of poverty is a priority. In these contexts, convincing local communities to engage in conservation initiatives is the main task for the future of the natural environment. For local communities of these regions, however, conservation imposes restrictions on natural resources which hinder their economic subsistence.
The ICDPs are based on ideas of sustainable development that link the use of natural resources to sustainable practices, without damage to the environment or overexploitation of resources. Sustainability has been promoted by ecological science and has scientific support. Thus the conservation of nature has been strongly linked with ideas of development, and especially to the concept of “sustainable development”, which also needs to be understood in a historical context. This concept embraces the idea that while environmental protection is important for future survival, in order to achieve socio-economic development, a degree of exploitation of natural resources is also needed. Both aspects are important, thus there should be an equilibrium between conservation and development. The first official definition of sustainable development can be found in the Brundtland report, which defines sustainable development as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report, 1987, p. 24).

Chapin (2004) explains that in the late 1980s and early 1990s, due to policies demanding the inclusion of socio-economic objectives in conservation initiatives, conservationists started designing programs to work with local communities. Private foundations and international agencies, in turn, funded environmental projects that were using this approach. Sustainable development started to be understood and conceived as an approach that included conservation with the development and participation of indigenous communities “based on the idea that if conservation and development could be simultaneously achieved, then the interest of both could be served” (Berkes, 2004, p. 621). Many organizations adopted this approach. Under this new approach of conservation projects with development goals, concepts such as “community-based natural resource management, community-based conservation, sustainable development and use, grassroots conservation, devolution of resource rights to local communities, integrated conservation and development projects” (Chapin, 2004, p. 20) began to emerge from conservation organizations. These expressions and conservation/development initiatives, however, have not been not created and directed by local communities (indigenous and non-indigenous). Conservation organizations were leading and designing these programmes, funded by financial support specially allocated to generate programmes for indigenous people (Chapin, 2004).
Conservation organizations created special units to carry out this mandate. One of the agencies promoting government initiatives and policies including socio-economic elements in conservation projects is the GEF. In 2006, donor countries agreed to support GEF until 2010 and in 2010 the funds to support GEF until 2014 were ratified. The GEF target is to provide financial support to developing countries for the deployment of international environmental programmes in relation to biodiversity conservation, climate change, and organic pollutants. The GEF mechanisms of support are associated with the UNDP, the World Bank, and the United Nations Environmental Programme (Clémençon, 2007).

The creation of the GEF and provision of economic support by developed countries reflects the relevance of this demand for ICDPs. Pereira (2010) points out that the ICDP approach has been attracting funds for payment for environmental services (PES). However, these initiatives depend on forest dwellers having participatory decision-making, granted by different institutions, on the rules they are subject to. In a similar manner, Rinzin et al., (2009) also argue in favour of advocating for the inseparability of conservation projects and human development objectives. Otherwise, these projects risk failure when not incorporating social and economic factors. They further argue that participation of local communities in policy formulation and management can also foster successful conservation partnerships.

These examples demonstrate how government policy has “captured” the integration of development and conservation because it has better outcomes for conservation projects in the long term. However, according to Chapin (2004), despite ICDPs being popular examples of sustainable development which attracted funds by offering a more appropriate way of carrying out biodiversity conservation, conservation organizations were not prepared to work in the socio-economic arena. Thus, ICDPs have not had the outcomes expected. However, some controversy exists regarding this topic.

Conservation projects related to situations of ‘policy capture’ are required to formulate policy which includes local populations in their projects, albeit often without recognition of the complex realities of defining local communities and the impacts on local power relations. As a result, local participation in conservation projects has become mandatory in order to get funding. In this section the existing literature has been used to argue that the integration of conservation and social development goals was a logical outcome of the
current debate. The operating paradigm determines how conservation projects are organized in the world, and how they developed in practice. This section stresses that conservation and social development are not only important and legitimate partners, but elements of more progressive conservation projects when compared to the older approaches. This partnership, however, still remains a challenge and demonstrating the complexities inherent to it will form a major part of the narrative in this thesis.

Building upon this discussion attention is now narrowed to focus on the specific area of interest investigated in this thesis, namely marine conservation and development of MPAs relative to general goal of achieving conservation principles while also fostering development opportunities for local communities.

2.4. Emergence of marine conservation

As part of the “global environmental consciousness which emerged in the context of European colonial expansion between 1660 and 1860” (Grove, 1995, p. 474), the promotion of conservation started to focus attention on marine habitats as people became more aware of the ocean as a larger ecosystem that needed protection. In 1899, the International Conference for the Exploitation of the Sea proposed scientific enquiries to promote “rational exploitation of the seas” where “the principle of using science to define sustainable levels of fish harvest provided a powerful model for application outside of fisheries, in other areas of resource development such as forestry” (Adams, 2009, p. 40). Thus, the development of conservation and the sustainable management of terrestrial and marine resources simultaneously supported each other. According to Banks and Skilleter (2010, p. 198): “Protected areas have been recognised as an essential and effective approach to conserving biodiversity in both the terrestrial and marine environments”. However, Fabinyi (2008) cautions that the construction of many MPAs indicates a tendency for the interests of conservation to be prioritized over those of fisheries management.

Initially, a distinction was made between land and marine conservation and management. Whilst the shoreline has a management system tied to the land, the inshore area has a more international scope (Smith, 2000). International agreements such as the
CBD signed at the Rio Conference\textsuperscript{25} required cross-cutting measures, thus included shore (land), inshore, and out-shore, resulting in measures affecting industries as varied as forestry and fishing (Adams, 2009).

The ICDPs in marine areas have to be juxtaposed with those of a terrestrial nature due to the fact that incorporating a human aspect into development must also involve people who live by marine areas. In the last ten years, ICDPs have included participatory integrated coastal management for sustainability and biodiversity conservation, which incorporates the involvement of civil society in building support for conservation, for instance in Patagonia\textsuperscript{26}, the Nile Basin countries, and the Caribbean Conservation Association\textsuperscript{27}.

In the 21st century, many broad terms are used for the management and conservation of marine resources that have also been established in order to address aspects of socio-economic development (Table 2.1). Although a range of terms exist, these mainly reflect local variations due to the implementation of different projects in different countries: all, however, can be included under the broader umbrella of “integrated”, ecosystem-based (EB) approaches.

\textbf{Table 2.1:} List of terms used in management plans of marine and coastal resources

<table>
<thead>
<tr>
<th>Term</th>
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<tr>
<td>Integrated Coastal Zone Management (ICZM)</td>
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<tr>
<td>Integrated Coastal Management (ICM)</td>
</tr>
<tr>
<td>Integrated Management Coastal Zones Marine Areas (IMCZMA)</td>
</tr>
<tr>
<td>Ecosystem Based Management (EBM)</td>
</tr>
<tr>
<td>Ecosystem Based Fisheries Management (EBFM)</td>
</tr>
<tr>
<td>Framework, ecosystem approach to fisheries (EAF)</td>
</tr>
<tr>
<td>Ecosystem-based approaches to fisheries management (EBAFM)</td>
</tr>
</tbody>
</table>

\textsuperscript{25} This conference was organized by the United Nations in June 1992 and held in Rio de Janeiro, Brazil. Originally called “The United Nations Environment and Development Conference”, it is also simply known as “The Rio Conference”.

\textsuperscript{26} www.fundacionpatagoniasur.cl/about_us_fundacion_es.htm

\textsuperscript{27} www.caribbeanconservation.org/
As these terms suggest, their shared characteristic is the importance of social aspects in the efficient implementation of each project. The literature shows that the integrated and EB terms essentially constitute a response to the demand to include people in conservation projects.

The creation and importance of PAs has become so extensive that, to enhance their effect, they can be joined with other PAs or other biological ecosystems, in systems known as eco-regions. Traditionally, eco-regions have not focused on social concerns. However, now, as a result of the political demand to include development in conservation projects, there is a requirement for them to do so. An investigation into the literature on ICDPs identifies that the expansion of typical terrestrial conservation areas towards the coast and sea has involved this ICDP approach. Such a link between land and sea has evolved as part of the move towards protecting the environment and contributing towards the socio-economic development of local communities which began in the 1990s through biodiversity projects initiated by organizations such as the WWF, TNC and CI. The incorporation of marine resources within terrestrial conservation projects was considered beneficial as this constituted a bigger and more appropriate goal. The larger the area to be protected, the more relevance a conservation project may have. The following sub-sections explain the characteristics, scope, application, and the utilization of this approach.

2.4.1. Marine and coastal management approaches that emphasise social elements and local participation

Marine conservation has emerged strongly from the science of ecology, and includes systems and ecosystems analysis. Despite this, it does not necessarily take on board all aspects of ICDPs. However, because conservation project staff rely on government funds they must take human involvement in ecosystems more seriously. Some approaches work to include development and participation of local peoples in their deployment, such as the integrated approach, EB and co-management approaches. Co-management constitutes a step further than integrated and EB projects due to the inclusion of local participation, with ideally equal participation and power over marine resources management plans as a main goal. This approach indicates a shift towards including people as a key element in conservation and the sustainable management of marine resources.
2.4.1.i. Integrated approach

One of the central approaches mentioned above is the “integrated approach”. This considers social and cultural aspects as an important part of environmental dynamics and conditions. These social and cultural aspects have to be included in any kind of integrated conservation project. As Berkes (2007, p. 15192) argues, “ecosystem management and human well-being should be integrated, recognizing that biodiversity conservation and livelihood needs are ultimately complementary goals”. This concept recognizes that, to understand and incorporate social and cultural elements as an important aspect of an environmental project, it is mandatory to gain the participation of local communities. The integrated approach is distinct from community-based conservation projects in that it does not include objectives which are conceived for local communities in MPAs for the sake of socio-economic development. With the integrated approach, projects that will result in development for local communities are a side effect, but these are meant to be functional, with the aim of protecting and managing the marine resources in a sustainable way. An example of this is the promotion of eco-tourism in MPAs.

Alvial and Reculé (1999) define one of the variations of this integrated approach as Integrated Coastal Zone Management (ICZM). This consists of a coordinated development strategy with the inclusion of institutional, environmental, and socio-cultural resources in order to achieve conservation alongside a multiple sustainable use of the coastal area. According to Lane (2008), fragmentation of policy and implementation is an impediment to improved environmental management and therefore integration of implementation and policy is seen as the solution. In the coastal zone, for instance, marine, terrestrial, and estuarine environments are in contact. These environments should be administrated for multiple-use due to the diversity of sectors including the market, government, and civil society involved in their governance. Alvial and Reculé (1999) point out that several developing countries have been aiming to implement ICZM. In fact, up to 1993, just over 50 countries had achieved some level of this integrated coastal approach.

In a report for the UNDP and GEF, Nakashima (1997) reviewed GEF projects implementing Integrated Coastal Management as best practice, including those listed in Table 2.2. This list demonstrates the extent to which the integrated approach was implemented around the world between 1992-1999. This report identifies lessons learned
by various GEF initiatives to conserve biodiversity in coastal, marine, and freshwater ecosystems, such as:

- A two-track approach to resource management and policy reform that integrates “top-down” and “bottom-up” management.
- Integration between good science and good governance.
- Integration between sectors and disciplines:
  - Community and public involvement is crucial for developing a broad base of public support.
  - Participation and environmental education.

This list shows some of the same aims that were mentioned in the review as critical elements in the deployment of ICDPs. While these concepts have been identified as crucial to success in conservation projects, putting them into practice still remains a challenge.

**Table 2.2**: GEF projects implemented using integrated coastal management in national and international waters. Source: Nakashima 1997.

<table>
<thead>
<tr>
<th>Country</th>
<th>Project</th>
<th>Year</th>
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<tbody>
<tr>
<td>Argentina</td>
<td>Patagonian Coastal Zone Management Plan</td>
<td>1992</td>
</tr>
<tr>
<td>Belize</td>
<td>Sustainable Development and Management Of Biologically Diverse Coastal Resources</td>
<td>1992</td>
</tr>
<tr>
<td>Bolivia/Peru</td>
<td>Conservation of Biodiversity in the Lake Titicaca Basin</td>
<td>1995</td>
</tr>
<tr>
<td>Cuba</td>
<td>Protecting Biodiversity and Establishing Sustainable Development in the Sabana-Camaguey Ecosystem</td>
<td>1992</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>Conservation and Management in the Coastal Zone of the Dominican Republic</td>
<td>1992</td>
</tr>
<tr>
<td>Jordan (Yemen)</td>
<td>Conservation of the Dana and Azraq Protected Areas</td>
<td>1992/1999</td>
</tr>
<tr>
<td>Red Sea (Yemen)</td>
<td>Protection of Marine Ecosystems of the Red Sea Coast</td>
<td>1992</td>
</tr>
<tr>
<td>Black Sea (Bulgaria, Georgia, Romania, Russian Federation, Turkey, Ukraine)</td>
<td>Environmental Management and Protection of the Black Sea</td>
<td>1993</td>
</tr>
<tr>
<td>Gulf of Guinea (Benin, Cameroon, Cote d'Ivoire, Ghana, Nigeria)</td>
<td>Water Pollution Control and Biodiversity Conservation in the Gulf of Guinea Large Marine Ecosystem</td>
<td>1992</td>
</tr>
<tr>
<td>Lake Tanganyika (Burundi, Tanzania, Congo, Zambia)</td>
<td>Pollution Control and Other Measures to Protect Biodiversity in Lake Tanganyika,</td>
<td>1992</td>
</tr>
</tbody>
</table>
Diedrich et al. (2010) analysed the participatory process for sustainability in coastal areas using the ICZM framework in a project conducted in the Balearic Islands, western Mediterranean Sea, Spain. The Balearic Indicators Project constituted one of the most relevant results of ICZM. According to the authors, their project showed that the indicators present differences. These differences reveal the lack of any universal method to implement ICZM because every situation is unique and ICZM is generally implemented at the local level. Government agencies have therefore recruited increasing the number of academics who are promoting multidisciplinary science to resolve management issues, stakeholder investment, and public participation on ICZM approach.

Christie et al. (2005) argue that a degree of the discussion between groups who promote participation in integrated models aims to achieve social and environmental goals on relatively small scales. In contrast, proponents of large-scale initiatives target mainly biodiversity conservation. Therefore, integrated approaches characteristically work on a smaller scale. Large-scale initiatives still maintain the historical approach, in which conservation groups do not consider social aspects and human participation as an important element. Both Diedrich et al. (2010) and Christie et al. (2005) note concern associated with the development of ICZM in terms of public and stakeholders participation, which means new challenges for this approach focusing on local realities at a smaller scale.

2.4.1.ii. Ecosystem-based (EB) approach

The second major approach that reflects the influence of ICDPs in marine and coastal conservation is the ecosystem-based (EB) approach. The EB approach has been both used and promoted for decades in resource management. Recently, during the last 10 years the EB approach has become preferred for marine resource management to recover depleted marine species and their sustaining ecosystems (Gelcich et al., 2009a). The EB approach can be defined as combining “ecological, social and economic considerations toward achieving the goal of the sustainable use of natural resources” (Angulo-Valdés and Hatcher, 2010, p. 635). The EB approach takes a standpoint in which humans form a vital part of an integrated strategy of managing marine resources whilst also achieving ecological conservation (Barnes and McFadden, 2008).
Scientists, resource managers, and policy makers all agree on the significance and usefulness of this approach. The EB approach has now been accepted by many international agreements and national governments and has been implemented worldwide. The main characteristic of this approach is that it includes interconnections between ecosystems. In this view, both social and natural components constitute integrated parts of the ecosystem, thus making it a more holistic concept for management of both fisheries and other marine areas. The main difference from traditional single-sector management is that the EB approach works with all the components together rather than each in isolation (Barnes and McFadden, 2008; DeReynier et al., 2010; Curtin and Prellezo, 2010).

Barnes and McFadden (2008) explain that the main characteristic of the EB approach is an emphasis on stakeholder involvement and the process of implementing this approach. An extensive body of literature has developed referring to its use worldwide. For instance, Barnes and McFadden (2008) refer to how the National Oceanic and Atmospheric Administration (NOAA)\(^{28}\), has shifted their management approach to the Ecosystem Approach to Management (EAM). Further, Fletcher et al. (2010) note that in Australia, the EB approach has been used for the past decade. This approach was introduced to accomplish the legislative and policy initiatives introduced for fisheries management for the Commonwealth and the government. In terms of the European Community (EC), De Santo (2010) notes that the role of science in policy-making has become important for developing the EC Integrated Marine Policy and Strategy Framework Directive. He explores how the science–policy interface has moved towards the deployment of a precautionary and EB approach to marine resources management.

Despite the popularity of the EB approach and its emphasis on the inclusion of stakeholder involvement, it has not yet achieved equality between stakeholders (fishers) and government managers in managing marine resources. This type of equal management is called co-management and can, at least theoretically, be complemented with the EB approach.

\(^{28}\) This is the United States’ largest marine resource management agency.
2.4.1.iii. Co-management

Co-management primarily occurs in marine resource projects and can be implemented using integrated and EB approaches to develop sustainable strategies of marine resources exploitation. This type of management which is regarded as one of the main elements of sustainable development, represents another response to people designing marine conservation projects in order to implement the imperatives of including socio-economic aims in these projects (Gelcich et al., 2009b). Noble (2000) refers to the *Brundtland Report*, as the origin of concepts of co-management and as one of the main elements of sustainable development. In implementing a co-management system, local communities must increase decision-making and access over their fisheries resources in co-administration with government management and economic activities.

As outlined above, the concept of co-management implies the participation of stakeholders in local communities. For Marín and Berkes (2010), it refers to government and local resource users having power and responsibility over marine resources management systems, in contrast to the common approach of including only governments in a top-down approach. In the last decade, the fisheries sector (fishers, processors, marketers, etc.) has shown an increased interest in using a co-management approach, with the goal of having government officials and fishers working together. Hollup (2000) explains that co-management implies fishers become involved in all of the stages of fisheries management planning and implementation, including fishers’ opinions, interests, knowledge, and perceptions of the industry and the environment, thus making it a more democratic form of participation in decision making. Co-management is also considered more appropriate for incorporating TEK or LEK regarding the utilization of marine resources. Hollup (2000, p. 407) notes in this context that “There is a tendency for such knowledge to be taken more into consideration where the resource users hold or claim rights (as native or indigenous people) that are recognized legally by the central authorities”.

Reflecting on the socio-economic and biological characteristics of the artisanal fisheries of Galicia, Spain, Freire and García-Allut (2000) propose a different management model which considers including fishers collaborating with government agencies, where regulations were co-managed by government and fishers in a management system adapted
to each territory. As this suggests, there are different examples of co-management around the world. Hollup (2000) points out that developed countries where fishing is an important economic activity and that have legal democracies (e.g. New Zealand, USA, Canada, Nordic and selected EU countries) have examples of the co-management approach. Nepal (2002, p. 748) likewise points out that:

While Canada and Australia are the leaders in co-management of protected areas in the developed world, many developing countries in Asia (Nepal), Africa (Zambia, Zimbabwe), and Central America (Honduras, Nicaragua) have adopted various forms of the co-management of protected areas.

Documented co-management initiatives for marine resources management and conservation include projects from Spain, Chile, Australia, New Zealand, and Canada. Fragoundes et al. (2008) provide an analysis of a successful case of co-management in Galicia, Spain, based on shellfish gathering. This traditionally female activity, with an open-access regime, is currently being developed as a co-management project that includes the allocation of licenses, training and improvement of the organizations. Through this reorganization, women have been increasingly empowered, demonstrating the social dimension of co-management, which in this context has improved the social value of shellfish gathering.

Marín and Berkes (2010) refer to the Chilean case of Management Exploitation Areas of Benthic Resources (MEABR), which are also under a co-management system. The authors explain that this case shows that there are many sectors involved in co-management. They also observe that the stakeholders included in this co-management system are not a homogeneous group, but rather consist of a broad set of public agencies, private organizations, fisher associations, and civil society organizations. One critique of the MEABR system is that in this case the bureaucracy and rigidity of the law are part of the state top-down system, in which fishers have no opportunity to participate in management (Hall et al., 2009). Here, poaching is the main factor hampering co-management and policing, sanctions and motivations for fishers to implement monitoring mechanisms have not been resolved, and thus poaching continues to be associated with poor relationships among fishers.
Nursey-Bray and Rist (2009, p. 118) describe a further example of co-management from Australia in their review of an indigenous co-management initiative within a MPA in the Great Barrier Reef World Heritage Area:

Marine protected management has gained acceptance as a way to achieve enhanced biodiversity outcomes. [...] Simultaneously, co-management has gathered momentum as a mechanism to incorporate indigenous cultural aspirations within environmental management domains.

Within academia, strong advocates continue to develop and assess new and more effective ways to work with indigenous people in conservation and management plans of natural resources. Work carried out by Moller and colleagues (Newman and Moller 2005; Moller et al., 2007; Stephenson and Moller, 2009) in New Zealand and by Berkes (2009) and Turner (2001; 2004) in Canada demonstrates the value of indigenous participation and knowledge in co-management approaches. Moller, for example, is at the time of writing running a three year project called Te Tiaki Mahinga Kai that comprises:

[...] a national network of tangata kaitiaki/tiaki, kaumātua, environmental managers, and researchers formed to improve management of mātaitai, taiāpure, and temporary closures throughout Aotearoa, New Zealand. These are special areas and devices set aside to sustain customary fishing. He believes that traditional Māori resource management techniques, including their continued evolution, have much to offer national resource management practices and is assessing what constitutes successful participation in resource management (CSAFE 2010).

Despite the success of using and promoting co-management around the world, it has experienced difficulties. For example, Marin and Berkes (2010) argue that the magnitude of the real participation of fishers in any co-management approach has ranged widely. The efficiency of a co-management approach depends on ecological and social conditions, together with an administration which is determined by the government. In the co-management approach, both administrative and legal aspects are operated entirely by the relevant government agency, which means that true co-management in which users and government have equal decision-making power does not exist. Gelcich (2008, p. 36) also points out how “the perceptions of fishers can affect engagement in co-management regimes which can be determinate of its success”. Co-management has also been open to significant abuse through the manipulation of quota systems.
Hauk and Sowman (2001) conducted an overview and analysis of selected coastal and fisheries co-management case studies in South Africa. They indicated that the co-management initiatives conducted in South Africa are still only in the early stages of development. A key change they point out for the future is that the government has to become more supportive, specifically in administration, and allocate more financial resources to co-management initiatives.

The literature discussed above concerning co-management and its challenges reflects the relevance of the integration of social development and local participation in projects for the protection and management of marine resources. Thus, one extension of the move to include people in conservation projects has been towards co-management models. Another particular style of conservation integrating development goals and local participation is through MPAs.

2.5. Marine Protected Areas (MPAs)

Among the changes brought about by the EB approach has been the emergence of MPAs as an important tool to achieve sustainable marine development and conservation. Despite the multiple difficulties inherent in protecting such areas, literature has recorded a global understanding that MPAs are an essential, powerful, and effective tool, with the potential to stop the deterioration of the environment alongside conserving marine biodiversity (Banks and Skilleter, 2010). The target of MPAs is to establish long-term goals to ensure ecosystem conditions. The idea is that MPAs sustain public benefits fostering achievement of sustainable development (Angulo-Valdés and Hatcher, 2010) and to alleviate poverty in coastal communities (Fox et al., 2011).

The holistic nature of MPAs allows for the implementation of EB management actions. Since many of these biological-based projects are conducted by governments, the legislated and regulatory structures created to implement them also have reinforced the associated social and economic dimensions of such activities. In order to deal simultaneously with the implementation of the biological, economic, socio-cultural, and political aspects of MPAs, these projects constitute a particular set of challenges. There is a
temporal connection between the emergence of MPAs and integrated EB approaches that has resulted in many MPAs adopting the concerns and socio-economic problems of local communities.

There are many types of MPAs, including marine reserves, marine parks, national monuments and natural sanctuaries, while UNESCO also considers biosphere reserves a form of MPA. In this thesis the definition of MPA follows that proposed by IUCN:

[…] any area of intertidal or sub-tidal terrain, together with 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 (Guerreiro et al., 2010, p. 897).

Currently MPAs are considered areas where a portion of sea and coast is protected as a no-take area and others are left for exploitation subject to management plans. Adams (2009, p. 55) suggests that “these were to be zoned nature reserves, whose aim is to conserve ‘natural areas and the genetic information they contain’ in core zones, while allowing sustainable human activities to continue in outer zones”.

According to Angulo-Valdés and Hatcher (2010), MPAs are considered a new and more suitable way of managing and conserving the biodiversity of marine resources. MPAs have the potential to be deployed in diverse social and economic contexts and with different types of designs. They are also a tool that incorporates institutional and legal support to achieve sustainable development and to overcome difficulties in marine and coastal areas.

MPAs have been implemented throughout the world under many different socio-political systems and diverse types of management. A significant number of scientists advocate this approach as it appears to be more promising and effective than other approaches. Banks and Skilleter (2010), for instance, mention that the CBD proposes the establishment of a MPA network. By the year 2012, it is expected that this network will protect 10–30% of each habitat type in marine reserves. Guerreiro et al. (2010, p. 896) note that “Subsequently, the 5th World Parks Congress in 2003 recommended that 20–30 percentage of each marine habitat be closed to exploitation activities”. Despite many such international commitments that exist to promote the creation of MPAs, a mere 1.17% of the world’s marine areas are protected (Voyer et al., 2012). This reality can be compared
with the more than eleven percent of land protected in some way by the same year (Guerreiro et al., 2010).

Banks and Skilleter (2010, p. 197) report that the “MPAs that exist in the world are approximately 4,600 providing some magnitude of protection to an estimated 0.6% of the world’s marine habitats, but only 0.08% of this area is no-take. These no-take areas are referred to as marine reserves. The marine reserves have generally been based on iconic species or sites”. Iconic species are an example of historically earlier strategies in conservation projects. Sen (2010), however, states that MPA implementation has increased in the last 40 years, placing restrictions on fishing activity that can range from gear restrictions to establishing regimes of total exclusion such as marine reserves or no-take MPAs.

2.5.1. Challenges of marine protected areas (MPAs) to the integrated and ecosystem-based (EB) approaches

Projects with integrated and EB approaches have encountered challenges in the process of implementing management plans during the establishment of MPAs. The intention here is to provide a framework for the analysis of MPAs, as well as to document examples of problems identified in other integrated or EB model based projects. The issues that must be considered include:

- The gap between scientists and policy-makers;
- Lack of coordination and political framework;
- Lack of human and financial resources;
- The dearth of monitoring, control, and surveillance;
- Lack of interdisciplinary team structure;
- Lack of attention to socio-economic and governance aspects; and
- The level of stakeholders’ participation.

The first four issues are closely related as all correspond to problems with project implementation, and pertain to the practical applications of the integrated and EB strategies. The last three are also related because they result from the ability to incorporate
new practices within a management style that corresponds to social and cultural knowledge and understanding. In other words, these issues correspond to projects that have adopted the integrated or EB approaches but have not implemented them on the ground. The problems described above are common to all projects.

2.5.1.i. Gap between scientists and policy-makers

The first important challenge for MPAs is the difficulty of putting scientific knowledge into practice experienced by policy-makers. Several authors discuss this issue, although currently it remains a problem with no solution. Concepts have been institutionalized at international and national political levels, with a degree of institutional innovation required in the process (Berghofer et al., 2008). However, a deficiency in communication still exists in terms of providing understanding to create the actual policies and structures necessary to address what scientific knowledge indicates as being important for the implementation of the integrated and EB approaches.

Government agencies, along with the public, do not always know how to work with resource managers, who may well be scientists, to shift from the past traditional approach to the integrated and EB management approach. There are cultural and institutional challenges still to be overcome. DeReynier et al. (2010, p. 534) propose using “the integrated ecosystem assessment process to both develop new management ideas for a particular ecosystem, and to help shift public policy processes and perceptions to embrace ecosystem approaches to management”.

De Santo (2010) draws attention to several dimensions of the science-policy gap. Effective communication and understanding of the needs, timeframe, sources of knowledge (TEK and scientific) and scopes between science and policy-making would go a long way towards creating a successful EB approach. One area of tension between science and policy goals typically includes: “the politicisation of science and scientisation of politics” (De Santo, 2010, p. 414).

DeReynier et al. (2010) explain that in integrated ecosystem assessment, stakeholders in a MPA such as scientists, managers and civil society should be fluent in communication and create understandings between them to bridge the gap between scientific knowledge and policy-making. Each group should have an on-going chance of participation and of
providing their visions to each other in order to create a shared vision for the ecosystem. In a similar manner to De Santo, Fletcher et al. (2010) have identified the need to enhance the management decision-making processes, rather than emphasis solely improving scientific knowledge, as a critical factor in the implementation of integrated ecosystem-based approach for fisheries (management and conservation). They also argue that EB approaches have achieved progress at the conceptual level, but at a practical level only a few management agencies have adopted this approach. Another important element in integrated and EB approaches relates to how management agencies, usually represented by the government provide coordination and a political framework.

2.5.1.ii. Government coordination and political framework

Government coordination and the political framework are two aspects that can facilitate or obstruct the deployment of a MPA. These are elements that MPA managers and agents need to bear in mind when planning to a timeframe, given that it is necessary to dedicate some time to coordination and establishing good relations and effective communication with the relevant political power(s). The following examples cover both successful and unsuccessful implementations of government coordination in order to achieve integrated and EB approaches for MPAs.

Fletcher et al. (2010) investigated the benefits of establishing a regional level Ecosystem-Based Fisheries Management (EBFM) programme in the West Coast Bioregion of Western Australia. They report that the EBFM programme was a success in terms of considering all stakeholders’ and government’s interests, concerns, and needs. Specifically, every stakeholder group was able to provide their assets in a manner that could be incorporated and utilised efficiently in management planning.

In contrast, Banks and Skilleter (2010) express concern regarding the dearth of coordination and accordance in common policy frameworks required to achieve marine conservation at regional, national, and international levels. They refer to the fact that this lack of coordination and deficiency of frameworks at a political level is a clear obstacle for the progress of marine conservation. Christie et al. (2005) also refer to some of the reasons behind the lack of coordination among policy-makers in Integrated Coastal Management (ICM), and how the political framework does not facilitate the deployment of MPAs. They
argue that in developing countries, institutional culture takes some time to change, and moreover faces institutional-level issues such as weak capacities, competing interests within each level of government for budget and staff, a dearth of shared understanding about their targets, and a similar dearth of programmes’ monitoring and assessment.

2.5.1.iii. Lack of human and financial resources

The literature also stresses that the success of MPAs can be affected by insufficient human and financial resources. This can be an obstacle for any type of conservation project. It is argued that many MPAs created around the world are created in theory, or “on paper”, but all the necessary requirements to make the MPAs function as a PA are never established. Thus, these areas remain as unprotected as they were before becoming an MPA. The following four examples refer specifically to this problem.

Diedrich et al. (2010) provide an example of the problems arising from insufficient funding for an Integrated Coastal Zone Management (ICZM) project in the Balearic Islands, Mediterranean Sea, Spain. By the end of the project planning stage, the project was still not finalised due to an absence of human and financial resources. Currently, the agencies involved in the project still have not received additional technical and financial assistance, thus impeding progress and jeopardising implementation in the long term. This situation illustrates that it should be mandatory to carry out participatory agreements as part of statutory management practice in order for such projects to be effective and to have access to funds.

Thur (2010) also refers to a lack of funding as a common major problem in the deployment of MPAs. He notes this as one of the main reasons that MPAs are called “paper parks”. Paper parks are areas that exist on paper when legally established, but have not been really protected in practice. For instance, coral reef MPAs located in developing countries are rarely allocated sufficient funding by the governments to carry out their protection and administration goals.

Angulo-Valdés and Hatcher (2010) also address the importance of economics for the administration of MPAs. They provide some recommendations for the funding requirement of MPAs, including promoting MPA benefits to obtain profits; providing MPAs with a business side; representing MPAs in economic terms to motivate new
investors; and encouraging public knowledge of MPAs and compliance with their regulations.

One way of overcoming the lack of financial resources has been to establish eco-tourism activities whose revenues support development of MPAs. Fabinyi (2008) provides an example of this, examining the development of a series of community-based MPAs in the Calamianes Islands, Philippines. He notes that MPAs deployed by local governments and conservationists in the Philippines correlate conservation and fishing activities benefits with the economic profits of dive tourism. The dive tourism user fees can provide financial benefits for all the main local actors involved in fisheries, conservation, and tourism. However, West (2004), argues that Western eco-tourism in relatively poor countries can lead to a situation where government officials based their decisions on commercial parameters rather than on local sociocultural values and processes. In MPAs, each case should be balanced between socio-cultural and economic elements to achieve success as an alternative to generating incomes for the MPA’s administration.

2.5.1.iv. Dearth of monitoring, control and surveillance

One of the consequences of the lack of human and financial resources is the impossibility of monitoring, controlling, and surveillance of a MPA or conservation project. Hanich et al. (2010) explain this issue with an example from the tuna fisheries in the Pacific Islands region: where an EB approach requires the navy or police to monitor and improve management controls to be effective in the management of fisheries.

Pinkerton and John (2008) point out the lack of agreement among experts (ecologists, economists, and other social scientists) as to the most appropriate means of monitoring and enforcement of fishing regulations in MPAs. For these authors, monitoring and enforcement are a major problem, absorbing considerable resources in most fisheries. It remains a polemical topic, lacking the right system to achieve compliance with the regulations. Voluntary compliance is rarely achieved. Thus, obtaining legitimacy seems to be an essential goal for regulations compliance. In the same regards, Clifton (2003) assesses an example from Indonesia, a country which also demonstrates deficient enforcement of MPA regulations in their nine marine parks. One solution to achieve enforcement involves
the empowerment of local communities and the partnership between resource users and fisheries managers.

However, there have been some examples of success in the surveillance and enforcement of MPAs in Japan, where regulations are monitored and enforced by coast guards, fishery inspectors, rangers for nature conservation, and others. Yagi et al. (2010) conducted a survey identifying around 1161 MPAs distributed across the Japanese coast. Protections for these are provided through different legal backgrounds and management models.

2.5.1.v. Lack of an interdisciplinary team

The literature is replete with authors referring to the poor inclusion or complete absence of social science approaches for the implementation and practice of MPAs. Assessment of ecological or environmental issues should, ideally, be multidisciplinary (Castilla, 1999; Huntington, 2000; Drew, 2005; Fox et al., 2011; Fox et al., 2011; Voyer et al., 2012). This section distinguishes between (i) the factors proposed for the implementation of MPA, and (ii) those actually used in practice.

Among the factors proposed for MPA implementation is the need for interdisciplinary approaches involving ecology, anthropology, and economy with the incorporation of local communities to implementation (Castilla 1999). Drew (2005) similarly notes that to establish effective customary ecological management plans it is necessary to create multidisciplinary teams in nature conservation initiatives with the specific inclusion of social scientists to integrate TEK/LEK.

Interdisciplinary teams and input in implementation have the potential to benefit the deployment of MPAs, although the literature clearly indicates that accomplishing interdisciplinary work in MPAs remains a challenge. To undertake projects that work within areas of high associated poverty and environment problems requires a multidisciplinary endeavour that is still far from being achieved. The agenda and overall knowledge used by conservation projects that include integration of socio-economic development initiatives still favours ecological standards and procedures over socio-economic and cultural aspects, and promising MPA programs have not succeeded due to the absence of social considerations (Angulo-Valdés and Hatcher, 2010). Symes and
Hoefnagel (2010) likewise refer to the absence of social scientists and social aims in policy-oriented research for the implementation of sustainable development and marine conservation projects with an EB approach which in general remains less important for European fisheries policies. However, new reforms for the incorporation of social science into interdisciplinary teams are planned here.

Many failures in the implementation of the EB approach in practice can be traced to a failure to acknowledge socio-economic, cultural and political elements at a regional and local level. These elements could, however, be addressed effectively if the teams implementing these initiatives included members skilled in the fields of social sciences. The following are examples of the multidisciplinary teams, including social science, requirement for the implementation of MPAs and management of marine resources from: Barents Sea (north of Norway and Russia), New Zealand, Man and Biosphere, South Africa, NOAA (USA) and the Philippines and Indonesia.

Knol (2010) specifically emphasized this necessity in a project for the Barents Sea, where the role of science in the process of an integrated EB management plan is described in integrative, interdisciplinary terms. The lack of interdisciplinary teams and input in practice, however, refers to the lack of social science input for the creation of MPAs with integrated and EB approaches, including the approach undertaken for the administration of fisheries. In this approach, resource management is related to the field of natural sciences and, when included, social science is restricted to the disciplines of economy (Paterson et al., 2010).

According to Bess (2010), New Zealanders have been prepared to try new and untested approaches. However, it is still necessary to include a multidisciplinary approach for the practice of the current models which integrate land, air, and water set by in the Resource Management Act 1991, together with a management system based on individual transferable quotas (ITQs) for the management of marine resources.

Adams (2009) refers to the Man and Biosphere programme (MAB), the aim of which was to create a truly international form of environmentalism. The MAB programme was supposed to develop a basis within the natural and social sciences for the rational use and conservation of natural resources, and to improve the relationship of ‘man’ and the environment. To achieve this conjunction of social and biological based projects, MAB was
intended as an interdisciplinary, problem-oriented approach to the management of both natural and human-modified ecosystems. However, it could not carry out this goal. The project was seen as too ambitious, consuming excessive amounts of time and funds, and lacking the necessary understanding between people from social sciences and biological sciences disciplines.

Based on their work in the South African sardine *Sardinops sagax* fishery, Paterson et al. (2010) argue for the need for social scientists to be involved in sustainable development fisheries projects, as fisheries confront issues outside scientific scope. Natural sciences approaches are not able to address these problems. Fisheries management issues might include, for instance, problems such as equity, redistribution of fishing rights and poverty alleviation. Natural scientists have little knowledge and expertise to resolve such human problems which are exacerbated by a discourse dominated by hard science.

In the United States, a study conducted by Barnes and McFadden (2008) also notes that the first challenge identified in the deployment of an ecosystems approach was the effective integration of social elements in resource management plans. The NOAA has strong natural sciences capabilities; but their social science capabilities remain weak even though human dimensions are considered as paramount in order to reach a sound knowledge of any ecosystem. In the same regard, Christie (2005a) found it crucial to pay attention to social aspects as well as ecological ones in research focused on the Philippines and Indonesia. Participative management processes should then comprise an on-going monitoring of social and ecological aspects of any given project.

The lack of an interdisciplinary team to design and implement environmental projects such as MPAs has resulted in a deficiency in attention to social aspects. This is explained in the next sub-section.

### 2.5.1.vi. Lack of attention to social issues and governance

There are other important criticisms of marine resources management plans and marine and coastal conservation projects using the integrated and Ecosystem-Based approaches which are a consequence of a lack of an interdisciplinary team. These include the insufficient attention and consideration paid to systematically research socio-economic, political and cultural aspects of local communities, which culminates in a failure to adequately address these
realities. Mahon et al. (2010), for instance, note how natural science has been the main focus for Large Marine Ecosystem management plans. Notwithstanding, recently governance and socio-economic elements have been of higher interest. Thur (2010) points out that, to be effective, staff administrating the protection of marine ecosystems needs to understand not only physical and biological processes, but also associated social and economic factors. The latter, however, are seldom considered.

Waylen et al. (2010) found that, despite the significant quantity of literature emphasizing the significant influence of local socio-cultural factors in the effectiveness of conservation initiatives, there is a still a dearth of systematic research:

Conservation interventions should seek to understand the societies they work with and tailor their activities accordingly. It is important to assess the social context that will indicate elements that can contribute to a conservation project’s success (Waylen et al., 2010, p. 1119).

The socio-economic aspects of MPAs that require investigation and that are particularly relevant to this thesis include careful identification of the local groups which will be allocated benefits from the project. Project benefits are socio-economic issues because they have the potential to resolve the economic difficulties of local people. If the benefits of a project are allocated to one local group specifically, this can create tensions with other local groups that do not obtain these benefits. Glaser et al. (2010, p. 1223) add to this discussion with what they call “distributive justice”:

It is important to ascertain who bears the costs and who obtains the gains from formal MPA establishment and operation. This relates both to material (loans, grants and equipment) and to non-material (power and status) benefits which need to be supported by procedures which are locally considered open and fair.

Furthermore, according to Marín and Berkes (2010), power over and decisions about, marine resources management plans are concentrated at the state level and not with fishers’ organizations at a local level. Thus, local opinions and capabilities that form part of the socio-economic sphere are not considered. This lack of attention to and research of socio-economic, political and cultural elements of local communities, alongside a lack of exchange with resources users could result in the MPA not being adapted to the local reality. Angulo-Valdés and Hatcher (2010) argue that donor agencies in several countries
have been promoting the establishment of MPAs around the world with the same strategic template, which does not allow for adapting such plans to local situations. There is also a dearth of institutional and legal frameworks specifically tailored to cater to such projects.

The role that MPAs play in helping development and alleviating poverty is still very minor. While the ecological contributions of MPAs and impacts are comprehensively established, their social role remains poorly understood and investigated (Mascia et al., 2010). Further socio-economic elements to be considered at the local level include the benefits expected by stakeholders in conservation projects that are not an explicit part of the project agenda. This does not imply that political issues are “unknown” to conservation staff, but rather that they may be considered as beyond the responsibility of the conservation organization or the project. Nevertheless, the stakeholders’ expectations of a conservation project can hinder their engagement with it if they do not feel satisfied. Chapin (2004), for instance, refers to conservation projects where local communities have experienced political tensions over such issues as land tenure, lack of representation, and the power levels of indigenous organizations. In this example, the conservation NGOs deemed struggles against the oil, mining, and logging companies destroying vast swaths of rainforest around the world as political actions out of their scope, and have not helped indigenous people in these conflicts. Schmidt and Peterson (2009) identify other local political issues that can hinder a conservation project and which are related to self-determination. If self-determination is the prime concern for an indigenous group, special attention has to be paid to avoid any aggravation of that dimension of their engagement:

Application of the Endangered Species Act (ESA) to tribal lands in the United States provides a rich example of the articulation between biodiversity conservation and indigenous peoples' struggle for self-determination (Schmidt and Peterson, 2009, p. 1458).

That stakeholders expected certain benefits, such as the resolution of particular political issues, would be clear to project staff if they paid attention to these stakeholders’ socio-economic aspects. Such types of political problems could hinder the conservation project to the extent that it may be deemed untenable to continue under particular circumstances.

Some of the socio-economic aspects mentioned above could be effectively addressed given a positive attitude towards working with local stakeholders, especially resource users.
This attitude involves addressing stakeholders’ participation. In terms of marine conservation projects, the recommended governance involves working co-operatively with local fishing and indigenous communities because their participation in resource management programs will help to deal efficiently with the environmental problems that many countries are presently facing.

2.5.1.vii. Stakeholder participation

Participation of stakeholders in any conservation project is argued to be a key to success (Howe, 2001; Voyer et al., 2012). Participation implies involving different stakeholders such as resource users, with the ‘developers’ (which are the scientists and policy-makers) in order to reach consensus and coordination in their agendas and knowledge (Diedrich et al., 2010). As Waylen (2010, p. 1120) puts it: “Many sources in the literature suggest that community participation promotes conservation success”. The benefits of participation have been strongly identified by several authors and include:

- Facilitating common understanding, establishing trust, resolving/avoiding conflicts, increasing stakeholders’ responsibility and accountability, enhancing the legitimacy and acceptance of management policies and decisions, and contributing to more effective enforcement of rules and regulations by increasing compliance (Pita et al., 2010, p. 1093).

Aswani and Hamilton (2004) also stress that local communities’ participation contributes to establish decentralized participatory fisheries management. At the same time, community-based conservation initiatives necessitate concentrating on equity and empowerment factors (Berkes, 2004). In parallel fashion, in a study conducted on Baltic salmon stocks, Haapasaari and Karjalainen (2010) compared four alternative management plans alongside the stakeholders’ commitment to each new management plan. They found that engaging local residents’ participation (when they are the main stakeholders) increased the chances of accomplishing the aims of the management plan. Finally, Diedrich et al. (2010) note that a participatory approach is paramount to achieving an effective implementation of marine resources management plans, although this participatory approach can be different in each situation or project depending on resources, local political context, and logistics.
The type and magnitude of participation, however, can be constrained by an institutional context. DeReynier et al. (2010) emphasize that public participation in ecosystem-based management (EBM) still faces challenges when put into practice, despite agreement about its importance. Policy-makers and resource managers (scientists or not) have already accepted a more inclusive approach, including socio-economic and cultural factors such as EBM, but now have to confront institutional adjustments to align with the principles of EBM. According to Banks and Skilleter (2010), successful establishment of marine reserve networks will depend on (amongst other issues) the improvement of the participation of key local groups. They note that polarised views and opposition from some stakeholders can became a barrier for the deployment of marine reserves, and thus especial attention has to be put on greater involvement and collaboration.

Through the assessment of a major community-based MPA programme (CB-MPA) in an Indonesian island archipelago, Glaser et al. (2010) found issues in relation to the inclusion of local participation and local knowledge. The authors go on to stress the importance of such knowledge about pre-existing non-formal ways of protecting and managing the marine resources. Gray and Hatchard (2008) point out that in the EB approach stakeholder participation – despite it usually being taken for granted – is very difficult to achieve. Hollup (2000) refers to the limited or non-existent participation of user-groups (fishermen) in the elaboration and deployment of fisheries management policies in the lagoon fisheries in the island state of Mauritius. This absence of fishers is due to stereotypes and damaging opinions about fishers’ behaviour prevalent among government agents, the public, and fisheries managers. These negative perceptions clearly affect the user-group’s participation, and contribute to their poor compliance with regulations.

The debate promoting the integrated, EB approach is about what type of participation is necessary for proper implementation. Integrated and EB approach projects have taken place in different contexts around the world, each with their own types of obstacles. Therefore, despite the agreement that participation is important, the challenge lies in determining the type and magnitude of participation. Stakeholder participation can involve very different things, ranging from holding stakeholder meetings, to providing information and answering enquires about the project, to conducting a sound consultation throughout all stages of the project implementation. A higher level of participation would involve
including all the local elements expressed in the consultation process in the project, and also allowing stakeholders a role equal to those of scientists and managers in the decision-making processes of the MPA. In the following section, perspectives on participation present in the literature are discussed, introducing the contested nature of what type of participation should be included within the practice of integrated and EB approaches for MPAs.

As already stated, Diedrich et al. (2010) explain that a participatory approach has been used in resource management projects to adapt them to the local and political context, and thus contribute to an effective deployment of the plan. The engagement of stakeholders in a conservation project depends heavily on the extent of their participation, which will in turn enhance the expected achievement of the project. The following discussion focuses on the types of participation that managers can promote and the characteristics of achieving effective participation:

In their study at the Bahía de Kino, Sonora, Gulf of Mexico Cinti et al. (2010) explain the importance of including local practices. As they found, local users do not instantly learn and understand the rules implemented by government. Thus, communication and organization between local groups and government is vital in order to make government regulations for local fisheries suitable for applying in the local context and reality. This practice also contributes to obtaining strong support from fishers. Moreover, to motivate stakeholder participation in a project, the first step must be to explain the project’s objectives and the scientific implications for the biodiversity in non-scientific and locally relevant language. This will set up conditions in which the stakeholders can then participate in and engage with the project. If stakeholders do not understand the project and its biological implications, it is unlikely they will want to be involved (DeReynier et al., 2010). However, the majority of conservation projects only include indigenous people as a way to meet their conservation goal, not because the goal is local participation (Chapin, 2004). Thus, these projects do not make efforts to translate the projects to local communities in a non-scientific language.

Stakeholder LEK and TEK also has to be integrated into MPA projects. Glaser et al. (2010) explain that LEK, scientific knowledge and local necessities had to be connected and considered in Indonesia, which has over 6000 coastal villages, to provide new ways to
achieve conservation and development aims. In Chile, improving the participation and sharing of knowledge between fishers and consultants must also be enhanced (Schumann, 2007). Paterson et al. (2010, p. 793) refer to “active” participation, as, for example, in a meeting setting, allowing all participants to understand that their non-scientific contributions are valued in an equal manner during the process. In addition, Jentoft (2000) argues, in relation to the absence of communities’ participation in fisheries management, the recovery of fish stocks depends on fishery communities.

Unfortunately fishery communities are not considered to be a major contributor to fisheries management and they may even be considered an obstacle. Social scientists advocate for fishers’ participation, due to their experience of living their entire life in local communities (Hall and Close, 2007; Hall et al. 2009). Fishers have traditional knowledge that fisheries managers should take into account. However, managers are typically primarily concerned with finding solutions for fish depletion. Hence, it is recommended that managers aim to avoid any negative impact on the culture and social structure of fisheries communities and they should ideally design fisheries management plans that contribute to increase the solidarity and cultural dimensions of fishers’ communities.

Mikalsen and Jentoft (2008) assess the institutional context of management plans established in European fisheries with a specific focus on resource users and stakeholder participation in decision-making. They stress that in spite of a reformed fisheries management system in Europe that integrates greater participation of all stakeholders, in practice this has not been effective due to each country’s own needs regarding stakeholder participation. Thus, European model has not worked for all. In the same sense, Berghofer et al. (2008) emphasized the importance of obtaining stakeholder participation for the decision-making process in European fisheries, given that these stakeholders contribute with diverse values and opinions, local knowledge, and alternative practices, according to the local context. These are all elements which facilitate an effective deployment with the participation of all important actors. Likewise, Mauro and Hardison (2000, p. 1267) argue that “Indigenous peoples should be invited in the process to participate at all levels of decision making and management, and have representation on steering committees, planning boards, advisory bodies, and similar organizations”.
Howe (2001) argues that participation of local communities in MPAs and integrated coastal management projects extends to decision-making processes and to accommodate the fact that local communities have a rich local knowledge accumulated over generations which prove valuable for decision-making processes. On the other hand, Pita et al. (2010) note how participation of fishers in the fisheries management decision-making process is not a new approach within the European Union (EU), given that in the early 1970s the European Commission introduced the idea of involving resource users in decision-making. At the same time, Pita et al. (2010) consider stakeholders’ participation a vital element to achieve good governance. They used a study conducted in Scottish inshore waters as a way to prove several benefits of including stakeholders in the fisheries management decision-making process. The overexploitation of fisheries around the world and deficiencies in current fisheries management, likewise, is attributed to the historical absence of the main stakeholders in real decision-making.

All aspects described above could be accomplished with what Glaser et al. (2010) argue is a key type of participation for the proper implementation of a MPA. They found that “Comprehensive participation” through all stages of an MPA, in Spermonde Archipelago in South Sulawesi, constituted a key aspect of EB implementation. Comprehensive participation is described as active participation of the resource user-group from the design to the deployment of conservation plans, and implies not only a constant effort in inviting local communities to participate, but also an important amount of time dedicated to maintaining this local participation. In another example, Diedrich et al. (2010) argue that marine management projects with development indicators should involve NGOs, the general public, the private sector, and resource users to be considered a truly participatory project. However, given that too many stakeholders can cause conflicts resulting in costs of time (one of the reasons why stakeholders are frequently kept to a minimum), sometimes these actors are not included.

A further related aspect in the process of enhancing participation of stakeholders that is relevant to this thesis is a selection process for stakeholders that ensures that different groups are invited and encouraged to participate. Local organizations, for instance, should also have a role in the implementation of conservation projects as key stakeholders. The literature shows, however, that local organizations are not usually provided with a chance to address their agendas (Chapin, 2004). The selection of representative people from all the
stakeholder groups (referring to different types of actors in the same community) is paramount for the effectiveness of the project implementation, as an incorrect selection can cause conflict in the local communities or even at a regional level. Glaser et al. (2010) also found that “transparency and representativeness” were critical elements to consider in the implementation of future initiatives. One way of including resources user-groups and local organizations in a resource management and conservation initiative is by carrying out a consultation process.

To understand the complexities and needs of communities, consultation with stakeholders is now being adopted as a standard activity in conservation initiatives. However, although consultation is a way of participation, it is not the only one. Stakeholder consultation in itself is not sufficient to assure local support for the project, and instead should be viewed as the first step. Human and Davies (2010) note the absence of stakeholder consultation for the initial stage of developing natural resources management programmes in comparison with their frequent participation in the implementation and evaluation stage. A thorough consultation of stakeholders can help to elucidate some traditional forms of community management of, for instance, marine resources that use local ecological knowledge systems, such as that mentioned before by Glaser et al. (2010). It is particularly important to identify and integrate “locally emergent rules” through a consultation process. These rules should be institutionally formalized because they are part of the local community’s own ways of organizing local social-ecological systems in order to achieve sustainability, and thus better reflect the needs and situation of the local community. The idea pursued here is to work with nature and against poverty, but in union with people. In terms of MPAs in the Baltic Sea cod fishery, Suuronen et al. (2010) also establish the dearth of proper communication between resource users and other stakeholder groups before the deployment of any management plan. Incorporating resource users’ interests and opinions into the decision making process could help in establishing sustainable fishing policies.

Thus, the consultation process itself could indicate what different types of information are necessary to collect, such as opinions, queries, local knowledge, local rules and desired benefits. For instance, Christie et al. (2005) also support community participation in Southeast Asia (Philippines and Indonesia) through addressing local groups’ desired benefits to achieve sustainability within a coastal management process. However, while
stakeholder consultation is important, it may not always be appropriate for the design stage of a conservation project. An example of this is provided by Human and Davies (2010), who conducted a stakeholder consultation for a project developing a marine and coastal monitoring program for the Pilbara and Kimberley regions of northern Western Australia. In this study, rigorous selection of suitable stakeholders did not in practice provide the outcomes expected for marine ecosystems knowledge to help in the research planning process. The authors argue for the need to ascertain the effectiveness of stakeholders’ participation, given that it may not necessarily or reliably provide the expected outcomes.

This section has explained and provided examples from the literature of types of participation in conservation projects, how consultation can take place in such projects, and the importance of locals’ and stakeholders’ engagement in them for the successful deployment of, in particular, marine and coastal management and conservation projects. The literature presented also argues that projects should have a greater scope than a simple focus on how stakeholders and local communities’ interventions, such as the allowance of fish quantity, fishing techniques, marine resources size and marine resources types affect the natural environment. Cultural and social features are also paramount for such projects to realise any chance of success. If applied by projects’ managers to promote stakeholders participation, and especially that of resource users and local communities, these elements will result in the engagement of stakeholders in the relevant project. All of these elements are also indicative of the potential contribution of anthropological perspectives to achieve a greater understanding and consideration of cultural and social factors in such environmental projects.

2.7. Summary

Environmental anthropology has long focused on the relationship of people and their natural environment. However, this sub-discipline has undertaken different approaches to study this relationship. The initial approach considered the natural world as an objective element separated from a subjective human existence, replete with meanings, and where human actions could affect and modify the natural environment. This has largely been
replaced by a new approach, where the natural environment and the human social and cultural realm are joined together symbiotically.

This new approach has led to the investigation of the actions or defences used to address practical environmental problems. This view of the interaction of humans and the natural environment is based on how people signify their surrounding world and how values, beliefs, interests, understandings, and the way of viewing the natural environment can affect environmental projects. However, this approach also investigates how environmental projects, and specifically the discourses and ideas evolving from them, can impact on the view humans have of the natural environment.

Environmental anthropology specifically examines the inclusion of human participation in environmental initiatives (conservation or management of natural resources) and the inclusion of the social and cultural dimensions of local communities such as identities, social structures and dynamics, historical processes and culture in these initiatives. Specifically, this section has proposed using an anthropological perspective that identifies and analyses in-depth the thick complexity and implications of including the human aspects and dynamics in conservation projects. The critiques raised by environmental anthropology about the importance of human inclusion in such projects have helped precipitate the evolution of conservation projects that integrate socio-economic development aims. One of the elements that has been identified to improve local participation in conservation projects is to take into account TEK and LEK as a legitimate source of knowledge that can complement scientific knowledge.

This review has identified the importance of including socio-economic and cultural elements in conservation projects, together with the participation of resource users in local communities affected by the management plans of marine resources. Conservation projects have, as shown, progressed towards this more inclusive approach of human aspects and local communities’ participation. Social scientists with expertise in investigating socio-economic and cultural topics can contribute significantly to this task of integrating new social perspectives to improve environmental projects.

Among conservation alternatives, MPAs with an ICDP approach have gained popularity. Nonetheless, MPAs constitute a particular set of challenges which emerged in relation to ICDPs aims because they must deal simultaneously with the implementation of
biological, economic, socio-cultural, and political aspects of a project. Since many of these biological-based projects are conducted by governments, the legislative and regulatory structures created to implement them have also reinforced specific and not always ideal social and economic elements of these projects. The recent evolution of different MPA models stresses the temporal connection between ICDPs and the emergence of MPAs with integrated and Ecosystem-based approaches a move which has resulted in MPAs adopting the concerns and socio-economic problems of local communities.

A comprehensive literature has developed highlighting obstacles and challenges to the successful creation of MPAs. The problems discussed in this review of the deployment of MPAs have included the gap between scientists and policy-makers, together with the lack of: coordination and political framework; human and financial resources; monitoring; control and surveillance; interdisciplinary project teams; attention to socio-economic and governance aspects; and stakeholders’ participation. Conservation projects such as MPAs, as shown in this review, still aim to change the practices and behaviours of locals in order to achieve sustainable fishing production. Despite having made progress towards co-management, or people and community-based conservation projects, the literature reviewed in this chapter shows a lack of more empirical data aimed at contributing to the design of more effective projects with an orientation of combining conservation /development activities.

What is still glaringly obvious is that it remains a daunting task to integrate conservation and development via ICDPs. The literature has emphasised that conservationists and governments who encourage conservation practices within local communities must urgently take into account a set of social and cultural factors which have been obscured, misunderstood, simplified, and dismissed both in the history and ideology of the environmental movement and throughout the history of ICDPs.

Having established the conceptual foundation for and components of developing successful MPAs the following chapter describes the methods used in this thesis to evaluate the process and implementation of a major MUMPA in coastal Chile.
Chapter 3

Methodology

3.1. Case study

This thesis studies the LML MUMPA, a specific type of MPA which also includes a particular approach to ICDPs. The characteristics of ICDPs in themselves raise issues in terms of the involvement of local communities and the acknowledgement of local needs, interests and decision-making in the design and implementation of MPAs with an ICDP approach. This research used an ethnographic methodology and included extensive fieldwork using techniques commonly deployed in social-scientific research to collect primary data. The techniques used are also traditionally employed in ethnographies to gather information, including gathering oral histories, documents, participant observation, together with field notes.

Sustainability and sustainable development are possible economic alternatives that both political powers and societies can adopt. However, to be effective, sustainable development must also incorporate the perspectives of poor rural communities in the realisation of sustainable strategies for the utilisation of natural resources (Boissiere et al., 2009). Local communities can be “key elements to solving intractable problems and halting cycles of poverty, powerlessness and environmental destruction” (Global Greengrants Fund, 2011). For this reason, through anthropological methodologies, it is possible to provide poor rural communities around the world with a voice in their own future. After some preliminary fieldwork, the local communities’ awareness of the
environmental degradation around them can also be examined, as they should be the ones most vulnerable to its ravages.

To research the LML MUMPA project, fieldwork was primarily undertaken in Bahía Mansa town, located in San Juan de la Costa County, Osorno Province and Los Lagos X Region of Chile. This research was completed between February 2007 and February 2011. The fieldwork itself was undertaken during a period of residence in Bahía Mansa town and in Santiago, Chile, from April 2008 to January 2009, and from May-June 2010. The fieldwork conducted in Bahía Mansa was divided into two periods: 1) five months between June 2008 and January 2009, and 2) nine days in June 2010.

This case study is valuable in that it constitutes a project that can illustrate the cultural and social dynamics of both indigenous and non-indigenous peoples, and on two core “occupational cultures”, namely logging and fishing. This research also focuses on the concerns and interaction of these cultures regarding biodiversity conservation at different levels, including international, national government, local government, NGOs, local institutions, and grass roots organizations. As mentioned in Chapter 2, significant progress has been made towards the inclusion of the social and cultural dimensions of local communities in biodiversity conservation and management projects. In addition, consensus exists in terms of considering local participation as a crucial element in achieving effective conservation and management plans (Wells and McShane, 2004). Notwithstanding, the issue of how to apply best this vital factor to achieve success in conservation and management plans in practice remains unresolved.

There has been limited inquiry and thus knowledge about the role and effects of social and cultural factors in and produced by conservation projects (Chan et al., 2007; Carneiro, 2011; Voyer et al., 2012). Thus, the inclusion of social scientists with ecologists is necessary in order to conduct social and cultural-oriented research about how local communities participate both in the design of conservation and management projects and in the implementation of them to ensure effective co-participation (Symes and Hoefnagel, 2010). More in-depth research is key to understanding how to interact with locals, together with what is locally meaningful and appropriate in conservation projects. Knowledge about the role of human phenomena in conservation projects is still in its early stages, particularly in terms of how to incorporate it into policy, governmental frameworks, and private initiatives.
in practice (Knol, 2010). As discussed previously, ecological impacts and scientific knowledge have historically prevailed over social, economic, and cultural discourse in conservation and management initiatives. Moreover, while the utility of stakeholders’ participation has been increasingly recognized in the literature, new ways must now be identified to improve the quality of such participation both in locally accepted ways, and according to each specific context (Blom et al., 2010; Voyer et al., 2012). This case study provides an example of how the social and cultural characteristics and dynamics of local communities can influence both positively and negatively the implementation of a MPA. As explained in the following chapters, Chile is a country with both an indigenous reality and a political context that create specific local identities, which can affect the deployment of ICDPs. In summary, the methods used in this thesis help to explore:

- Cultural and social dynamics of all different local actors in MPA creation;
- The interaction of local actors regarding biodiversity conservation at different levels;
- The role of local participation in relation to the success in conservation and management plans of the MPA;
- The impacts on social and cultural factors in conservation projects.
- How to interact with locals, examining in particular what is locally meaningful and appropriate in implementing conservation projects; and
- What human phenomena should be incorporated into policy, governmental frameworks, and private initiatives in practice.

The research began with a preliminary investigation into options for case studies. Possible subjects considered for fieldwork included an indigenous group in the south of Chile associated with the Chiloé-Corcovado Marine Area and a non–indigenous group in two possible sites in the north of Chile: Caleta Chañaral de Aceituno, Atacama III region and Caleta Los Molles, Valparaíso V region. However, during these initial research stages, a unique initiative conducted by the government of Chile relating to the conservation of

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29 Since 1970, Chile has been divided into administrative regions. The north of Chile includes the XV, I, II, III, IV and V regions and the south includes the VI, VII, VIII, IX, X, XI, XII, XIII and XIV regions.

30 Communities of artisanal fishermen in Chile live along the shoreline of the country in social units called “Caletas” or coves in English.
marine and coastal resources and integrating development aims was identified\(^{31}\). This initiative was the GEF Marino project, which created the LML MUMPA that was eventually selected as the case study. This MUMPA included different cultures and social dynamics, and was thus ideal for the analysis of different histories, interests, and opinions relating to the implementation of an ICDP. Moreover, the case study chosen has the characteristic of being in a territory where indigenous communities have been involved in previous conservation projects encouraged by NGOs:

*So the idea behind choosing this area was to combine ecosystem management but with local communities for the first time in Chile, and taking advantage of the initiative that the Haullliche communities had in the Osorno shoreline. Also beneficial was that WWF and CONAF\(^{32}\) were working in the area with these indigenous communities. There was a river in the area that emerged from the mountains to the sea, therefore freshwater, marine-coastal and the rain forest ecosystems were almost pristine, making the area though isolated a very special place (Alvaro Rodríguez, designer of the GEF Marino Project).*

The GEF Marino project was also strongly influenced by pre-existing notions of what constitutes TEK. These understandings precipitated the attempt by the GEF Marino staff to develop a strategy and action plan for addressing local communities’ concerns and seeking their active involvement and participation in project activities:

*No doubt that the GEF Marino is a huge progress in terms of setting up the bases of an unique model in Chile […] for the administration of a marine and coastal territory and of the natural resources contained there in a participatory way and involving the local stakeholders, grass root, local communities trying to counteract the excluding dynamic that currently exist for the decision-making (Alvaro Rodriguez, Designer of the GEF Marino Project).*

The LML MUMPA therefore provided a valuable opportunity to conduct an in-depth analysis of how an ICDP is perceived by, and affects, local communities, depending on the differences in their cultures and social dynamics. The selection of this case study was also influenced by meetings held with the organizations and institutions involved with the artisanal fishers and conservation in Chile, such as National Corporation of Artisanal Fishing (CONAPACH), and WWF. These groups indicated preferred locations based on the following criteria:

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\(^{31}\) I was informed of this initiative by a friend, Mauricio Galvez, who was working in the Chilean Under-Secretary of Fisheries and is currently the coordinator of marine resources conservation for the WWF-Valdivia-Chile.

\(^{32}\) National Forest Corporation.
3.1. Case study

- Communities which have not previously been involved in studies similar to the proposed research.
- Areas that were representative of the different ecological regions of Chile and thus provide a broad based case study for this thesis.
- Sites that can inform the development of progressive resource management policy and the level of achievement of sustainable development.

3.1.1. Identifying relevant actors

The previous chapter identified the importance of understanding the perceptions of various stakeholder groups holding important information relating to LML MUMPA. In order to account for this, it was necessary to investigate the history, culture, and social dynamics of the local communities. These stakeholders were asked about their life experiences, providing both historical antecedents and the current influences that the LML MUMPA project had on their life in their locality.

Three groups of stakeholders were selected for interviews, with the analytical focus of the thesis residing with two main groups, namely the artisanal fishers and indigenous communities. The third group, the GEF Marino project staff and the specialists, were selected to complement and provide another perspective for the issues covered in the research. These three groups were considered key informants as defined by McGoodwin (2000, p. 63) “when researchers are trying to collect specific and detailed kinds of data they may rely on ‘key informants’. A researcher’s key informants may consist of only a very small sample of community members, but one which is explored in greater depth”.

The key informants from the local communities were people with leadership roles in the local communities. Due to the large number of groups involved in the overall project, it was considered essential to interview at least one representative from each group. To achieve this, interviews were conducted with the leaders of each artisanal fishers group and indigenous community organization of the Mapu Lahual Territory to obtain the formal opinions of each organization. Informants with a leadership role were paramount for the study as they functioned in a primary role in the LML MUMPA project, which meant they had more interest, knowledge, and competency in discussing the overall implications of the
Chapter 3.- Methodology

LML MUMPA project for their communities. In the same sense, community leaders could also provide information about history, culture, and social dynamics from a broader perspective because leaders are typically people highly integrated into their communities, and thus are people most likely to have considerable information about their community.

The first group included the leaders of nine Huilliches indigenous communities of the LML MUMPA project. This included Huellelhue, Nirehue, Loy Cumilef, Caleta Cóndor, Maicolpi, Maicolpué Río Sur, Melillanca Huanqui, Manquemapu, and Mahui Dantu communities (Figure 1.2, Chapter 1). In Mahui Dantu, interviews or any kind of fieldwork could not be conducted as originally planned because the community was located too far away from the other communities, with poor road access and no public transportation.

The second group included most leaders of the artisanal fishers’ organizations of the Osorno Province, including Syndicate N° 1, Syndicate N° 2, Syndicate N° 4, Syndicate Encarnadoras, Cooperative Coopemar Trumao, Syndicate Pucatrihue, Syndicate Playa Centro, and Syndicate Costa Brava. Four other fisher’s organizations from indigenous communities were also included: Syndicate Tril-Tril (from Maicolpi indigenous community), Syndicate Maicolpué Río Sur, Indigenous Association Huellelhue, Nirehue and Loy Cumilef (this is one organization that represents three indigenous communities), and Indigenous Association Caleta Cóndor.

The third group included the project staff, decision makers of the GEF Marino project, and specialists in marine resources. The decision makers were from private and public agencies, and were involved in the coordination and implementation of the LML MUMPA project. These organizations were the National Forest Corporation (CONAF), the UNDP, and the Municipalidades\footnote{The equivalent of City Councils.} of San Juan de la Costa and Purranque. In addition, two marine biologists were included in this third group. As experts they specialised in the management of marine resources and were also involved with the local communities of the Osorno shoreline. Referring to the representatives of the third group, in Río Negro town and Municipalidad de Río Negro fieldwork was not conducted as originally planned as it was decided to prioritise the County and the Municipalidades of San Juan de la Costa and Purranque. Although the LML MUMPA is located in Río Negro County, indigenous communities and artisanal fishers have more contact with the County of San Juan de la
3.2. Use of qualitative methodology

Costa, where stakeholders spent most of their life. In addition, Municipalidad de Purranque was involved to a greater extent with the GEF Marino project than the other Municipalidades.

The leaders of the three stakeholder groups identified, who were interviewed via a semi-structured process, were not the only participants of the study. Informal interviews were also completed with other members of artisanal fishers and indigenous communities organizations. These interviews were conducted in the absence of their leaders, to increase the ability and willingness of subjects to talk freely. Other residents of the fieldwork area, who were not members of the artisanal fishers and indigenous communities local organizations, were also informally interviewed. The reason for the informal interviews is that it can be common to find that the organizations’ members do not necessarily think the same way as their leaders, or do not share their understandings and ideas. This strategy was used to investigate whether there was a difference in opinion between general members, residents not participating in organizations, leaders of the artisanal fishers’ organizations, and the indigenous communities of Mapu Lahual Territory. Thus, the extent of difference between the perceptions and opinions of leaders and members of most of the organizations could be established.

Information about the history, culture, and social dynamics of the local stakeholders participating in the LML MUMPA was gathered in order to assess the extent to which the ICDP considers culture and social dynamics in conservation projects. This information was also gathered to help understand how these elements in the implementation of MPAs related to the participation of local people associated with the ICDP. To analyse these topics in-depth, a qualitative ethnographic methodology examining both cultural and social characteristics and realities was necessary.

3.2. Use of qualitative methodology

The analysis used in this thesis is framed within a qualitative mode of investigation. This approach is essential for understanding the local-level social and cultural factors that are the main focus of the thesis. As outlined above, the qualitative methodology used is
ethnographic, in which the main sources of information are oral histories, collected through informal and unstructured conversations, in-depth semi-structured interviews, participant observation, and notes collected in fieldwork. This is complemented by local and non-local secondary sources (i.e. written documents) and visual material obtained during the course of the investigation. This activity consisted of creating and collecting a photographic registry of over 700 pictures taken by the researcher and supplemented by photographs from local people, most notably Cristian Vargas and Alonso Hinostroza. From this visual material, twelve photographs are used in this thesis to accompany the social and cultural information in Chapters 4 and 5.

According to Ruiz and Ispizua (1989, author’s translation), qualitative methods aim to understand the meaning of the things (processes, behaviour, and acts) where the language used is one of concepts and metaphors more than one of numbers or statistics. Qualitative research does not look to measure empirically, generalize, or contrast the social phenomena observed, but instead tries to explore the range of experiences and meanings that occur in a single case. Qualitative methods start from the basic assumption that the social world is a world constructed with meaning and symbols. Qualitative methods are therefore designed to search for how a particular informant constructs and views the world around them, and to understand both the subjective and deeper, meaning-laden concepts related by the subjects studied.

Due to these characteristics, qualitative methods were chosen to meet the current research objectives. Ethnographic methodology includes a variety of qualitative techniques which provide a valuable way to give voice to the people who, despite being the main participants and those most significantly affected by policy makers, are rarely considered or involved in State initiated management plans for marine resources. The aim of ethnographic research is therefore to describe and comprehend individual group cultures and social dynamics, collect opinions, understandings, interests, and needs through narratives which are all vital in understanding the complexities of community involvement in marine conservation activities.

The focus of inquiry of ethnographic fieldwork is towards social phenomena and involves:
3.2. Use of qualitative methodology

living in close contact with the research population in order to observe their daily routines, ritual and social acts, economic activities and other aspects of cultural behaviour [...] for the study of the human social systems [...] and for a description of culture and to research on how much each problem and socio-cultural process count (Bernard, 2006, p. 725).

The specific characteristics of ethnographic fieldwork emerged in the decade 1915-1925, following the appearance in 1922 of major theoretical works by A.R. Radcliffe-Brown and Bronislaw Malinowski. Malinowski is considered the “father” of ethnographic research, developing a methodology for this type of fieldwork which implies rigorous and long-term residence with the people being studied (Honigmann, 1973). For these qualities, ethnographic methodology is unique and produces a level of information more elaborate and complex than that of other methodologies for the study of culture and human behaviour:

In terms of data collection, ethnography involves the researcher participating overtly in people’s daily lives for an extended period of time, watching what happens, listening to what is said, and/or asking questions through informal interviews (Hammersley and Atkinson, 2007, p. 3).

This specific methodological approach provides the best model for understanding the relationship between ICDPs, social and cultural dynamics and participation of local groups. This is because ethnographic research produces knowledge that represents social phenomena in more in-depth detail that any other methodological approach, primarily due to the long-term involvement with the communities being studied. Conducting ethnographic research involves collecting a variety of sources of information, which are then combined to achieve a unique approach with the purpose of capturing the social and cultural meanings so crucial to understanding socio-cultural dynamics in relation to any social phenomenon and event. Ethnographic methodologies aim to understand and describe the information “from the inside”. Ethnographic research is also appropriate for researching small-scale communities and their local characteristics and social dynamics (Brewer, 2000), and can best provide detailed descriptions of real-world events and everyday situations. In addition, ethnographic techniques facilitate a familiarity with the participants in local communities which helps to acquire more knowledge about their social life and thus better understand it (Puddephatt, 2009).
3.2.1. The interviews

A variety of information collection techniques are used in this thesis, including the collection of oral histories. This approach is used because it is important to obtain the participants’ point of view. Oral histories were collected via interviews, which varied in structure, including both unstructured/informal/spontaneous and in-depth/formal/semi-structured sessions. When unstructured/in-depth interviews were held, notes were taken. When semi-structured interviews were conducted, they were recorded.

McGoodwin (2000, p. 64) explains that the use of unstructured interviewing is spread in social science research:

Is the most widely used form of interviewing for gathering information about a community and its people. Community members are interviewed informally during the course of an ordinary day, wherever convenient. Despite its casual approach this type of interview requires skills on developing rapport, getting informants to open up and provide the info desired, knowing how to end the interview, and making sure that information is systematically elicited.

To provide a registry of the data collected in the unstructured interviews, the researcher collated daily field notes using a laptop, field diary, or by speaking to a digital recorder. Unstructured interviews were conducted both individually and in groups.

On the other hand, when a detailed version of past events or when access to particular locations or people are unobtainable, in-depth interviews are used (Garcés, 1993, authors' translation), as is the case of the current investigation. This type of interview aims to identify what is important and significant in the mind of the informants, including meanings, perspectives, interpretations, and the way in which the informants see, classify, and specify their own world. The in-depth interview technique used (described by Ruiz and Ispizua, 1989 authors’ translation) was qualitative, flexible, and dynamic and was selected amongst other types of interviewing techniques because it can illicit important information needed for the current research. It was also non-directive, not structured, not standardized, and open. It did not need to have a guideline of set questions, although interviewers often have a paper outlining general subjects they are aiming to treat. Here, many face to face encounters (in-depth interviews) between the interviewer and the informant are used, where the purpose was hermeneutical. That is, the emphasis of the in-depth interview was
3.2. Use of qualitative methodology

to register stories about the history, experience, and opinion of the person about certain facts, but presented through the interviewee’s interpretive lens.

When doing the semi-structured in-depth interviews for this thesis, two different procedures were used, one for the artisanal fishers and one for the indigenous communities. These varied a little but most of the questions/subjects were the same. Each had thirty-eight potential questions/subjects (see Appendix A and B respectively for the artisanal fishers and indigenous communities’ guidelines). A third interview guideline was used for the project staff or specialists, depending on their role or knowledge about the GEF Marino project. With the latter interviews, the number of questions/subjects varied significantly. The interview guidelines started with simple questions such as age, gender, occupation, and place of birth, which were followed by more complex questions about perceptions, opinions, and interests. The semi-structured in-depth interviews provided rich historical information and were appropriate for discussing specific topics and issues from the local community that were useful for building the case study. The general interview themes were as follows:

- Understandings of cultural and social dynamics;
- Participation, awareness, and empowerment; and
- TEK and LEK.

Most semi-structured in-depth interviews were conducted individually, although on three occasions, when it was pertinent to do so, participants were interviewed with other individuals present.

The style of interview differed when conducted with an interviewee who had little formal or academic education and therefore could not access written text. Even the most educated people among the artisanal fishers who participated in this study demonstrated difficulty with formal skills such as writing and organization of ideas. During these interviews, concrete questions were used that involved uncomplicated language, simple grammar, illustrative examples, and comprehensible technical terms. When asking a general question, attempts were made to be specific, to explain the meaning of the question, and to rephrase the question if necessary until the participant had a clear idea of the meaning. For instance, when asked if there was any policy that the government has created that affected
them, some participants found the implications of this concept difficult to grasp immediately. Examples were therefore provided, such as whether policies such as fishing quotas or MEARBs had an effect on the interviewee and what their views were relating to these topics.

The tone of the interviews also differed between the interviewees. Tone refers to the approach of the interview, voice emphasis, and behaviour with respect to each of the interviewees. Different tones were therefore used depending on the age and gender of the participant, and similarly if the respondent was from a rural area or not. Chilean Spanish uses a different linguistic approach to a person who is older, involving appropriate titles such as *Usted, Señor/Señora*, or *Don/Doña*. In these circumstances, the tone of the conversation was very polite and formal. The particular way this polite form of address is used varies significantly between Spanish speaking countries. Likewise, if a young person was being interviewed, or the respondent was old but used a lot of southern rural Chilean slang, this slang was also incorporated into the questions to achieve better rapport and familiarity, and to blend linguistically and culturally with the respondent. This facilitated confidence and communication with the respondent during the course of the interview.

The average time of each semi-structured in-depth interview recorded was one hour. The shortest interview was 34 minutes and the longest 2.17 hours. Sometimes, after recording an interview and turning off the recorder, an unstructured informal conversation with the interviewee was held for a longer time. In this case, notes were taken recording the most important issues discussed. The informal interviews lasted from one to four hours on average.

The only difficulty encountered in recruiting people to participate was that some interviewees moved frequently because they lived in other cities/towns. This lack of availability meant extra effort was required to locate them. Some communication problems also emerged in regards to reaching interviewees by mobile phone, as this does not always work, especially in remote and rural areas.

All interviews were conducted in Chile except for one conducted in Wellington, New Zealand. Interviews conducted in Chilean cities included Santiago, Valparaíso, Puerto Montt, Puerto Varas, and Osorno. One interview was conducted in each of these cities, except for four in Osorno. Within the province in which the author was living, interviews...
were conducted in Puaicho, Pucatrihue, Maicolpué Río Sur, Tril-Tril, Costa Río Blanco, and Bahía Mansa.

Throughout the fieldwork process, the interviewees’ expectations in terms of outcomes were met, especially because the research promoted the incorporation of visions, values, interests, and expectations of their own local communities into future marine resource management plans and conservation projects. This was very important for interviewees. Many people explicitly mentioned that they were looking forward to seeing the research, even if simply to view the printed copy (if unable to read reliably) in order to see their pictures or names on the research. Only the third group of key informants, the project staff and specialists, were likely to engage with reading of the research. An e-mail address was provided for future contact or if participants wanted information about the results of the research. It was made clear that the researcher was more than happy to respond to such enquiries.

3.2.1.i. Relevance of questions addressed/findings sought

This ethnographic research focuses on describing the three different realities constructed by the perceptions and opinions of each of the three stakeholder groups: distinct realities brought about by the specific historical, cultural, and social context of the respective groups. The purpose was to see the interactions between these three groups, together with the cultural and social dynamics within the first two subgroups, that is, the artisanal fisher and indigenous communities. The questions were addressed in order to provide clarity about the processes involved in relation to social and cultural factors in the implementation of the LML MUMPA as well as the concerns the groups had regarding the participation of local peoples in the LML MUMPA. In addition, the methodology used in this research contributes to provide empirical data aimed at showing the success of MPA in combining conservation and local development.

The first theme of the interview, “understanding of cultural and social dynamics”, included questions pertaining to the different aspects of the participant’s economic activities. As a result, this section changed slightly depending on whether the interviewee was an artisanal fisher (indigenous or non-indigenous) or an indigenous individual who had a different occupation, such as an alerce worker. Some questions within this section that
were the same for both groups of stakeholders, artisanal fishers and indigenous non-fishers, including the years of working at their particular occupation or activity; current and past economic activities; role of their local organizations; and visions and perceptions regarding their relationship with the government. The aim was to collect respondents perceptions of their economic and social situation, together with the wider discourses encoded within these perceptions, in order to see how each group identifies itself.

In addition, this section was used to detect conflicts in the community, in their own perceptions and interests regarding marine resources, and in their position in their communities. Questions also investigated changes in the local socio-economic systems and resources over the last twenty years, before conservation groups arrived in Mapu Lahual Territory. In this section, only artisanal fishers were asked about issues related to artisanal fishing activities such as resources, the role of fishers’ organizations, the role of middlemen (buyers, gear, equipment and merchants), marine resources rights, and stewardship. The indigenous non-fishers were asked about their opinions regarding marine resources, and their understandings regarding fishing. However, they were not asked questions related to fishing activities, with the exception of the three people who are both fishers and indigenous people leaders.

The second theme of the interviews was “participation, awareness, and empowerment”. In this section, the same questions were asked of both groups, including questions regarding their understandings and level of participation in the GEF Marino project, and what their resulting interest in it and opinions of it were. This section was also designed to collect the interviewees’ own evaluation of different aspects of the project such as benefits, environmental education achievements, and expectations. The themes covered in this section were the same regardless of whether the interviewees were fishers or non-fishers and were indigenous or non-indigenous as all groups could provide a different view about these topics.

For the third group of interviewees, a different interview was tailored for each person, depending on their role, level of participation in activities, or knowledge about the GEF Marino project. This strategy was adopted because these different roles would provide specific information relating to the LML MUMPA. Questions were therefore designed based on each individual’s specific involvement with the project.
The last theme covered by the interview concerned TEK and LEK about either fishing or forestry, depending on the main occupation of the interviewee. Questions in this section also sought to gather information about ecological knowledge in more general terms, asking for instance about knowledge in relation to nature, the use of herbs for healing, weather, local food, and so on. The questions were designed to assess whether this was an important aspect for the interviewees and if they had something to communicate about it. In this regard, the same questions were put to the first two groups. The third group was not asked specifically about their TEK and LEK, but about what they knew regarding the TEK and LEK of the artisanal fishers and indigenous communities from the fieldwork area. This was designed to assess the level of importance this group assigned to gathering information on TEK and LEK (see Appendix A and B for specific questions).

3.2.1.ii. Informants

Due to the nature of this thesis, namely, research in which personal interviews form an integral part of the fieldwork, ethics approval was required. This was submitted to the University of Otago Human Ethics Committee in November 2007, and approved in January 2008. This Committee respects all anthropological ethical codes. According to McGoodwin (2000, p.59) in relation to ethical research:

The foundations for conducting ethical research in small-scale communities includes transparency, regarding what the research is about and its aims are; confidentiality, which guarantees participating subjects that their contributions to the study will not be revealed without their express consent that must be completely voluntary; and risk disclosures to participating subjects concerning what the possible risks to themselves and other community members may be.

During the interviews, an information sheet was provided to participants explaining the purpose of the study; what each participant was requested to do; possible disadvantages; risks and benefits; confidentiality; use of the research results; and about people participating in the study. In cases where it was deemed that the interviewee could have literacy problems, the information sheet was read to the interviewee. In addition, written consent was attained prior to conducting the semi-structured in-depth interviews, and verbal consent when conducting unstructured informal interviews.
Chapter 3.- Methodology

Two homogeneous samples were selected in order to provide in-depth descriptions of the discourses of the two primary stakeholders, namely Huilliche indigenous community leaders, and the artisanal fishers’ organization leaders. The indigenous communities included the nine mentioned previously. However, the most important indigenous communities are the four coastal indigenous groups located adjacent to the LML MUMPA. The most important artisanal fishers’ organizations are the ones that have a Management Exploitation Area of Benthic Resources (MEABR) within the LML MUMPA: syndicate Maicolpué Río Sur, syndicate N° 2, and the two indigenous artisanal fishers associations of Caleta Huellelhue and Caleta Cóndor. These two indigenous subgroups are the primary participants of the GEF Marino project.

The president or leader of the indigenous communities and the artisanal fishers’ organizations was always interviewed. At other times, other members of the organizations, including the secretary or treasurer, were also interviewed. The interviewees and their positions/affiliations are listed in Tables 3.1 and 3.2.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Position</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubén Casanova</td>
<td>President</td>
<td>Artisanal Fishers Syndicate</td>
</tr>
<tr>
<td>*Manuel Hinostroza</td>
<td>Member and ex-leader</td>
<td>Artisanal Fishers Syndicate and Indigenous Community</td>
</tr>
<tr>
<td>Maite Burgos</td>
<td>Secretary</td>
<td>CPAALO (Fishers Council) and GEF Marino project</td>
</tr>
<tr>
<td>Nelson Holtmann</td>
<td>President</td>
<td>Artisanal Fishers Cooperative</td>
</tr>
<tr>
<td>*Raúl Ampay</td>
<td>President and leader</td>
<td>Artisanal Fishers Syndicate and Indigenous Community</td>
</tr>
<tr>
<td>Luis Adue</td>
<td>President</td>
<td>CPAALO and Artisanal Fishers Syndicate</td>
</tr>
<tr>
<td>Fermín Pradines</td>
<td>Treasure</td>
<td>Artisanal Fishers Syndicate</td>
</tr>
<tr>
<td>Patricio Arriagada</td>
<td>President</td>
<td>Artisanal Fishers Syndicate</td>
</tr>
<tr>
<td>Alicia Olga Rodríguez and Eusebio Díaz</td>
<td>President and member</td>
<td>Artisanal Fishers Syndicate</td>
</tr>
<tr>
<td>Raúl Toledo and Nelson Vinnett</td>
<td>President and Treasure</td>
<td>Artisanal Fishers Syndicate and FEDEPESCA (Fishers Federation)</td>
</tr>
<tr>
<td>Eduardo Vargas</td>
<td>President and leader</td>
<td>Artisanal Fishers Syndicate and Indigenous Community</td>
</tr>
</tbody>
</table>

(*) indicates two leaders and one member of the artisanal fishers’ organizations who are also leaders of an indigenous community. Although part of both groups, these interviewees were specifically considered for their role as artisanal fishers.
Each interviewee was asked both in the consent form and verbally if they wanted their real name or a pseudonym to be used in the research, and all nominated their real name. In Chile, when people are asked about issues in which their voice and opinions are usually not heard, they fully appreciate their real name being used as an indication of the importance and respect held for what they have told you. For Chilean interviewees, it is considered offensive, even a grievance, not to use the participants’ real names in research of this kind, because it constitutes an honour to see their names in research that is about them. Therefore, on request, the interviewee’s name was used in some of the quotations and tables used throughout the thesis. In respect of the academic traditions recognised elsewhere, the researcher was careful to evaluate the written comments and quotes from named participants to check that they may not have negative consequences for the participant.

In order to identify and contact key figures in the artisanal fisher and indigenous communities, people previously interviewed were asked if they knew or were friends of anyone else who needed to be interviewed. Addresses and mobile phone numbers were requested if they had them, and introductions obtained in person, if possible.

**Table 3.2:** Sub-group Indigenous communities’ leaders and oldest members interviewed.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marlene Antiñir</td>
<td>Indigenous community president</td>
</tr>
<tr>
<td>Anselmo Paillamanque</td>
<td>Mapu Lahual Territory Indigenous leader (lonko)34</td>
</tr>
<tr>
<td>Jennifer Quinchalef</td>
<td>Secretary Mapu Lahual Indigenous Association</td>
</tr>
<tr>
<td>Jorge Loy</td>
<td>Indigenous community president and ex-president of AIML</td>
</tr>
<tr>
<td>Juan Fica</td>
<td>Vice-president indigenous community and AFS Treasurer</td>
</tr>
<tr>
<td>Laura Melillanca</td>
<td>Indigenous community vice-president</td>
</tr>
<tr>
<td>Luciano Huinchalaf</td>
<td>Indigenous community president</td>
</tr>
<tr>
<td>Raúl Romero</td>
<td>Indigenous community president</td>
</tr>
<tr>
<td>Martín Paillamanque</td>
<td>Mapu Lahual Indigenous Association president</td>
</tr>
<tr>
<td>Silvia Cañulef</td>
<td>Counsellor SJDC35 and indigenous communities’ leader</td>
</tr>
<tr>
<td>Orlando Loy</td>
<td>Vice president indigenous community</td>
</tr>
<tr>
<td>Baldemar Huanquil</td>
<td>Vice president indigenous community</td>
</tr>
<tr>
<td>Marta Antilef</td>
<td>Oldest person indigenous community</td>
</tr>
<tr>
<td>Esmerilda Cumilef</td>
<td>Oldest person indigenous community</td>
</tr>
<tr>
<td>Carmen Tacul</td>
<td>Oldest person indigenous community</td>
</tr>
<tr>
<td>Juan Loy</td>
<td>Oldest person indigenous community</td>
</tr>
</tbody>
</table>

34 Lonko means chief in the indigenous language Mapudungun-Chesungún, indicating an important person for the Mapuche and Huilliche indigenous people.
35 San Juan de la Costa County.
Prior to fieldwork, the number and identities of interviewees in this third project staff group of stakeholders was not known, with the exception of the LML MUMPA local coordinator. During fieldwork, the interviewees of this subgroup were mentioned by other participants during separate interviews and while conducting participant observation. As this third group (Table 3.3) included key people in the project and fulfilled the interview requirements, it was considered important to include them as part of the research.

**Table 3.3:** Sub-group project staff, decision-makers, and experts interviewed\(^n\).

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Javier Oyarzo and Judith Herrera</td>
<td>Mayor and Productive Development Head of San Juan de la Costa Council.</td>
</tr>
<tr>
<td>Pedro Vergara</td>
<td>Marine biologist, Professor at the Los Lagos University. He did the assessment of many allocations of MEABRs in the region.</td>
</tr>
<tr>
<td>Luis Cárdenas</td>
<td>Regional Head of CONAF.</td>
</tr>
<tr>
<td>Paloma Toranzos</td>
<td>UNDP Technical assessor of Environmental Program.</td>
</tr>
<tr>
<td>Cecilia Godoy</td>
<td>Coordinator of LML MUMPA.</td>
</tr>
<tr>
<td>Patricio Arriagada</td>
<td>Productive Development Purranque Council.</td>
</tr>
<tr>
<td>Alvaro Rodriguez</td>
<td>Biologist. Designer of GEF Marino project and ex-coordinator of the MUMPA III region. Currently working as Sub-secretary of Fishing.</td>
</tr>
<tr>
<td>Eduardo Villouta</td>
<td>Marine biologist. Department of Conservation, Wellington, NZ.</td>
</tr>
</tbody>
</table>

This technique of identifying contacts when the exact number and identities of people are not known beforehand is known as a chained referral method or snowball sampling (Biernacki and Waldorf, 1981). In the investigation process, a sample is constructed by first identifying a person to be an informant in the fieldwork. In this way, specific people are chosen to be interviewed. This means that the sample is intentional and not probabilistic, with the choice of “subject of study” determined by certain characteristics such as high potential of contributing knowledge of the topic and also of knowing further people who may have information relating to the topic. With this approach, a small group of people are initially selected for interviews, during which they gain confidence in the researcher. Subsequently, the researcher asks if this group of people can refer others as potential

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\(^n\) All interviewees agreed to have their name revealed in writing.
3.2. Use of qualitative methodology

interviewees. This chained approach therefore provides a linking mechanism by which residents of the area, who know others with an interest in the reality and issues that are the focus of the research, can provide assistance in locating further key individuals who may consent to be interviewed.

No opposition to interviews occurred, nor did any people withdraw from the study after participating. After conducting interviews, contact was maintained with most of the participants for the duration of the fieldwork. The researcher stayed in the house of two of her interviewees and kept in touch on a daily basis with half of her interviewees, visiting them, buying things from them, participating in their social activities, eating with them, and requesting their services (transport, groceries, accommodation, etc.) while living in Bahía Mansa town. Likewise, the researcher’s interviewees went to her house on different occasions during the fieldwork period, with some locals visiting on a regular basis.

All thirty-six semi-structured in-depth interviews were digitally recorded (with the consent of the participant). Of the thirty-six interviews conducted, thirty were transcribed in their entirety. The remainder were partially transcribed due to financial and time constraints. These interviews were those providing less important data for the research, but which had been reviewed to obtain any necessary information from them. A copy of the interview transcripts were provided to each of the interviewees to check and to keep as a record. Most of the interviewees were also provided photographs of themselves which had been taken at the time of the interview. Anthropologist Carla Cerpa transcribed seven interviews from the digital recordings. Anthropologist Giovanka Luengo transcribed seventeen interviews, and the author transcribed six full interviews and three partial interviews.

From the nine Huilliches indigenous communities included in the LML MUMPA, seventeen people, including seven women and ten men, were interviewed. The youngest person interviewed was 23 and the oldest 105. Eleven people were interviewed from the Osorno Province artisanal fishers’ organizations leaders, including two women and nine men. In the fishers’ organizations, women take on the role of secretaries or fishing boat assistants. Three of the interviewees from the artisanal fisher group are also indigenous. At the time of writing, the author had kept in contact with many of the interviewees and had become friends with some of them.
people. Nine people were interviewed from the project staff, decision makers and specialists, including three women and six men (Table 3.4).

Table 3.4: Gender of interviewees

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous people</td>
<td>7</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Artisanal fishers</td>
<td>2</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Project staff, decision-makers and specialists</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>25</td>
<td>37</td>
</tr>
</tbody>
</table>

There were no difficulties with people at the study site. All participants were accessible, cooperative, and willing to help in the research as much as they could. Most of the people interviewed offered further help if needed in the future, demonstrating their positive attitude towards the research. This empathy with the local community was largely achieved through participant observation conducted by the researcher, where the local people saw the researcher participating in their daily activities, which helped to develop a close relationship. The local community were also aware that the researcher did not represent any institution and was not managing any funding, both of which are sensitive topics. Fortunately, there was no need to persuade anybody to participate in the research. Those involved agreed to be interviewed the first time they were asked.

3.2.2. Participant observation and field notes

In conjunction with the interviews of key community members and the collection of secondary sources, participant observations were undertaken. “The participant observation designates the investigation that involves the social interaction with the informants in their natural scene and during which data will be taken in a systematic and non-intrusive way. The design of investigation in the participant observation remains flexible during the process” (Taylor and Bodgan, 1986, p.31). Participant observation was designed to augment the interview questions regarding “participation, awareness, and empowerment”, while the other domains were better covered by the semi-structured in-depth and unstructured informal interviews. A combination of measurements aims to avoid any potential weakness of the methods and techniques conducted in the research.
3.2. Use of qualitative methodology

As outlined above, during the time spent in Bahía Mansa, the researcher participated in general daily activities and engaged in participant observation in some particular instances or events. In situations where it was valuable to take notes, questions were formulated in the natural setting in order to allow people to speak their mind and voice their opinions, thus reducing reactive effects and without forcing them to respond to the interests or preoccupations of the investigator. Table 3.5 is a list of the activities in which the researcher participated whilst conducting fieldwork.

The data collected by this “embedded” method provide researchers with key information that can be used for developing interview questions (McGoodwin, 2000). Moreover, participant observation also emphasizes the interactions and dynamics within the community in a natural context, thus providing the ability to check coherence between what the interviewees discuss in their interviews and their actions, attitudes, and behaviour in their daily life. Participant observation is a method which produces a form of data combining the researcher’s descriptions of interviewees and local communities’ behaviour.

Participant observation highlights what participants do and say in various circumstances, such as meetings with their own organizations, with other organizations, and with the GEF Marino staff, or when going about their own economic or social activities. A meeting of stakeholders with the GEF Marino project staff, for instance, provided the opportunity to observe the opinions and dynamics between them. Previous responses obtained from interviewees can then be contrasted with perceptions gained from doing participant observation.

Other forms of data include the notes written by the researcher about her own participation in the setting. According to McGoodwin (2000, p. 63) “field notes may include daily logs, personal journals, descriptions of events, and the researcher’s own personal notes”. In addition, photography, video tape, and film can catch and retain greater detail than notes alone, providing invaluable information for the researcher.
Table 3.5: Activities in which the author participated in the community whilst conducting fieldwork in Osorno Province, Chile.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Activity characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPAILO</td>
<td>Meeting with participation of indigenous communities and LML MUMPA coordinator.</td>
</tr>
<tr>
<td>Huellelhue Board</td>
<td>Meeting with indigenous communities and government agencies regarding land tenure conflicts.</td>
</tr>
<tr>
<td>Tourism Board</td>
<td>This was held at San Juan de la Costa council with tourist operators.</td>
</tr>
<tr>
<td>Caletá Cóndor</td>
<td>Indigenous community monthly meeting.</td>
</tr>
<tr>
<td>Huellelhue</td>
<td>Artisanal Fishers Indigenous Association monthly meeting.</td>
</tr>
<tr>
<td>CONAMA</td>
<td>This was a meeting regarding the Environmental Protection Fund.</td>
</tr>
<tr>
<td>CONADI and CONAF</td>
<td>Meeting held at CONADI-Osorno regarding sustainable development of economic activities.</td>
</tr>
<tr>
<td>Tourism and Environment</td>
<td>Seminar held in Entre Lagos town.</td>
</tr>
<tr>
<td>Tourism</td>
<td>Seminar held in Purranque town.</td>
</tr>
<tr>
<td>Environmental education</td>
<td>Pichimallay Park workshops with local community.</td>
</tr>
<tr>
<td>Fire Station</td>
<td>National dance lessons.</td>
</tr>
<tr>
<td>Green Lemu</td>
<td>Meetings. The researcher helped to create an environmental committee.</td>
</tr>
<tr>
<td>Chesungún</td>
<td>Huilliche language lessons held at the local Primary school.</td>
</tr>
</tbody>
</table>

Ethnographic research depends on a complete, precise, and detailed field notes registry. Thus, these were made after initial contact with the people of Bahía Mansa, the fisher groups, and the indigenous communities, and during in each interview. Furthermore, registered sequences and relevant elements in the interviews were noted in detail, together with documentation of the scene and surroundings in which the interviews were made. Notes were also taken of informal encounters with people of the community. These data were useful to make contact with other people or to complete information from the interviews. The interviews allow the gradual collection of wider discourses offering insights into the situation of the GEF Marino as an ICDP, and allow identification of the responses and opinions that stakeholders have regarding the LML MUMPA.
3.3. Validity of the research

Much of the information taken as field notes is presented in the investigation. Other notes that were used helped to guide encounters, research for interviewees, and to retain ideas that arose in certain situations. Field notes are an essential tool for fieldwork, where many encounters and situations may happen virtually simultaneously, and data that is going to be necessary for the investigation needs to be recorded quickly for later use.

3.2.3. Text and document search

Relevant supporting written texts and documents were selected from those that discussed the local artisanal fishing and indigenous communities groups, LML MUMPA, Mapu Lahual Territory, and the GEF Marino project. Following Ruiz and Ispizua (1989), these texts were analysed for ethnographic detail to expand the data collected from personal observation and interviews. For instance, the written material compensates for missing historical details about events or situations mentioned in the interviews, such as dates and names, and provides background information not covered in the interviews:

This includes the analysis of any texts as qualitative data, be they fiction, nonfiction, folk tales, newspaper articles, advertisements, films, videos, photographs or songs. These can be studied for any variables that can be correlated or interpreted in light of historical or ethnographic information (McGoodwin, 2000, p. 68).

The documents used for this study can be divided in two types, namely personal written documents including family newspapers, letters, historical drawings, and diaries, and public documents including press articles, archives of organizations and historical societies, investigations (published and unpublished) about the community, and books and plans of communal development. All such documents were collected during the fieldwork period and are incorporated into the thesis. In addition, the data involved a thorough review of both academic and popular texts.
3.3. Validity of the research

3.3.1. Triangulation

The aim of triangulation in qualitative studies is to achieve credibility and validity in the results: “It is assumed that the validity of data about culture and social dynamics can be tested by assembling supporting information from other sources” (McGoodwin, 2000, p. 59). Furthermore, to employ a range of methods during the research is a method-appropriate strategy for testing or reinforcing the credibility of the analyses in qualitative studies. Thus, diverse methods are useful in order to achieve reliability when aiming to grasp the opinions, visions, values, and interests of local communities. The range of methods employed in this research, therefore, is due to the nature of the study, which aims to capture and understand deep social and cultural complexities which are inherently subjective and contingent.

Two kinds of triangulation were completed in this study. First, data triangulation was done through the combination of a variety of data sources in the research, such as primary sources (oral histories) and secondary sources (written material). These sources were used to develop an increasingly nuanced understanding of the stakeholders and their concerns. Second, methodological triangulation was used involving multiple methods of data collection, such as interviews (unstructured and semi-structured), participant observation, and fieldwork notes, to research a single program.

Validity can also be achieved by collecting the data over a long-term stay in a community. These approaches supported the data through cross-verification of interviews and field notes. By combining different types of interviews, participant observations, and collection of texts (written material) over a prolonged period of time, researchers can expect to increase opportunities to overcome defects, intrinsic biases, or difficulties that come from using only one type of methodological technique.

Despite the fact that each technique can introduce a particular bias, it is considered a better alternative to have combined the different techniques used in this research because together they provided more complete information about a situation or topic. For instance,
participant observation is less intrusive than interviews, and so provides more freedom and flexibility in terms of the type of information that can be collected. In addition, by taking field notes and employing participant observation concurrently with semi-structured in-depth interviews, there are more chances to see actions and perceive opinions in contexts out of the interview frame. Because an interview is usually an artificial situation, this may cause the interviewee to respond to things depending on what they think is expected from them or to hide things they do not have to talk about. However, when participant observation becomes an accepted part of daily activities, participants might not be worried about the researcher’s presence or even aware of it, and may provide other opinions. In many instances, subjects behave more naturally and perhaps feel more confident in divulging things that they did not mention or mentioned differently in their interview. Finally, semi-structured in-depth interviews incorporating oral histories contribute a deeper perspective of issues identified from interviewees during participant observation. Through interviews, the researcher can elicit more details, thus providing more complete information than that gained from participant observation.

3.3.2. Use of methodology by other researchers

The methodology used in the current research has been employed by other social scientists including environmental anthropologists, sociologists, human geographers and political ecologists during critical assessments of cultural and social elements in the deployment of conservation and management of natural resources. West (2006), for example, conducted an ethnographic analysis in Crater Mountain Wildlife Area in Papua New Guinea and found that “institutions, politics, and identities affect environmental processes and outcomes” (West, 2006, p. 205).

As such, social science has contributed theory and methods to the study of fisheries management (Maiolo et al., 1992, McGoodwin, 2000). This includes studying the interaction between fishers groups and conservation projects such as Zimmerer and Bassett (2003, p. 53) who refer to Sundberg’s work when they argue that “the conservation encounter between artisanal fishers, NGOs and local people in the Maya Biosphere, where Sundberg (1998) used ethnographic field methods with success and paid particular attention to the narratives people constructed in talking about environment and
conservation”. Similarly, Young (1999) investigated the case of recreational whale watching in small-scale fishing communities of Laguna San Ignacio and Bahía Magdalena in Baja California Sur, Mexico. Thirty-three oral interviews in each study site were collected in conjunction with participant observation of local fishing and tourism activities. The goal was to examine “whether the economic benefits of eco-tourism reduced resource conflicts and extractive pressures on inshore fisheries and promoted stewardship of marine resources by local people” (Young, 1999, p. 583).

Social science has also contributed to research about the social and cultural elements of fishers groups. Puddephatt, et al. (2009) note how Van Den Hoonaard conducted ethnography among shrimpers in northwest Iceland. During this research, the ethnographer identified specific social and cultural elements in their fishing activities such as local relationships, social identity patterns, and relations systems with policy makers and scientists. Specifically participant observation was also used broadly in studies regarding social and cultural characteristics of fishers groups by a wide range of researchers. Seixas and Troutt (2003), for example, conducted fieldwork that included interviews of key informants and participant observation as a methodology to examine fishers’ knowledge, fishing activities (resources, gear, and purpose), and changes in the local socio-economic and ecological system over five decades of evolution in the local Brazilian shrimp market. Their data analysis was based on triangulation of data from field notes, interview transcriptions, and external sources such as official documents and academic literature on the subject.

Cooley (2003) also used participant observation and semi-structured interviews to conduct an anthropological study about cultural models and fishing knowledge of commercial blue crab fishermen in Georgia, USA. He upheld participant observation and semi-structured interviews as fundamental tools for data collection to achieve an in-depth exploration of the knowledge, attitudes, and opinions of the crabbers. This contributed to understanding “why crabbers fish the way they do, how they understand the dynamics of the resource, and why they react the way they do to certain management alternatives” (Cooley, 2003, p. 179). At the same time, the anthropologist McGoodwin (2000) recommends participant observation, unstructured interviewing, semi-structured interviewing, and collecting field notes among other techniques for studying the culture of small-scale fishing communities. He emphasised these as “sound research methods to help
3.3. Validity of the research

fisheries officials to obtain trustworthy and reliable information” (McGoodwin, 2000, p.57).

There are also ethnographic studies related to fishing groups and their TEK, such as Johnson and Orbach (1990), who describe the migratory fishing behavior of small-scale inshore shrimp fishermen from North Carolina based on data collected from personal interviews and ethnographic fieldwork to analyse the basic social organization and fishing patterns of this group. Similarly, Acheson (2010a; 2010b; 2004) has studied the Maine Lobster Industry, USA for the past 30 years, investigating issues such as group positions about trap limits, attitude of fishers over conservation efforts, and fishers’ behavior in terms of territorial arrangements. He used qualitative research techniques, including direct observation, key informant interviews, and open-ended interviews. In a similar manner, Pinkerton (1999) studied community-based conservation research and co-management in British Columbia Salmon Fisheries, Canada, and also conducted ethnographic fieldwork using semi-structured interviews to research competing visions of resource management and development within aboriginal and coastal communities working on the clam fishery on the West Coast of Vancouver Island, British Columbia, Canada (Pinkerton and Silver, 2011). Finally, Johnson and Griffith (2010) conducted semi-structured in-depth interviews with key informants in the North Carolina coastal region to research the cultural beliefs and values of commercial and recreational fishers. Likewise, Hall and Close (2007) collected the local knowledge of an operational fishery working with spiny lobster and the queen conch in the Turks and Caicos Islands, located at the south end of the Bahamian Archipelago. In this case, background information on the population and culture of the study area was obtained, and interviews were undertaken by a fisheries researcher and an anthropologist trained in qualitative interview procedures. The aim of the research was to determine harvest locations for the current fishing season of the lobster and conch by map-based interviews.

There are also researchers who are not social scientists but who have used qualitative methodologies in research related to management of marine resources, including ecologists, marine biologists, and physical geographers. Gelcich et al. (2005), for example, used semi-structured, open ended interviews to show how specific discourses were mobilized for policy evaluation in the case of marine common property rights in Chile. This “identified distinct story lines within the different artisanal fisher syndicates that serve to establish

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claims and validate actions [...]. Understanding these different story lines and the reasons they are held should help more effective policy development” (Gelcich et al., 2005, p.389).

As this shows, the methodologies used in this research have also been successfully used by academics from different disciplines to research similar topics.

### 3.4. The analysis

Analysing this ethnographic research shows the social and cultural perspectives through which artisanal fishers and indigenous people frame their interactions with the environment, together with the local communities’ socio-cultural characteristics and dynamics. All of these are elements which, in combination, influence ICDPs such as the LML MUMPA.

Chapters 4 and 5 are based on the wider discourses of the two local stakeholder groups, namely the artisanal fishers and the indigenous communities. Both of these discourses are further divided into three topics including history; socio-economic and cultural characterization; and social and cultural dynamics.

The social and cultural elements and participation of the stakeholders in the LML MUMPA, are measured through these three themes. Chapters 4and 5 present the data primarily in the form of personal quotes from the participants in the ethnographic research, complemented and extrapolated with tables, graphics, maps, and photographs when deemed appropriate for facilitating understanding. Some of the interviewees’ quotes are also presented in Spanish if it is deemed that the English translation would have changed the meaning and literal content of the interviewees’ answers.

### 3.4.1. Methodological approach - discourse representations

The two main groups studied in this research are: (i) the historical artisanal fishers, whether they are indigenous or not, and; (ii) the legal indigenous people specialized in *alerce* harvesting and processing, who are now turning to fishing as a second, or complementary, occupation. The level of engagement of local fishing and indigenous communities in the
protection of the marine and coastal area was assessed through an ethnographic methodology where, among other techniques, individual interviews were conducted. Analysis of these interviews demonstrates the extent to which socio-economic and cultural dynamics in the local communities have hindered the development of the LML MUMPA, and illustrates the complexity inherent to (or the appropriateness of) real-world applications of ICDPs. Two main organizations were consulted to complete the objectives of this thesis:

a) The leaders of the artisanal fishers’ organizations. The purpose of these fishers’ narratives is to collect the discourse of the second most important stakeholder’s group of the LML MUMPA. One part of this second group, the members of the Osorno Shoreline Fishers Council (CPALO), was not the main participant but has also been involved in the project and, as such, was allocated some benefit. Other members of this group, the Fishers Federation (FEDEPESCA), have been excluded from the LML MUMPA.

b) The leaders of the nine Huilliche indigenous communities in the Mapu Lahual Territory. The purpose of the indigenous people narratives, is to collect the discourse of the four main participants of the LML MUMPA. Notwithstanding, in this group are also considered the other five indigenous communities of the Mapu Lahual Territory because, in spite of not receiving benefits for their communities from the GEF Marino project, they have received benefits and participated in the project through the Mapu Lahual Indigenous Association and the Mapu Lahual Indigenous Park Network.

To explore the history, culture, social characteristics, and dynamics of artisanal fishers and indigenous communities, this thesis examines the topics that emerge in the interviews conducted, that is, the discourse, which, according to Blount (2002) represents the ways that people transmit information about typical everyday phenomena in their social and cultural worlds. This method includes an analysis of emergent themes, in line with a cultural analysis approach. The content of a discourse can be arrayed in a hierarchy of theme units, making possible the construction of levels of shared meanings, perceptions, and understandings across individuals within their culture. The discourse considered here

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38 The list of the artisanal fishers syndicates members of CPALO and FEDEPESCA are in Chapter 3.
involves the language and meanings that each analysed group use in terms of their life and the LML MUMPA implementation. In this thesis, discourse is not used as a linguistic method of analysis, but rather as a means to represent cultural and social features related to the way each group expresses themselves in language. Discourse is considered as “any form of language use manifested as (written) text or (spoken) talk-in-interaction” (Van Dijk, 2008, p.116). Discourse shows:

[...] different ways of thinking, acting, interacting, valuing, feeling, believing and symbols, tools, and objects to enact and recognize different identities and activities. Discourses give the material world certain meanings, distribute social goods in a certain way, make certain sorts of meaningful connections in our experience, and privilege certain symbol systems and ways of knowing over others (Gee 1999, p.13).

Shi-xu (2007) also explains the concept of discourse used in this analysis:

The discourse in the analysis can inform about power relationships and history, and social dynamics. There can be a diversity of discourses (i.e. with varied or even mutually exclusive contents) that are derived from different groups and communities in contemporary culture. The notion of discourse has to consider local cultural realities and peculiarities (Shi-xu, 2007, p. 7).

Discourse is dynamic and can change constantly depending on the circumstances and the context, or even on the methodology used to collect it; for instance, discourse can be different if collected through an interview or through participatory observation. Certain situations can change the discourse of a person or a group, because discourse can be used as an instrument to access specific events or issues. Discourses evolve, but can also be discontinued over time. Therefore, the discourse of a group or a person can vary. For instance, a government or a police officer can address the same issue, about the same group or person, and two different discourses will emerge. Thus, discourse is very easy to change or adjust:

Over the same or similar topic, there can be different, incompatible, and even opposing discourses. The very act of proclaiming some discourse to be the norm, dismissing alternative ones or undermining them, indicates the presence of the cultural diversity and struggle of human discourses (Shi-xu, 2007, p. 6-7).
3.4. The analysis

Nevertheless, despite their multiple and varied nature and their capacity to mutate or change with context and time, discourses are very valuable to understand how a group is representing their reality, ideas and needs. For avoiding discourses bias, it is recommended to complement them with other sources of information and to situate them in the specific context and conditions they were collected.

The identities and backgrounds of the two main groups are presented in the artisanal fishers’ and indigenous communities discourse (Chapters 4 and 5) of this analysis. Both groups can be further sub-divided into five sub-groups which are described in Chapter 4. The artisanal fishers and indigenous peoples’ discourses explain the different social histories of these groups, which raises the importance of investigating how these differences might influence the negotiation of the terms of governance and resource access in the LML MUMPA.

3.4.2. Use of reflexivity

According to Hammersley and Atkinson (2007), writing ethnographic research is a main step in the entire anthropological research process. The creation of a text from ethnographic data depends not only on the data collection and analysis, but also on the process of writing. Ethnographic methodologies aims to create a social science text from our social and cultural experience in the field, namely, by converting the field information into a text constructed by social sciences arguments, and showing the relevant correlations between data and theories or concepts. The process of writing using the ethnographic data collected also forms part of the analysis itself. The social and cultural phenomena with which research is concerned can be made into text in a variety of forms, with no best way to do it. These forms can include different styles, genres, and narrative stances.

In this thesis a reflexive writing approach is used to some extent as a way of acknowledging the subjective nature of anthropological writing, in which the personal standpoint in terms of the research could have affected the information gathered, which could in turn have produced a distorted view of the culture studied. In spite of the many measurements taken to corroborate and contrast the data elicited (triangulation), the researcher participation in the study could have influenced the final work results.
Chapter 3.- Methodology

In addition, this thesis has a reflexive approach in that it tested the results of the investigation through several means, like interviewing different groups of people on the same topic. This illustrates that the researcher has reflected on the relativity of responses. However, it was not deemed necessary to focus the research to completely bring reflection to the foreground.

Chapters 4 and 5 include a thick description of the behaviour of artisanal fishers of the Osorno Province shoreline and of the indigenous communities of Mapu Lahual Territory. Thick description is used here as employed by Geertz (1973) to conduct ethnography, and is a term referring to description that explains not just the specific human behaviour, but also its context. By explaining the context, the relevant human behaviour will become more meaningful to a person that is not part of that culture and thus allow interpretation of the culture. While reading these chapters, it is important to bear in mind that Geertz notes two things:

Cultural analysis is intrinsically incomplete. And, worse than that, the more deeply it goes the less complete it is [...] The fact is that to commit oneself to a semiotic concept of culture and an interpretive approach to the study of it is to commit oneself to a view of ethnographic assertion as [...]‘essentially contestable.’ Anthropology, or at least interpretive anthropology, is a science whose progress is marked less by a perfection of the consensus than by a refinement of debate. What gets better is the precision with which we vex each other (Geertz, p. 29).

By describing the history, social and cultural characteristics and dynamics of artisanal fishers and indigenous communities, Chapters 4, 5 and the first section of Chapter 6 aim to provide an interpretation of the key elements in their lives as artisanal fishers and indigenous communities together with the meaning and importance they assign to them.

It is claimed that this thesis is anthropological, because it is clearly better positioned as anthropology than as any other discipline. It is, however, as said before, not an ethnography in terms of how anthropologists define an ethnography, but essentially an in-depth study into a particular development project and its associated community/group purporting to describe how they view the world and how they behave in it, i.e., emically.

The classical approach of "anthropology" is that the centre of cultural anthropology tends to rely on critical theory, reflexive perspective, and an anti-reductionist position and
3.4. The analysis

this thesis has not aimed for this approach. In addition, it is important to clarify that this thesis is addressing a question that is not typically within anthropological theory (emic vs. etic, reflexive vs. direct, theoretical vs. practical/applied) but that it has used anthropological field methods to collect and analyse the data. In order to understand the dynamics of an ICPD, it tried to find a meeting point between theories about ICDPs and anthropological insights into local dynamics.

The historical section of Chapters 4 and 5 provides a general background of artisanal fishing and indigenous communities in Chile and the regulations affecting them. This contextual framework is followed by the emic-based analysis of the artisanal fishers and indigenous communities, focussing on social and cultural dynamics, together with the artisanal fishers’ and indigenous communities’ relationship with the LML MUMPA. These sections also comprise the understandings and opinions of specialists Claudio Castro and Pedro Vergara (both marine biologists who have worked very closely with artisanal fishers and helped them with their affairs)\(^\text{39}\). The visions and opinions of these two specialists are included in the artisanal fishers’ discourse because, during fieldwork, the artisanal fishers themselves have made explicit that they feel these people are legitimate and that they are held in high esteem. Thus, their opinions are deemed important to complement or contrast with those of the fishers.

The sections that utilise an emic approach are accompanied by graphs displaying information obtained by semi-structured in-depth interviews. The participants interviewed through unstructured informal interviews did not provide the same level of information, and therefore graphs were unable to be constructed. The researcher’s interpretations are separated from the information provided by the participants and are outlined at the end of each of the four emic-based approach sections (4.2, 4.3, 4.4, 4.5 and 4.6) and (5.2, 5.3 and 5.4) under the subheading ‘Review’.

It is also important to note that, in this research, according to Hammersley and Atkinson (2007) the term ethnography is used to describe the research process. Ethnographic methods are used to show that failure to take social and cultural factors and perspectives into account led to the failure of the ICPD. Chapters 4, 5 and the first part of

\(^{39}\) These individuals gave permission to use their real name as, due to the difficulty in disguising their identity, it was impractical to use a pseudonym.
Chapter 6 are the textual product of the ethnographic methods and are the product of intense analysis interpreting the findings of this work and describing them in an organised narrative, which provides new knowledge to understand the social and cultural complexities of the local population when conducting ICDP in different contexts.

### 3.4.3. Organization of narratives in the analysis

Here, the ethnographic research is organized in terms of texts that highlight different aspects of the socio-cultural characteristics and dynamics of the local communities constituting the focus of inquiry in this dissertation. Two textual approaches are used to synthesise and arrange the data, namely thematic and chronological. The thematic analysis involved conducting a content analysis of emergent themes derived from all the data collected through interviews and participant observation. Specific topics, terms, and situations were identified, and a meaning assigned to them for each of the groups analysed. The discussion in the analysis represents cultural features related to the way stakeholders see their realities, history, and social and cultural world. Topics that arose from the responses during the semi-structured interviews were coded (Table 3.6). The majority of the topics coded were included under the three headings outlined above (see Section 3.4).

An "emic" mode is the representation or description from the actor’s point of view: an emic account comes from an informant inside the culture being studied. An "etic" mode, in contrast, is the representation or description by an observer in terms that can be applied cross-culturally: an etic account comes from the observer’s strategic criteria (Harris, 1976). The emic approach is achieved here by selecting topics for coding based on those which emerged in the interviews, and which the respondents stressed because these were important to them. The researcher instigated some of these topics directly (for examples, see Appendix A and B); but other topics were issues and situations that the interviewees independently wished to address.

In contrast to the emic approach where topics of importance were identified by the interviewees themselves, the etic approach requires an external description or analysis of events by a culturally neutral observer. In this case, the etic approach is applied by concluding each section with an independent analysis conducted by the researcher. The etic section is correlated with concepts or theories from the literature review.
3.4. The analysis

Table 3.6: Coded topics that emerged from the semi-structured interviews.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Coded by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>Alejandra Paineo</td>
</tr>
<tr>
<td>Belgium Embassy</td>
<td>Alvaro Rodriguez</td>
</tr>
<tr>
<td>Conflict with CPAPO</td>
<td>Cecilia Godoy</td>
</tr>
<tr>
<td>Conflicts artisanal fishers vs industrials</td>
<td>Claudio Castro</td>
</tr>
<tr>
<td>Conflicts within communities</td>
<td>CONAF</td>
</tr>
<tr>
<td>Conflicts within local organizations</td>
<td>Natural resources conservation projects</td>
</tr>
<tr>
<td>Current situation</td>
<td>AMERBs</td>
</tr>
<tr>
<td>Economic situation and</td>
<td>MUMPA's benefits</td>
</tr>
<tr>
<td>Economic activities</td>
<td>Participation level</td>
</tr>
<tr>
<td>Education</td>
<td>Participation in GEF activities</td>
</tr>
<tr>
<td>Effects of policies implemented</td>
<td>Participation interest in GEF</td>
</tr>
<tr>
<td>Evaluation WWF</td>
<td>Political dynamics</td>
</tr>
<tr>
<td>Fire wood issues</td>
<td>Relationship with government</td>
</tr>
<tr>
<td>GEF benefits</td>
<td>Situation 20 years ago</td>
</tr>
<tr>
<td>GEF evaluation</td>
<td>TEK or LEK</td>
</tr>
<tr>
<td>GEF future actions interest</td>
<td>Ways of assessing the organization</td>
</tr>
<tr>
<td>GEF future situation</td>
<td>Ways to improve their situation</td>
</tr>
<tr>
<td>GEF issues for including fishers</td>
<td>Indigenous culture</td>
</tr>
<tr>
<td>GEF Marino environment education</td>
<td>Fishers social dynamics</td>
</tr>
<tr>
<td>GEF Marino understandings</td>
<td>Indigenous Park Network</td>
</tr>
<tr>
<td>Inclusion of artisanal fishers info in GEF</td>
<td>Alcoholism</td>
</tr>
<tr>
<td>Indigenous family history</td>
<td>Loco resource use</td>
</tr>
<tr>
<td>Indigenous master plan</td>
<td>Superstitions</td>
</tr>
<tr>
<td>Indigenous social dynamics</td>
<td>Conflicts men vs. women</td>
</tr>
<tr>
<td>Indigenous vs. artisanal fishers</td>
<td>ESBA</td>
</tr>
<tr>
<td>Issues with consultants</td>
<td>Cooperatives vs. syndicates</td>
</tr>
<tr>
<td>Land tenure issue, claims</td>
<td>CONAPACH</td>
</tr>
<tr>
<td><em>Alerce</em> work</td>
<td>Tourism</td>
</tr>
<tr>
<td>Mapu Lahual Association</td>
<td>Marine resources</td>
</tr>
<tr>
<td>Marine resources access rights</td>
<td>Vandalism</td>
</tr>
<tr>
<td>Marine resources pouching</td>
<td>Bad effects of GEF Marino</td>
</tr>
<tr>
<td>Marine resources product's trading</td>
<td>Needs</td>
</tr>
</tbody>
</table>

The chronological approach consisted of organizing the sections of analysis in order from the past to the present. The historical-temporal description and the characteristics of artisanal fishers and indigenous communities are placed first in this analysis because they develop a cultural-historical framework which provides insights into the various opinions about the LML MUMPA. Chronological arrangements are a valuable tool of ethnographic analysis. This mode of organizing the text stresses that the history of local communities has influenced their cultural and social dynamics and, therefore, their views of the LML MUMPA. “Qualitative analysis has the strength to look at the programs’ units holistically”

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40 The table is displayed in two columns in order to confine it to a single page.
41 The topics not included in Chapters 4 and 5 are: Belgium Embassy and superstitions. These were not included because they were not directly related to the issues studied.
(Patton, 1987, p. 51), so the impressions and opinions of locals can be obtained and put into context.

### 3.5. Summary

This chapter has covered the methodology chosen for this research, namely a qualitative ethnographic approach. This methodology includes the following techniques of data collection: semi-structured and unstructured interviews, participant observation and field notes, and text and document searches. The analysis results in an ethnographic data text through a content analysis that utilises both an emic and etic approach. The emic approach is represented by the two discourses of the main stakeholders of the LML MUMPA, the artisanal fishers and indigenous communities. This approach is sub-divided into a chronologic and a thematic order. The etic approach interprets the two discourses in light of the knowledge, concepts, and framework derived from the literature review presented in Chapter 2. In Chapters 4, 5 and 6 the results obtained from using this methodology are outlined.
Chapter 4

Artisanal fishers

4.1. Introduction

The first section describes the history of the artisanal fishers in the area chosen for this study, providing a context and background against which subsequent sections situate their specific social and cultural characteristics and dynamics. This continued analysis is divided in three sections titled: History of the Osorno Province Shoreline Fisheries; Socio-Economic and Cultural Characterization; and Social and Cultural Dynamics.

The reality of the artisanal fishers of the Osorno shoreline is highly specific to this area of Chile. The following analysis illustrates the theoretical application of an ICDP needed to suit this local reality (whether based in international or Chilean parameters). This section illustrates why it is vital to understand the complex nature of the dynamics and identities of artisanal fishers in order to construct a carefully executed plan for community involvement aimed at achieving overall success for the GEF Marino project.

Stakeholders in this research can be divided into many different groupings, each with their own identities and claims. For the purposes of this thesis, five groups are distinguished:

- Historical artisanal fishers who are not descendants of indigenous people.
- Historical artisanal fishers who are descendants of indigenous people but do not have legal recognition as such.
- New fishers who are non-indigenous people.
4.2. The political background of Chilean artisanal fisheries

4.2.1. General background of artisanal fishing activity in Chile

The CIID\textsuperscript{42} (1991) reported that around 2 million artisanal fishers live along the 22,000 km of continental coast in South America, and represent more than 40\% of the fishing production value of this continent. Despite this contribution, the artisanal fishers’ conditions are precarious due to low levels of education and training and marginal access to the market.

In Chile, different indigenous cultures have inhabited the coastal areas for the last 10,000 years, with the first evidence for the harvesting of marine resources dated to between 9400 and 9680 BP (Llagostera, 1993). Fish-hook technology developed between 7500 and 7000 BP, originally associated with the “cluster of Andean fishers” (Núcleo de Pescadores Andinos in Spanish), but eventually also spreading to the southern parts of the territory.

According to the Chilean Fishing and Aquaculture Law (FAGA) of 1991, artisanal fishing is defined as an extractive fishing activity conducted by people who have direct and

\textsuperscript{42} Centro de Investigación del Desarrollo.
habitual work as artisanal fishers. This law also distinguishes between owners of the boats (armador), seafood artisanal fishers (including scuba divers), seaweed artisanal fishers (mariscador/alguero) and artisanal fishers that fish for finfish. These categories of artisanal fishers are not mutually exclusive. An individual may engage in any combination of these pursuits, either simultaneously or successively, but only if the activities occur in the same region. Thus, there are four different categories of artisanal fisher including scuba divers, offshore fishers, inshore fishers, and the ships’ owners (Diario Oficial, 1991). The fishers that fish only for pelagic fish are more numerous, with 45% of the total, fishers that fish for mussels and benthic resources comprise 27%, and the fishers that harvest seaweed comprise 20% (CIID, 1991).

Chile has 189 caletas, 70% of them classified as rural and the rest are settled in urban areas or close to them. In December 2009 there were 75,861 registered artisanal fishers in the country, but many artisanal fishers are unregistered (SERNAPESCA, 2009).

4.2.2. Management Exploitation Areas of Benthic Resources (MEABRs)

Another characteristic of small-scale fisheries in Chile is the establishment of co-management systems through MEABRs. Fisheries management systems based on centralized government decision-making have proven to be problematic, and thus have directly contributed to the existing crisis in world fisheries. As a consequence, the expansion of co-management has been promoted as an important alternative to top-down resource management policies. However, in fisheries sectors around the world, property rights are still poorly defined. Chile is one of the few countries attempting to create well-defined property rights. One approach explored by the Chilean government involved an attempt to introduce co-management in coastal waters, hand-in-hand with granting Territorial User’s Right in Fisheries (TURFs) (Gelcich et al., 2005). Part of the co-management approach regulated by FAGA 1991 included implementing MEABRs. This system operates by offering artisanal shell-fishers organizations exclusive access to shellfish

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43 The name applied to the social units where artisanal fishermen live.
44 In Spanish, Áreas de Manejo y Explotación de Recursos Bentónicos (AMERBs).
found within tracts of seafloor close to their ports on the condition that they take primary responsibility, under government supervision, for managing the harvest of these species. However, “To put the MEABR system into perspective, only 18.5% of the total artisanal catch is shellfish, and of that only 2% are benthic resources that come under co-management” (Marin and Berkes, 2010, p. 852).

Specifically, in addition to other resources, MEABRs were established in Chile for the snail (gastropod) loco *Concholepas concholepas*. The shoreline of Osorno Province is mainly benthonic and loco (Figure 4.1) is also known and marketed internationally as the “Chilean abalone”. This are the most important of the benthic resources as the *loco* is endemic to Chile and southern Peru. It achieves high prices, especially in Asian export markets.

![Figure 4.1: Loco snail without shell, cooked and ready to eat.](image)

In the 1980s the *loco* resources were overharvested in Chile as a consequence of an open-access regime. For this reason, in 1989 the government placed a harvest ban on loco to allow the resource to recover. This ban was upheld until 1992, meaning that loco could not be extracted for three years. A few years after the ban was established, the government created a strategy to resolve overexploitation, resulting in the MEABRs: “The law recognized the right of organized artisanal fishers to regulate common-property territorial use rights in these management areas” (Marin and Berkes, 2010, p. 852). However, although the MEABRs were legally established in 1991, it took more than ten years to put them in place, with allocation to the artisanal fishers’ syndicates and organizations throughout the country beginning in 2003. Since the introduction of MEABRs, familiarity

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45 Loco is desired for only eating purposes.
with their use has slowly spread among the artisanal fishers. However, despite ten years of promoting the MEABRs, people still find it extremely hard to find a legal or adequate market for their products.

The process to establish a MEABR is as follows: the artisanal fisher organization claims an area with certain dimensions and proposes this area to SUBPESCA (Under-Secretary of Fisheries). This institution first confirms that the area claimed is available, it is not subject to the claim of another artisanal fisher organization, and there are no other conflicting issues. Second, if the area is allocated by SUBPESCA, they will inform the artisanal fishers’ organization. Based on an expert survey of the benthic resources, “Baseline Study of Benthic Resources” (ESBA in Spanish), SUBPESCA will set a limit on the loco harvest for the MEABR. An ESBA costs around 7,000,000 Chilean pesos. However, the fishers’ organizations can apply for government funds (for instance, to the Chilean Economic Development Agency CORFO) to compensate for some of this expense. MEABR boundaries extend from the lowest tide to a depth of twenty-five metres.

An artisanal fishers’ organization can apply for as many MEABRs as they want, but only in the region where they are located. Furthermore, an artisanal fisher organization has more chance of being allocated a MEABR if the members reside near to the MEABR. The allocation does not distinguish between historical or established fishers, seaweed gardeners, or new fishers without skills to dive. Being a historical fisher, for instance, is not an advantage, and does not provide more chances of being allocated a MEABR.

Thus, a MEABR is a measure dedicated to artisanal shellfish fishing within TURFs, which were incorporated to enhance self-regulatory practices among artisanal fishers. In fact, in several caletas in which MEABRs have been introduced as co-management solutions, notable achievements were recorded in the management of benthic resources, (Cereceda and Czischke, 2001, author's translation). In addition, FAGA requirements for fishers to be registered in and restricted to the region where they live, combined with their administrative responsibilities for the area, have made fishers stay in their home regions. Moreover, this policy “turned fishing from an individual or small-group (the boat) activity to a large-group (the organization) activity and thus ownership has led to stewardship” (Schumann, 2007, p. 103). Defeo and Castilla (2005, p. 270) insist that “the legitimization

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46 US$14,000 or NZ$17,900
of the participation of fishers in the management process through co-management is one of the most promising ways to promote compliance with regulations”.

According to FAGA (1991), the government provides permission for any person, regardless of occupation, to create legally an artisanal fishing organization (such as a syndicate, cooperative, or association) which could then be allocated MEABRs: “The MEABRs are being managed under the stewardship of an artisanal fisher organization. It is an agreement between the State and the artisanal fisher organization where the artisanal fisher organization is being allocated the marine area” (Claudio Castro). However, other studies of the implementation of TURFs in Chile show that the response of artisanal fishers to a co-management system can differ depending on characteristics of the marine resource or the fishers themselves. Specifically, these studies analysed the financial decision-making behaviour of fishers who had been allocated property rights. The results of the studies suggested that fisherman’s harvesting behaviour depends on if they perceived themselves gaining or losing based on their personal expectation level (Gelcich et al., 2007). Indeed, as discussed in Chapter 2, merely implementing defined property rights over fisheries resources is not a complete solution. Rather, it must be accompanied by extensive research into artisanal fishers’ culture and social context (McGoodwin, 2000; Waylen et al., 2010; Thur, 2010).

4.2.3. Other regulations of FAGA 1991

Chilean law grants all artisanal fishers priority access to marine resources located along the shoreline and up to five marine miles from the coastline. This law is meant to provide the artisanal fishers exclusive access to these resources. In addition, FAGA refers to exclusivity of some fish capture via the Decree Supreme N° 240 (1998), which allows only artisanal fishers to harvest fish with a higher domestic consumption in Chile, such as maigre (carpine), pippin (reineta), conger (congrio), cojinova, etc. This decree is enforced through restrictions on the methods permitted in the harvest of forty-nine species, such as wall nets and fish hooks. However, four situations occur that mean industrial fishing is violating these exclusive access rights of artisanal fishers.

First, a loophole introduced into the law (Section 47 of FAGA) allows the government to allocate temporary permits to industrial companies to fish inside the artisanal zone (Bernal et al., 1999). By invoking their economic power, many ships are allowed access by
fisheries authorities, so much so, in fact, that this is becoming the norm rather than the exception.

Second, “A system of satellite monitoring introduced in 2000 to track the location of industrial fishing ships operating in high seas” (Peña-Torres, 2002, p. 28) has observed unauthorized entrance of industrial fishers within the artisanal zone. Artisanal fishers have informed the authorities about these issues, and although the government is addressing them, “there is still a long period of time between when the government can fine the companies for infringing upon a fishery regulation, and the company then being penalized with the sanctions stipulated by law” (Peña-Torres, 2002, p. 28).

Third, industrial ships operate bottom-trawling in front of the bay where many of the caletas are located. As they pass through, these large ships seriously deplete fish stocks before the fish even reach the 5-mile fishing zone reserved for the artisanal fishers. Bottom-trawling is both harmful to the environment and unsustainable because it encourages the overexploitation of target fish stocks and the capture of young fish and non-target species. Many of the fish caught by bottom-trawling are used for the aquaculture industry. Trawl nets capture whatever is in their path, destroying the sea bottom together with its flora and fauna which are vital elements for marine life survival (DOALOS, 2006).

In Chile the practice started with the hake fishery (Merluccius gayi) during the Pinochet dictatorship\textsuperscript{47} and was employed by Spanish immigrants who came to the country after the Spanish Civil War (Bernal et al., 1999). It continues today not only because new fisheries laws have not addressed the issue, but also because Chile has kept the economic model implemented by the Pinochet government. Therefore, Chilean laws do not limit the amount of fish that foreign or Chilean investors in industrial fisheries can remove from the marine resources of Chile, and thus allow bigger ships to deplete marine life through the use of bottom-trawling which has resulted in overfishing. In the face of rapid development in industrial fishing, Chile’s artisanal fishers are struggling to cope with depleted fish populations, a situation which leaves many artisanal fishers in danger of losing their main source of income.

\textsuperscript{47} The Agusto Pinochet dictatorship was from 1973-1989
Fourth, and relatedly, in spite of artisanal fishers being allocated exclusive rights to fish forty-nine species, industrial fishing captures these species as by-catch while intending to fish other species:

The Confederation of Artisanal Fishers (CONAPACH), through a media communication signed for their authorities, rejected the industrial fisheries authorization to fish the short tail hake with trawling nets, because that species shares the space with other resources that can be captured only by artisanal fishers, such as the common hake (*merluza común*), austral hake (*merluza austral*), pippin (*reineta*), tooth-sawfish (*sierra*), maigre (*corvina*), among others and that have to be harvested by selective fishing systems, due to the law prohibiting the trawling nets within the artisanal fisheries (CEDEPESCA, 2008, author’s translation).

Artisanal fishers blame industrial fishing for the decrease in the marine resources which has put them in such a critical economic situation. Currently, fishing is the third largest resource income in Chile. The industrial fisheries supply marine resources to export, while the artisanal fishers still supply the domestic market only. While seafood consumption in Chile is high, most of the fish capture in the country is by industrial fisheries for export. The Chilean fisheries system is problematic due to a lack of coordination between different authorities (Barton, 2006). The economic model is based on “strong public-private cooperation in favour of the export-led model” (Bernal et al., p. 121), which recognises that “There is a need for greater responsibility on the part of producers and a more thorough evaluation of the impacts of the sector by state authorities” (Barton, 2006, p. 376).

The regulations and issues discussed in this section represent the political and economic context in which Chilean artisanal fishers operate. This context illustrates an egregious situation that needs to be considered when implementing any type of management of marine resources initiative.
4.3. History of the Osorno Province shoreline fisheries

Twenty years ago, artisanal fishers of the Osorno Province shoreline were mainly divers without fishing or net-making skills because they did not need to fish. Harvesting loco from the seabed was their only fishing activity, with other marine resources only exploited occasionally, without the use of boats, and for personal consumption. In the 1980s and 1990s, a period known in Chile as the “loco fever”\(^{48}\), international markets could pay more than 1,500 Chilean pesos\(^{49}\) for each loco, although today they sell for only one third of that price. During this time, many artisanal fishers from other cities and towns, both in the inner region and from other areas of Chile, came to live on the Osorno Province shoreline because of the loco boom. Moreover, many people who were not fishers turned to fishing during this time (Table 4.1, Figure 4.2). After a fishing ban was placed on loco, some fishers continued to operate along the Osorno Province shoreline, but most left.

Most of the artisanal fishers that currently live in Bahía Mansa, the main coastal town in the Osorno shoreline (Figure 4.3), are originally from other cities of the X region, or even from other regions of the country (Table 4.2). None of the fishers interviewed or encountered in the region in this research were born in Bahía Mansa. People originally came from other places to fish loco before the resource was depleted, with a later wave with the creation of the MEABRs as the loco started to recover. The average age of interviewees is fifty years old, and all those who have been fishing between twenty and thirty years started to fish during the loco boom. The two that have been fishing for only five years started when the MEABRs were allocated in the Osorno shoreline. According to artisanal fishers, therefore, the two milestones that motivated their move to Osorno Province from other areas of the country were “loco fever” and the creation of the MEABRs.

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\(^{48}\) The name came from a Chilean movie made in 2001 by Andrés Wood about this time.
\(^{49}\) US$2.98 or NZ$3.82 (conversion calculated on November 11, 2011).
Chapter 4.- Artisanal Fishers

Table 4.1: Age and number of years fishing of artisanal fishers interviewed in 2008.

<table>
<thead>
<tr>
<th>Fisher's Age</th>
<th>Years fishing</th>
<th>Year started fishing</th>
<th>Year arrived in Osorno Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>20</td>
<td>1988</td>
<td>1988</td>
</tr>
<tr>
<td>56</td>
<td>15</td>
<td>1993</td>
<td>1993</td>
</tr>
<tr>
<td>44</td>
<td>24</td>
<td>1984</td>
<td>1984</td>
</tr>
<tr>
<td>50</td>
<td>5</td>
<td>2003</td>
<td>2003</td>
</tr>
<tr>
<td>46</td>
<td>33⁵⁰</td>
<td>1975</td>
<td>1987</td>
</tr>
<tr>
<td>60</td>
<td>38⁵¹</td>
<td>1963</td>
<td>1963</td>
</tr>
<tr>
<td>51</td>
<td>5</td>
<td>2003</td>
<td>2003</td>
</tr>
<tr>
<td>55</td>
<td>45</td>
<td>1963</td>
<td>1987</td>
</tr>
<tr>
<td>48</td>
<td>27</td>
<td>1983</td>
<td>1983</td>
</tr>
<tr>
<td>45</td>
<td>25</td>
<td>1985</td>
<td>1985</td>
</tr>
<tr>
<td>48</td>
<td>35</td>
<td>1973</td>
<td>2005</td>
</tr>
<tr>
<td>60</td>
<td>20</td>
<td>1988</td>
<td>1988</td>
</tr>
<tr>
<td>67</td>
<td>49</td>
<td>1960</td>
<td>1987</td>
</tr>
</tbody>
</table>

Figure 4.2: Age of the interviewees and the years they have been fishing.

Table 4.2: Places artisanal fishers interviewed come from.

<table>
<thead>
<tr>
<th>City</th>
<th>County</th>
<th>Province</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>La Unión</td>
<td>La Unión</td>
<td>Ranco</td>
<td>IX</td>
</tr>
<tr>
<td>Riauchuelo</td>
<td>Río Negro</td>
<td>Osorno</td>
<td>X</td>
</tr>
<tr>
<td>La Unión</td>
<td>La Unión</td>
<td>Ranco</td>
<td>IX</td>
</tr>
<tr>
<td>Osorno</td>
<td>Osorno</td>
<td>Osorno</td>
<td>X</td>
</tr>
<tr>
<td>Ancud</td>
<td>Ancud</td>
<td>Chiloé</td>
<td>X</td>
</tr>
<tr>
<td>Bolsón</td>
<td>Río Negro</td>
<td>Osorno</td>
<td>X</td>
</tr>
<tr>
<td>Entre Lagos</td>
<td>Puyehue</td>
<td>Osorno</td>
<td>X</td>
</tr>
<tr>
<td>Barra del Río Toltén</td>
<td>Toltén</td>
<td>Cautín</td>
<td>IX</td>
</tr>
<tr>
<td>Osorno</td>
<td>Osorno</td>
<td>Osorno</td>
<td>X</td>
</tr>
<tr>
<td>Viña del Mar</td>
<td>Viña del Mar</td>
<td>Valparaíso</td>
<td>V</td>
</tr>
</tbody>
</table>

⁵⁰ He is not currently fishing.  
⁵¹ Less 7 years that he worked in the dairy industry.
Table 4.2 shows that seven out of ten fishers came from other cities or towns of the X Region, three came from further north (but still geographically the south) in the IX Region, and one came from the central part of the country in the V Region. Artisanal fishers describe their high mobility as an important aspect of their culture which illustrates their ability to change locations to live and to fish. They do not only move to live in different places, but are often required to relocate to distant locations in order to fish.

One fisher leader, for instance, commented on how he arrived in Bahía Mansa from Chiloé (further south), during the loco fever in 1980. When the loco ban was implemented in 1989, he went back to Chiloé, only to return in 1996 when the syndicates were being created in order to apply for MEABRs. He explained the conditions of his arrival in anecdotes which reveal the culture and behaviour of the artisanal fishers, including the management of their financial affairs and attitudes toward money at that time.

*I arrived here in Bahía, because everybody was saying in Chiloé that here there were heaps of loco and it was true there were heaps of loco and we came to work here in the 80s […] then I left because a lot of people came from the north and they depleted all the locos, sea squirts, craps, sea urchin […] it was a good place to work but the truth is they were predators, because they knew they were going to leave […] no body used to talk about conservation…it was to catch, to catch only, we had to leave when this started to get empty (of marine resources). In the year 87, when it was opened, the loco season, for four days I worked good and I made 5.000.000 Chilean pesos52 in four US$10,000 (calculated on November 11, 2011).
days […] so from the year 80 to the 88 we earned twenty or thirty times more than now…we used to expend it in alcohol and women only […] the people are regretful, now they are old, have no teeth, no provisions, no savings, no good houses, the most of them don’t have a car […] it is different in the north and in Chiloé; over there the people put good use to the money, there are no poor fishers over there53.

Besides the loco, other benthic resources exploited along the Osorno Province shoreline include erizo (sea urchins) and lapas (limpets), while fish such as congrio (conger), manta negra (sting fish), and corvina (weakfish). Artisanal fishers also cultivate cochachuyo (kelp) and sierra (sawfish), the last four in Figure 4.4. as other marine resources.

Figure 4.4: Traditional seafood from Osorno shoreline: a) Sting fish from Bahía Mansa; b) Corvina; c) Truck loaded with kelp at Bahía Mansa pier, ready to be taken to traders; d) Sierra NZ$4.5 per kilo.

Other artisanal fishers explain that when Bahía Mansa and the surrounding area started to furnish poor returns of loco, they could not live from loco harvesting alone.

53 The interviewees’ responses in this thesis were all in Spanish and what is represented in the quotes is the English translation. It is attempted to translate the Spanish idioms into idiomatic English when possible.
Regardless, some of them kept harvesting despite only catching small loco. However, when the ban on catching loco was put in place (1989-1992), the artisanal fishers started to fish other marine resources, occasionally also poaching loco under permitted size. Notwithstanding, artisanal fishers explain that they do not exploit marine resources to the same extent as industrial fishers and factory ships, which are more efficient and thus able to exhaust the resources more extensively.

The artisanal fishers also expressed specific ideas for improving their fishing activity and increasing the availability of marine resources. They want, for example, “To make the areas more profitable, to cultivate them, for example with chorito (blue mussels), machas [...], but we haven’t been able to because we don’t have money”; and “To work the whole year around with for instance, kelp, that doesn’t have any restrictions”.

The fishers stated that the situation fifteen or twenty years ago was easier. More marine resources were available and they were free to fish them wherever they wanted, as indicated in the following reflections by artisanal fishers on the past availability of marine resources:

*The situation was better because there was an abundance of everything. Even here in this beach you could fish ribalo (snook), corvina (weakfish) and pejerrey (silverside), now you don’t find even snook. Before, without areas (MEABR), the people used to dive wherever they want. They fish any amount they want, was free, but also in the areas [...] you fish in quotas and if they respect that, the children are going to have the chance to get to know the resources we have here because they are being protected.*

*Twenty years ago there were more kinds of fish. In summer there was a season where we could fish jurel (jack mackerel) very close to the coast. You needed to navigate twenty minutes and you could get to the marine area where you can find heaps of jurel. Well then you could have other species of a small fish such as chancharro.*

*The resources have decreased, that’s clear, as there has been a decrease in all the resources. Imagine, we used to fish the sting fish and we used to get a thousand kilos, two thousands kilos, now some boats if they are lucky they catch two hundred, one hundred kilos.*

Marine biologist Pedro Vergara, however, affirmed that the productivity of marine resources in the province remains the same as it was ten or twenty years ago. Fishers believe that marine resources have decreased due to the considerable increase in their
number, which Vergara feels may be up to double that of ten years ago. Quite simply, there are more people fishing the same quantity of resources.

On the other hand, marine biologist Claudio Castro thinks that it is unlikely the artisanal fishers themselves could overexploit a transitory marine resource such as sawfish or finfish in general. He thinks that the decrease in marine resource stocks is the result of oceanographic conditions. Many fish species migrate, for instance, following water currents. It may be that global warming is affecting them, or oceanographic processes might be creating natural banks that translate and move to new places, resulting in some species appearing in some seasons while others disappear.

The weather also can affect the availability of marine resources, along with determining the time of year when fishers can work. The Osorno coastline has very severe weather in winter time, and from May to September fishing is very difficult. The pitfalls encountered with weather conditions are evident in the fishers’ comments:

*There were more fish before, also the weather was better, because I remember that when I was young, the sea was good for fifteen or twenty days and now in September there hasn’t been a good day. August hasn’t been good for working at all but prior to then it was really good.*

The artisanal fishers often view their situation with dismay due to not being able to fish because of bad weather. Another concern raised by artisanal fishers which has caused them hardship is that, prior to the establishment of the MEABRs, they could freely and legally move between counties to fish for loco and other marine resources. However, after the establishment of MEABRs, while any fisher could continue to harvest finfish anywhere, they can no longer dive wherever they wish. It is hard to tell from a distance whether a boat is fishing or diving for loco in the MEABRs. Thus, if a boat that does not belong to the responsible artisanal fisher organization is seen in a MEABR, it will be forced to leave the area under suspicion that it might be poaching loco. In reality, despite lacking legal access rights to the loco, historical artisanal fishers continue to fish and dive in indigenous communities’ MEABRs. The historical fishers explain they feel justified in this action not only because they believe indigenous communities are not as skilled as they are, but also because members of the fishers indigenous associations reside in Bahía Mansa most of the year and are unable to patrol their management areas.
The paperwork necessary for the loco extraction during the ban periods has also created difficulties for artisanal fishers. Loco bans differ depending on the region. Currently the loco ban in the Osorno Province shoreline is from August to January, and thus the loco can only be fished between February and July. However, in 2008 the extraction period was extended until August on the request of the artisanal fishers’ organizations, mainly because of bad weather conditions and difficulty in obtaining all the legal papers necessary for the loco extraction on time. Some artisanal fishers’ organizations could not extract any of their loco quotas from the MEABRs, and others only part of their quotas (Table 4.3).

As explained by artisanal fishers, the loco quota system works as follows: there are periods established in the SUBPESCA resolutions that allow the extraction of a certain quota for each of the artisanal fishers’ organizations with MEABRs (Table 4.3), and it is compulsory to inform SERNAPESCA (National Fishing Service) of the exact date when the artisanal fishers’ organization is going to do the loco extraction. Officials from SERNAPESCA go to the fishing village on a certain date and assess the quantity of loco that is being extracted and check that each loco is the right size, namely over ten centimetres long. If the extraction has been done correctly, the SERNAPESCA officials will provide a permit to the vehicle which will transport the loco.

**Table 4.3:** Loco quota extraction by artisanal fisher’s organization interviewed in 2008.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Extraction Quota</th>
<th>Quantity extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nº 1 Syndicate</td>
<td>40,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Nº 2 Syndicate</td>
<td>30,000</td>
<td>None</td>
</tr>
<tr>
<td>Nº 4 Syndicate</td>
<td>43,600</td>
<td>10,000</td>
</tr>
<tr>
<td>Encarnadoras Syndicate</td>
<td>Not allowed</td>
<td>None</td>
</tr>
<tr>
<td>Coopemar Trumao Cooperative</td>
<td>70,000</td>
<td>23,000</td>
</tr>
<tr>
<td>Maicolpué Río Sur Syndicate</td>
<td>120,000 (2 areas)</td>
<td>28,500 1 area</td>
</tr>
<tr>
<td>Huellelhue, Nirehue and Loy Cumilef</td>
<td>32,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Indigenous Association</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caleta Cóndor Indigenous Association</td>
<td>13,000</td>
<td>None</td>
</tr>
<tr>
<td>Pucatrihue Syndicate</td>
<td>127,900</td>
<td>127,900</td>
</tr>
<tr>
<td>Playa Centro Syndicate</td>
<td>15,685</td>
<td>Half quota</td>
</tr>
<tr>
<td>Costa Brava Syndicate</td>
<td>43,000</td>
<td>27,000</td>
</tr>
<tr>
<td>Tril-Tril Syndicate</td>
<td>20,000</td>
<td>No info</td>
</tr>
</tbody>
</table>
Chapter 4.- Artisanal Fishers

Marine biologist Pedro Vergara, an assessor of twenty-six of over thirty MEABRs that exist in the Osorno Province shoreline, participated in the legal creation of artisanal fishers’ organizations. His account is that he began working with the first few syndicates, created in 1997, and advised them on how to prepare for arrival of the MEABRs. When the syndicates’ directives expired, he helped to update the directives and their bylaws. “I got involved with the MEABRs in 96, 97 […] I got in touch with the few syndicates that existed at that time […] I told them [the syndicates] the MEABRs were going to be established and they should be prepared and organized, that MEABR was a good choice […]” (Marine biologist Pedro Vergara). Most of the fishers’ organizations were created around the year 2000 as a means to apply for the MEABRs as shown in Table 4.4.

Table 4.4: Creation year of artisanal fishers’ organizations interviewed.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Year of creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N° 1 Syndicate</td>
<td>1998</td>
</tr>
<tr>
<td>N° 2 Syndicate</td>
<td>2002</td>
</tr>
<tr>
<td>N° 4 Syndicate</td>
<td>2002</td>
</tr>
<tr>
<td>Encarnadoras Syndicate</td>
<td>1999</td>
</tr>
<tr>
<td>Coopemar Trumao Cooperative</td>
<td>2001</td>
</tr>
<tr>
<td>Maicolpué Río Sur Syndicate</td>
<td>1992</td>
</tr>
<tr>
<td>Huellhelhue, Nirehue and Loy Cumilef Indigenous Association</td>
<td>2003</td>
</tr>
<tr>
<td>Caleta Cóndor Indigenous Association</td>
<td>2004</td>
</tr>
<tr>
<td>Pucatrihue Syndicate</td>
<td>1997</td>
</tr>
<tr>
<td>Playa Centro Syndicate</td>
<td>2002</td>
</tr>
<tr>
<td>Costa Brava Syndicate</td>
<td>-----</td>
</tr>
<tr>
<td>Tril-Tril Syndicate</td>
<td>2002</td>
</tr>
</tbody>
</table>

Table 4.5: Fishers' interviewed main activities in the sea.

<table>
<thead>
<tr>
<th>Name</th>
<th>Activity as fisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubén Casanova</td>
<td>Fisher</td>
</tr>
<tr>
<td>Manuel Hinostroza</td>
<td>Diver</td>
</tr>
<tr>
<td>Maite Burgos</td>
<td>Encarnadora (bait hookers)</td>
</tr>
<tr>
<td>Nelson Holtmann</td>
<td>Fisher</td>
</tr>
<tr>
<td>Luis Adue</td>
<td>Fisher</td>
</tr>
<tr>
<td>Fermín Pradines</td>
<td>Fisher</td>
</tr>
<tr>
<td>Patricio Arriagada</td>
<td>Crew (Marine)</td>
</tr>
<tr>
<td>Alicia Rodríguez</td>
<td>Fisher</td>
</tr>
<tr>
<td>Raúl Toledo</td>
<td>Fisher</td>
</tr>
<tr>
<td>Nelson Vinnet</td>
<td>Fisher</td>
</tr>
<tr>
<td>Eduardo Vargas4</td>
<td>Fisher, diver</td>
</tr>
<tr>
<td>Raúl Ampay</td>
<td>Sea gatherer and Crew (Marine)</td>
</tr>
<tr>
<td>Eusebio Díaz</td>
<td>Fisher/Trader</td>
</tr>
</tbody>
</table>

4 He is not fishing any more.

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Different types of sea jobs exist among the artisanal fishers (Table 4.5). Claudio Castro identifies different specialisations among fishers including fishers, seaweed and mussel gardeners, divers and the crew who can be divers’ assistants called *tele* in Chilean slang (the person that helps the diver with the hose and compressor), and the marine (crew member).

Artisanal fishers also highlighted a debt-peonage system, in which they are always in debt to an intermediary, as a significant factor about their work in Bahía Mansa. As a result, they have few options to negotiate the prices for their catch or the gear they require. The gear artisanal fishers need such as baits, nets with baited hooks, and gasoline is mainly provided by the intermediaries. There are three buyers in Bahía Mansa and each one provides a certain number of boats. Fishers have to sell all their catch to the buyer that provides the boats, obtaining their payment for the on-sale of their products four days later. The sales are traded individually.

In August 2008, four artisanal fishers’ institutions, including syndicate N° 4, syndicate Playa Centro, and the Artisanal Fishers’ Associations of Caleta Huellehue and Costa Brava, sold their locos to a buyer at a company in San José de la Mariquina. By the end of this field research in January 2009, the company had not paid any of the syndicates for their loco product. This provides one illustration of how these local communities, indigenous and non-indigenous, have no way to defend themselves in certain situations. This dependence on traders illustrates the difficulties involved as the artisanal fishers attempt to negotiate their products.

One interview involved a married couple who work as traders in Bahía Mansa, but who are also historical and skilled artisanal fishers. They were the only people found whose family had been fishers for at least three generations. Their parents and children were also artisanal fishers. They described themselves as traditional fishers. Unusually, the woman of the couple is a skilled fisher, which is not very common amongst fishing communities, where women usually work in fish processing, marketing, and distribution (McGoodwin, 2000).

*All our lives we have been fishers. My parents, my brothers are fishers and the man whom I married as well is a fisher and trader [...] I was a fisher like my brothers [...] I used to get into the sea with them [...] we all used to get in the boat and go fishing.*
Porque toda la vida hemos sido pescadores. Mis padres pescadores, mis hermanos pescadores [...] y el caballero con quien estoy también es comerciante pescador [...] Yo era pescador con mis hermanos y así trabajaba de pescador [...] Entraba a la mar con ellos [...] yo iba con [...] igual, igual que ellos [...] Claro. Tenía mis aperos, mis hermanos tenían aperos igual y todos en bote salíamos a la mar.

Artisanal fishers’ specializations are also related to the history of occupational fishing. Claudio Castro describes four types of fishers:

a. Traditional artisanal fishers: fishers who have dedicated their lives to the activity of fishing, have no skills for any other economic activity, and have a direct and permanent relationship with the sea. Their fishing involves selling what they catch and living off the resulting income.

b. Seaweed gardeners: also a traditional occupation, but most of the time people who do not have legal recognition as fishers because their activity occurs only on the shoreline. They collect seaweed, mussels, and limpets, usually in very small numbers, for self-consumption.

c. Opportunistic fishers: fishers who started to fish in the last eight years because of the legal access available through the allocation of MEABR, but who do not possess the necessary skills for fishing. This kind of fisher becomes a member of a syndicate or cooperative or any other kind of artisanal fisher organization. There are many opportunistic fishers who live in the city and engage in significant economic activities besides fishing. An opportunistic fisher could also be someone who does not possess fishing skills and who starts to fish while simultaneously looking for a job for which they are better qualified. The following two quotations from historical fishers concern this type of fisher and how they are allocated MEABRs; clearly, the skilled fishers perceived such MEABR allocations as unfair:

[...] the law came to life and anybody that has a licence to be a seaweed gardener or that is not a fisher, gets a licence to be seaweed gardener, gets together with a few people, creates a syndicate, or an indigenous association and can obtain a MEABR. [...] to get a seaweed gardener license you can get it only with your Identification [...] now you go to Osorno and there are taxi drivers that have created an artisanal fisher syndicate and were allocated an MEABR and they don’t even work in the sea [...] now we are fighting that if a syndicate doesn’t work their MEABR in three years that the government should withdraw it from them.
For the historical or traditional artisanal fishers with the allocation of MEABR their situation started to be bad [...] because with them there is not freedom to work, because also without the MEABRs the people that really work in the sea (the 'real fishers') will work, not the rest, to create a syndicate you put as members people that have never been in to the water and because they are part of the syndicate you have to give them part of the locos.

If they were fishers then no problem at all. As I just told you, 90% of our syndicate members are indigenous and real indigenous, very indigenous. Also, these members of our syndicate belong to indigenous communities, you know what I mean. There are indigenous people that know about fishing but there are others that do not, and doesn’t matter that they have never worked in the sea and that they have everything, so that is what bothers us, the opportunism that they have sometimes [...] there are even people that have MEABRs and they don’t know even how to row...and many people that have MEABRs and they haven’t even seen the sea [...] there are other syndicates in which half of them are women and old women, for instance, Costa Brava has very old ladies or Caleta Huillin [...] the indigenous have ancestral rights over the sea but they have been seaweed gardeners all their life, they have always used the shoreline, so they should have the right to use the shoreline as always but it is nothing to do with the seabed, that is a totally different thing.

d. Artisanal fishers of indigenous origin: The artisanal fishers’ indigenous association is an organization that was created because of the ancestral relationship that these communities have with the sea. While not experienced in fishing or diving from boats, they have interacted with the sea from ancestral times. Currently, the law allows them to be recognized as artisanal fishers and they can be allocated a MEABR whether or not they have traditionally been fishers.

Pedro Vergara also highlights the fact that there are very few real fishers along the Osorno Province shoreline, and he believes that the only artisanal fishers’ organizations that have real fishers are the N°1 syndicate, Encarnadoras syndicate, Pucatrihue syndicate, and part of N°2 and N°4 syndicates, which are all members of FEDEPESCA except for syndicate N°2. Vergara reinforces the categorisation provided by Claudio Castro regarding the opportunistic fishers. Of the four groups Castro identifies, three do not have fishing skills, such as the opportunistic fishers. Vergara describes such people in the following way:

If you were to give most of the fishers complex fishing gear they will drown with it. What you find are fishers that have been learning only superficially and there are people here that were unemployed. A friend asked them to go to work with them fishing and they earn 60,000 pesos\textsuperscript{55} in a day and in three days they work in the

\textsuperscript{55} NZS$200 (calculated on November 11, 2011).
week they earn 150,000 pesos\textsuperscript{56}, then they do not go back to work in an industry where they were earning 120,000 pesos\textsuperscript{57} a month. They stay in the fishing activity even though there are months that they do not earn anything because the weather is bad or the marine resource is under a ban, but there are months that they can make 400 or 500 thousands pesos\textsuperscript{58}, then they know that and is a very relaxed work, they are their own employees and they do not have a boss, then they have another freedom that they did not have as a labour worker and they turn into fishers not being really fishers, not getting the skills, hence if we would say real fishers that have all the necessary skills of fishing are maybe 20\% or 30\%.

The type of equipment a fisher owns also relates to the history, specialization, and type of artisanal fisher. Historical and skilled artisanal fishers usually have the basic equipment necessary to fish, and their needs therefore relate either to infrastructure or to upgrading what they already have. New and opportunistic fishers need to start with no resources, acquiring a boat and engine as a first priority.

4.3.1. Fishing equipment

Artisanal fishers stress that differing access to equipment reinforces and extends the compounding influence of the social inequalities discussed in the previous sub-section 4.2.3. Only a small number have been able to acquire equipment to facilitate more consistent and economically viable fishing practices. Small-scale capital is a characteristic of artisanal fishers. If an artisanal fisher is unable to own a good boat, he is confined to a very fragile economic situation. The separation between local actors that have better equipment and others who do not is directly reflected in rights of access to marine resources. The actor or group that has good equipment, for instance, has greater ability to poach loco in an area where they do not have legal access.

Most of the artisanal fishers’ boats are wooden (Figure 4.5), although they would prefer to have faster and more durable, but generally unaffordable, fibreglass boats. Boats left in the port of Bahía Mansa during storms get destroyed, and thus fishers need lighter boats to be able to put them on the beach or in a dry area rather than leave them in the sea. In addition, the fishers that currently own fibreglass boats have an added advantage over

\textsuperscript{56}NZ$550 (calculated on November 11, 2011).
\textsuperscript{57}NZ$500 (calculated on November 11, 2011).
\textsuperscript{58}NZ$1,600 (calculated on November 11, 2011).
the ones that do not in that, because they can get to locations faster, they can transport tourists to the indigenous communities, as artisanal fishers explained: ‘Instead of expending the two hours required by a wooden boat with a 220 cc engine, the fibreglass boats require only forty-five minutes or less with a more powerful engine to get from Bahía Mansa to the indigenous communities of Caleta Huellehue and Cóndor’.

The artisanal fishers working along the Osorno shoreline fish with nets (Figure 4.6) and long-line fishing boats. Long-line fishing is a fishing technique which uses hundreds of baited hooks hanging from a line.
All the artisanal fishers’ organizations have special needs aimed at improving their situation as fishers (Table 4.6), which range from purchasing their first boat to improving their fishing gear and fishing infrastructure. All of the fishers interviewed wanted to express very clearly what these needs were.

Some artisanal fishers’ syndicates, such as the Playa Centro syndicate, do not even have boats, fishing gear, or divers, and thus have to hire another syndicate with such equipment to work their MEABRs and harvest their loco allotment. Some syndicates only started to learn diving and fishing skills after being allocated their MEABRs, and are at present trying with difficulty to purchase a boat and diving equipment. In addition, some artisanal fishers’ syndicates argue that the artisanal fishers who lack the skills and equipment to exploit MEABRs should not have the right to own and access them.

An artisanal fisher from an indigenous community and a non-indigenous but “new” fisher expressed their views regarding access to equipment among the artisanal fishers:

No we are about to have a training to learn to make fishing nets, because now that we created a syndicate we bought a boat, complete fishing gear, an engine and all that you need for fishing, we have everything for this fishing season. We are waiting for the weather to improve to extract our loco quota that the SERNAPESCA resolution gave us.

[…] we couldn’t extract all our locos since our syndicate doesn’t have boats, then we have to hire everything, boat with diver, everything […] we hired the Manzano syndicate […] we bought an engine. We were trying to apply to a project to get a boat.
This year our dream is to be able to get money for a boat but it is hard because we owe money to the bank, to CPA, to Pucatrihue syndicate for another year that we hired them for our loco extraction [...]..

Despite artisanal fishers resolving their needs related to improving gear and infrastructure, their occupation is still in peril because they are vulnerable to external circumstances, such as the fallout from industrial fishing practices.

4.3.2. Encroachment by industrial fishing

One of the issues affecting artisanal fishers worldwide involves the impacts of industrial fishers’ harvesting techniques, specifically-bottom trawling (Figure 4.7). This is also true of the artisanal fishers along the Osorno shoreline. In this subsection, artisanal fishers provide in their own words, a fuller explanation of the issues associated with bottom-trawling. The following excerpts provide perspectives from some artisanal fishers on industrial fishers. They show the level of awareness among artisanal fishers of the potential impacts of industrial fishing on the marine ecosystem:

Trawling nets should be eliminated, we are fighting to eliminate them because they damage too much, the regional and national artisanal fishers organizations are fighting for that. Now it is also getting integrated into the fight with the Shoreline Counties Association, because we have to eliminate trawling nets because they are very prejudicial, imagine killing all the seeds, they plough through the sea bed, they also kill the fauna down there.

Well now to fish is generally bad, actually it is bad, but it is not the fault of overharvesting, it is the government’s fault, the main responsibility is the government’s. We see the ships fishing here offshore, the trawling boats, they come within five miles [zone allocated to artisanal fishers] and we denounce them and the authorities don’t listen to us.

The industrial fishing boats cannot get within the five miles, but every night you see the industrial boats working inside the five mile zone [...] you complain to SERNAPESCA and they don’t believe us [...] you see them more at night [...] the last time I went to Valparaiso I was in the SUBPESCA and we complained about this to the Sub-Secretary and he didn’t believe us, he said it can’t be, he strongly advocated the industrial fishing. [...] we have done a collective complaint from fishers from all around [...] the [industrial] fishers can disconnect the satellite monitoring system when they get into the five mile zone and in that way they don’t get caught.
The other issue related to the industrial fishing is the salmon aquaculture, because all the fish from the trawling nets go to the salmon aquaculture, then if you fish four kilograms of native fish to make one kilo of salmon […] it is the fish flour, the pellets which they feed the salmon, so the conger, the dolphins, the sierra all are used to make fish flour and for a little money.

Pedro Vergara agrees that industrial trawl-net fishing damages the seabed. However, he explained that the benthic resources they damage are not extracted by the artisanal fishers of the Osorno shoreline because, in general, the nets of industrial fishers are very deep, not 10 metres but 40, 80, or even 100 metres down. Even so, the industrial fishers can disturb species development chains.

Of all current fishing techniques, the negative impact of trawling nets on vulnerable marine ecosystems raises particular concern amongst fishers from the Osorno shoreline. According to artisanal fishers, the notorious impacts of bottom-trawling, the weak control of fish harvests, and the lack of legal boundary and rights enforcement are the main problems that the Chilean government must address.
4.3.3. Review

The key transitions in the history of artisanal fishers in the Osorno shoreline are found in the loco boom and the allocation of MEABRs. These factors have resulted in increasing numbers of people turning to fishing as an occupation, together with the relocation of fishers from different areas to Bahía Mansa and surrounds.

Despite the boom in the loco market, few artisanal fishers exploiting loco at the time realised long-term economic benefits. Moreover, the aim of the MEABRs, recovery of the loco resource, has not provided a good quality of life for artisanal fishers, who strongly advocate aid to protect and strengthen their occupation as they feel doomed to an insecure future without the external help they require.

Historical fishers’ high mobility, together with factors such as the availability of marine resources, weather conditions, lack of fishing gear, and the difficulties posed by traders and industrial fishing encroachment are the issues described by artisanal fishers in their interviews as key to understanding the current state and characteristics of their occupation.

Despite four types of fishers being present in the area, namely traditional artisanal fishers, traditional seaweed gardeners, opportunistic fishers, and artisanal fishers of indigenous origin, all of them are shaped by the specific external factors which make artisanal fishers in the Osorno shoreline economically vulnerable, this is evident because their livelihood is based on a small-scale level of production and capital commitments, both of which they hope to increase if possible.

Compared to ten years ago, the increasing difficulties of fishing have made artisanal fishers more receptive to arguments for conservation in order to restore the fishing stocks. Primarily, this appears to reflect a change in attitude, as they are not actively changing their fishing practices. The fishers’ capacity to follow more conservation oriented practice is limited by the economic uncertainty of their fishing livelihoods. As noted above, this uncertainty is exacerbated during periods of bad weather when they are not able to fish for a long time. Because they lack alternative income possibilities, they consider it necessary to fish in a non-sustainable way.
It is important to understand “environmentalism” “as a quest for a viable future, pursued through the implementation of culturally defined responsibilities” (Milton, 1993, p. 2) when assessing the manner in which the artisanal fishers consider and value the environment and its resources, and consequently to comprehend why they think the way they do. Nevertheless, the MEABRs have possibly initiated a growing sense of “environmentality” (Agrawal, 2005) in the fisher communities.

From the research findings summarised above, it is clear that any management plan of marine resources in an area, whether a MPA or any other type, requires a long time for implementation. It may be over ten years before it is fully accepted and all aspects of its regulation are understood by local communities. Hence, it is not surprising that local communities can be reluctant to accept any management plan which represents an entirely new manner of managing marine and coastal resources when local residents have had difficulty dealing previously with the MEABRs.

To engage these fishers with this specific culture and high mobility can prove to be a significant challenge for the implementation of ICDPs. Therefore, it is imperative that important decisions be made with an understanding of the differences, claims and roles of each of the stakeholder groups.

4.4. Socio-economic and cultural characterization of fishers communities

All artisanal fishers interviewed referred to three elements of their socio-economic and cultural characteristics, namely impoverishment, compounded by the necessity to pursue other occupational activities besides fishing; lack of education; and issues around historical artisanal fisher’s indigeneity. Analysis of these socio-economic and cultural characteristics of artisanal fishers provides elements that can build the analysis of community dynamics around the GEF Marino.
4.4. Socio-economic and cultural characterization of fishers communities

4.4.1. Impoverishment of artisanal fishers

The artisanal fishers interviewed stated that in many respects they live in an environment characterised by helplessness which makes them socially vulnerable. The majority have not finished school, have no social welfare or no pension when they retire, and little income from their occupation as fishers. In addition, they have difficulties in accessing credit, as fishing is an uncertain business with inherent risk, making it difficult to apply for bank loans or insurance. To survive, therefore, no fisher can exist entirely on fishing as described by one fishing leader:

*As an artisanal fisher leader I need to have another job to support me economically, because if I only work 100% as a fisher, if I live only on that, I wouldn’t be able to do things for the syndicate, to work for the institution. I have to work for me and my family’s sustenance. No, the marine resources have decreased […] I think because there are too many people fishing, that’s why so many people work in another job too, the divers, the youth, everybody because there are not many choices if you are living only from fishing, you have to work in something else.*

Artisanal fishers have to find other jobs in order to avoid the potential economic hardship produced by bad weather conditions, and work at many occupations besides fishing, including carpentry, plumbing and building which are all very low-income occupations in Chile. Some fishers also practice agriculture and raise animals both for themselves and for cash. All the artisanal fishers interviewed had another job besides fishing (Table 4.7). Having another job or owning a business has improved their income but they feel it is still not enough and they need help to develop themselves.

<table>
<thead>
<tr>
<th>Name</th>
<th>Activities besides being fishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubén Casanova</td>
<td>Builder, politician, tourism technician</td>
</tr>
<tr>
<td>Manuel Hinostroza</td>
<td>Owner of a shop, selling fire wood, raising animals</td>
</tr>
<tr>
<td>Maite Burgos</td>
<td>Cook, secretary</td>
</tr>
<tr>
<td>Nelson Holtmann</td>
<td>Accountant</td>
</tr>
<tr>
<td>Luis Adue</td>
<td>Owner of a restaurant</td>
</tr>
<tr>
<td>Fermín Pradines</td>
<td>Owner of a shop</td>
</tr>
<tr>
<td>Patricio Arriaga</td>
<td>Carpenter, plumber, craftsman (wood and shells) and builder.</td>
</tr>
<tr>
<td>Eusebio Díaz</td>
<td>Fish trader</td>
</tr>
<tr>
<td>Alicia Rodríguez</td>
<td>Fish trader</td>
</tr>
<tr>
<td>Raúl Toledo</td>
<td>Housekeeper for German family</td>
</tr>
<tr>
<td>Raúl Ampay</td>
<td>Carpenter</td>
</tr>
<tr>
<td>Eduardo Vargas</td>
<td>Carpenter</td>
</tr>
<tr>
<td>Nelson Vinnet</td>
<td>School assistant</td>
</tr>
</tbody>
</table>

Table 4.7: Other work activities artisanal fishers interviewed have besides fishing.
In spite of having another job, the majority of fishers cannot afford to have a car or their own fishing gear and boat, while many do not have the skills and education to work easily in another more profitable industry.

Claudio Castro explains that the artisanal fishers lack both social and cultural protection and the Chilean government has not progressed enough in protecting this economic activity, which has important implications for the health and social wellbeing of these people. Considering that Chile has a very long coastline, it is significant that creating laws and social policies for the people that live inland is seen as a greater priority than for those whose livelihoods depend on the coast and marine resources. The artisanal fishers recognise many of these constraints on the social and economic development of their communities.

Claudio Castro also explains that the members of only one artisanal fishers’ organization have improved their economic situation with the MEABRs. However, unfortunately, he notes this is not the same for all of the fishers’ organizations:

Due to fishing being not as productive as 20 years ago fishers have been looking for other choices that could help their family livelihoods. The MEABRs have been another choice as a potential to really improve their economic situation as fishers. However, there are difficulties in managing the MEABRs, working them and administering them. There is a syndicate that has improved the situation with the allocation of the MEABRs, the syndicate Pucatrihue. They have gained concrete benefits because they have set up clear goals. They have a venue, a truck and a sustainable production of locos; it is the ideal syndicate. They have taken advantage of the choices and have overcome the obstacles. However, they are located in a more isolated area away from other syndicates but in Bahía Mansa there are too many syndicates in the same bay.

According to artisanal fishers, the situation in Bahía Mansa undercuts more successful practices due to competition in the bay among fishers which has resulted in overexploitation of the loco and to a lesser extent other resources. This has depleted available marine resources, which means there is a lack of sufficient resources to provide for all the fishers living on the Osorno shoreline. While other marine resources are available, artisanal fishers cannot earn as much exploiting these resources as they have with the loco in the past. In contrast, Pucatrihue Syndicate is located on another beach further north of Bahía Mansa, in the Pucatrihue village. Pucatrihue Syndicate leaders explained that they are relatively isolated from Bahía Mansa and constitute the only artisanal syndicate in
4.4. Socio-economic and cultural characterization of fishers communities

that village. Besides having less competition than the artisanal fishers’ organization of Bahía Mansa, they form a cohesive unit, which has helped them to succeed in terms of resources, gear and facilities. However, in comparison with the Bahía Mansa fishers organizations, they have the disadvantage of not having a wharf which would enable them to fish even when the area is experiencing rough seas and severe weather conditions.

This situation of impoverishment is recognised by all parties. What are much more contested by local groups are the reasons why and who should be blamed. The following paragraphs describe the often highly contested way in which the structural position of fishers is explained by different groups in the community.

The following comments describe the fishers’ perspectives of their socio-economic situation in their own words (author’s translation):

*The situation of the artisanal fisher is not too good. Fishing for the loco, sea urchins, and limpets is working, they are the only things we produce in our area besides the seaweed cocha yuyo (kelp), that we have a lot of but it has low value. Nevertheless, it helps in our livelihoods. Also they (purchasers) buy luga (red algae) and luche (karengo, parengo) but that is what they buy less.*

*The situation of artisanal fishers is bad. I would say that they are poor, the person that lives only on marine resources, off the sea, either mussels or fish [...] you have to find other jobs.*

*We need a lot of help to survive as fishers [...] we have a lack of gear, we don’t have support, very little from the authorities [...] the people help us very little [...] they have abandoned us but sometimes it is our fault.*

While, for many, structural (as well as cultural) constraints exist that impact on the use of money, there are some exceptions to this situation, including five of the more affluent interviewees. All of them have a car, their children have finished or are finishing school and they have other more lucrative sources of income. One has a restaurant, another had a shop that was sold in 2009 and with that money he has invested in the building of an eco-lodge and camping site, another has a furniture workshop using native timber, another a grocery store and his daughters have tertiary education, and finally, the last is a fish trader.

All of these interviewees were also the subject of accusations from the community, for being dishonest by allegedly misusing, stealing or obtaining money by taking advantage of other people, or that they have participated in illegal activities such as poaching. The fact
that the success of some is challenged by the others is evidence of both the internal conflicts within the community but also a disparity in the capacity to act.

Whilst it is true that artisanal fishers do not usually save or otherwise invest the money they earn, there are other reasons associated with this behaviour as the fishers explained themselves. In the next section, one of these issues, lack of education, will be addressed.

### 4.4.2. Education

To be able to attain the legal identification, Artisanal Fisher Registration (RPA) as a fisher, school attendance until Third Form (*Octavo Básico* in Chile) is required. Due to a lack of education, many fishers do not meet this requirement, making them ineligible for an RPA. Hence, these people are therefore considered to be working illegally as a registered artisanal fisher. Due to a lack of registration, the exact numbers of illegal fishers is unknown by the government. The participants in this research informed the researcher of their incomplete education, specifically significant trouble in reading and writing. They stated that, as a result, it was hard to understand all the aspects involved in the GEF Marino project. They were aware that there are many projects available to provide funds to satisfy their needs, however because of their inability to complete applications and to understand all the requirements, they miss out on the opportunities. During the research, the researcher was asked many times to help them to write up project applications and letters, which the researcher did in exchange for their goodwill and their time spent helping her in the research. This is the reason why some leaders, such as the president of CPALO, wanted the researcher to be present during meetings with Cecilia Godoy, because it could later explain to them what she meant and also constitute a witness.

Furthermore, the very low level of education (Figure 4.8 and Table 4.8) amongst the artisanal fishers and the lack of a proper quality education constitute a significant obstacle to them finding better jobs. Through government programmes, special efforts have been made to make artisanal fishers complete their education. In artisanal fisher localities such as those in San Juan de la Costa and Río Negro Counties, one of the main needs is technical support to apply for funding. There are many funds available from the government, especially on a regional level. However, the fishers do not know how to apply to these funds.
Table 4.8: Artisanal fishers’ educational level.

<table>
<thead>
<tr>
<th>Year</th>
<th>SC to Form 3</th>
<th>SC to Form 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 5</td>
<td>SC to Form 5</td>
<td>Completed Middle school</td>
</tr>
<tr>
<td>Form 7</td>
<td>SC to Form 5</td>
<td>Completed High school</td>
</tr>
<tr>
<td>Form 3</td>
<td>SC to Form 5</td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Standard 4</td>
<td>SC to Form 5</td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Form 1</td>
<td>SC to Form 5</td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Standard 4</td>
<td>SC to Form 1</td>
<td>Incomplete Middle school</td>
</tr>
<tr>
<td>Form 3</td>
<td>SC to Form 5</td>
<td>Incomplete Primary school</td>
</tr>
<tr>
<td>Form 5</td>
<td>SC to Form 5</td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Form 1</td>
<td>Incomplete High school</td>
<td>Incomplete High school</td>
</tr>
</tbody>
</table>

Note: This table records the fishers who had a second chance at education, taking advantage of programmes that concentrated the equivalent of two school years into one for adult learners, as well as the overall level of education of the interviewees.

The following quotation from an artisanal fisher leader who is also an accountant explains how the lack of education is recognised as a limiting factor on the fishers’ economic activities:

*I think that being organised has brought benefits to the fishers, because to negotiate in a group has its advantages, but there is still a lack of education, skills, lack of training. It is like everything in life, it doesn’t matter how much success you have in life, but if you don’t have education […] I would like that no fisher has a lack of education, they haven’t even finished Primary school and from that derives many issues […] irresponsibility, neglect, informality, lack of continuation, lack of commitment and lack of culture.*

Answers show that the fishers think that the project’s purpose is to provide things for them as opposed to protecting the marine resources. As discussed above, the artisanal fishers were expecting many things from the project and their failure to participate in the project, therefore, was more an issue of frustration with unmet expectations than an unwillingness to protect the marine resources. The following are quotations regarding problems of understanding the LML MUMPA’s aims by artisanal fishers:

*I think that in the beginning the GEF Marino project’s aim was to protect the alerce, more than the sea, was to focus on the alerces because the indigenous communities were there, but now I go to CPAŁO meetings and they say - what benefits have the*
indigenous communities had from the GEF Marino, nothing. At the moment it is not helping the indigenous communities or the artisanal fishers.

They told us that there was a lot of money, two thousand million pesos and that they want to do things to protect the marine park and at the same time to do things with communities and fishers.

Most of the people don’t understand much (of the GEF Marino project), so they are not very keen on the idea.

As noted by the fishers, the GEF Marino must share some of the blame for the poor understanding of the project’s objectives, although they also identified low education as leading to poor engagement in conservation projects. This breakdown in the level of understanding is a result of two main factors, both related to education. First because artisanal fishers with low education have a poor understanding of a projects’ contents and aims, it is unlikely that they will be keen to participate if the project is not meaningful for them. Second, poor education is associated with poor earnings. Because income gains can be affected by projects requiring use of working time in the project, if there is no compensation for this time then it is also not likely they will participate. Clearly, low education is an important factor presented among fishers of the Osorno shoreline.

### 4.4.3. Historical artisanal fisher’s indigeneity

The artisanal fishers can be regarded as indigenous because they are descended from indigenous people and their physical features (i.e. skin colour and shape of eyes) and surnames corroborate that. However, they are people that, even though descended from indigenous people, do not identify with the indigenous culture usually because they have lost their culture and language for many generations. This fact becomes increasingly important in considering how the fishers experienced the LML MUMPA.

Based on their surnames on the members’ lists from the artisanal fisher organizations, it is evident that the inhabitants of the Osorno shoreline descend from the Huilliche group. However, this fact is not immediately obvious, as many do not identify themselves as indigenous nor have they sought legal recognition of their indigenous status. As an artisanal fisher notes: “In the end, in the syndicates all are indigenous [giggles], there are some cases in other places that the communities and fishers are different but here the majority are the same […] so most of the people
are indigenous people, 90%”. It is not possible to determine any difference in physical terms, education, or manner of speaking, between historical fishers and indigenous people.

The difference on the Osorno shoreline is that while there are indigenous people legally identified as indigenous, there are others who, despite having sufficient legal documentation, have not applied for such recognition despite the benefits associated with membership of an indigenous community. Legal recognition, for example, means that they do not have to pay for MEABR access rights. Hence, many of the historical artisanal fishers who do not work with the *alerce* are arguably as indigenous as those living in the indigenous communities beside of the LML MUMPA.

The historical artisanal fishers noted that in terms of culture, there is no significant difference between indigenous people living beside the LML MUMPA who specialise in the *alerce*, and those who live in Bahía Mansa, except in terms of occupation. A possible explanation for such a discrepancy is that the fisher groups avoided legal recognition as indigenous because they do not know how to apply for it or did not know they were eligible. The researcher directly asked those fishers that she knew had indigenous surnames or were married to an indigenous person why they did not possess legal recognition. They explained to her that it was because they did not know they could obtain legal recognition. Now that they are aware of the process, they are going to try to obtain it. In summary, however, indigeneity seems to be in a complex relationship with occupation, education and legal status.

### 4.4.4. TEK/LEK

The concerns of the artisanal fishers did not appear to relate to the environmental or the ecological basis of resources at all, and they appeared to have little to contribute when efforts were made to engage them in discussion of ecological or environmental knowledge. Thus, this was potentially important for the GEF Marino project because it arguably discourages the GEF Marino from recognizing and understanding the importance of the use of TEK/LEK during the design or implementation of the LML MUMPA. Whatever knowledge they may have had did not appear to be important enough for artisanal fishers to give it open consideration during interviews, arguably because there were other topics
that have more priority for them at the moment. The following are opinions from fishers about their LEK:

The GEF (Marino) includes very little (LEK), that is why these government projects fail because when an agronomist arrived in the country and said that potatoes have to be planted, he doesn’t ask the peasant in what period he cultivates, he comes to use his knowledge, that’s why State projects fail, because they don’t use the knowledge of the local people, territorially, ancestrally there are processes. The farmers plant per moon, when they wait for the time of fertile soil, it is not just to sow and many times the people feel put down because they don’t listen to them. I used to hear my grandmother, for instance, she planted beans in the waxing moon, the last quarter, I don’t remember how it was, and the indigenous people are very careful to follow that, ancestrally they have their culture, which is the reason they have dwelt in the system for such a long time.

I think that the GEF project is elaborated towards the scientific knowledge it is oriented towards, more technical, that’s why they come from outside. I think that this sort of organization sees a more global thing.

The government doesn’t ask the people that know about fishing, they don’t listen to us. When they built the pier, we told them don’t make the stairs there because the sea hits that side, no they said, the plan came like that, there you have the pier that moves like a caterpillar.

Lack of local participation and consideration given to TEK/LEK is a common occurrence in project implementation. In assessing the GEF Marino project, Claudio Castro ties together these two issues:

I think that the local thinking was not considered in the GEF Marino project with the MUMPA, as an idea created overseas, having a strong international vision, theory and science [...] I think that not too many people sat down and talked to the old locals, and that is the easiest part to do and to ask them how do they imagine a marine protected area could be, because the hardest part is to implement the idea, to put it in practice in a way the locals will truly feel part of the project.

The relative unimportance of TEK/LEK and active local participation are aspects related to a privileging of technical/scientific knowledge over indigenous knowledge. The scientists running a conservation project have the power, knowledge and ability to implement a project. Thus, they believe that they do not need to include the knowledge and decision-making of the local communities. The artisanal fishers argue that the bias against TEK/LEK extends to the Chilean government, which prefers to maintain control of projects through a top-down approach and develop projects only with scientific and
technical input. To some extent, the government’s stance shows the distrust of externally initiated projects previous to the GEF Marino project. For the historical fishers, this situation is the cause of poor implementation, such as the inappropriate location of a pier due to the failure to consult their knowledge and experience of the sea.

4.4.5. Review

In discussions with the fishers through this research they highlighted as major concerns, impoverishment; occupational activities besides fishing; lack of education; and issues of indigeneity as socio-economic and cultural characteristics of their communities. Their socio-economic and cultural context provides a basis from which to assess the likelihood of artisanal fishers participating in any project that could bring development and economic help to them. By adding the socio-economic and cultural context to the internal and external historical conditions explained in Section 4.2., a situation is presented in which historical artisanal fishers have been willing and hopeful regarding participation in any project that will supply a possible solution to their needs.

Given its ICDP approach, the LML MUMPA project organisers should have been fully aware of the socio-economic and cultural context in which implementation was to take place, especially when the latter impinged on the type of reception they hoped to receive from local communities. One factor the GEF Marino staff could have taken into consideration for the success of their project was to anticipate the additional complexities that could arise through comprehensively assessing existing problems and difficulties such as impoverishment, the need to pursue additional jobs, and lack of education as explained in Section 4.5. These were key elements in understanding the expectations the LML MUMPA project was generating among locals, but which were omitted by the LML MUMPA project staff.

As part of its ICDP approach, the GEF Marino mainly focused on assisting in the socio-economic development of the indigenous communities. However, it did not help the marine resources users of the LML MUMPA, namely the historical artisanal fishers. As a result of the creation of the LML MUMPA, which includes three MEABRs controlled by indigenous communities, it is harder now for the established artisanal fishers to fish in those areas. The GEF Marino has, however, motivated the patrol of the area by providing
resources to the indigenous communities, including money for petrol and to buy boats or engines to guard the LML MUMPA and therefore the MEABR. Literature discussed in Chapter 2 pointed out how, in the aim of addressing environmental aims, socio-economic development and human well-being can be negatively impacted when both factors are not considered together (Chapin, 2004; George, 2007; Rinzin et al., 2009; Wapner, 2009; Carneiro, 2012). This research confirms that finding.

Knowledge of the MEABR’s legal process and the historical fishers’ experience with it can highlight the difficulties for both historical and new artisanal fishers in satisfying the requirements. Because most of the artisanal fishers have not completed their education, it is hard for them to complete the necessary paperwork and undertake the steps to manage a MEABR. Local fishers have also been struggling to satisfy all the requirements for working their MEABRs. The implementation of the LML MUMPA has added more complex requirements to the existing marine protection regulations regarding the management of marine resources through the MEABRs. For this reason, it is important to know the experience of the artisanal fishers with fisheries regulations prior to the implementation of the GEF Marino LML MUMPA. This is one of several reasons why the artisanal fishers’ syndicates prefer to poach rather than dealing with the difficulties in harvesting loco legally. Furthermore, if artisanal fishers have had trouble adhering to the MEABR’s stipulations, it is to be expected that they would also have difficulties following the process and rules of a MUMPA.

Lack of education is a social aspect of local communities which an ICDP needs to be aware of and to understand in order to achieve success. In addition, establishing relevant mechanisms of collaboration and working closely with the people of this area on a regular basis was essential to gaining their trust and encouraging their participation in this long term project. While participation in conservation projects is mentioned in the literature as a key factor for success (Howe, 2001; Waylen, 2010; DeReynier et al., 2010; Pita et al., 2010; Banks and Skilleter, 2010), what is not assessed in the literature is how factors such as a lack of education and poverty can hinder the participation of local stakeholders if not addressed properly by project managers.

One of the GEF Marino staff strategies for collaboration with indigenous communities was to work closely with the president of Artisanal Fisher Council (CPALO),
who proposed in his discourse that historical artisanal fishers and legal indigenous communities are actually one group. He advocated for the indigenous communities in this sense, although the indigenous artisanal fishers associations of Caleta Huellehue and Caleta Cóndor, in spite of being members of CPALO, do not feel they have the same identity as artisanal fishers. Thus, even though historical artisanal fishers and indigenous communities both descend from indigenous people, both groups feel they do not share the same identity. They feel their main occupations, namely fishing and logging the *alerce*, are the basis of their different identities.

The identity of many of the historical fishers on the Osorno shoreline is closely linked to their occupation as fishers. Despite being indigenous, the fishers have lost their indigenous language and culture and do not live with other indigenous people that maintain these traditions, and thus fishers focus instead on their fishing activity as their main identity. The artisanal fishers of this study organize their social and economic life around their fishing activity, as fishers usually do, and these elements constitute a specific culture whereby families and community ties become the basis to sustain their life (McGoodwin, 2000). This situation impacted on the fishers’ relationship with the GEF Marino as this project imposed natural resources restrictions by the establishment of a MUMPA, which affects not only the main occupation of fishers but the source of identity of this group of people as well.

4.5. Social and cultural dynamics: fisher organisations and politics

4.5.1. Artisanal fishers’ organisations

In the previous section, it was noted that much of the conflict between the GEF Marino and local communities has emerged around political institutions and organisations for fishers (Table 4.9). For the artisanal fishers, their political context was a topic which they wanted to elaborate upon and the following analysis is based on their account of fisher politics.
Among these political organizations, stated in Table 4.9, the CPALO and FEDEPESCA issues were the most recurrent topics. There are four organizations that are members of FEDEPESCA (N°1, N°4, Encarnadoras and Pucatrihue syndicates) and one organization that is a member of CPALO (N°2 Syndicate), which are organizations that have a majority of real fishers’ members (Table 4.10).

Table 4.9: Fishers political organizations. There are four principal representative political groups.

<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Name</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONAPACH</td>
<td>National Chilean Corporation of the Artisanal Fishers</td>
<td>National</td>
</tr>
<tr>
<td>COREPA</td>
<td>Artisanal Fishers Regional Corporation</td>
<td>Regional</td>
</tr>
<tr>
<td>CPALO</td>
<td>Osorno Shoreline Artisanal Fishers Council</td>
<td>Province</td>
</tr>
<tr>
<td>FEDEPESCA</td>
<td>Fishing Federation</td>
<td>Province</td>
</tr>
</tbody>
</table>

One important issue for CPALO and FEDEPESCA is their relationship with the Municipalidad⁵⁹ of San Juan de la Costa, the institution that governs San Juan de la Costa County and is based in the port of the Osorno Province shoreline. The current Mayor, Javier Oyarzo, has been re-elected four times for a combined term of fourteen years. He represents a right wing party, and does not have a good relationship with the GEF Marino project. In interviews, the artisanal fishers of CPALO claim that the Mayor from the San Juan de la Costa Municipalidad undermines rather than supports their efforts, whereas the artisanal fishers of FEDEPESCA feel the opposite. FEDEPESCA members noted they had a reasonable relationship with the San Juan de la Costa Municipalidad.

Table 4.10: Artisanal fishers’ organizations membership to larger organizations.

<table>
<thead>
<tr>
<th>CPALO</th>
<th>FEDEPESCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coopemar Trumao Cooperative</td>
<td>N°1 Syndicate</td>
</tr>
<tr>
<td>N°2 Syndicate</td>
<td>N°4 Syndicate</td>
</tr>
<tr>
<td>Maicolpué Río Sur Syndicate</td>
<td>Encarnadoras Syndicate</td>
</tr>
<tr>
<td>Huellelahue, Nirehue and Loy Cumilef Indigenous Association</td>
<td>Pucatrihue Syndicate</td>
</tr>
<tr>
<td>Caleta Cóndor Indigenous Association</td>
<td>Costa Brava Syndicate</td>
</tr>
<tr>
<td>Playa Centro Syndicate</td>
<td></td>
</tr>
<tr>
<td>Tril-Tril Syndicate</td>
<td></td>
</tr>
</tbody>
</table>

⁵⁹ City council.

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The artisanal fishers members of CPALO noted in their interviews and throughout the fieldwork participatory observation that they have problems with Major Oyarzo, who does not get along with the strong leader and President of CPALO. As a result, they claim that he has not supported their projects and initiatives. According to fishers’ opinions, the dispute between the CPALO president and the Mayor is claimed by some to be the result of the Mayor’s failure to respond to requests for help. The CPALO president, who has a very distinctive personality, usually stands up for the fishers’ rights and is very direct in his demands. However, because the Mayor does not assist, CPALO has found other institutions in the government or among fishers from whom to request help, such as COREPA and CONAPACH or the Gobernación as the president of CPALO noted. CPALO depends on these relationships to satisfy their needs. On the other hand, FEDEPESCA depends greatly on the San Juan de la Costa Council. The basis for these differences is evident between the leaders and the fishers’ members not in leadership role in the artisanal fishers’ interviews.

The Mayor hired the marine biologist, Claudio Castro, for example, to be in charge of the artisanal fisher’s development but told him not to work with artisanal fishers from CPALO. This epitomises the many conflicts and tensions between the artisanal fisher members of CPALO and the Mayor, although these do not exist between the four syndicate members of FEDEPESCA that are against the CPALO president.

The strong competition between CPALO and FEDEPESCA is arguably a result of competing claims to fishing rights. The FEDEPESCA group claims that they are the only historical fishers and the only ones with fishing skills. In contrast, they view some CPALO members as new and unskilled fishers who opportunistically applied for MEABRs when the government offered a new chance of being allocated an area to fish benthic resources. According to FEDEPESCA members, the problem is that CPALO used this opportunity to claim areas that FEDEPESCA members had used before the allocation of the MEABRs. The following statements are indicative perspectives of artisanal fishers on their engagement with local and regional government:

I have a very good relationship with the authorities, but the organization itself, CPALO that supports all the organizations, is very bad. In addition, in what sense I said that it is bad, because I have been going, for example, to the regional government.
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here in Osorno and I have talked to them. There are many things that, because of CPALO, haven’t been allocated here or have been getting here too late.

Very good relationship with the Municipalidad (San Juan de la Costa), the only bad thing is the professionals [...] well we had always had good relationships with the last two people in charge of fishing affairs [...] but the excesses are not good [...] the Mayor has been the same for 14 years and hasn’t done anything [...] imagine 28 years and we don’t have a good high school and a sport centre [...].

The CPALO has a good relationship with COREPA and they deal effectively with their demands at a political level. The CPALO president even holds a position in the COREPA. Thus, he maintains strong interaction and support for artisanal fisher organizations at both a regional and national level. For any artisanal fisher organization, the support of COREPA is valuable when applying for and obtaining funds and grants.

On the other hand, as noted above FEDEPESCA has a good relationship with the Mayor of San Juan de la Costa Municipalidad, because no disagreements or opposition have arisen as is the case with the CPALO president. Their only complaints are with the lack of initiative of the San Juan de la Costa Council, as the FEDEPESCA president explains:

I have a good relationship with the Municipalidad of San Juan de la Costa, but their work is bad, because sometimes we bring good projects to the Municipalidad and the projects stay there sleeping in the Municipalidad and nobody moves, nobody has the impulse, nobody encourages you to do things in a certain way, or nobody says let’s do it all together, or anything. There are some policies that are good and others that are not at all. Because sometimes the policy makers, they sit down behind a desk to do the policies, about issues they have never asked our opinions [...] they sit down and say we are going to do this law like this and that is all, no matter who they harm [...] they have never come to an artisanal fisher village to see the real life of a fisher [...] regarding the MEABRs the government said, we are going to give choices, to allocate MEABRs to everybody, that’s okay for all the artisanal fishers. But the reality is not like that [...].

Artisanal fishers (historical and new fishers) explain that the presence of the LML MUMPA project has exacerbated the existing conflicts, as local groups perceived bias in the access to natural resources and benefits provided by the GEF Marino. The main conflicts are those between:

- FEDEPESCA and CPALO, and
- FEDEPESCA and indigenous communities.
The underlying causes include conflicts over the GEF Marino project benefits; conflicts over marine resources access rights; conflicts over poaching; conflicts of historical artisanal fishers with indigenous communities over firewood access; conflicts over indigenous groups being exempt from payments for MEABRs; and finally conflicts of fishers with the CPALO leader because the leader allegedly gets money dishonestly from the GEF Marino.

4.5.2. Conflicts between FEDEPESCA and CPALO

The most crucial parts of this wider conflict between FEDEPESCA and CPALO emerged over two issues:

- Inclusion of the indigenous communities’ artisanal fishers associations in CPALO, and
- Allocation of the MEABRs to the indigenous communities’ artisanal fishers associations.

These two situations were reflected as FEDEPESCA members explained conflicts in the actions and/or goals that FEDEPESCA pursue. FEDEPESCA members do not want to be associated with “opportunistic fishers” or fishers with indigenous origin that actually are allocated an MEABR but lack the skills to dive and exploit its resources. For FEDEPESCA members, this is about principles and losing access to resources that, now, have been granted to fishers who do not know how to fish. Secondly, mistrust of the CPALO President arose as FEDEPESCA members felt he was taking advantage of grassroots members’ positions within the CPALO organization.

The artisanal fishers of the Osorno shoreline attribute their formation in 2000 to the realization that, if they could unite all the artisanal fishers’ organizations of the region into one significant organization, they would have more power to address claims to the government and to receive funds from different sources available. The first organization to be created was CPALO, on October 31st, 2002, including Tril-Tril, Maicolpue Rio Sur, Playa Central, Nº1, Nº2, Nº4 and Encarnadoras syndicates of Bahía Mansa and the Pucatrihue syndicate. The formation of CPALO was facilitated by a government project
funded by SERCOTEC\textsuperscript{60}, which hired consultants from CGL in 2002 whose main aim was to support artisanal fishers of Region X.

Later in 2003, due to conflicts between a group of syndicates and the CPALO president, four syndicates (N°1, N°4, Encarnadoras and Pucatrihue syndicates) left CPALO and created FEDEPESCA.

Now CPALO and FEDEPESCA exist to organize and strengthen efforts in any project or activity the syndicates undertake. There are two explanations for the departure of these four syndicates from CPALO, namely that of Luis Adue the President of CPALO, and those of the members of FEDEPESCA. Adue claims that the departing syndicates lacked commitment to the cause, whereas FEDEPESCA members believe that Adue exploited his position to the detriment of the fishers. The protagonists’ positions on the separation of FEDEPESCA from CPALO are encompassed in the following quotes.

\begin{quote}
Long time ago the project was created constituting a group of people able to reach the regional government to obtain projects in a most direct way, but from then this group lost its aim, we as a syndicate were part of CPALO, but started something dictatorial [...] so we left the group.
\end{quote}

\begin{quote}
The four artisanal fishers’ organizations are not participating any more with CPALO they turn out because they didn’t believe in our challenges that we have set up as an organization and actually our goals were large, for instance, not poaching, not to fish illegal locos.
\end{quote}

\begin{quote}
[...] we didn’t like the policy [of CPALO] because a few get all the money - that is the truth. The leaders instead of helping their communities are abusing them, to have a lot of people in the organization in order to get their money or money from them. For example Adue in three, four, years impossible that he would buy an expensive car for ten million Chilean pesos, first point, second, in five, six years are not long enough to have such a restaurant like he has. Third, he has a house that is worth 25 million pesos. Also a person working with a salary in a few years cannot achieve that, which is impossible. So it’s to abuse the dumb people. That is the reason why the people are leaving his organization, because a few are stealing the money [...] as well we were supposed to put money in the organization to pay salaries for people in the organization that were not going to make money for us.
\end{quote}

The position of FEDEPESCA members reflects their observation that the CPALO President has achieved economic success in the community. The GEF Marino, as a result of promised benefits and high expectations, is commonly identified as the source of the

\begin{footnote}
\textsuperscript{60} Technical Cooperative Service.
\end{footnote}
4.5. Social and cultural dynamics: fisher organisations and politics

money which FEDEPESCA members complain about CPA LO obtaining. CPA LO member contested this situation in the following quote:

The last thing I hear is that CPA LO is requesting the GEF Marino backup all the projects that are coming up [...] the projects that are supposed to benefit directly and indirectly the artisanal fishers of CPA LO, all the documents that are involved with those projects, the proof of those projects [...] is to avoid doubts because to be leader of artisanal fishers, it is very complicated, there are people with bad intentions without having real proof they have accused the leaders of getting rich out of the GEF Marino and that is not the truth, that they are stealing money, because they don't give us any money.

The following are the opinions of FEDEPESCA and CPA LO members about their conflicts:

I think that there would be conflict if the members of the alerce workers indigenous communities turned into fishers, this is not my case. I would only be worried if they have all the paper required for it [...] but they have to get some income for their livelihoods, what the artisanal fishers say that I don't understand is: We don't go to take away their alerce and they come to fish when they have no more alerce available. I think they do it because it has been a choice that they have taken. Well and if they have to turn to fishing they could do it [...] that is fine by me.

From the very beginning they used to say that we indigenous communities, we don't have marine resource rights and we said that that's not true, we are Chileans and it is not our fault that the government gives us privileges in having our community and in having the alerce work and to have been allocated the Management Area. Ah yes, yes, the people from here, Bahia Mansa, say that [...] The majority feels that we are robbing a piece that belongs to them, because they always have said that to us, we were allocated an area when we worked in the coastal range. [...] but they don't understand that we have a MEABR but we don't have the gear and resources to work it and we are always going to work it half with them, but they don't understand that, they want that area for them.

That's what I'm telling you, they say that the indigenous communities, in their opinion, they don't have the right to work the sea because they were working the land, the wood and they should keep working in what they have skills.

Much of the resulting conflict is based on contested claims to marine resources as the LML MUMPA and MEABRs impose new regulatory structures. FEDEPESCA fishers do not approve of the allocation of MEABRs to indigenous communities that have traditionally specialised in the alerce. On the other hand, indigenous communities are aware of the historical fisher's complaints and the resentment against them, especially from FEDEPESCA fishers due to their having been allocated the MEABRs. They contend in
response that their position as Chilean citizens and local residents provides them equivalent rights to the historical fishers.

It is apparent that both groups are aware of the cause of the conflict and that it seems to have no readily available solution. Observations during fieldwork indicated that the two indigenous fishers’ associations in the case of Caleta Cóndor could not extract any of their legally allocated locos for the year. Similarly, the Huelllhue, Nirehue and Loy Cumilef indigenous artisanal fishers’ association located in Caleta Huelllhue could only harvest 8,000 of their 32,000 loco quotas. Therefore, it is true that indigenous communities with MEABRs have not been able to exploit them as competently as the artisanal fishers from FEDEPESCA expressed that they have. As a result, FEDEPESCA members are frustrated and believe they are justified in claiming more marine areas to harvest loco because they have the necessary skills and fishing gear to accomplish it.

The marine biologist, Pedro Vergara, helped the indigenous communities from the Osorno Province shoreline apply for their MEABRs, conducting the Benthic Study Baseline (ESBA) for their MEABRs, and assisting with the legal process. However, he thinks that the indigenous communities are not fishers in that they claim to fish only to apply for the MEABRs when in reality they are not fishers but sea gardeners and subsistence agriculturalists. The majority did not know how to dive or how to use a fishing net, and hardly know how to navigate. The people of Bahía Mansa and Pucatrihue, in contrast, have actual experience as fishers.

The leaders of FEDEPESCA note that of all the people registered in the Osorno Province shoreline as fishers and many members of the syndicates, only 20 or 30% are ‘real fishers’ with significant fishing skills. The law regulating the licensing of fishers is excessively broad, almost anybody can be a fisher. As a consequence, this preoccupies FEDEPESCA activities. People wanting to take advantage of the law can do so easily. The law is also incomplete, failing to stipulate that the MEABRs should be allocated to legally constituted artisanal fisher’s organizations composed of a majority, or at least some proportion, of divers. This would eliminate many artisanal fishers’ organizations comprised only of sea gardeners.

The syndicate Caleta Milagro, for example, is an artisanal fishers’ indigenous association that does not contain any artisanal fisher. Only five or six sea gardeners live in
the Caleta and the rest of the members of the organization are taxi drivers that live elsewhere in Osorno. The latter are registered in the artisanal fisher indigenous association because they are relatives of (or are related in some way to) the indigenous people from Caleta Milagro. More examples of opinions of FEDEPESCA and CPALO members about the conflicts are as follows:

The people that have been involved with the GEF Marino are the people who have dwelt in the Coastal Range and that live in Bahía Mansa, they are doing double robbery, because they are making money with the alerce that belong to all the Chileans and not just those that live in Bahía Mansa […] are stealing the alerces and that is robbery not from us but from the Chilean State, a robbery of the future generations in our country […] .

[…] they say that everybody has the right, but the people that have never worked as a fisher, they are taking space from the fishers, the same as if the fishers go to work with the alerces.

Opinions of FEDEPESCA and CPALO members of the indigenous communities working as fishers are as follows:

No the indigenous cannot sell the alerce the way they used to. What has happened to them is the same as what happened to the fishers with the loco, when there was the abundance of locos, there was an abundance of everything. The alerce workers made a lot of money out of the alerces, now it is forbidden, they need many papers, ownership of the land, management plans, to have everything in order.

[…] here the artisanal fishers let the indigenous community work, do their work and the sea is for everybody […] the artisanal fisher doesn’t have privileges over others, the sea is for everyone. There shouldn’t be a conflict. Conflict for nature, for fighting over a piece of nature shouldn’t be […] it hasn’t happened in CPALO […] I heard that there were some issues with a syndicate in Pucatrihue that were opposed to CPALO but on more personal issues.

No we don’t have any problems with the indigenous fishers, and they don’t fish anyway, they only do sea gardening, fishing almost nothing, they only fish snook or Patagonian blenny (Robalo in Spanish) from the beach. And if they did want to fish it would not be a problem if they don’t get into our Management Areas […] the rest of the sea is free, and there you can do whatever you want.

Differences between FEDEPESCA and indigenous artisanal fishers associations were not considered by the GEF Marino project. For the project staff, the indigenous people were more important for the project than the historical artisanal fishers from FEDEPESCA.
4.5.3. Poaching

Poaching loco in the MEABRs constitutes a significant issue among the artisanal fishers, being seen as both a problem and also, arguably, as a legitimate response to perceived unfair treatment. This is one of the topics on which almost every interviewee had an opinion. For the purpose of this analysis, it is possible to identify two kinds of poaching:

- Poaching from a MEABR without access rights, and
- Poaching from a MEABR with access rights.

The first type of poaching involves poaching in a MEABR that does not belong to the artisanal fisher organization of which the perpetrator is a member. This diver could be a member of another artisanal fisher’s organization, or a diver who has a boat and the necessary diving gear, but is not a member of any artisanal fisher organization. Divers tend to poach in MEABRs that have not been worked, like those of the indigenous associations located adjacent to the LML MUMPA. The extent of such poaching and the difficulties in controlling it were commonly addressed in the interviews:

"The loco poaching here is very dangerous [...] it is because of peoples’ needs. I understand them because imagine that sometimes there are 15 or 20 days without work and they are in despair due to not being able to buy things for their family and if they find the option and if nobody is patrolling, [...] of the people that poach, almost none of them are in syndicates [...] but also there are people from the syndicates that also poach. No, no, no, we are not going to accept it, never, to accept that somebody goes to poach our loco [...] we are spending a lot of money on patrolling our areas and we don’t like that they poach from us, of course, we are not going to be spending 3 million pesos\(^61\) per year and then find that the day that we have to harvest the loco we don’t find any loco.

The fisher that has the skills to fish is the one that poaches. If they have better gear, the one with the better gear is the one that can poach.

They all poach from each other and we don’t do it, we never poach from others, we never go to other areas to poach [...] because if we would be real fishers, real ones, we would also be poaching from them, but it has always affected us that they always come to poach us. The loco, because they sell <matuteado\(^62\)> is how we call it. Last year we caught one, so we talked to him, because you can work out things talking and then if they don’t understand talking we have to [...] and then we gather all the members of the association and we told him that what he was doing was bad and nothing else but

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\(^{61}\) NZS$10,000

\(^{62}\) Slang used to name the poached item.
if we would have wanted to we could have taken all that he had stolen from us out of his boat.

The idea is that the other artisanal fishers shouldn’t know where the species are, for instance, where is the loco, so they don’t poach it, that is what the divers ask the owners of the areas, to hide from other fishers where the ‘bajos’ are and where they grow and collect the loco in the seabed. There is a lot of poaching and there is no respect, when the areas are allocated nobody else can get into that area but they do it anyway. Therefore, there is no commitment from the fishers, well we also don’t blame the fishers that much because there is no other income they can have, they shouldn’t be needing to poach their mates, there are not many fish either, they have been losing them so the only choice is to poach, the poaching is going to exist now and forever.

Another type of poaching that emerged from the artisanal fishers’ narratives is the poaching within MEABR access rights. This involves poaching within a fishers own MEABR when a ban is in place, in other words, extracting loco all year round in fishers management area. Examples of this second type of poaching are less frequently recounted as the perpetrators are also the most likely complainants.

The majority of the fishers from syndicate N°1 of Bahía Mansa, made the mistake of claiming a MEABR in order not to exploit it with the best intentions of the area’s management […] if they are exploiting the area all year round, it is never going to be productive. That is what happened with their area, they should have harvested on the 25th and on the 24th in the evening they were poaching itself in their area. What locos did they expected to find on the 25th? Therefore the idea is, because I started to work with them last year, that they change that mentality. (Pedro Vergara, marine biologist, consultant of MEABRs in the Osorno Province shoreline).

Out of season exploitation of a MEABR is subject to extensive paperwork requests which costs money and time, and also requires certain knowledge. The reason fishers provide for their poaching is that many artisanal fishers’ syndicates prefer to poach in their area rather than going through the process of expending money and time to do everything legally.

Historical fishers want the GEF Marino to support them in resolving the poaching problem. While the GEF Marino has helped artisanal fishers with resources to patrol their areas, they have only aided the artisanal fisher organizations in CPALO, not those in FEDEPESCA. Understandably, this created further tensions and conflicts between the two

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63 Places where divers accumulate the loco in the seabed.
artisanal fishers’ organizations. A further challenge to the control of poaching is that the fishers’ difficult economic situation is often considered an excuse to justify such actions:

“We know about poaching [...] the same people that poach us poach them. That’s why when I proposed to the GEF Marino the protection of the shoreline, my idea was [...] that they create a boat to patrol the shoreline, with one, two, three fibreglass boats, all with radios, (in that way) we were going to be able to protect the natural heritage and we were going to be able to do a sustainable harvest knowing that the resource is protected.”

Pedro Vergara explains that, despite the poaching, MEABRs have worked in helping the locos recover, but that it is a very delicate situation because the artisanal fishers often resort to violence to assert access claims. Such situations have even led to shootings and violent fights. A fisher who was shot and suffered severe injuries, resulting in the loss of an eye, claimed that he was fishing for other fish and not catching loco: “Now there is a concern to look after your management area and that nobody can get there to do anything, any boat that is around your MEABR will be suspicious and is seen as doing something wrong, poaching locos is what the people think first” (Claudio Castro, marine biologist).

Both the fisherman who is poaching and the fisherman protecting his MEABRs can resort to violence. Deaths have resulted from fishers carrying guns to protect the MEABRs. That is why, during the past two years, fishers have been poaching at night, when it is harder to patrol the MEABRs:

“[..] there has been a lot of poaching [...] with the creation of the MEABRs when a member of a syndicate who was poaching was expelled and being expelled from their syndicate meant that they were free to do whatever they want, they got to the extreme of poaching at night with a torch. Then the syndicate owner of the MEABRs when it was time to harvest their area found that they did not have any loco left to harvest. Just then they started to look after their MEABRs. Now the people respect the areas more. That bad time already is in the past. There is a neighbour here that was caught poaching and they almost killed him, it was the law of the strongest.”

Another conflict between the historical artisanal fishers and the indigenous communities specialising in logging the *alerce* involves their respective firewood needs. Wood burners and stoves are the only way of heating and cooking in the communities of the Osorno Province shoreline. Indigenous communities have the privilege of free access to firewood resources in the land that they inhabit, but do not own the resource:
Another conflict is [...] for instance we have to collect firewood, because we can’t go to cut wood in the indigenous communities. Even if we are in caletas, we have to collect little sticks for firewood from the beach, we can’t cut, we can’t cut any wood, that is with some indigenous communities not with all, we don’t log we collect wood that is on the ground and sometimes they don’t even let us get that wood, even when some fishers have been in other caletas they chase the artisanal fishers, the indigenous don’t let them disembark, there are kind of serious conflicts, really bad, it hasn’t happened to me though, they have destroyed boats of fishers that go to the indigenous communities for fire wood. Here [in Bahía Mansa] you have to buy everything, indigenous don’t let us take wood that sometimes is getting rotten, that’s what’s complicated, but it depends on the relationship that they have with the person [...] is not with all of them, no.

Apart from firewood access, indigenous communities with legal recognition that have a MEABR also do not have to pay for access. This is seen as a privilege that the indigenous people enjoy, and which other artisanal fishers’ organizations with indigenous members would like to obtain, as noted during their interviews. The fee for the use of a MEABR is 500,000 pesos\(^64\) per year. The following opinions of historical fishers are representative of the conflict between indigenous and historical fishers.

That’s right as an indigenous community they have more choices than us, because they have more help, we don’t have an indigenous community or we are not an indigenous artisanal fisher syndicate, we have to pay for the areas (MEABRs) and the people that have an indigenous community don’t have to pay for them [...] for instance we have a lot of people that are indigenous in our syndicate, but you have to turn into an indigenous community, but I can’t because I’m not indigenous, maybe if I married an indigenous woman, so now the syndicate can’t become indigenous, I already asked [...] the government always helps the indigenous more than the artisanal fisher, because we as artisanal fishers have been disadvantaged, because imagine the MEABRs, you can work them once a year, and you have to see how to look after them, when there is nothing. Now, after 10 years, there has been a recovery of the benthic resources, and the government, what have they done for us, every time we need technical support we have to pay for it [...] the indigenous don’t have to pay for the technical support due to they are larger organizations. The indigenous communities do the follow up\(^65\) of their MEABRs using a big organization in Puerto Montt and because they are associated with them, they prefer when there are big groups of organizations and then each group will pay a very low price, for instance we pay two million pesos\(^66\) for each and they charge the indigenous organizations 500,000 pesos\(^67\)

\(^{64}\) US$1,000 (calculated on November 2011).
\(^{65}\) The follow-up mentioned above involves the assessment of a marine biologist whom the artisanal fishers’ organization pays to write a report about the state of their benthic resources in their MEABR.
\(^{66}\) US$4,000 (calculated on November 2011).
\(^{67}\) US$1,000 (calculated on November 2011).
Chapter 4.- Artisanal Fishers

…the other benefit the indigenous communities have is that they don’t have to pay the sort of rent that all syndicates have to pay for each MEABR.

As noted in this section, there are different types of poaching. It is, however, significant that poaching is an important topic for skilled fishers that reflects the disparities between them and the new fishers in indigenous communities. The opinions displayed above stress how upset skilled fishers feel over the disparities between them and indigenous communities, and the advantages over marine resource rights that indigenous communities have over them, simply for being members of an indigenous community. Poaching is one way skilled fishers counteract what they see as this unjust situation.

4.5.4. Review

Political power and political relationships between national, regional and local artisanal fishers’ organisations and government institutions; conflicts around artisanal fishers’ organizations; poaching; and conflicts over firewood were the main social and cultural dynamics mentioned by artisanal fishers in their interviews. All these issues, in different magnitudes, underline volatile local relationships. The strategy of implementation of the GEF Marino project has accentuated the existing conflicts between the historical artisanal fisher communities and the indigenous communities, because the project has provided obvious benefits to some of them without considering the very volatile relationships between these communities.

In fact, some historical artisanal fishers believe that the “legal” Huilliche indigenous people, who are not skilled fishers or are new fishers, have no right to receive any of the benefits arising from the GEF Marino project because the project is oriented toward marine resources and the historical artisanal fishers have been using the marine resources from the LML MUMPA more extensively during the last thirty years. The conflict between artisanal fishers and legal indigenous communities can be understood through knowing the history, context and specific characteristics and dynamics of the fishing activity of the Osorno Province shoreline for the last forty years. Poaching is the result of a specific local history and socio-cultural characteristics which have resulted in this illegal activity becoming a common practice amongst all fishers, both historical and new, as the only way
they have found to overcome internal and external difficulties imposed on their fishing occupation.

In order to understand the implications of the GEF Marino as an ICDP in Chile, it is important to know the political context and local social and cultural dynamics of the localities in which it was implemented, especially the dynamics between the most important local artisanal fishers organizations. The opposition between the biggest artisanal fishers’ organizations, which included most of the artisanal fishers’ syndicates and cooperatives, together with indigenous artisanal fisher associations of the Osorno Province shoreline, was also overlooked by the GEF Marino project. This omission created tension and frustration in FEDEPESCA, which was excluded from the project. Indeed, because the GEF Marino project staff were unaware of the conflicts, they did not plan strategies to overcome them. In FEDEPESCA, there are two organizations whose members are excluded from the LML MUMPA project. These include the oldest artisanal fisher syndicate of the Osorno Province shoreline, the N°1, and the strongest, and better organised, syndicate Pucatrihue. Consequently, fishers from these organizations were the most affected by the implementation of the LML MUMPA that would control access to marine resources. The literature clearly identifies negative effects of lack of fishers’ participation in fisheries management (Jentoft, 2000; Hall et al. 2009; Paterson et al., 2010; Diedrich et al., 2010; Glaser et al., 2010), and the nuances of the effects as assessed in this thesis provide empirical evidence to understand the implications of the absence of fishers in viable deployment of fisheries management projects.

Conflicts in the study area often revolve around historical access rights to marine resources that stem from the fact that the majority of the indigenous communities’ members have never been fishers. On the Osorno shoreline, before the GEF Marino implemented the LML MUMPA, there were already conflicts between the historical artisanal fishers (“the real fishers” as the local fishers say) and the indigenous communities that have been granted access rights to marine areas despite the fact that they were not perceived by local fishers as “real fishers”.

The GEF Marino project did not anticipate these conflictual relationships between stakeholders, and thus the GEF Marino staff worked with simplified concepts of the local groups in the LML MUMPA area. The GEF Marino only focused on the indigenous
communities that live by the LML MUMPA, who are historical seaweed gardeners, and most of whom have never fished on the open sea. In fact, their main economic activity is *alerce* logging. Following the same logic, the GEF Marino saw potential benefits in the fact that the indigenous communities were not a threat to the marine resources protected by their MUMPA. The GEF Marino staff decided to engage the Huilliche indigenous people in the protection of the area by providing them with resources to patrol the area. However, as this section shows, illegal trade of the loco continued after the MEABRs were implemented. This situation puts the sustainability of the product in danger, because loco below the minimum size limits are harvested and the price of the loco sold in the informal markets is very low. The control has not worked because many fishers do not have any other income, and thus illegal trade is possible because there is a chain of people participating in different ways, including fishers, multiple port authorities, police and the Fishing National Service. Their participation involves, in some cases, covering their eyes and saying “I haven’t seen anything”.

Historical fishers think that there are some artisanal fisher organizations who are taking advantage of being able to be allocated a MEABR when they are not “real” fishers purely because this choice exists and they want to diversify their livelihood strategies. Even if they do not have the skills to fish loco, such as diving, they can hire another syndicate with the skills to obtain the marine resources for them. In addition, to contact the indigenous communities, the GEF Marino staff interacted with the two main organizations in the area that they thought were representing the indigenous local communities well (CPALO and the Mapu Lahual Indigenous Association), thus creating more conflicts.

It is essential to understand the nature of the stakeholders’ conflicts and the different identities and discourses in the area in order to understand the whole process of conservation and resource management. The GEF Marino project, with the creation of the LML MUMPA, added more conflicts to the existing ones because, like the situation with the MEABRs, it again provided access rights to the marine area they created to the indigenous communities, not to the historical artisanal fishers who were the existing users of that area. This further intensified the clash between the two groups.

The social and cultural dynamics between CPALO and FEDEPESCA, alongside the different relationships these organizations have with the local, regional and the national
government, are also important to consider in order to be aware of what kinds of situations can be faced by the GEF Marino project. These issues are not readily incorporated within the project proposal design to meet international parameters. The existing local conflicts are further exacerbated when artisanal fishers have to establish negotiations with the organisations in charge of the ICDP or environmental projects, which are not in any way familiar to them. The absence of unity between artisanal fishers and their lack of education make them very vulnerable in negotiations with any kind of agents.

4.6. Summary

This Chapter has described and analysed the culture of the small-scale fishing communities of Osorno Province. This information helps government officials and private organizations working on conservation projects to understand this group, especially if it is an ICDP. In addition, the analysis of community interview data contributes to the preparation of more suitable and effective management policies to provide more accurate assistance to the socio-economic development of fishing communities. Clearly, if fisheries management is to be more successful in the future, it must integrate social and cultural concerns (McGoodwin, 2000). The Chapter also illustrates how these communities are organised, what their needs, interests and expectations are, and how their fishing activity is related to their personal and cultural identity, despite the many occupations members of these fishing communities pursue. The history, context and political complexities of this specific territory have shaped the life of these fishing communities. The ethnographic methodology used to gather the information of this Chapter has provided useful and reliable knowledge about specific social and cultural characteristics and dynamics to reveal a vulnerable social, cultural and economic situation that increases chances of conflicts among artisanal fishers.

Central to the process of investigation has been the identification of three important changes along the Osorno shoreline that have threatened the livelihoods of historical artisanal fishers since 1989. These changes include, depletion of marine resources, new restriction of marine resources, and escalation of conflicts over rights following greater restriction of marine resources. The last two changes are associated with the implementation of the MEABRs and the LML MUMPA. In addition, the uncertain and
unstable economic conditions of the artisanal fishers have been affected by weather and marine resources depletion, and, they also believe, have been aggravated as a result of fisheries regulations in Chile that tend to favour industrial fisheries. Moreover, the artisanal fishers’ economic conditions impact on the project to the extent that their great needs give rise to excessive expectations, especially when the LML MUMPA project appeared to be a panacea for many of their problems. A further confounding factor in the implementation of the GEF Marino project involves the impractical and unrealistic expectations of the artisanal fishers, which stem from their significant socio-economic needs. In this context, the GEF Marino project was seen as a critical opportunity that could not be missed. However, due to the environmental conservation aspects of the project, it also had potential negative impacts for the historical fishers. In particular, the LML MUMPA could be the source of increased deprivation for the historical artisanal fishers of the Osorno province shoreline due to loss of traditional access and use rights to the local marine and coastal areas. From the perspective of the historical fishers, the GEF Marino, as an ICDP involved in the socio-economic development of local communities, should have sought equal opportunities for access to the marine resources amongst all stakeholders, specifically historical fishers and indigenous communities. Thus, the historical fishers believe the GEF staff failed in their responsibility to prioritise access equity issues in their planning and management of the project.

The management of marine resources, such as the MEABRs that were allocated from 2003 onwards and the LML MUMPA implemented in 2005, has affected the artisanal organizations, especially in relation to FEDEPESCA. The effects are compounded by the fact that these activities have created overlapping regulatory structures. The LML MUMPA, in this sense, creates more difficulties for artisanal fishers within the existing situation for the management of marine resources.

These elements impacted on the overall aim to engage historical artisanal fishers to protect marine resources, and unless fishers are effectively engaged in the project with a requirement to protect the marine area, they will continue to be a threat because they are the key users extracting the marine resources. They can even constitute a threat if they do not reside adjacent to the LML MUMPA, as they can travel to the area to fish and itinerant fishers are less subject to regulation.
Eleven of the fourteen presidents of the artisanal fishers’ organizations were interviewed during fieldwork. In this chapter, their perspectives on the regulation of marine resources reflected some of the tensions that underlie the conflict between FEDEPESCA, CPALO and indigenous communities. Along the Osorno Province shoreline, historical artisanal fishers and the Mapu Lahual Territory Huilliche indigenous communities began to have conflicts regarding historical access rights to marine resources where these Huilliches communities live part of the year. Disputes stemmed in particular from the fact that the legal indigenous people who specialised in the alerce are now turning to fishing since the allocation of their MEABRs and are disputing the use of the marine resources that were, until recently, solely used by the historical artisanal fishers from the Osorno shoreline. On top of these conflicts, there were arguments between historical artisanal fishers and the Huilliche indigenous communities in regard to the benefits they received from the LML MUMPA.

The evaluation of historical artisanal fishers of the LML MUMPA differs from the indigenous discourse because the historical fishers’ opinions are generated as a result of the MUMPA’s biased engagement with indigenous communities and CPALO members, resulting in comparative socio-economic privileges. Management of marine resources is a human phenomenon: fishing people should be joint participants in MPAs. The context presented in this Chapter constrains the implementation of the GEF Marino LML MUMPA as an ICDP because the reality is very intricate. The socio-economic, cultural and political complexity of the area was misunderstood by the staff in the project due to their first impressions that there were only two groups involved, fishers and indigenous people. What this Chapter has shown is that this was anything but the case. Building upon the discussion in this Chapter emphasis is now placed in Chapter 5 on the role of the indigenous communities in the deployment of the GEF Marino project.
Chapter 5

Indigenous communities

5.1. Introduction

To understand the extent to which ICDPs consider social and cultural dynamics, and also to address the participation of local communities in conservation projects, this chapter describes and analyses the Huilliche indigenous communities from the Mapu Lahual Territory and the subsequent implications for the relevant LML MUMPA project. Although there are nine indigenous communities in this territory, here the specific focus is on the four communities located beside the MUMPA in the area of Caleta Huellhelhue and Caleta Cóndor, namely Caleta Cóndor, Huellhelhue, Nirehue and Loy Cumilef indigenous communities. The discussion explains their history, their main socio-cultural characteristics and relevant problems and dynamics. This area is useful as a representative example of the involvement of indigenous communities in conservation projects. The MUMPA chosen is located in the south of Chile, where the Mapuche (the largest group of indigenous people) live.

The indigenous communities have a distinct perspective that has both significant similarities and pertinent differences with the discourse provided by artisanal fishers, especially given that the discourse of indigenous communities, based on their specific history and socio-economic conditions, influences their support for and involvement in the LML MUMPA. To explore these influences further, this chapter provides the historical, socio-economic, and cultural contexts within which this discourse is generated.
Chapter 5.- Indigenous communities

To begin, a general background is provided on the legal, demographic and geographic elements of ethnic groups in Chile and specifically of the Huilliche indigenous people of the study area. This information is necessary to understand the context in which the indigenous people in Chile are situated.

5.1.1. Chilean ethnic diversity

Different ethnic groups exist in Chile, and they can be divided and sub-divided regarding their identities, culture, language and territory.

In 1993, during the government of Patricio Aylwin (March 1990-1994), the Indigenous Law 19,253 was enacted. For the first time, this law officially recognised indigenous people in Chile and protected their lands. Part of the implementation of Law 19,253 involved the establishment of the National Corporation of Indigenous Development (CONADI) under the Ministry of Planning (MIDEPLAN). CONADI launched several special programmes for indigenous people, and also had to coordinate with other government agencies for the provision of resources and services to indigenous people, such as health and education (Gacitúa-Marió, 2000).

In the first article of Law 19,253, the State acknowledges the existence of nine ethnic groups in Chile including the Mapuche, Aymara, Rapa Nui or Pascuenses, the communities Atacameñas, Quechuas and Collas from the north of the country, and the communities Kawaskar or Alacalufe and Yámana or Yagán from the austral channels (CONADI, 2010, author’s translation). In Chile, over half a million people (692,192) self-identify as being of indigenous origin, equivalent to 4.6% of the total population. The Mapuche are the largest group, representing 87.3% of the indigenous population (INE, 2002, author’s translation). They are located in the south-central part of the country as well as in the south-east of Argentina (see Figure 5.1), and are geographically distributed such that the names of the different Mapuche groups reflect their different territorial identities from the north (Picunche), and further south (Huilliche or Williche), to the Andes (Pewenche or Pehuenche), central valleys (Nagche), and the coast (Lafkenches) (Transcorp, 2002,

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69 Huilliche means in Mapudungun “people of the south”, hue=south, che=people.
70 Lafkenches means in Mapudungun “people of the sea”, lafken=sea, ches=people.
5.1. Introduction

Huilliches live by the coast and therefore could conceivably have been called Lafkenches. However, some Mapuche who specifically work the sea further to the north (VIII region) of the case study are currently known as Lafkenches. Huilliches have traditionally lived by the coast but their livelihoods have not primarily depended on fishing like the Lafkenches, and therefore the term Huilliches is more suitable for them. The Mapuche are originally from rural areas, but currently most live in Santiago city. When the Spanish arrived, the Mapuche were located from the Aconcagua valley to the archipelago of Chiloé (Figure 5.1).

![Map of Mapuche Territory](image)

**Figure 5.1:** Map of Mapuche Territory.

Molina et al. (2006) explain that the inhabitants of the study area were previously known as Cuncos, rather than Huilliches, because during colonial times the Huilliches corresponded to the indigenous groups located further to the west. The Cunco territory remained independent from the Colonial era until the end of the XVIII Century. Figure 5.2 illustrates the location of the Cuncos in the pre-colonial and colonial period, effectively between south of Valdivia and north of Chacao Chanel.

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71 In the XIX Century the name Huilliche was generalized for all the indigenous people located from the Toltén River to Chiloé, hence the use of that name for the indigenous communities in this thesis.
Chapter 5.- Indigenous communities

The Cuncos cultivated beans, potatoes and corn. In regard to marine resources, the Cuncos came from the interior to the sea through paths between the forests, then downriver via canoe to obtain fish, sea lions and mussels, harvesting their seafood during the summer. After Spanish contact, the Cuncos maintained their harvesting, hunting and fishing activities, incorporating the planting of wheat, barley, peas and other vegetables, and raising cows, sheep and horses. It is not known if any logging of the wood available in the coastal range was undertaken, as Cunco tracks used to pass by the *alerce* forests.

The Cuncos encountered the Spanish for the first time in 1544, when an expedition arrived in Valdivia. The city of Osorno, the closest to the case study, was subsequently founded in 1558, holding eighty thousand indigenous people, gold and extremely fertile soils. Gold production made the indigenous submissive to the encomienda following Spanish occupation of the territory. In 1598, a massive indigenous rebellion started by the Mapuche further north freed the Cuncos, and Osorno was destroyed by the indigenous people in 1600. It was soon reoccupied, but the Cunco-Huilliche repelled the Spaniards.

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72 The encomienda was a socio-economic institution in the Spanish colonization of the Americas through which indigenous people were forced to work for the Spanish as a form of payment of taxes and tributes to the Crown. The Spaniards were entitled to receive the encomienda as a payment for their services given to the Crown, and, in exchange, the Spaniards were supposed to look after the indigenous people and to educate them in the Catholic religion.
again in 1604. Between 1604 and 1793, the coastal range of the Osorno shoreline remained outside Spanish jurisdiction and free of colonial exploitation. Hence, the Cunco-Huilliche were independent of the Spaniards but constantly at war to maintain their freedom (Molina et al., 2006, author’s translation).

In 1793, the peace treaty Las Canoas was signed at the Canoas or Rahue River, establishing the assignment of land to the Spaniards, repopulation of Osorno, long friendship, aid and free transit, submission to Spanish justice, and acceptance of missions and evangelization. The Treaty assigned all the flat land of Osorno, between the Río Rahue and the Andes Mountain but not what is located west of the Río Rahue, to the Spanish King for eternity (Transcorp, 2002, author’s translation). The latter region is that of the case study, the Mapu Lahual Territory. The Mapu Lahual Territory is located in three counties (Figure 5.3), San Juan de la Costa, Río Negro and Purranque.\(^3\)

\(^3\) The most important town in the San Juan de la Costa County, Osorno Province shoreline, is Bahía Mansa.
Chapter 5.- Indigenous communities

Since Spanish colonization, the Mapuche have been defending their territory and trying to maintain their traditions and culture. In fact, the Mapuche were never conquered by the Spanish. Rather, it was the Chilean state, after Chilean independence in 1881, which annexed Mapuche territory. The Mapuche were relegated to 6.4% of the territory they had before the Spanish invasion and were reduced to living on lands called comunidades or reducciones, due to government initiatives aimed at increasing the agricultural production of the country by encouraging private investors, specially Chilean and German immigrants (Richards, 2005). As a result, the Mapuche have been subjugated by non-indigenous Chileans and have progressively been losing their language and traditions to the point where 56% of Mapuche can neither understand nor speak Mapudungun, their indigenous language (CEP, 2006). Prior to colonization, indigenous people in Chile could be easily distinguished from non-indigenous. Now, they have been assimilated into the Chilean culture to the extent that they are akin to any non-indigenous rural person or poor urban person in most external cultural aspects. This apparent similarity lies behind the need for legal indigenous recognition which allows for distinctions to be made by governmental agencies and for indigenous people to access special assistance.

5.1.2. Requirements to obtain Indigenous recognition

In Chile, in order to access indigenous benefits and to claim indigenous rights, people must qualify as indigenous in the CONADI. The second article of the Indigenous Law 19,253 states that people possessing Chilean nationality can be considered indigenous given the following circumstances:

a) Those who are the offspring of an indigenous person via any affiliation including adoption, the children of an indigenous father and mother who descend from native inhabitants of the lands identified in art.12, number 1 and 2 of 19,253.

b) The descendants of an ethnic group who inhabit the national territory and who have at least one indigenous surname.

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74 In Spanish, quality of indigeneity, “calidad indígena”.
75 The person will need to provide ID, birth certificate, and a copy of the land tenure or another document (if required) that can prove that the person is the child of people who live in lands that the law defines as indigenous.
c) Those with a non-indigenous surname if it can be proved to have an indigenous origin.

d) For self-identification: someone who on a regular base maintains cultural characteristics of an indigenous group, meaning the way of life, traditions or religion of these ethnic groups.\textsuperscript{77}

e) By self-determination or by marriage to an indigenous person.\textsuperscript{78}

Having at least one of the above circumstances can qualify a person as indigenous. In order to prove this \textit{calidad de indígena}, a certificate is issued which then allows a person to apply for and participate in any indigenous service or programme directed exclusively at indigenous people. This \textit{certificado indígena} has helped to orient special funds exclusively for indigenous people, considering that in Chile “most social indicators for indigenous groups are consistently below national averages” (Gacitúa-Marió, 2000, p. 214). Notwithstanding, there are two specific cases where people receive indigenous benefits while not experiencing critical poverty rates or are not the most affected by not being able to express their indigenous culture and language. First there is the case of people who are non-indigenous and are of European descent but, due to living in an indigenous community, they can receive indigenous benefits. Second, people that qualify as indigenous but who do not self-identify as such can apply and be allocated indigenous benefits. This last case includes people who, due to past discrimination and oppression, feel unable to maintain their indigenous identity.

In Chile an indigenous community is legally recognised as such when a group of indigenous people obtains a certificate issued by the CONADI to establish themselves as an indigenous community. Registering as an indigenous community requires a minimum of ten people, with a minimum age limit of 18 years old. It is a requirement to qualify as an indigenous community in the CONADI in order to access indigenous community benefits and to claim indigenous community rights. Thus, under this law, the community of Caleta

\textsuperscript{76} The person will need to provide ID and birth certificate.

\textsuperscript{77} For the accreditation this person will need to submit, besides ID and birth certificate, an affidavit witnessed by a notary that declares (to swear an oath, “declaración jurada”) their self-identification and a letter from a traditional authority or leader of the indigenous community. In addition, CONADI will conduct a field anthropological assessment.

\textsuperscript{78} The person needs to provide their ID and the birth certificate of their husband or wife, a declaration expressing that the husband or wife is alive, and marriage certificate.
Cóndor was constituted in approximately 1995, followed by the Nirehue community in 1997, whereas the Huellelhue community was established in 2000, and the community of Loy Cumilef in 2003.

5.2. History of Caleta\textsuperscript{79} Huellelhue and Caleta Cóndor areas

During the last glaciation, approximately 12,000 years ago, the coastal range of the Los Lagos, X region in Chile (more recently known as Mapu Lahual Territory) was a refuge protected from the extreme weather which affected the Andes and the interior regions of the country. As a result, this coastal area still has flora and fauna once common to the rest of the region, but which has since disappeared because of the Ice Age. The coastal range of the X region also contains the last remnants of the Valdivian Temperate Rainforest, accounting for 1% of the original forest. This is one of five major temperate rainforests in the world and is the only temperate rainforest in South America and the second largest in the world. Furthermore, this rainforest is a refuge for a high variety of ancient endemic biological groups due to the flora and fauna being isolated by the presence of the Andes and the Pacific Ocean on either side. Some examples include the \textit{araucaria} (monkey-puzzle tree), \textit{olivillo} and \textit{alerce} forests, the \textit{pudú} (the world’s smallest deer), the \textit{puma} (known as cougar or mountain lion) and Chiloé and Darwin fox (WWF, 2007). All these natural species have, according to the WWF (2007), made this area one of the twenty most important sites to conserve worldwide.

The inhabitants of the local communities in the Mapu Lahual Territory exploit natural resources for their livelihoods from the Valdivian Temperate Rainforest, especially the \textit{alerce} tree. The natural history may have influenced the settlement patterns of the indigenous peoples, making permanent settlement less attractive along the coast than elsewhere. Geographically and climatically, the area by the coast of Mapu Lahual Territory is hard to access as it is one of the roughest terrains in Chile and, during winter it experiences heavy

\textsuperscript{79} Cove
snow and rainfall. The tracks that are currently part of an Indigenous Park Network located in Mapu Lahual Territory are the same trails that indigenous people used in pre-colonial times coming from inside the region, travelling from their villages in the central valley to the sea to harvest marine resources before returning to their villages. However, no archaeological studies have been completed in the area. The location of a few pottery shards in the Caleta Huelllehue area provides scant evidence of indigenous occupation and utilisation. No scientific records or studies about indigenous settlements exist that can prove that communities lived in these areas in pre-colonial times or in the current indigenous communities. According to Molina et al. (2006, author’s translation), no evidence has been found for early exploitation of the *alerce* in the pre-hispanic and the first post-colonial periods in the coastal ranges of the Mapu Lahual Territory. This is so in spite of evidence that indigenous people in other areas, where the *alerce* forests grow to low altitude and reach the shoreline, used the *alerce* for utensils, medicines, and artefacts or weapons.

From the time of Spanish colonization in 1552, the *alerce* was logged until 1976 when, due to excessive exploitation, a ban was set up by the Chilean government. *Alerce* is valued for its waterproof character (resistant to rot and insects) and durable qualities as a knot-free timber. It is used for the interior and exterior of buildings (shingles), and as posts and in fencing. From 1976 onwards, through management plans granted by CONAF, the indigenous communities of the Mapu Lahual Territory have only been harvesting dead *alerces*.

People from different rural areas of the south of Chile have moved to live in the Caleta Huelllehue and Cóndor areas. Some of the current residents of the indigenous communities beside the LML MUMPA recall that the exploitation of *alerce* brought many people to the region. Among the earliest to settle in the region was the Loy family, arriving ca. 1930 with another family, named Caro. A member of the Loy family describes this:

*I was raised there, with my father and my mother [...] some people my dead father knew took us there, they were the Caros [...] but they (Caros) were not the owners of the land, they knew the area. I was born there in 1937, in Ranu cove, Ranu port [...] and later we got down in the Cove where my sons are, my dad slash and burn everything there. Two of my brothers and one sister were born there, my other siblings arrived there when they were a little child. My dad worked in swidden agriculture. Over there you didn’t sell, you do a veggie garden, for personal consumption only,*
Indigenous communities

Juan Loy is the oldest inhabitant of the current indigenous community of Loy Cumilef. According to some members of the indigenous communities, he is the only ancestral inhabitant of the area (although he does not live there anymore). His sons Orlando and Jorge suggested that they are the only genuine inhabitants of the indigenous communities as the Loys are the only family who have been allocated the title to their lands. Jorge, as the former president of the Mapu Lahual Indigenous Association, also undertook most of the negotiations with the GEF Marino project designer and the WWF-Valdivia, and explains how he created the identity they are using for the indigenous claims based on his family’s earlier arrival in Caleta Huellelhue.

However, other members of the indigenous communities in Caleta Huellelhue and Cóndor note there is no conclusive information about who were the very first family or founders of the region, although the Loy family were definitely one of the earlier residents. Jorge Loy remembers the testimony of his grandfather Pedro Loy, recalling the story of an ancestor, Huenchu Loy, who discovered the area and built a house made of alerce in Rada Ranu.

[...] the first inhabitants of the south side of the Huellelhue River would be the Loy that came from Riachuelo. Roberto Concha explains that Pedro Loy arrived in Caleta Huellelhue as a labourer in 1950 for an immigrant German family who died at the mouth of the river. Because nobody took possession of their house, Pedro Loy and his family stayed in the house [...] but Sergio Lefian affirms that was another family, the first one in Caleta Huellelhue, the Cumilef” (Molina et al., 2006, author’s translation).

80 See appendix C for Loy family kinship graphic.
5.2. History of Caleta Huellelhue and Caleta Cónedor areas

Before the Loy family arrived, the region was used by a company that logged the *alerce* without permission. Families travelled to and from the communities for different reasons, and thus indigenous people have often referred to the fact that they have not been resident in these communities from ancestral times, or sometimes for many generations.

All the current members of the indigenous communities who are over forty years old came from other towns in the south of Chile (see Table 5.1), and most of the inhabitants are concerned that they are not legal owners of those lands, with the exception of the inhabitants of Loy Cumilef indigenous community.

Table 5.1: Year of arrival and place of origin for the Caleta Huellelhue indigenous families interviewed.

<table>
<thead>
<tr>
<th>Families last name</th>
<th>Year of arrival</th>
<th>Birth place</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loy</td>
<td>1950</td>
<td>Riachuelo</td>
<td>X</td>
</tr>
<tr>
<td>Cumilef</td>
<td>1950</td>
<td>Riachuelo</td>
<td>X</td>
</tr>
<tr>
<td>Fica</td>
<td>1960</td>
<td>Temuco</td>
<td>IX and X</td>
</tr>
<tr>
<td>Tácul</td>
<td>1960</td>
<td>Rilán</td>
<td>X</td>
</tr>
<tr>
<td>Colil</td>
<td>1960</td>
<td>-------------</td>
<td>-----</td>
</tr>
<tr>
<td>Delgado</td>
<td>1960</td>
<td>La Unión</td>
<td>XVI</td>
</tr>
<tr>
<td>Romero</td>
<td>1966</td>
<td>Catríhuala</td>
<td>X</td>
</tr>
<tr>
<td>Alvarez</td>
<td>1970</td>
<td>Catríhuala</td>
<td>X</td>
</tr>
<tr>
<td>Llancar</td>
<td>1976</td>
<td>Rucatayo and Quema del Buey</td>
<td>X</td>
</tr>
<tr>
<td>Lefian</td>
<td>1978</td>
<td>-------------</td>
<td>-----</td>
</tr>
<tr>
<td>Repol</td>
<td>1978</td>
<td>-------------</td>
<td>-----</td>
</tr>
<tr>
<td>Vargas</td>
<td>1978</td>
<td>Ruca Pihuel</td>
<td>X</td>
</tr>
<tr>
<td>Huinchalaf</td>
<td>1980</td>
<td>Misión San Juan</td>
<td>X</td>
</tr>
<tr>
<td>Ampai</td>
<td>1988</td>
<td>Cumilelfo</td>
<td>X</td>
</tr>
<tr>
<td>Kiefer</td>
<td>1992</td>
<td>Osorno</td>
<td>X</td>
</tr>
</tbody>
</table>

People arrived in the Caleta Huellelhue and Cónedor areas to work for logging companies, first in 1950-1960 with a Spanish company Hacienda Cameros (Ranch Cameros) and then in the mid-1960s with Ricardo Toibee, a German who established himself there to make *alerce* products for commercial purposes and stayed in the area for four years, until 1970. The people who came from the Catríhuala to work the *alerce* continued working on their own when Toibee left (Molina, et al., 2006, author’s translation). Among those who worked for the Spanish company, some settled in Catríhuala, further up in the coastal range from the actual coastal indigenous communities.
When this company exhausted the *alerce* on the land it owned it dismissed its employees. Most workers decided to stay in the area, establishing homes further down the coast in Caleta Huellehue and Cóndor. According to the indigenous communities, even during the early period of exploitation, the settlers experienced conflict over resource access rights. The following are the comments from indigenous residents about their association with *alerce* logging.

*My father (Paulo Fica) came to work with a logging company specialising in white timber and *alerce* and building roads. My father liked to work on the roads, he used to maintain the roads for the logging trucks.*

*[…] bueno ellos llegan trabajando por un, por una firma […] En bueno ellos trabajaban en *alerce*, en madera blanca y en los caminos mi papá era, más le gustaba trabajar en, era toda su vida trabajó en el camino, era guarda planta no sé cómo le decían abí, le decían antes al que arreglaba el camino y en eso arreglaba los caminos él, para que pasaran los camiones madereros esa era su pega más que nada.*

*From Riachuelo we went to Villarrica with Paulo […] I had nine kids, five died, three when they were babies […] two as adults…we were travelling everywhere, we were even harvesting potatoes in Llanquihue…me and my husband Paulo did not go to school at all, we did not know how to read and write […] when the Spanish arrived renting or buying the *alerce* forest in the coastal range, the boss was Antonio Solano. They came from Spain, they hired heaps of labour workers who came to work with them.*

*[…] when I was 13 years old I was the maid to the Spaniard who hired my dad to work as labourer to log *alerce* in the Coastal Range […] When they ran out of *alerce* they left, they could not find enough wood to make telegraph poles, they ran out of *alerce* beams, shingles, then the indigenous people started to fight, terrible things happened, deaths, they wanted to kill each other, everything between the indigenous, because they did not have more work (between them was her dad). The Spaniards fired the indigenous workers and told them to go away and they did not want to go. […] that was in the Catrihuala […]*. 

Carmen Tacul and Elsa Fica are respectively the wife and eldest daughter of one of the labour workers, and above they speak about their arrival in the coastal range of the Catrihuala area in 1950. Carmen Tacul was born in 1909 and in 1945 married Paulo Fica, becoming the parents of one of the main leaders of the current Huellehue indigenous communities, Juanillo Fica, together with another member, Belmar Fica. Although both had family in the indigenous community, none of their sons or daughters currently live

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81 Juan Fica is the member of the community that claims the largest amount of land (600 hectares).
82 He died of cancer in March 2010

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there. As a result, they spend part of their lives in Bahía Mansa and part in Caleta Huelllehue: “My brother Nano (Belmar Fica) has a house as well in Bahía besides the house he has in Caleta Huelllehue”.

Between 1957-1982 there were confrontations between indigenous people from Catrihuala and Hacienda Cameros. Antonio Solano, who had employed Elsa Fica as a maid when she was a girl, was the administrator of the Hacienda (Molina et al., 2006, author’s translation). The Hacienda Cameros aimed to undertake an extensive exploitation of the alerces which necessitated the eviction of the Huilliches, even though members of the Catrihuala community were totally dependent on the alerces for their livelihood. Paulo Fica’s family was not part of the indigenous group from the Catrihuala community. He came from further north to work for Hacienda Cameros. Later, however, Fica became part of the Catrihuala community with a claim to some of its lands. Fica and his wife moved to Caleta Huellelhue to live with their sons Juan and Belmar, but later they left the community. At the time of writing, his sons have lived in Caleta Huelllehue for over forty years and are in the process of claiming part of those lands for themselves:

 [...] in Huelllehue we could raise poultry, geese, ducks and chickens. They were scared in the community when my dad and my mum arrived because they made huge veggie gardens. They used to treat us in Huelllehue like <the whites> because from my dad side we were not indigenous. I went to the Registry Office and they told me due to my father’s lineage I would not receive any support as an indigenous person (Elsa Fica ex-resident of Caleta Huelllehue).

People such as the Fica family have come and gone from Caleta Huelllehue over the last fifty years. The current indigenous community residents explained they arrived for a variety of reasons including to obtain jobs on haciendas or to escape from past circumstances to the relative isolation of the region. The lack of legally-secured access to resources is evident in these narratives, as is the presence of current private owners who are non-indigenous people, referred to as having assumed the title of primary owner, in Spanish ‘se llamaba dueño’, which indicates that in reality they did not want to accept or acknowledge the actual owner. On the other hand, the narrative of the Huinchalaf family (from the 1970s) depicts an itinerant family who followed available employment involving marine resources. The Huinchalaf parents do not live there anymore, but their children have a house in the community that they use periodically because they also have a house in Bahía Mansa and a grandson who lives in the indigenous community for the entire year.
with his family. The following are the settlement narratives of indigenous people that do not involve logging.

I arrived when I was 13 years old. I arrived with my parents. My father was employed by a man who was called the land owner, he was called the owner of those ranges, Pellegrin Meza. My father arrived to look after his animals.

Yo cuando llegué tenía 13 años [...] Llegué con mis papas. Mi papá llegó de empleado del caballero que se llamaba dueño [...] Se llamaba dueño de esas cordilleras [...] Pellegrin Meza, ese era el que estaba esa vez, mi papá llegó de empleado a cuidarle animales [...].

My father arrived because of the work, following the footprint by the shoreline, gardening seafood, fishing from the coast. He arrived in those places (Caleta Huellhelue) that were so beautiful, wonderful, you could live there very quiet and they stayed until today.

Más que nada como llegaban antes la gente como todos los antiguos, llegó allá en esos lugares trabajando por eh, bueno, siguiéndose por las huellas, por estas cosas del mar, trabajaban siempre. Hartos trabajaban en esto de mariscales, buscando el pescado, el marisco, orillando el mar [...] Y así llegaron hasta esos lugares y bueno se fueron quedando en esos lugares, lugares tan bonitos, tan maravillosos. Para vivir tranquilos y todo, entonces se fueron quedando abí hasta los días de hoy.

During the last two decades, people have continued to be attracted to the natural resources and the relative isolation of the region. Those who did not have a strong attachment to the land before, or who did not have realistic income, found a sparsely settled place, where the legal owners did not live or rarely visited. Without needing to buy land, they could take possession of a section and establish a house, just like indigenous people did in pre-Hispanic times. In the 1970s this land could be logged as the ban on logging alerce was not policed by any institution. Thus, they could obtain as much wood as they required, and log other wood, without being caught; but, as indigenous people noted, they would not have established a big logging company to exploit the alerce, which may have protected the area:

If you go to the coastal range you'll see that they are intact, how they should be [...] is very little what the people (indigenous communities) have cleared (of native vegetation), to have their animals to be able to survive that is the other choice for their livelihood for the people who live in there.

The coastal range is virgin far inside, because we are there, because if we haven't been there in that coastal range protecting [...] now those ranges wouldn't be like they are.
5.2. History of Caleta Huellelhue and Caleta Cóndor areas

As noted earlier, only a small proportion of these people live in the indigenous communities on a permanent basis because of the living conditions there, but they have organised themselves as a community.

5.2.1. Organization as a community

People came from different areas to the coastal range because of circumstances that illustrate how hard and complex life was for migrants to the region.

Many leaders, when talking about their community, emphasized the old people born in their indigenous community as it was in their interest to demonstrate longevity of habitation in order to persuade CONADI to buy the lands for them. Currently, however, no one over sixty years old lives in the indigenous community. Carmen Tacul and Marta Antilef, my oldest interviewees, had previously lived in the indigenous communities but now resided in Osorno and Bahía Mansa respectively, and the following quotation illustrates how a leader from indigenous communities in Caleta Cóndor emphasised that the people have been living in the indigenous communities for many years:

Now what happens is that amongst the people who have lived here for many years, there are people who were born and raised here and now are very old, they have always told us that many years ago, the Osorno province coastal range was uninhabited. And then somebody said I am going to become the owner of this place. He bought and claimed the area, I do not know if he purchased from the government, to the Estate and then he became owner of that land but with some people living there, in that time there were already people living there, so he became the landowner and now he has sold the land to a Real Estate. That man's last name is Meza and he sold the land to Vegaro with us included.

Marlene Antíñir, aged 37, arrived in Caleta Cóndor with her sister. Their mother, from Osorno, has never lived in the indigenous communities. Antíñir is one of the leaders from the indigenous communities struggling to obtain title to the land because her only income for her family comes from resources related to the indigenous communities.

Claims of indigeneity started when the organization of the people living and working in the caletas Huellelhue and Cóndor became legal indigenous communities around 1994 because of the implementation of the Indigenous Law 19,253, in order to access indigenous benefits and to claim indigenous rights.
Chapter 5. Indigenous communities

In the 94 or 92 Caleta Cóndor Indigenous community was created [...] Yes (I like that we are organized) because for example before being in there (in Caleta Cóndor indigenous community) as an individual we never obtain anything for the community, for the people, for us, and as a group, as an indigenous community and fishers we have obtained things, then I like to have an organization, to be organized.

This indigenous leader confirms that before becoming an indigenous community, the committee of Pro-Adelanto was first organized to work the alerce and later as a resident committee. These organizations collaborate with State authorities, councils and other government institutions or non-profit private organizations. A common objective, for instance, is an application for a sealed access road. Because the government can only build roads on community-owned land or government-owned land, the committees usually focus on land reclamation (to be allocated communitarian land) and then apply for government infrastructure in the respective territory (I. Municipalidad de Coyhaique, 2010, author’s translation). The progression in Caleta Cóndor began with being a Pro-Adelanto functional organization, which then shifted to become a resident committee board, and then a legal indigenous community.

A similar development occurred in the other three communities (Nirehue, Loy Cumilef and Huellelhue), initiated when they constituted one Nirehue indigenous community. The President at that time was Jorge Loy, later the President of Mapu Lahual Indigenous Association and of the Loy Cumilef indigenous community, as the following indigenous leader explains:

It was my brother Jorge Loy who struggled to introduce the CONADI programme, my brother was the president of Nirehue indigenous community at that time. The programme’s aim was to build infrastructures when we were only one grouping. Before being an indigenous community we were a Progress Committee because we only wanted to fight for being able to work the alerce, we only were interested in that. Later on we were told that the government was only allocating benefits and things to indigenous groups constituted legally.

Most interviewees noted the increasing restrictions over natural resources access, especially relating to their access and freedom to harvest the alerce and seafood. For the indigenous communities, this meant a loss of income. Local people were understandably

83 The Pro-Adelanto is a functional organization whose aim is to promote the housing and social development of their members. Pro-Adelanto committee applications are reviewed by the councils where the group lives and they are regulated by Law N° 19,418.
therefore very sensitive to new management plans for natural resources, and were upset by the increased restrictions compared to the past decades.

5.2.2. Alerce logging

The nine indigenous communities of Mapu Lahual Territory have different sources of income. Some of them specialise in the _alerce_, while others focus on white wood or greenhouse agriculture, with the minority specialising in fishing:

*Our first source of income in Loma la Piedra is agriculture and forestry, we work the vegetables in greenhouses.*

*I work with the alerce, or shingles or beams and also, when the situation is good, fishing, I’m also a diver, I have my RPA and all the paper in order, I have the diver and the marine ID that we need for working.*

*Well I have been working twenty years or more, but not really fishing, helping to fish, also I work as a builder, in all those sort of things [...] in the soil as a small-scale agriculturist [...] such as potatoes, beans, peas that in small quantity, for personal consumption, due to not having sufficient tools for large scale cultivation, to sell [...] also as a carpenter.*

*Bueno aquí ya son unos veinte años, por ahí o algo más, pero no tanto como directo de la pesca, igual trabajo en terreno o en construcción igual, en todo eso [...] En el terreno como pequeño agricultor [...] Así las cosas menores como papas, porotos, arvejas, eso es como menor [...] Para el consumo no más porque me faltan implementos para cultivar, entonces no puedo cultivar como para vender, más que todo para el gasto [...] Igual carpintería.*

The main identity of the four indigenous communities from Mapu Lahual Territory located adjacent to the LML MUMPA project is as _alerce_ workers, _alercero_ in Spanish. Chilean larch, _alerce_ or _lahual_ (Fitzroya cupressoides) (Figure 5.3) is an endemic and ancient evergreen tree that grows up to 45 metres high and lives up to 3,500 years, taking 500 years to reach commercial size. _Alerces_ are extremely slow to reproduce. They are in high demand for their lumber and have been overexploited to the extent that they are now highly endangered in Chile and Argentina (Endangered Species Handbook, 2008). The Bahía Mansa port is the disembarkation point for Huilliche indigenous communities that log dead _alerce_ and make shingles (Figure 5.4) and beams for construction. These communities are
located to the north of Bahía Mansa and do not have roads, so their main transportation is by boat.

Figure 5.4: Picture of *alerce* and *alerce* shingles.

Indigenous communities recognised that they are experiencing an economic crisis due to advocacy campaigns run by conservation organizations which aim to convince people to not purchase *alerce* products. This issue which directly affects the communities, is addressed in the interviews with indigenous people:

[…] the other issue affecting our economical livelihood is that nowadays the people build houses with plastic and before they would have used alerce instead.

*It is happening that they (historical artisanal fishers) are angry because we are turning to fishing. Imagine it is not that we have run out of alerce, because there are people saying that there is no more alerce (dead) available and that is not true. There has been a lack of information, as people, we are specialised in the alerce we have worked with alerce for a long time, many years, but unfortunately they are promoting that nobody buys alerce anymore. That has been a big mistake, now the people are afraid to buy alerce products that they think could be withdrawn (taken away) and we have now an alerce management plan allowed by CONAF, because we don’t exploit the green wood, rather the wood that is buried that we get out from the soil.*

In summary, it is clear that while people in the indigenous communities are descendants of indigenous people, they have come from different towns and cities in the south of Chile. Many have decided to identify as an indigenous community in order to
claim the lands from which they exploited their main source of income: the dead *alerce*. In order to claim lands, many indigenous communities started a process of registration and organisation that, coincidently, established them for future work in environmental conservation.

### 5.2.3. Chronology of the conservation projects in the Mapu Lahual Territory

The following subsection outlines a chronology describing the process in which the people from the Mapu Lahual Territory initiated land claims and were involved with conservation organizations based on their indigenous status.

In 1996, Luis Cárdenas, head of CONAF’s Osorno city office, arrived in the indigenous communities of Caleta Cóndor, Huellelhue and Nirehue, along with two other people from CONAF. This was the first time that a representative of CONAF had visited the indigenous communities of Caletas Huellelhue and Cóndor. Luis Cárdenas had made an arrangement with the indigenous communities, stating that CONAF would help them to undertake projects in exchange for information on illegal logging, effectively placing the communities in charge of monitoring their land. This move proved beneficial for the indigenous communities, because it allowed them to develop management plans for logging the dead *alerce* and other native timber. Moreover, it was aimed at helping indigenous communities conserve their natural resources.

Jorge Loy, who was to be the president of the future Mapu Lahual Indigenous Association, together with Luis Cárdenas (CONAF) and Anselmo Paillamanque from the General Committee of Indigenous Leaders of Butahuillimapu and other leaders of the communities designed the project as “Forest Management for a sustainable development within the indigenous communities of the Huellelhue basin”. The project aim was to develop nine indigenous communities in the territory whose main historical income relied on the *alerce*. However, the communities remained geographically isolated, with low income.

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84 CONAF was created during the Dictatorship of Pinochet and is a private institution with government funds. The government has been trying to make it a public institution since the return of democracy, but this has not yet been possible.

85 In the indigenous language of the Huilliche-Mapuche indigenous: “people of the large southern lands”. It was created in the Treaty of Peace 1793.
(comparable to the lowest Chilean income) and lacking legal ownership of their lands. Four activities were planned to help the communities develop eco- and ethno-tourism projects, forest management, land rights and sea and coastal access rights.

In 1999, the General Committee of Indigenous Leaders of Butahuillimapu presented the Huellelhue Programme to the Regional Government through CONADI. This programme could not be presented to the Regional Government by CONAF because it had to be presented by another public institution. Thus, CONAF and Mapu Lahual Indigenous Association asked CONADI to present on behalf of CONAF and the indigenous communities. Although CONADI was reluctant at first, they finally agreed. The Regional Government allocated resources from the Regional Development National Funds (FNDR) for the implementation of the Huellelhue Programme between 1999-2003.

In 2000, the first environmental initiative was conducted in the Mapu Lahual Territory, funded by the initial FBT contestable funding round, and was entitled “Design and implementation of the Mapu Lahual Community Park of Maicolpi”. This project was promoted by CONAF to encourage those families and communities participating in their existing programme to develop a sustainable relationship with the forest, and to incorporate them into the protection and management of tourism within the ecosystem.

In 2001, the Mapu Lahual Indigenous Association was created. This Association was created with the dual purpose of managing the Mapu Lahual Indigenous Park Network and creating strategies for the development of the nine indigenous communities. This association was created with an advisory team from CONAF after working with them for four years. By implication, the board of Mapu Lahual Indigenous Association was going to work closely with CONAF in negotiating their decisions and projects.

In February 2004, Luis Cárdenas hired consultants from the Parques de Chile Corporation to undertake a project with the help of the WWF-Valdivia to develop the Mapu Lahual Indigenous Park Network in a project called “Creation of Wild Protected Areas Management Plans for the Mapu Lahual Indigenous Park Network and

86 Fondo Bosque Templado or Temperate Rainforest Funds.
87 Fund created by WWF and CODEFF in 2000.
88 www.parquesparachile.cl.
establishment of a pilot area”. This project was supposed to be completed in eleven months and had several objectives: a) to create infrastructure for three parks, b) to train the local communities in the sustainable use of the forest and eco-tourism, c) the establishment of five environmental and cultural libraries intended to operate as centres of environmental interpretation, and d) advertisement through a promotional brochure.

This new project was to complement the previous work done for the indigenous community of Maicolpi. These projects were not completed, however, because there were issues regarding the misuse of money by leaders of local communities, resulting in the completion of only three centres that were supposed to include libraries. The library located in Maicolpi is currently being used as a communal centre. It also does not have power because it was cut for extended non-payment of bills. Another, located in Caleta Cóndor, is used as a tourist centre, but is extremely basic and is only now improving as a result of other projects. In Loy Cumilef community, the centre is closed, empty, and effectively abandoned. The latter building, moreover, was constructed in Nirehue community, before the Loy Cumilef community was created, thus separating it from the Nirehue community.

5.2.4. Review

In the last fifty years, people have come from different areas in the south of Chile to live in Caleta Huelllehue and Cóndor, seeking to improve their life. To meet their basic needs, one powerful strategy has been to organise as an indigenous community: a comunidad indígena Huilliche. Organising as an indigenous community brings some benefits, such as allocation of goods, and has allowed community members to establish a management plan to work the dead alerce. Notwithstanding, they now face new issues because of the low demand for alerce products.

The new arrivals in Caleta Huelllehue and Cóndor area have therefore legally organized as an indigenous community, not because they have a culture and an ancestral past that binds them together and indigenous traditions they want to maintain or recover, but because it is functionally appropriate for making land claims to the government and to obtain a management plan to log alerce. It would seem that these people are placed in a precarious economic situation, which relies on extracting natural resources of private lands
on which their economic subsistence depends, and they are under pressure to diversify their sources of income in the near future.

The history of the current indigenous communities of the Mapu Lahual Territory provides significant context in which to view the reception of the LML MUMPA. As is indicated in this chapter, the situation of indigenous communities adjacent to the LML MUMPA, and therefore the main participants in the project, is highly complex and unstable.

In order to understand the nature of the indigenous communities discussed to date it is necessary to distinguish between the four types of people:

- Members who currently live the entire year in the indigenous communities.
- Members who used to live the whole year in the indigenous community but left the community permanently to settle in Bahía Mansa or another town but still maintain their rights as a member and own houses in the indigenous communities. This usually applies to people who have siblings or parents still living in the indigenous community.
- Members who used to live the entire year in the communities and have now settled in Bahía Mansa or another town, but visit the indigenous community frequently to obtain *l Alvarez* or to work in eco-tourism.
- People who live all year in the indigenous community but are not members of the community and are not making claims to land.

The GEF Marino project considers all the indigenous communities of Mapu Lahual Territory to be participants in the LML MUMPA project. This appears largely due to their prior participation in the Mapu Lahual Indigenous Park Network as they are not all strongly related to the area where the LML MUMPA is located. The GEF Marino project, however, understood that these were indigenous people and therefore expected them to possess indigenous knowledge of the natural environment that should include harvesting,

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89 Such people, despite living in the indigenous communities, are not members as they have not undertaken the requisite legal process of recognition conducted via CONADI. To complete the process, the current members have to allow them to do so, which has not been agreed to do because these people arrived in the indigenous communities more recently or many years after the earlier arrivals. If allowed to become legal members, the former group could also claim lands of the indigenous community through CONADI. The current members do not want more people claiming lands because they have already “allocated” or divided all of them between them.
resource management practices and traditional access rights to the resources of the area which indigenous groups were presumed to have as a result of their ancestral heritage and worldviews (Turner and Berkes, 2006). However, it should have been evident before commencing the implementation of the project that this was not the case and that the special configuration of this indigenous group, including the specific reasons and short time they have been living in the area, was going to be an obstacle for the implementation of the project.

The non-existence of permanent indigenous settlement within the coastal area of the LML MUMPA explains why there is little evidence of indigenous knowledge directly related to the use of these marine resources. Primarily, the people using the marine resources and fishing during at least the 20th century have been the fishers settled in Bahía Mansa, Pucatrihue and Maicolpué towns. In addition, the project created unanticipated conflicts between the local communities stemming from the fact that the indigenous people, who had been living in the area, have been harvesting the dead wood from the alerce forest since environmental laws prohibited logging alerce in 1976. However, the logging restrictions and control of the harvestable dead wood have tightened in the last ten years, and thus these indigenous communities are now turning to fishing as a new source of income. This shift has meant that the indigenous communities clash with the historical local fishing communities. Thus, when the GEF Marino staff considered the indigenous communities the main stakeholders of their project and granted them access rights to the LML MUMPA, they unwittingly generated inequity between historical artisanal fishers and indigenous communities. This specific instance demonstrates the importance of ascertaining distributive justice of material and non-material benefits among local communities for the deployment of MPAs (Glaser et al., 2010).

As this scenario illustrates, the diverse manifestations of indigeneity, elements broadly investigated by environmental anthropology (Townsend, 2000, Dove and Carpenter, 2008), are a cultural aspect that the LML MUMPA project overlooked. The LML MUMPA project thought that knowing that their main stakeholders were legally registered as Huilliches was a sufficient indication of indigeneity and that all indigenous groups possessed the same main characteristics, as long as they were indigenous people. The reality, when discussing indigenous identities, it is far more dynamic and complex than was thought to be the case in this project (Foerster and Montecinos, 2007, Bjorkan and
Qvenild, 2010). Section 5.2 describes the evolution of indigeneity claims by this Huilliche group to illustrate the complexity and cultural ambiguity of the indigenous status they hold.

The selection of these indigenous groups as stakeholders for the LML MUMPA also involved considerations relating to more efficient strategies and activities to be undertaken with local communities. In this case, the project’s main focus was protecting coastal and marine resources. Staff believed that a local community whose principal use of the sea was the transportation of forest resources would be more inclined to look after the LML MUMPA, as marine resources were not their main source of income and the LML MUMPA would allow them to earn money through eco-tourism activities supported by the GEF Marino staff. If the GEF Marino project staff had made themselves more aware of the identity and reality of the local group, strategies that catered more effectively to the people, such as addressing their true interests such as land claims, could have been discussed and implemented.

The strategy of organising as an indigenous community in Caleta Huellelhue and Cóndor, specifically in order to make land claims, is not a unique case, as are many similar situations like this in Chile. This type of organisational land claim stresses the principal political and economic needs these communities experience, which, as argued in the literature, needs to be identified in biodiversity conservation initiatives (Chapin, 2004, Schmidt and Paterson, 2009).

In this case, the indigenous community members identify the economic hardship of their communities as a very important socio-cultural aspect which the LML MUMPA failed to consider. Lack of attention to socio-economic circumstances of local communities is a common failure of conservation projects, again as noted by the literature (Guha, 2000, Chapin, 2004, Ross et al., 2009, Kabiri, 2010, Rinzin et al., 2010, Durand and Vázquez, 2011). Here, identification of the key issues and local capabilities in the communities would have contributed to the development of a more accurate and effective blueprint and, thus, determined a more appropriate direction for the project (Waylen et al., 2010, Thur, 2010, Angulo-Valdés and Hatcher, 2010). Achieving a better understanding of this background could have successfully revealed the strengths and weaknesses of the local communities.

In order to achieve a more complete characterisation of the local communities and their internal dynamics, their socio-economic characteristics are now examined.
5.3. Socio-economic characterization

Nomadism, poverty, isolation, issues around ethnicity and lack of land tenure are all important characteristics and dynamics mentioned by the members of the indigenous communities. These dynamics obstructed the engagement of local people with the GEF Marino project, and constitute elements that the GEF Marino staff did not consider as significant or that necessitated their action and special attention in order to engage the stakeholders in the design and implementation of the LML MUMPA project. The following sections describe these different characteristics and dynamics and the way they were important for relations between local people and GEF Marino staff.

5.3.1. Nomadism in the population

Caleta Huellhelhue and Caleta Cóndor are two of the more isolated areas in Chile due to geographic and climatic obstacles. This is the roughest terrain in Chile, experiencing heavy snow and rainfall during the winter months. The only way to reach Caleta Huellhelhue and Cóndor is by boat (two hours), by foot or by horse (5-6 hours) over tracks that cross the coastal range. There are no roads. For these reasons, the members of the coastal communities of the LML MUMPA, especially women and children, live in Bahía Mansa. Often, they spend ten months of the year there. Alvaro Rodríguez (Designer of the GEF Marino project) refers to the inhabitants of these indigenous communities as “Very brave people that want to improve their quality of life, they cross the river bar that is very dangerous all the time and they don’t know how to swim”.

Around seven hundred people from the nine communities maintain a house in the indigenous community, but not all of them live there\textsuperscript{90}. In Caleta Huellhelhue, Nirehue, Loy Cumilef and Caleta Cóndor, three of four of the presidents of the communities, plus the presidents of the two indigenous associations of artisanal fishers, live in the town of Bahía Mansa. From March to December they move between the indigenous communities to Bahía Mansa:

\textsuperscript{90} A significant amount of the literature and information available says that all of the people of these nine communities live there, even the supposed “inhabitants” declared they live there but are not forthcoming as to the actual number of months, unless you ask them for that information more precisely.
I have been living more than 35 years in Huellelhue. From there I emigrated here not too long ago, it is not that I have emigrated, the problem is that I have to come here (Bahía Mansa town) because of the study of my kids, for that reason I had to try to stay here and with the passage of time I have tried to find another source of income, that is the reason why I'm half of the time here as in Huellelhue [...] all my kids were born in Huellelhue and we stayed there until they finished Form 12, even there were two years that my kids were alone in Bahía Mansa staying in a hostel.

Where the members of the indigenous communities reside is important because residency is one of the important elements used by the government to allocate indigenous land rights. While it seems peculiar to claim land rights if they have not spent significant parts of their lives in the indigenous communities, the indigenous communities, as they have noted, do not have the necessary services and conditions to live there on a permanent basis.

Despite this reality, some people from these communities conceal the fact that they do not live in indigenous communities for most of the year. For instance, a prominent leader from an indigenous community, who lives in Bahía Mansa with his family, insisted that for most of the year he lives in his indigenous community and that only his family stays in Bahía Mansa most of the year. The latter situation reflects the intent of many members of these indigenous communities to disguise the fact that they do not live in the indigenous communities for most of the year. Only fifteen families, comprising forty-two people and including eight children, currently live the whole year in Caleta Huellelhue where the indigenous communities of Nirehue, Huellelhue and Loy Cumilef are located (see Figure 5.5). All the houses in the indigenous communities are located along the Huellelhue River, except for one that is located by the Pitril river estero Pitril. The Huellelhue River can be navigated. Some houses are very far from each other, up to a kilometre apart. It is approximately 20 kilometres from the furthest house to the sea.
Figure 5.5: Map of the Caleta Huellelhue indigenous communities.

The inhabitants of Caleta Huellelhue and Cóndor are isolated. For example, there is only one primary school in the area, which is located in Loy Cumilef community and is seven hours by foot from Caleta Cóndor. The communities lack many other services including roads, a health centre, television reception, telephones or mobile phone reception, power system (other than individual generators), shops of any kind, public water system and sewerage. Thus, members of these communities prefer to live in Bahía Mansa town where they have access to all these basic facilities. This town of two thousand inhabitants has the largest concentration of public services, including a medical centre, a Fire Station, Police Station, a Secondary School, a pier built around 1989, and a sea port authority office.

The members of each of the Caleta Huellelhue and Cóndor indigenous communities’ comprise several categories including men who regularly go to these communities to harvest dead *alerce*. Such men do not remain for longer than a few days before returning to Bahía Mansa, where they have their other houses and families. These people typically have two houses, one in the indigenous communities and another in Bahía Mansa. In summer, this group stays during January and February in the indigenous communities with their entire family. This nomadism was a feature of local cultural life of these community
members before it became lucrative to claim to live in the indigenous communities. This historic nomadism was due to the lack of basic services and middle and high school education at the indigenous communities. It was a better alternative for women and children to live in Bahía Mansa, but men have to go by boat monthly to the indigenous communities in order to access their main source of income, the alerce, and to get it out to sell it.

5.3.2. Poverty

The people in the indigenous communities feel the government should provide some special concessions for them due to their state of poverty, as this indigenous person explains:

I think that in part it is ok that they now control the access to the natural resources. 80% is fine, but they don’t make it easy for the people whose livelihoods depend on that, there should be an exception, a little exception, because we have had to wait so long to get the resolutions and permissions to extract the natural resources, they should have the will, for instance the authorities need to execute prompt resolutions, but they don’t hurry up, they stick to the law and that is fine but sometimes they could make some exceptions for people like us.

This interviewee refers to the fact that, in his view, people who have a lower education and restricted income should be helped by the government, including faster processing of the paperwork necessary for them to exploit natural resources such as alerce. This is especially important when their livelihood depends totally on this resource.

The indigenous people, like the historical artisanal fishers, often have incomplete education (see Table 5.2 and Figure 5.6). This results in low proficiency in Spanish reading and writing, which the interviewees explained to the researcher. For them, low education constitutes a disadvantage in social settings as this hinders their ability to understand most aspects involved in, for example, conservation projects, to complete application forms, and to understand all the requirements for any sort of situation they need to resolve. In addition, they miss out on opportunities to find better jobs:

The sad reality is that we don’t understand many times the topics for the lack of education and that’s why we can’t apply to government projects. We miss some projects because nobody is telling us when you can apply to this project, there is nobody in the council or any place else that could be there to help us with that. The government
5.3. Socio-economic characterization

hasn’t been able to help us but because of that. I can’t criticize the government, what doesn’t help us is that we don’t know how to do the things many times.

[…] we are people who find it hard to understand things, they should have come down to our level to make it possible for us to understand [the GEF Marino project].

As part of my fieldwork, I helped many of the people from the communities to write letters and to fill out forms. Some people from indigenous communities have also participated in government programmes to complete their education, but only the indigenous people that work as fishers have undertaken these programmes. The indigenous people specializing solely in alerce logging do not have access to these programmes.

**Table 5.2:** Indigenous people interviewed’s educational level. This table records the indigenous people who had a second chance at education.

<table>
<thead>
<tr>
<th>Year completed</th>
<th>Second chance (SC)</th>
<th>Educational level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 7</td>
<td></td>
<td>Completed High school</td>
</tr>
<tr>
<td>Form 5</td>
<td></td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Form 5</td>
<td></td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Form 3</td>
<td></td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Form 3</td>
<td>SC to Form 5</td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Form 3</td>
<td></td>
<td>Incomplete High school</td>
</tr>
<tr>
<td>Standard 6</td>
<td>SC to Form 3</td>
<td>Completed Middle school</td>
</tr>
<tr>
<td>Standard 6</td>
<td>SC to Form 3</td>
<td>Incomplete Middle school</td>
</tr>
<tr>
<td>Standard 7</td>
<td></td>
<td>Completed Primary school</td>
</tr>
<tr>
<td>Standard 6</td>
<td></td>
<td>Incomplete Primary school</td>
</tr>
<tr>
<td>Standard 5</td>
<td></td>
<td>Incomplete Primary school</td>
</tr>
</tbody>
</table>

In comparison with the education of artisanal fishers, discussed in Chapter 4, the education of indigenous community members is lower. No one from the indigenous communities has tertiary education, and proportionally more people have not even completed primary school.
5.3.3. Ethnicity

Just as was evident with the fishers, issues of who is ‘indigenous’ and who has ‘authentic ethnicity’ are a key aspect in understanding the local dynamics of these communities. An initial observation is that virtually no-one of indigenous descent in these indigenous communities, with the exception of Domingo Eucapan, speaks Chesungün, the indigenous language. Hence, the only indigenous characteristics they retain are their surnames and their physiognomy. Following tradition in Hispanic countries, community members use two surnames. First the father’s first surname is used following the given names, and second the mother’s maiden name is listed (first surname). When women get married they do not change their surname to their husbands’ surname in order to be able to pass on their surname as a second surname. The indigenous culture is also very similar to the culture of non-indigenous peasants of Chile, who are specialized in alerce forestry work.

Indigenous people explained the reasons for their lack of interest in learning the native language:

I used to walk many kilometres to go to school from Huellehue to Millantue [...] I studied until Form 1 (Sexto Básico), in the range not in towns how the people live now… I would not like to learn the indigenous language. It is too late, after all the sacrifice to walk so long for going to the school with my brother [...].

I do not speak Mapudungun or Chesungün, neither my mum, my grandmother nor my great grandmother. I never met anybody who spoke indigenous language in my hometown, only they spoke what is traditional Chilean [...].

In 2007, a group of cultural anthropologists conducted an ethnographic study in the area examined by this thesis. The subsequent report stated that, even though they were discussing territories that are recognized in the literature as ancestrally belonging to Huilliche, the current inhabitants are relatively recent and not all of them have a Huilliche origin. These indigenous communities do not maintain their indigenous culture or its most important customs. Rather, they have Creole origins and have traditionally worked on the alerce, and so do not have the same understanding about the sea as they have about the
5.3. Socio-economic characterization

forest. However, they explicitly define themselves as Huilliches. Indeed, the communities are legally constituted as being of Huilliche origins (CEAAP\textsuperscript{91}, 2007, author's translation).

These people nevertheless thought it would be useful to seek indigenous legal recognition as a member from the indigenous community. For example:

\begin{quote}
I think that is better to be indigenous (legally) […] the idea of the indigenous law was to be recognised as an indigenous but with the power that should have, what the indigenous people want to be.
\end{quote}

TEK and LEK were topics consistently included as an element of the interviews in the study site in this thesis in order to investigate ethnicity elements. However, it was very common for participants to change the subject when queried about their knowledge of the natural environment and natural resources. When such knowledge was directly addressed, they did not maintain the discussion, preferring to introduce other topics such as the mistrust, failures and disagreement with the GEF Marino project or the land tenure issues. Some indigenous leaders, however, noted this knowledge had been lost with the passing of their ancestors:

\begin{quote}
There are some people who have on their minds questions relating to their ancestors, such as how did they live their daily lives in the world, so with the biodiversity and I always ask them and they say that the life was different before that you would go to get water in a stream and you would ask for it (to the stream), that with respect you would get remedy from a tree and now you don’t do that anymore […] that is lost.
\end{quote}

I also asked about stories regarding the indigenous names used for some places. One answer was “Here we stayed as Nirehue that is an indigenous word for a place with little rocks that is where the alerce are located”. These types of examples could show TEK. In addition, some responses from leaders regarding TEK were also collected. The following quotations are responses of the indigenous communities' members about TEK, but they are not related to knowledge which the GEF Marino project could have used or that local communities think LML MUMPA has overlooked:

\begin{quote}
In my case I think that we know how to look after our environment, our natural resources, we are from there, we are from the land you could say and we know what is good and what is bad to look after the nature, for instance I wouldn’t need another environmental project […].
\end{quote}

\textsuperscript{91} Centro de Estudios Antropológicos, Arqueológicos y Patrimoniales.
In the river they used to get their medicines and I got healed, something that they used to find by the rocks, in a pot he boiled and said you are going to drink these herbs and I got healed of my Anaemia.

The following example is the opinion of the indigenous leader who was most concerned about recovering the indigenous culture and language. As such, she is teaching indigenous culture at the local school in Bahía Mansa:

Well, at this moment, because I’m Mapuche-Huilliche, I started to learn more about my culture [...] in the old times native wood was largely exploited, the alerce and because of that a lot of people came from the north and the south, people who came from cities, people who were not Mapuche and didn’t know our culture. Since then they started to put down our ancestors who were here, the discrimination was strong, it was there when my mum stopped speaking Chesungún, she stopped speaking her language.

Clearly, characteristics of ethnicity were not well developed by the indigenous communities participants interviewed in this research. Other topics took priority in their discourse, with the exception of the former leaders of the Mapu Lahual Indigenous Association, Jorge Loy, who also started negotiations with the GEF Marino project, and Martin Paillamanque. These two leaders have a strong ethnic identity. This is a key issue for this thesis that is addressed in Chapters 6 and 7.

### 5.3.4. Indigenous land claims

Another important issue relevant to the problems with the implementation of the LML MUMPA is that the land of seven of the nine indigenous communities has no association with the people who live there (or that have houses there). Instead, these lands belong to private groups. Only the communities of Melillanca Guanqui or Huanqui and Loy Cumilef own their land, although the Maicolpué Río Sur and Manquemapu communities own part of the land that they now inhabit.

However, there is a law in the Chilean Civil Code that stipulates that if a person takes possession of isolated land and the land owner does not evict them, it is possible for the land to be claimed by the squatter (see Appendix D). Therefore, under this law, these indigenous communities could have legal access to the land domain title because they have
been living for more than ten years in the area and the landowner has not attempted to evict the people, as the following indigenous leader explains:

\[\text{Nobody used to go there, one, two, three families, then my dad arrived, other people arrived, they established there and the land owner never said this land is mine [...] the owner for fourteen, fifteen years he has never said anything [...] three, four years ago the people of the community met the owner Huidotti.}\]

Consequently, when referring to the possible process of eviction, the indigenous communities would, in the first place, be notified and given an order of eviction. However, based on the international human rights commitments of the Chilean state, which support the right to adequate housing, the government should forbid forced evictions. The general prescription in the Civil Code\(^{92}\) indicates that the indigenous communities are correct under Chilean law to believe they are the owners of the land they inhabit or use; but they have not had the funds to take these claims to trial. The following are two narratives of indigenous people about indigenous land disputes:

\[\text{When we claimed the land we thought we were going to be able to claim with Nirehue (indigenous community) because my family was located in a fiscal land, then the government was going to solve our land conflict but not the others. We started to claim land in 1985, but we created Loy Cumilef Indigenous Community in 2002. I didn’t want the people who arrived only 20-25 years ago to be located next to the houses of my family and relatives when we received the title of land ownership. All our lives we have had the domain, the rest of the people from Huellelhue and Nirehue Indigenous Community were located on private land. I thought we were going to argue more when the government gave us the land ownership. It is better that we separate before this happens. My family and relatives separated from the other people of the community, and a short time later we received the title of the land. Jorge was really into all the legal and policy issues of claiming indigenous land. The government didn’t have to buy the land for us because it belonged to them they just allocated it to us.} \]

\[\text{Konow, he had registered the ownership of 1,200 hectares in Maicolpi and CONADI bought them and allocated them to five families [...] I was allocated 20 hectares the person allocated the least land was me [...] CONADI didn’t help us in the beginning only by pushing them they did it.} \]

The lack of stakeholder ownership of the land on which the Huelllehue, Nirehue and Caleta Cóndor indigenous communities are now located has limited the project’s ability to provide infrastructural benefits to contribute to the social and economic development of these communities because they could not build on private land:

\[^{92}\text{Título XLII, DE LA PRESCRIPCION}\]
My brother struggled quite a lot to bring Orígenes programme to us [...]. My brother was at that time on the board of Mapu Labual (Indigenous Association). The Orígenes programme arrived because the land where my family and relatives were living was fiscal and they could only build infrastructure in a fiscal area.

These communities have been asking CONADI to buy these lands for them because they are indigenous Huilliches inhabitants. As yet, CONADI has not bought the lands adjacent to the LML MUMPA because other indigenous communities in the region, which have a higher number of inhabitants and are claiming lands that are more affordable for the government, have been prioritised. Indigenous land tenure issues stem from when these lands were given to fifteen indigenous families (not the same families that live there now) by the Chilean government. This action was part of the allocation of titles, called commissary titles (5th of May 1827), during the XIX century. However, in 1847 two Germans, Kindermann and Renous, took these lands from the fifteen families (Molina et al., 2006, author’s translation), by encouraging the indigenous people to drink and then offering them a small amount of money and an insignificant amount of goods in return for the titles to their land.

In 1909, Pelegrin Anibal Meza Loyola and his son, Martin Meza, became the legal owners of the Caleta Huellelhue and Caleta Cóndor land when they registered the area under their name. Pelegrin Meza was a judge and Deputy of the Radical party for different cities in the X Region such as Valdivia, La Union, and Río Bueno and Osorno. He also was an agriculturalist and breeder (Biblioteca del Congreso Nacional, 2010, author’s translation). The leader, Orlando Loy, remembers a story his grandfather told him about the judge Meza:

> When Meza was about to register the land under his name he went to the house of my grandfather, they were friends, he used to host him. Pelegrin Meza said to my grandfather: “Mr Pedro, tell me where are the boundaries of your domain?” The eldest of my grandfather’s sons helped Meza taking him around the land telling him the names of the places so the judge could register the property under his name. Meza always respected the domain of my grandfather. The other people in the other communities (Nirehue and Huellelhue) are on private land.

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93 Llaitul, Marin Nilian, Millan Purra, Panquele, Maripan Pinsal, Epullao, Huilitararo, Calapai, Tranquil, Catrilef, Pailalef, Cumilef, Kinchagual and Naupi (Cf. Posesión Llaitul and others).
94 I do not know where these fifteen families lived after selling their lands but they never returned to the area.
Meza died in Valdivia in 1978. His family is reputed to have been the people who sold the land to Humberto Huidotti in 1988, the current owner of most of the indigenous communities’ lands from Caleta Huellehue and Cóndor. The actual owner, Humberto Huidotti, owns 200 million pesos in contributions for the land. He works in the business of land trades and is originally from further north, La Union, and owns 13,000 hectares. Interestingly, the government has not auctioned his lands for not paying the contributions because Huidotti has claimed they are indigenous lands.

In addition, in 1994 Humberto Huidotti sold 2,300 hectares of Caleta Cóndor Indigenous Community land to the Inmobiliaria y Constructora Vegaro S.A., owned by Aguayo-Saffie. Right after Vegaro bought the lands, the indigenous community went to regularize the title of the lands under their name. Vegaro opposed their application, and subsequently the indigenous community have had to pursue a legal claim to the land. CONADI facilitated the appointment of a lawyer and the claim was taken to court, but denied in December 2007 for lack of legal proof of entitlement to the lands claimed. The leaders of the indigenous communities have explained that they do not completely understand the legal process or its outcome:

Yes, there was something weird that happened regarding our land issue, I don’t know what happened […] the trial (between CONADI with Vegaro Real State) had already a judgement and they told us of the results in April when the trial was in January when we had lost the trial in the Court in Santiago […] then CONADI invited us to a meeting when they informed us that the Real Estate wanted to do business with our community from the very beginning and CONADI before told us that we could have won the trial and to obtain the ownership of the lands going through a trial, not that we needed to buy the lands, so that was a lie from CONADI I don’t understand why they did it like that […] The trials have been going on for many years since 94 or 95.

The Caleta Cóndor indigenous community was in court when the LML MUMPA was being designed and implemented, and thus were more concerned about their own permanence than about participating in the project. In these circumstances, it is clearly unlikely that people will engage in a long term project when they do not know if they will be able to continue living in the relevant area. The GEF Marino staff had not envisaged that a project of this nature would encounter difficulties arising from this situation.

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95 Personal information provided by Huidotti’s partner Maruja Riquelme 2008
96 In English, Real Estate and Building Constructers Vegaro S.A.
The issue of land tenure was both the primary problem and main concern for the indigenous communities, who expected that the GEF Marino would have access to significant funds and be able to work with them in their social and economic development. The latter would include support in making claims to and being allocated lands, as three leaders from the indigenous communities explain in terms of the importance of land claim disputes:

The topic of the land and what affected most of the communities is the shoreline as is the case in my community, we have fought our entire lives and knocked on the doors of the Intendencia, Gobernación, CONADI and National Land Ministry the doors open but not all, we have been fighting for 40 years to be able to have a title as owners because now those lands are declared that don't belong to the government and are private, you know what I mean... all our life we wanted to be owners but we haven't been able.

[...] they [GEF Marino staff] didn't have information about us [...] they were going to help us, first priority was to resolve the land tenure issue [...] and they haven't helped us at all and we keep fighting for the lands [...].

The most important need is to be owners of the land to have land reclamation one day (saneamiento), that if we were owners we could do projects such as for instance to install wood splitters, that would work very well, because we would have permission to obtain the wood, not to have problems, because now if you install a wood splitter you can work a year without having problems (being caught) but sooner or later they will ask you from where are you obtaining the wood.

The quotation below is from another leader, who also has a house in Bahía Mansa, and like the interviewees above, he frequently visits the indigenous communities to work the alerce, which is his main source of income. He also demonstrates a strong desire to live solely in the indigenous community:

What we need most is to be owners of the land I think that being owners of the land you can have a quiet life the rest of your life, because it is a quiet place (Caleta Huellehue), clean [...] over there you have your house, a piece of clear land and all the rest is range. Range where white wood is hardly touched, you can say not even one stick touched, firewood we consume the least.

Kinship is also an important social factor for indigenous land claims due to community interrelationships. Family conflicts have been the driver to strengthen and organise land claims, although family disputes at other times have also weakened the
organisation applying for land claims. Kinship is an important aspect mentioned by indigenous communities.

Land tenure issues are considered the most critical problem by the indigenous communities. If these issues are not resolved, they will hinder efforts to underpin any type of working relationship and conservation or development initiatives in the indigenous communities located in Caleta Huellihue and Cóndor.

5.3.5. Review

The conditions mentioned above in which the indigenous inhabitants arrived, and currently still face in the coastal range, include their isolation, nomadism, bad economic situation, low education, loss of ethnicity and indigenous land claims, which make these indigenous communities very fragile. All of these socio-economic, ethnic and structural dynamics are key social and cultural factors of the local populations who are LML MUMPA stakeholders. All of these factors have influenced and, as discussed further below, hindered their interaction with the LML MUMPA project.

Indigenous communities adjacent to the LML MUMPA do not have basic services, secure working conditions or adequate housing. In addition, like the historical artisanal fishers, they have no social welfare, no pension when they retire, low and unstable income, and no access to credit, bank loans or insurance. Consequently, they are subjected to insecurity and poverty.

The isolation of the indigenous communities was a paramount factor to consider when establishing a timeframe and activities for the project. As mentioned above, the local community is in a remote area and access for the project staff was very limited. It was obvious that they could not keep in regular contact with the community, which in turn impinged on the success of the project, which required constant contact with local communities to ensure total engagement in the project.

As stakeholders only periodically occupy the relevant areas adjacent to the LML MUMPA, significant participation and engagement from the members of the indigenous communities should not have been expected, especially as move went from one place to another impeded follow up and a sound commitment. It was difficult for them to
collaborate when they were not permanently settled and this was another key aspect that the GEF Marino did not take into account.

Indigenous communities are fragile in terms of the feasibility of establishing the sound long term relationships needed to participate in a conservation project such as the LML MUMPA, because their priority is to resolve their basic economic needs for their families. However, the success of this venture depended entirely on them, because they are the ones expected to protect and police the LML MUMPA. The Mapu Lahual Territory, therefore, is an area where socio-economic and environmental issues clash. On one hand, there are the poor people whose only income is the alerce, and who have a great need to exploit it. On the other hand, environmental institutions such as the WWF-Valdivia are trying to protect the alerce from this exploitation. While the traditional aim of WWF was to work on environmental conservation, now their objectives also include assisting the economic development of local communities whilst simultaneously protecting environmental resources (Hughes and Flintan, 2001). WWF specifically promotes economic development projects that help local communities to reduce their use of natural resources, for example, in the case of the alerce, they created alternative sources of income such as eco-tourism. Here, this meant that instead of the local people making money logging the alerce, they could make money showing the alerce forest to tourists (WWF, 2007).

Thus, interventions in the area have historically either been focused on helping the poor inhabitants of the territory or on protecting its natural resources. Lately, however, the initiatives in the Mapu Lahual Territory have been focused on both aims. Unfortunately, these combined aims have not been accomplished and conservation projects have not been able to aid these communities to the extent of generating a sufficiently stable and high income to improve their quality of life.

Indigenous communities commonly maintain oral rather than recorded histories. These communities have not only been uprooted, but have also lost their language and the most visible aspects of their culture. The people also appear to lack the ability to verbalise information through oral history or (through the lack of education) to write their own history. This situation limits the communities’ ability to lodge complaints with or to claim benefits from the government and conservation and development projects and this is exacerbated by the fact that they are unable to understand what has been achieved or to
recall who had talked to them previously. This may be partly due to their lack of education, which has adversely affected their chances of resolving problems, especially regarding land tenure issues.

A more nuanced understanding of the ethnicity and main cultural characteristics of the indigenous community would have helped the ICDP to plan appropriate strategies to approach and engage local communities. They needed to know cultural codes and be made aware of social dynamics in order to avoid creating tensions and negative relations with stakeholders. Ethnicity is a complex phenomenon. Not every community that forms part of an ethnic group may necessarily be representative of the characteristics associated with that group. In reality, the community may possess cultural characteristics more similar to other ethnic groups. The GEF Marino staff, as part of a project that is engaging in social development, relied entirely on the name that the communities were utilising to represent themselves and in the legal status they have as indigenous.

From a qualitative point of view, the people of these communities are not strictly indigenous Huilliches from the Catrihuala, but are instead going through a kind of ethnic mobilisation process. This process is limited to legal and political aspects because they have lost their language and indigenous culture a long time ago and, unlike other indigenous groups in Chile, they are not attempting to recover it. The Huilliche ethnogenesis process involves communities that are not strictly or originally indigenous wanting to be classified as indigenous, not because they wish to recover their culture and language but because they can then receive government benefits. It should also be noted that the marketing of eco-tourism related to the area relies on claims of ethnic characteristics.

With the enactment of the Chilean Indigenous Law n°19,253 the inhabitants of both caletas (Huellelhue and Cóndor) organized themselves into two indigenous communities who identify themselves as part of the ethnic group Huilliche. This means that, formally, they are Huilliches, although not all of them are of that origin. There is even a family in Caleta Huellelhue who has the surnames Kiefer and Ruminot, as they are of German and French descent through marriage, but they remain part of the indigenous community and have received the benefits that have been allocated to the Huellelhue indigenous community from the government.
Given these circumstances, kinship knowledge would also have helped the GEF Marino staff to design better strategies to allocate goods or to transmit and spread information regarding the activities and aims of the project. Knowledge of the kinship relationships would have showed the internal dynamics, the conflicts or strengths in the community.

The members of the indigenous community do not have a community life built upon their indigenous traditions because they have spent most of their lives in Bahía Mansa or other places. One way to try and understand the complexity of being local and indigenous in this setting is the view that the communities of Caleta Huellehue and Cóndor are traditional people more than indigenous people. Chapin (2004) refers to these categories when explaining a condition common in Latin America. While traditional people is arguably a more accurate term to define this group of people, because it is recognised neither in the legislation nor in the conservation approach, these groups probably have not adopted or used it for their claims. Contested resource access between the Huilliche indigenous people in the Mapu Lahual Territory and outsiders provided the stimulus to mobilise their ethnic identity and resource rights. A similar response is noted in research by Li for the Nuaulu of Seram in Indonesia (Dove and Carpenter, 2008). When indigenous people were initially banned and separated from their initial source of income, the alerce, they were forced to exploit alternative natural resources and to fight for their claims. The latter involved organising themselves as an indigenous group regardless of the fact that they neither originate in the area, nor had spent a major percentage of their lives there.

The significance of TEK/LEK in regard to the case study analysis is its capacity to contribute well-informed understanding of ecological relationships without requiring a high level of formal education, as it comprises accumulated knowledge of how ecosystems function learnt and proved over many generations. This is a form of empirical knowledge, drawn from many adaptations to the environment (Berkes et al., 2000), and is grounded in moral, ethical, and spiritual world views (Ford and Martinez, 2000).

The indigenous communities of the coastal range have not, however, lived long enough in the relevant areas to have well-developed TEK about marine resources, although they do about the forest, especially the forest related to the alerzales. However, this

97 In Spanish, alerzales means more than one alerce.
knowledge has not resulted in protecting and exploiting nature in a sustainable way. In this specific case, the Huilliches communities do not show an obvious interest in the general surrounding environment and do not have any apparent spiritual relation with nature. This is in sharp contrast to Huilliche indigenous people, who maintain their culture and language in Chile and do have a very strong relationship with nature. Unlike the Huilliches Caleta Huellelhue and Cóndor indigenous communities, the cosmovision of these other groups is strongly related to natural features, much as in the case of the indigenous peoples of Siberia examined by Klubnikin et al. (2000).

In this thesis, discussions about TEK/LEK have been shown to be an inadequate way to approach participation or social and cultural factors of local people. In this specific investigation, concerns regarding the incorporation of TEK/LEK in the conservation project include that it implicitly privileges a narrow view of the problem of lack of engagement of local communities, and does not grasp the cultural and political complexities within which such knowledge debates are embedded. Instead, it has been proven that the cornerstone of the failures of the LML MUMPA project was the lack of engagement with socio-cultural, economic and political factors and conditions presented among locals in the area. The main lesson provided by this ICDP is that a project of this kind cannot succeed if there are land tenure issues in the communities where the project is going to be implemented, and where land tenure is the driving force to have even a constructed indigeneity. The feasibility of this type of project depended on resolving the communities’ first priority, namely land status.

Having established the socio-economic characterization of the indigenous communities adjacent to the LML MUMPA the following section describes the government, socio-cultural dynamics and politics characteristics of these communities. The following section is important to comprehend the opinion of the indigenous communities in relation to the process and implementation of the MUMPA in coastal Chile.
5.4. Government, socio-cultural dynamics and politics

5.4.1. Relationship with the government

As a result of unresolved land tenure, seven of the nine indigenous communities from the Mapu Lahual Territory are not eligible for assistance from the Municipalidad de Río Negro and national government agencies. As observed in the words of one study participant:

\[\text{[...]} \text{in our caleta we have been allocated benefits from the government and we have been able to use it, but other benefits haven’t been able to be allocated to us because we are not owners of the land where we live, so that is where we lose many benefits, not because the government doesn’t want to help us, the reason is because we are not owners of the land [...] in the caleta we have been allocated individual projects from INDAP and CONAF, such as animals, chainsaw, sheep [...] and have been useful, it has been useful for the people that have known how to use the things, so that is why I said that the government has allocated us things and the person that has been able and knows how to use the things has moved on.}\]

Community members also stated their disappointment over the condition of their school, the poor support in terms of developing eco-tourism initiatives and the lack of access to basic services. For example:

\[\text{[...]} \text{the Municipalidad is the worst, is bad, they haven’t brought any help, we have a school but the school is in very bad condition.}\]

Our relationship with the Municipalidad is between bad and good, doesn’t reach the good, I don’t understand why the Municipalidad de Río Negro doesn’t look at Huellelhue [...] they have under their jurisdiction a bit of sea, beach, a beach of 2 kilometres where there is nobody, a river with clear water, that the council could carry on tourism projects. It is a big luck to have a place like that which you can’t find everywhere, is a council that is between the five most poor counties in the country and they have that space and they could take advantage of that. I don’t know why they haven’t done anything [...] they have not taken the opportunity of anybody that could have the vision of making a lot of money.

The following quote is from a leader who has visions for the future, and is one of the members of the indigenous communities keenest to work in eco-tourism. His perspective is
possibly influenced, however, by the fact that he owns a good house in Bahía Mansa.
Neither he nor his family wants to live in the indigenous community due to the bad
conditions they would have living there. They only utilise the natural resources, in the area
as a form of income:

We as indigenous communities desperately want to own a bit of development to be able
to offer tourism services in the future, which is what we have always been fighting for.
Secondly, we have been fighting for the land tenure (saneamiento), the last issue is the
access, we are one of the only remote places that are isolated, the caleta is very isolated,
the caleta doesn’t have a way out to anywhere, it has a way out but it is very
complicated.

The intention of the Municipalidad de Río Negro has been to create a tourism project in
Caleta Huellhue and Cóndor, but a major problem has been the fact that the inhabitant
live on land that does not belong to them and private land owners such as the Huidotti or
the Vegaro company prevent the organisation of any project or infrastructure being built
on private land.

A summation of interview responses shows that there are generally negative opinions
held by indigenous people (see Figure 5.7) of the Municipalidad de Río Negro. These are due
to the lack of resolution over their basic needs in the indigenous communities, for instance,
not having one middle or high school, while the primary boarding school has very poor
facilities such as bad beds. There is no functioning electricity and no medical centre. In
addition, not having a road that can connect them with the town of Río Negro, leaves them
with restricted access such as boat, walking or horseback riding through the coastal range.

The indigenous communities are, however, grateful for the allocation of goods,
woodworking machinery and farm animals provided by the national government and value
the legal recognition, although they remain aware that these are limited in their extent:

That is a big help that the government have given us and I’m very grateful for that,
and we are all grateful, all my life I’m going to be thankful and all my family, because
was Orígenes, I don’t have anything bad to say, they gave me 96 million pesos in my
hand [...] to buy all the things we have to buy, was so beautiful, we bought
everything, 9 million they gave me in cheque money, we put it in the bank we have a
savings account, they made the deposit and we were allocated legally as it should be
[...] there were three people who were allocated with complete furniture, tools and
hardware [...] Three years ago Orígenes gave 11 sheep to each members of the
community, to 13 members, now I have 80 sheep [...] a chainsaw of 380 to 13.
Ah, esa es la ayuda grande que nos ha dado el gobierno, y esa sí que se la agradezco, y se la agradecemos todos, toda mi vida se la voy a agradecer, y toda mi familia, porque nosotros, fue Origen, ahí Origen prácticamente, no tengo nada que decir, y a mí me pasó 96 millones de pesos en mano, en mano […] Para que compre todas las cuestiones que tenía que comprar, eso es lindo, compramos todo, nueve millones ochocientos, nos dieron en plata así, en plata, que me lo dieron en cheque […] lo depositaron, nosotros sacamos la plata los dirigentes, y nosotros compramos las cosas que se dijo que se iba a comprar, y se entregó legalmente como corresponde, tanto, tanto a este, este […] Tres, porque salieron favorecidas tres personas, tres personas, salió favorecido con taller, con tres talleres, o sea cada uno con su taller, pero un taller completo, de lujo.

We have a very distant relationship with the council [Río Negro] for instance we had an experience, a bad experience when a document was badly written regarding land that we had been able to receive the title of recuperated (saneada) in Nirehue Indigenous Community where the alerces are, there was a Topographer, he did some wrong measurements […] I think that it was a good idea to get organised as an indigenous community, because the indigenous law is well known. We cannot deny that the state helps the indigenous a lot. However, the problem is that the state can help you until a certain point. The indigenous law is under another five laws and in that sense there is very little we can do. So it is like they respect and not respect and when there is an important action to take the indigenous law doesn’t support us […]

The impact of some social dynamics on the implementation of the project was evident, as explained by the indigenous people. First, there is a tendency for some people to criticise the actions of others or assume control of the project. Second, outsiders without required identification or documentation frequently arrive to assist, research, survey land, and so on in the indigenous communities. Third, community members have difficulty comprehending the implications of projects and initiatives from both private and governmental institutions. The coordinator of the LML MUMPA project, Cecilia Godoy, also complained that the people of the indigenous communities only wanted “cash for their pockets” and did not acknowledge the positive things done for them by the GEF Marino project. The following are opinions of indigenous communities about these three aspects:

There are times when I felt down because the people no matter how much I do they are not happy with the work done, they don’t acknowledge the good things done, but if a small bad thing has been done they will outline it or bring it out, so sometimes you feel like quitting, it is hard.

We don’t control the dates money arrives, we don’t keep a track of names of the people from institutions that visit them or receipts of money expended that is their fault the
issues with money they have had because they are passive in requesting and demanding to be more transparent to members of Mapu Lahual Indigenous Association for instance.

The people (of the indigenous communities) are changeable, therefore, to make something work you have to ask thousands of times, even to do little trials [...] for instance, if you want to do something you have to try first with a proof. Let’s do this little infrastructure, let’s motivate the people with this, let’s show them how big it will be, not to arrive and drop a huge project and the people will look up to it not understanding what it is about.

Porque con la gente es un poco cambiable, o sea, y entienda que para que la cosa funcione hay que preguntar mil veces. Incluso hacer la prueba con un poquito [...] Por ejemplo si quiere un, quiere hacer algo, por ejemplo, quiere hacer algo que sea relacionado con algo, o sea bueno hagamos la prueba con un poquito. Hagamos esta cosa, estructuras chiquititas y entusiasmemos a la gente con eso, demosle una pauta y así más o menos va hacer el grande, pero más grande, no se llegue y se plante encima de un menso proyecto y la gente quede mirando pa arriba y no entiende de que se trata la cuestión.

The relationships of indigenous communities with local and national government have been good on the one hand, because these relationships have brought them some important assistance. However, on the other hand, the assistance received is far less than the expectations and requirements of the communities to achieve a decent standard of living in their communities. There is still a long way to go in order to satisfy their basic needs and to secure the benefits and services to which communities are entitled by the State. The plight of these poor indigenous communities has resulted in hostility and disappointment towards government organizations that promise improvements but do not deliver them.

5.4.2. Relationships within indigenous organizations

5.4.2.i. Mapu Lahual Indigenous Association

Many organizations and institutions are involved in the implementation of economic initiatives with the indigenous communities, especially the development of eco-tourism projects. The main participants are CONAF and the WWF-Valdivia, which have been working closely, and almost exclusively, with the Mapu Lahual Indigenous Association founded in 2001.
The Mapu Lahual Indigenous Association represents the nine indigenous communities of the Mapu Lahual Territory and exists to address the common issues of these communities. Its role is important both in its relationship to defining “indigenous” in the region and as the “voice” and leadership group the WWF-Valdivia and the GEF Marino conduct their negotiations.

Most of the conservation interventions in the area were implemented from February 2001 onwards, when the Association was created to manage the Mapu Lahual Indigenous Park Network and to generate strategies for the development of the nine indigenous communities. The aim of the Association was to unify the indigenous communities living in the Chilean Coastal range of the X region (south Bahía Mansa) and to design a strategy to achieve territorial, economic and political development. The main target was identity-based sustainable development, land ownership and conservation of their natural and cultural resources (WWF, 2007). The association’s founding members were the Paillamanque family (from Maicolpi indigenous community) and Jorge Loy (Loy Cumilef indigenous community), with the close advice and help of Luis Cárdenas from CONAF (currently Regional Director of CONAF X Region).

In the case of the Mapu Lahual Territory, the Mapu Lahual Indigenous Association was created as a local organization through which the WWF-Valdivia allocated funds to facilitate the creation of the Mapu Lahual Indigenous Park Network. However, according to the communities, the WWF-Valdivia was controlling the Association’s activities to pursue the aims of conservation, and the establishment of the indigenous park overall did not work because some local leaders misused funds. Another leader of the indigenous communities located adjacent to the LML MUMPA explicitly questioned the use of the money allocated to the Indigenous Association:

*There were allocated thousands of millions, I do not recall exactly how much, but over thousands of millions, maybe more […] maybe somebody used them for something else, certainly they did a bad administration, they ruined the project and were charging more than they should be charging and maybe the others gave them only a part of the money […] they must have the money somewhere, in Chile there are so many things happening that you never know what the organizations do, imagine, how much money they have stolen, that is being broadcast on the TV or the radio.*

*Ah, no po, llegaron cientos de millones, lo que yo recuerdo, no lo exacto, pero llegaron sobre cien, doscientos millones de pesos, quizás más […] No, es que a lo mejor*
The GEF Marino staff first established their negotiations for the implementation of the LML MUMPA with the Mapu Lahual Indigenous Association because it was the primary visible indigenous organization in the territory. However, leaders from the indigenous communities criticized the performance of the Indigenous Association in its dealings with the GEF Marino. They did not believe that the Indigenous Association, as their representative, met its responsibility to obtain the best outcomes:

[…] I think that Mapu Lahual Indigenous Association has not taken action saying we are the ones who brought the GEF Marino project, we are going to control. This is where we have made mistakes as indigenous communities, letting only that CPALO get benefits, paying to them for an office and secretary, not only because CPALO has been smarter than us, but also because we haven’t fought for the benefits of the project.

The project staff, perhaps understandably, thought that this organization represented all the indigenous communities with whom they were required to work in order to implement the LML MUMPA. The GEF Marino staff realized only later that conflicts existed between the leaders of some of the nine indigenous communities, specifically those who did not feel represented by the Indigenous Association. The GEF Marino staff then decided to work with each of the presidents of the indigenous communities instead of only with the Indigenous Association.

5.4.2.ii. Social and political implications of the relationship between the groups and the Mapu Lahual indigenous association

The concept of the Mapu Lahual Territory, which forms part of the indigenous land claims, was heavily promoted by the Mapu Lahual Indigenous Association, making it appear a unified area where, in fact, nine indigenous communities co-exist. The actual name Mapu Lahual Territory translates as Territory of the *alerce*, which further emphasises how employment in *alerce* logging unifies the communities. However, some indigenous communities, which are part of the Mapu Lahual Territory but resident in the interior, do
not have any relationship with the indigenous communities living by the coastal range. Thus this organization was created to provide interaction between members:

At that time I was a friend of Jorge Loy, when he was the president of the Mapu Lahual [Indigenous Association] and I went to a meeting and I got interested when they said that the organization’s name was Mapu Lahual, and because I know a bit of the Mapuche language I said that means land of alerce. At that time I didn’t know that the coastal range had alerce. Then I went to a meeting and to some training sessions that the Belgian Embassy did and I got integrated because I participated in the workshops of communitarian leadership where you could get trained.

Coordinating indigenous interests proved a highly influential strategy that allowed access to funds and to organizations that these groups did not possess before. Externally, the Association provided the impression that it was representing a large number of people with clearly defined aims and activities. However, in reality, this initiative involved only a minority. The Mapu Lahual Indigenous Association only represents five communities out of the nine, namely Melillanca Huanqui, Manquemapu, Mahui Dantu, Loy Cumilef and Caleta Cóndor. The other four do not feel represented by this association and have a negative opinion of its work. However, the organisation was acting on behalf of nine indigenous communities without consultation with all their leaders. This situation, consequently, resulted in bitter disappointment for the majority and a loss of credibility and support for the organisation:

The ecologists arrived here not to work with the indigenous community but to work with the Mapu Lahual, but Mapu Lahual [Indigenous Association] says that it has nine communities but here the community Maicolpi is not part of it, so is not participating.

That we have no participation in the Mapu Lahual [Indigenous Association], we were Mapu Lahual […] was a board of the communities […] but they became a particular institution […] then they named 20 people I don’t know bow […] I don’t want to know any more about them […] later on they got some grants for communities projects using the communities’ names, mainly for training programmes, to improve the houses of the people to get tourists […]we were happy for that but we feel left behind by the Mapu Lahual and we don’t know bow they work[…] we don’t trust them, but we haven’t quit formally yet as we should have done already, to stop them from using our name because they are not good for us.

The Mapu Lahual [Indigenous Association] is not where it should be, for example when there is a problem in a community it is not there[…] if I’m part of an institution and I have a problem, my institution should be advocating for me[…]it has been a long time that I haven’t seen them [Mapu Lahual Indigenous
5.4. Government, socio-cultural dynamics and politics

According to the Mapu Lahual [Indigenous Association], I don’t know what they are doing[...] I used to go to their meeting to give ideas and to support them but they didn’t move towards what I thought they would do it.

That is what I’m telling you that the Mapu Lahual [Indigenous Association] took our name, didn’t do a massive meeting to explain to us what is Mapu Lahual for, suddenly we realized we were part of the Mapu Lahual [Indigenous Association].

Unarguably, the Mapu Lahual Indigenous Association has been a successful organization due to the fact that it has been able to attract some funds and carry out projects for the indigenous communities. However, it has also been strongly criticised and has, of late, been losing support from some of the indigenous communities. In addition, controversies have arisen as a result of the Association not adequately representing the nine indigenous communities, together with a belief that it has misused funds allocated to these communities. The only other indigenous organisations in Mapu Lahual Territory are the indigenous communities themselves, within which are also very volatile relationships.

5.4.3. Conflicts between and within indigenous communities

Another significant reality is the surprising number of conflicts within and between communities, especially over money issues and in relation to criticism of other members. The following two indigenous people explain the relationships they have within the indigenous communities:

[...] between them [indigenous communities members], seems they, don’t get along too well. When there are meetings they get together, when they have meetings[...] in summer the young people come back [to the indigenous communities] and they have soccer games, the Ernesto Vargas kids go to play soccer but there are no younger people living there [in the indigenous communities] anymore.

Other conflicts within indigenous communities include conflicts over land tenure. The dispute between the Maicolpi and Maicolpué Río Sur communities provides an example of the conflict within a community that resulted in the formation of two communities. Maicolpi was the first community to be registered as indigenous, but because there was conflict about which families were going to maintain the various parts of land allocated in the registration process, they split into the Maicolpi and Maicolpué Río Sur communities.
It was a moment when we had a conflict, for instance, with the road going to Tril-Tril, suddenly somebody was told from the City Council why don’t you take the land down the road and that will be yours and the community up there can rule the upper land. The Maicolpi indigenous community can rule the upper part from the road, there was a separation and then is when the indigenous community Río Sur was created. The community got separated and two communities born in the same territory, that was 1990.

Another land claims conflict produced the communities of Huelllehue and Loy Cumilef, which were originally part of the community of Nirehue. Huelllehue separated from Nirehue around 1998 and Loy Cumilef from Huelllehue around 2002. The existing communities are only separated by a river, with Huelllehue on one side of the river and Nirehue and Loy Cumilef on the other (see Figure 5.8). Despite this physical separation, in terms of culture, community life and space, they are still in effect one community. Their lack of distinct indigenous community identity is highlighted by the fact that the three communities only have one shared artisanal fishers syndicate.

According to current community members, the separation of the communities relates either to disagreement between community leaders or land claims. The former issue involved a dispute over the configuration of the community board. When Huelllehue was going to renew the board in 2002, instead of simply changing the board, they decided to separate into two different communities. One group remained as the Huelllehue community and the other established itself as the Loy Cumilef community, with each community being represented by a new board. This situation was related to conflicts within the indigenous communities centring on the former leader Jorge Loy, who was a high-profile leader. He envisaged his family as a single indigenous community, resulting in a larger share of land divided amongst fewer people:

Our community (Loy Cumilef) is solely my family and relatives. The three indigenous communities of Huelllehue, Nirehue and Loy Cumilef are in the sector or area called Caleta Huelllehue. When the consultants arrived in the indigenous community they said we ought to change the board of the organization because it had expired. They were <Price consultants>, you have to change the board every two years […] Besides, we couldn’t be only one group because the river divides us, Huelllehue was on one side of the river and Nirehue on the other, and Huelllehue community had to do the necessary paper work to become a separate group from us. We got divided as a strategy to resolve the land tenure conflict. In the land there were different owners, it was a strategy to obtain a benefit, it was not because the people of the community fought or argued […].
Thus, for the leader of Loy Cumilef Indigenous Community, the separation from the Nirehue community was intended to gain more government benefits, specifically via the governmental programme *Orígenes*, which only provides aid to legally constituted indigenous communities, as he explained: “*The separation of the Nirehue community was due to the Orígenes programme. When Orígenes arrived in Caleta Huellelhue, the sector was divided into two communities*.”

![Figure 5.6](image)

**Figure 5.6:** Picture of Huellelhue and Loy Cumilef indigenous communities separated by the Huellelhue River. Loy Cumilef and Nirehue indigenous communities are situated on the same side but Nirehue is further east.

The second reason indicated for the separation of the two communities relates to the conditions of land tenure claims, in that family members of the indigenous communities can claim sections of land. These sections vary substantially depending on whether the family are the offspring of another family who are also claiming lands, as the parents claim a larger amount of land than their children. The sections of land are separated by wire fences and a verbal agreement takes place that the other members of the communities respect.

These examples provide another demonstration that land tenure allocation generates conflicts within indigenous communities and it is a driving force in regard to the organization and, in the Mapu Lahual Territory, identification within a particular group.
Chapter 5.- Indigenous communities

The latter emphasises the pre-existence of very volatile relationships among residents of Mapu Lahual Territory.

5.4.4. Review

Relationships with the national and local government, relationships within indigenous organizations, specifically the Mapu Lahual Indigenous Association, and the conflicts between indigenous communities represent social and cultural dynamics that provide background as to how indigenous communities have been functioning. These dynamics point out the strengths and weakness of indigenous communities. The insecurity is caused by lack of security of land tenure and poverty which constitute a shortcoming that has the potential to exacerbate internal and external conflicts. What this suggests is that if indigenous communities have to struggle hard and constantly to generate enough income for their subsistence, it is unlikely they will be able to engage in other activities, such as conservation projects.

Greater awareness and understanding of the source of conflicts in the local communities on the part of the GEF Marino staff could have highlighted the delicate issues affecting these communities and helped to avoid exacerbating old or creating new problems. The decision regarding whom to negotiate with was paramount to all subsequent steps of the implementation of the LML MUMPA. On the surface, certain organization could be seen to be the most appropriate liaisons with whom to commence negotiations. However, the identification of underlying issues necessitated an assessment that the GEF Marino staff could not perform. Regardless of any expectations from other indigenous groups, each group in the study area could behave very differently, thus presenting an extremely complex challenge that had to be undertaken based only on the correct knowledge. The GEF Marino staff acted with a limited understanding of the local dynamics, making interaction with the stakeholders a more difficult scenario.

The discussion here establishes the background in which the Mapu Lahual Indigenous Association was initiated, the relationship between the Association and the discourse groups currently being examined, and the resulting social and political implications. While the Association was the organization that created and promoted the name “Mapu Lahual” for the Territory, this was created in conjunction with the WWF-Valdivia and the CONAF,
undertaking the creation of both the name and a form of constructed identity for the included communities.

Strategically, the WWF-Valdivia has become the gatekeeper for allocating money from external resources, giving them significant influence over the programmes and over the Mapu Lahual Indigenous Association as a local organization. Not surprisingly, Mapu Lahual Indigenous Association members have become disenchanted with the organisation because they felt they were not given enough room to manoeuvre and to initiate their own ideas. They also complained that the WWF-Valdivia was keeping most of the funds, allocating only a small percentage to the Mapu Lahual Indigenous Association, a common practice within larger conservation NGOs, as noted by Chapin (2004).

This lack of trust within the communities has affected the implementation of the LML MUMPA. Many anecdotes circulate regarding members of the community, especially the leaders, stealing money from the Mapu Lahual Indigenous Associations and other indigenous organizations to which they belong. Goods have been allocated to the indigenous communities or the money allocated for projects for the communities were not passed on by the presidents. Many of these rumours likely have no foundation, and in fact are based on things that cannot be proved. While it is likely that they relate, in part, to personal disputes, they nevertheless also indicate a deeper level of disenchantment within the communities.

The difficulties that the GEF Marino staff encountered when establishing contact with local communities have been linked to criticism, past experiences with other private-public agencies, and the lack of an effective way to present projects to those with little formal education. The GEF Marino staff were not aware of these situations. Consequently, they had difficulty in overcoming them and creating more effective strategies.

5.5. Summary

This chapter has illustrated specific characteristics of the indigenous communities placed as main stakeholders of the LML MUMPA project. The complex realities of some indigenous communities in Chile demonstrates the extent to which this type of complexity may
hamper any ICDP in which project staff do not fully understand the lived realities of indigenous peoples. In this particular situation, living in lands that do not belong to them is not considered a land encroachment, and neither is it deemed a situation where they are taking advantage of their indigenous condition given that the inhabitants of these indigenous communities are a product of an old history of eviction and abuse from the colonial times.

Personal information drawn from the history of the inhabitants from these communities tells of harsh life conditions and situations. These indigenous people have experienced situations from childhood that have left them without an opportunity to achieve a quality life in their native hometowns: they were forced by these conditions to leave their hometowns in order to look for better options for their livelihoods, which they found in this very remote area. Here, they have been able to exploit free access to natural resources in a sustainable manner. These people, with much effort, have made their living from poor conditions, lacking the basic facilities many of us take for granted.

In some ways, the indigenous communities have more rights to live in these lands than do the actual owners. As outlined above, the first owners bought the lands in special circumstances and for a very low price, and the current owners knew at the time of the purchase that these lands were inhabited. Because of this situation, the indigenous people have lived in this territory with the constant threat of being displaced or evicted at any time. If the constant insecurity and minimum basic services were improved or removed, they would live in the area year around. The weather, which is bad for most of the year, impedes the indigenous communities’ capacity to leave in case of an emergency. In addition, their children do not have the opportunity to finish school in the indigenous communities.

Regardless of their good intentions, the NGOs and other private institutions working with these communities have made a profit from the projects conducted in this territory. In this sense, they have gained more than the indigenous communities for their participation in the project examined in this thesis. The natural resources in this territory have been protected using indigenous people as an emblem. Effectively, the indigenous people have been used by conservation NGOs to their own ends and not to ends identified by the

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98 Kindermann and Renous.
99 The first owner of the lands bought it when the lands were not inhabited.
5.5. Summary

communities. Ultimately, this strategy has had good outcomes for the environment. Thus, in a passive, if not ironic, way these indigenous communities have contributed to protect biodiversity, but only at some cost to themselves.

All of the ethnographic socio-economic, cultural and political findings discussed in this chapter about indigeneity have shown, through a detailed analysis, how the cultural category of “indigenous/indigeneity” can be in fact a “discourse of indigeneity”. Being indigenous is actually constructed out of multiple intersections of power, law, local cultural politics, land-use, mobility, and shared history and, as a result, there are multiple “discourses of indigeneity” operating in the study site. This chapter has described how the constructed discourses of indigeneity have emerged.

Summarising the main findings in relation with indigenous communities reveals several conclusions. Specifically, in the case study, indigenous people did not demonstrate TEK related to both the marine and terrestrial ecosystem, indigenous people have lost the indigenous language and practices, indigenous people were not permanent residents of the indigenous communities, and indigenous people have practices that damage their environment. There is a specific ‘disjunction’ or ‘set of mistaken assumptions’ that contrast ICDPs from the fieldwork findings outlined above. All the findings reported in Chapters 4 and 5 reflect that the cultural world that was found and studied was really quite different to what was expected given what was read about indigenous peoples in the literature on ICDPs. Based on that literature, indigenous people were constructed in simple ways, as long term inhabitants with long term environmental relationships. The fieldwork findings did not accord at all with those simple assumptions. Chapter 6 proceeds to detail how this problem leads to the inevitable failure of the project. A failure to grasp complex socio-cultural dynamics is a major weakness of ICDPs as stated in Chapter 2, and is indeed what was found in the fieldwork. Chapter 6 details to why this caused the relationship between the GEF Marino project and the local communities, namely artisanal fishers and indigenous communities to fail.

100 The do not have TEK in the sense of protecting and exploiting nature in a sustainable way or with a knowledge accumulated for many generations and do not have TEK that reflects moral, ethical and spiritual dimensions related to the environment that are the characteristics of TEK described in the literature.
Chapter 6

Research implications for the implementation of the GEF Marino LML MUMPA project

This chapter first reviews ethnographic data from local artisanal fishers and indigenous communities relating to their participation in the project\textsuperscript{101}. Using these data, the chapter identifies the main issues found by this research in relation to both local groups. Finally, potential strategies for future ICDPs are identified, relating the lessons learned from this research to the broader context of ICDPs. The discussion of the GEF Marino project in this chapter centres on two aspects, namely the misunderstandings of the socio-cultural dynamics of the communities and the problem of participation which undermined the key assumption of how the project should be done.

The following is a discussion, from the fisher/indigenous communities’ point of view, about their engagement in the processes that comprise the ‘core methodology’ of an ICDP (participation, consultation, balance of socio-economic and environmental goals). It is focused in particular, on the two key themes of the thesis, that is the need for more ethnographic approaches to provide insight into 1) socio-cultural dynamics and 2) participation by indigenous groups and non-indigenous local resource users in the MUMPA project.

\textsuperscript{101} Quotes from interviewees are included in this section. When the quotes are from an artisanal fisher or indigenous community member their names are not provided, but when the quote is from the marine biologist Pedro Vergara or Claudio Castro their names will be provided to differentiate their opinions from the ones of the other two groups.
Within the artisanal fishers and the indigenous communities sections there are two sub-sections, the first dealing with the problems in rolling out the project's methodology by the GEF Marino staff, particularly the lack of meaningful consultation, participation, and the reasons why this happened, and the second dealing with the ‘socio-cultural dynamics’ and how a failure to understand local complexities resulted in the local groups’ lack of engagement in the project.

6.1. Artisanal fishers’ relationships with the LML MUMPA

The opinions expressed in this section reveal the artisanal fishers’ understandings of the GEF Marino project, including their values, interests and expectations and evaluation of the GEF Marino which, as an organisational actor, tried to implement a project reliant on substantial funding through an approach derived from ICDPs. The artisanal fishers described the main topic regarding the LML MUMPA implementation process as the exclusion of potential stakeholder groups. The specific issue concerned the fact that the GEF Marino did not acknowledge the negative effects that the exclusion of the historical artisanal fishers, namely FEDEPESCA, would have both on the implementation of the LML MUMPA and the economic livelihoods of the fishers themselves. The project’s conservation ideals have, in fact, exacerbated social tensions in the region by imposing constraints on the traditional resource use rights of one group whilst simultaneously granting increased access to another. This situation limits the success of the ICDP, which relies on the consent, commitment and participation of local stakeholders.

6.1.1. Artisanal fishers’ participation in the GEF Marino project

At the project commencement, none of the artisanal fishers’ organizations from Bahía Mansa were included either in the design or the implementation of the GEF Marino project. Later, however, it became necessary for the coordinator of the LML MUMPA,
Cecilia Godoy, to include artisanal fishers’ organizations that belonged to CPALO because two non-indigenous artisanal syndicates were allocated MEABRs within the LML MUMPA boundaries. In addition, she thought that because the artisanal fishers’ associations from the indigenous communities located adjacent to the LML MUMPA (including these two syndicates with a MEABR in the LML MUMPA) were part of the CPALO, it was a good idea in the interests of fairness to include CPALO in the project. However, Godoy did not anticipate that the CPALO’s president and some of its non-indigenous members would also be interested in participating in the project because of the financial benefits associated with it. The following are the opinions of fishers about the CPALO inclusion in the LML MUMPA project:

\[\ldots\] it is supposed that the GEF Marino project got here because of the indigenous communities, that is what I understand. Then, because the indigenous communities used to transit here, they used the sea (to transport alerce) and were also fishers, Lucho got the idea that if the indigenous communities were members of CPALO, and because the indigenous were also fishers Lucho said the CPALO has to be included in the GEF Marino (project) \[\ldots\] he said that it cannot be that such a project of so many millions will be only for the indigenous communities, it also has to give something to the fishers \[\ldots\].

Originally there was no consideration of the artisanal fishers, we demanded to be incorporated in the project. This was mainly focused in (indigenous) communities.

Some historical artisanal fishers from FEDEPESCA see the GEF Marino project as a threat due to the regulation of the LML MUMPA, which favours the people who live closer to it over those who more directly use the marine area. The historical fishers therefore think that they are unable to validate their customary historical right to fish in that area, and subsequently see their economic activity being restricted by the LML MUMPA. However, on top of these difficulties the artisanal fishers, both historical and new, had high expectations in relation to their participation.

6.1.2. Expectations of artisanal fishers regarding participation

All the artisanal fishers have the same expectations of the LML MUMPA, namely to have a new source of income through taking tourists to the LML MUMPA and to be allocated resources for policing their MEABRs. Notwithstanding in the interviews, different

\footnote{CPALO consists of both indigenous and non-indigenous people and organizations.}
perceptions regarding values of the marine resources were expressed by artisanal fishers. Importantly, the historical artisanal fishers arguably attributed far more value to the protection of the marine resources because, as they expressed, their livelihood depends on this. However, the GEF Marino failed to recognise this and did not assess whether or not the participation of these fishers had the potential to contribute to the protection of the LML MUMPA. The following is the opinion of an artisanal fisher that reveals the environmental attitudes of the artisanal fishers:

The artisanal fisher is not a predator of the environment and nature, he only takes what is necessary for him and his family to live, doesn’t pollute the sea, doesn’t discharge toxic liquids, doesn’t provoke massacres of the marine animals. I want to be clear about it […] industrial fishing is not the same, they destroy ecosystems, they destroy everything they find, don’t respect anything, also they release many toxic liquids in the sea, that slowly poisons the sea.

Other experts in marine resource regulation do not agree on the validity of this assumption. Marine biologist Pedro Vergara, for instance, doubts that artisanal fishers are capable of protecting the resources they exploit.

[…] you hear now that leaders and artisanal fishers are into the environment. When you face them and ask them directly all of them are going to say that they respect the environment. They understand that if they do not do that they won’t have enough natural resources in the future, but at the same time that a leader is telling you, other artisanal fishers are poaching loco, extracting loco illegally, the indigenous are logging live alerce. It will be a long time before the local people will really put in practice what they think is good for the environment (Pedro Vergara, marine biologist).

Most of the fisher interviewees mentioned that they would like to participate in the GEF Marino project, but only if they received concrete benefits. For them, attendance at meetings does not equate to participation as it does not involve them in project decision-making processes. Many interviewees spoke of their desire to keep participating in the GEF Marino project and the ones that have not been participating, which are the artisanal syndicates from FEDEPESCA, have expressed their desire to be included. All see an opportunity to diversify their incomes especially by working in eco-tourism, and view the GEF Marino as facilitating this. On the other hand, some artisanal fishers criticise the project’s operation because they expected the GEF Marino to have managed funds more effectively. Consequently, artisanal fishers think the GEF Marino project has wasted their money, and they are neither motivated nor engaged to maintain and further the GEF
6.1. Artisanal fishers’ relationships with the LML MUMPA

Marino staffs’ main goal of protecting the LML MUMPA. The following quotations express the expectations and opinions of artisanal fishers regarding the LML MUMPA:

Cecilia Godoy wants to include us as a number not as a real participant of the project, and we want to participate in the GEF Marino project but we need protection of our shoreline and foreshore and of the management areas we have.

I had a conversation with the GEF Marino staff and asked if they could buy me a boat full of equipment to take tourists and to do advertisements on the radio and the TV [...] they said no, that the project was not for that and if they were going to give something to the indigenous communities, it would not be in that way. But I said I’ll do it as an organization, for example one day I work, the next day my mate [another fisher] and in that way we are making money, they said no. I talked with Cecilia Godoy [...] it is good if they bring tourism from overseas, to give us work through that, but tourists are coming from other countries and we don’t have the resources to cater to them. For instance, with the boats we have to take tourists from Bahía Mansa to the marine park which they have already implemented, it take us one or two hours and with a high speed engine it could take 15 minutes, it’s more secure too [...].

Well at the moment, through CPALO, we are participating in the GEF Marino project, but if the project was how we were told it would be in the beginning, that they were going to provide some training, if this would have happened and they delivered that, I could at least have a job as a ranger, that would be welcome.

If they would have protected the coast and the sea it would have been good, but what is happening [...] the GEF Marino spend 300 million pesos and what did they do? They didn’t do anything. If I go to the LML MUMPA I can fish at any time. They are not protecting it. What they have done: strolls, meetings, parties, meals, lobby, overseas trips, spending money, and what have they done that is concrete? They should have established an office, they should have had a place to receive the local people, how they have wasted the money! They haven’t been smart enough.

Fishers (from CPALO and FEDEPESCA) have made it clear that they mostly feel disappointed, and still expect benefits from the GEF Marino project. Despite this opinion, some benefits from the GEF Marino project have been realised which are outlined below. In addition, it is important to stress that there is a relationship between the socio-cultural dynamics and the participation problems. The insights about the missing understanding of socio-cultural dynamics of the GEF Marino project inform an understanding of the ‘participation problem’ and breakdown of trust.
6.1.3. Artisanal fishers’ socio-cultural dynamics that impacted on the GEF Marino project evaluation

The GEF Marino project has had positive outcomes for some fishers’ organizations in the sense that it has provided concrete things for the artisanal fishers’ organizations which are members of CPALO, including money for engines and boats. The following quotations represent what artisanal fishers believe to be the LML MUMPA outcomes:

We have some benefits for our syndicate through CPALO from the GEF Marino project, gasoline to patrol the areas and a little help to buy an engine for a fishing boat, a part of the cost of a fishing boat.

Cecilia Godoy has supported us with cash to buy a boat, with 1,000,100\textsuperscript{103} pesos and gasoline (115 litres) to patrol at a cost of 111,000 pesos\textsuperscript{104} [...] for a project [partnership patrol].

However, for FEDEPESCA, the impacts of the LML MUMPA implementation have been largely negative, including restricting the use of the marine area and providing access rights to communities that did not historically use the area to fish, without providing any concrete benefits in compensation.

Patricio Arriagada, President of syndicate Playa Centro, said that the only help provided by the government was a loan by SERCOTEC\textsuperscript{105} together with two-way radios for the nine artisanal fisher organizations from CPALO. Despite several opportunities, however, he failed to acknowledge that he and all the institutional members of CPALO also received from the GEF Marino project approximately one million pesos\textsuperscript{106} to spend on anything the organization wanted for the improvement of their fishing occupation. When Arriagada was asked directly about the money, he admitted that he had received it and had used it to purchase a boat engine. While he told me at the beginning of his interview about the engine he bought for a fishing boat, he did not indicate that the engine was a direct result of the GEF Marino project investment in the community, despite there being no obvious advantages in failing to acknowledge the extent of the contribution of the GEF Marino project. Similarly, Arriagada mentioned courses in technical training (including apiculture,
6.1. Artisanal fishers’ relationships with the LML MUMPA

computer skills, artisanal fishing and snail culture), all of which were supported by other government projects but not the GEF Marino. Consequently, most of the benefits from the GEF Marino project that the artisanal fishers acknowledge stem from the money they have been allocated and from the diving courses. Any expected benefits in terms of environmental education were not acknowledged.

One issue fishers from FEDEPESCA mentioned as part of the GEF Marino evaluation is the importance of showing the boundaries established by the LML MUMPA, which constituted a paramount issue for them. The GEF Marino was enacting restrictions and FEDEPESCA needed to know the boundaries of the area in which they were no longer able to fish.

[…] At that time there was already the idea that the GEF Marino was bringing in large amounts of money, there were expectations and a belief that the money was only for CPALO artisanal fisher’s organizations. FEDEPESCA being the main user of the marine resources of the MUMPA wanted the GEF Marino staff to show them a map showing them the boundaries of the protected area (Claudio Castro, marine biologist).

The underlying argument or rationale for the fishers’ perspectives is that their opinions and willingness to comply with the enforcement constitutes a central factor in the success of the LML MUMPA. However, the GEF Marino has neglected the very aspect that appears to be essential for the historical artisanal fishers, namely a lack of equity. The economic behaviour of FEDEPESCA historical fishers has effectively been constrained by the LML MUMPA and yet the GEF Marino had not understood or recognized their culture and related social practices that could have been fundamental for the enforcement of the LML MUMPA. The staff thought that having to consider additional demands, such as those from FEDEPESCA, would have unnecessarily added to the project’s complexity and divided the funds amongst more local people.

Pedro Vergara, who is well acquainted with all the different identities, culture and types of fishers present along the Osorno shoreline, thinks the GEF Marino staff’s inclusion of CPALO members, as the main stakeholders in the project was an obvious mistake. He argued that most of the CPALO members are not historical fishers, i.e., not “real fishers”, and, thus, were not affected directly by the limitations on fishing areas. He further believed that their inclusion was of little help to the project and instead was a waste time and
money, because CPALO members wanted to participate in the project solely to be allocated benefits. The GEF Marino staff could, however, have consulted Vergara about the cultural models and differences between the fishers’ groups in the Osorno shoreline. Furthermore, while Godoy, the coordinator of the LML MUMPA, was committed to doing many things with artisanal fishers’ organizations from CPALO, many of these have never been accomplished. As for the evaluation of the LML MUMPA by the leaders of the fishers’ organizations interviewed, there are two issues mentioned:

- Exclusion of some from project benefits, and
- Promises that were not carried out.

These situations are related to each other because both involve the operational strategies adopted by the GEF Marino staff in the implementation of the LML MUMPA. Based on ethnographic evidence collected from artisanal fishers and indigenous communities it can be concluded that these situations could have been averted and/or managed in a different way if the approach, attitude and criteria of the GEF Marino staff had been different. Specially, it is suggested that had the approach been geared more towards socio-economic and cultural aspects than biological and ecological factors, that the outcome may have been quite different.

The four artisanal fishers’ organization members of FEDEPESCA referred to several events that demonstrated their lack of participation in the project. While they attended two meetings with Cecilia Godoy, they were originally supposed to have four meetings. The last two meetings were not held because Godoy failed to attend, which upset the fishers. Claudio Castro also confirmed the fishers’ frustration with the GEF Marino staff. Similar opinions expressed by the FEDEPESCA leaders support Castro’s stance. The following are quotes from a fisher, together with two from the marine biologists, who refer to FEDEPESCA’s lack of participation in the LML MUMPA:

Yes she left us waiting for her, we got together and she didn’t come. In another of the supposed meetings we were going to have she sent Alejandra Paineo who was her assistant, to talk to us and in the fourth meeting she didn’t send anyone, she didn’t even apologize for not coming to the meeting that was set up, she didn’t give any excuse. The GEF Marino resources have been allocated to some people but not at the grassroots […] to two or three leaders that have managed to have their people as part of the project.
The GEF Marino project started with good intentions, but they made the mistake of not listening to the people that knew about the shoreline. I knew the shoreline and they did not take me into account. They invited fishers of Bahía Mansa that should not have been invited, to the very first meeting, and it was then when the problems of the GEF Marino project started (Pedro Vergara).

If you read the GEF Marino project document, it talks about all the artisanal fishers of the Osorno Province shoreline; it does not make a distinction between all the artisanal fishers’ organizations in the area. The GEF Marino staff only worked with one organization, CPALO. The GEF did not know prior to starting the project and during its implementation, all the stakeholders and their differences in the locality where the MUMPA was going to be implemented. What I have seen is that not everybody has a good impression of the project […] The GEF Marino staff should have treated FEDEPESCA in a more delicate way, because they are “historical” in the locality and they feel the GEF Marino staff did not treat them well (Claudio Castro).

Much of the evaluation of the GEF Marino project relies on the direct benefits that the different stakeholders have received during the implementation of the LML MUMPA. The main complaints are related to the failure of the GEF Marino to assist the artisanal fishers and indigenous communities with their needs, despite its high level of funding, with promises made to the main stakeholders that were not carried out. Even though most of these commitments were to the indigenous communities adjacent to the LML MUMPA, the artisanal fishers also comment on promises not honoured: ‘In theory the idea of the GEF Marino project is good but what has been accomplished is not, in theory it is good but in practice it is not’\textsuperscript{107} The following quotes describe what they perceived as promises not honoured and subsequent disadvantages for historical fishers:

The communities that are located closer to the MUMPA have had more benefits, but besides the fact they have received more, they haven’t had all that they were promised. […] it hasn’t been that much, that is why I say a little bit more but not all that should have been, because for the millions that they said [giggles] that’s right it was supposed in Huelleline it was going to be a heliport, they were going to build huts and all those things for tourism […] because there were millions.

There are two or three miles offshore that they want to protect, seabed and water, so we can go around, but not to fish. They want to do a public consultation […] but I think if they ask CPALO and the indigenous communities we are going to lose, because none of them fish with a hook, but in the summer time the marine park is a good place to fish with hooks, you can fish the conger that gets good prices, those are good places to fish for us, we can fish a lot there […] so we got angry when they told...

\textsuperscript{107} Here the fisher refers to the promises made to the indigenous communities as opposed to any promise made to him personally or his group FEDEPESCA, who have been excluded from the project.
us that we were going to be forbidden to fish there, of course if they ask the indigenous communities if they can fish there they are going to be happy if we don’t fish there, that’s what we talked about with Godoy [...].

For Claudio Castro, the benefits of the project have been exaggerated. Externally, it appears to be a promising project in that it implements a large MPA that would then provide a pattern for the rest of Chile, but in reality the project has achieved little progress in protecting the marine and coastal areas and has instead escalated conflicts motivated by rights of access to marine resources.

The different evaluations expressed by the stakeholders of the LML MUMPA project reflect the conflicts among the participants and illustrate the reason for clashes among the local groups. The project evaluations illustrate constructions of this ICDP as a project that favours the GEF Marino staff’s scientific knowledge. However, careful and cautious assessment is necessary for a sound understanding of the social-economic and cultural dynamics present in the local communities. According to fishers, the project staff made promises they did not keep. Whether these claims are true or not, that they exist in the minds of the fishers community members, demonstrates that trust was not being created between the parties.

6.1.4. Summary

The fact that the four coastal indigenous communities are the main participants of the LML MUMPA project and to some extent, the members comprising CPALO, but not the historical fishers from FEDEPESCA, shows limitations in the application of ICDPs. The fieldwork evidence supports the observation that people with different values respond to the project differently. For instance, if their emphasis is on caring about the environment and protecting natural resources, they will be keen to participate in the project. However, if the environment is not a primary concern, it is unlikely that they will participate in a project which has no direct economic benefits for them.

The GEF Marino staff decided to include the indigenous communities as the main participants of the project, believing that they placed greater value on the environment based on their existing engagement, as proof of significant commitment with another environment project, the Mapu Lahual Indigenous Park Network. Mistakenly, the GEF
Marino believed that all members of the indigenous communities valued the protection of the environment because the indigenous communities based their land claims on their indigeneity, a claim associated with environment protection through the accumulation and use of TEK. However, as is illustrated in Section 6.2, this is not true for the majority of members of the indigenous communities. Rather, it primarily constitutes a strategy to gain legitimacy over claims to the land. Therefore, the existing values regarding the environment both challenge and weaken the claims based on indigeneity.

Despite expectations that an ICDP would raise awareness of environmental threats or encourage better organisation, only material, concrete things appear to be recognised as valuable by the participants in the LML MUMPA. Even these, it seems, were not always considered sufficient, as it was also common for stakeholders to forget some of the concrete benefits of the GEF Marino project because they did not fulfil every aspect of their expectations. Other, non-material things, such as education and workshops, appear to be discounted as an important benefit from the GEF Marino project.

The heterogeneity of the local actors in the area in which the GEF Marino project has been implemented has limited the processes expected to contribute to the success of an ICDP. In addition, due to the GEF Marino staff having to negotiate with several groups with diverse demands, different strategies were required to approach and engage each of the groups, especially because the GEF Marino implemented this project in an area where relationships are susceptible to heightened tensions because too many people are claiming access to a small amount of resources. Thus, existing competitiveness among local actors was exacerbated by the GEF Marino’s involvement, creating a high social-psychological impact for the historical fishers in particular, who saw the LML MUMPA as another wave of limitations that could affect their incomes. As a result, the processes and frameworks developed within the ICDP approach were unable to account for the emerging tensions amongst the local actors. Instead, the LML MUMPA project created discomfort and disappointment among all the different stakeholders.
6.2. Indigenous communities’ relationships with the LML MUMPA

Through discussing their expectations, alongside their subsequent evaluation, of the LML MUMPA, indigenous communities have narrated their relationship and opinions about the project and its managers. A lack of participation, unfulfilled promises, and lack of trust in relationships with the GEF Marino project are highlighted as central issues by the indigenous communities in their interaction with the project. They also held high, possibly unreasonably high, expectations for the LML MUMPA, viewing it as a solution for their vulnerable economic state.

6.2.1. Indigenous communities participation in the GEF Marino project

The indigenous communities expressed concerns about the implications of their participation in the LML MUMPA because this project could result in additional restrictions on their access to natural resources (alerce, white timber and coastal areas). Despite these concerns, they wanted to participate in the ICDP because they believed and hoped it would assist them not only in their socio-economic development, but also in their most important goal, namely securing legal land tenure. The following is a quote of an indigenous community member.

“We are participating; if we don’t participate we are going to be left behind even more because we are going to be informed less of what can happen to us in the future, we have to participate.”

Indigenous communities have expressed specific understandings, expectations and an assessment of the LMI. MUMPA. In these they make meaningful connections between their situation and the LML MUMPA, through narratives which work together to create a cultural discourse shaped by their local reality. The following is a quote of an indigenous leader regarding how he began to be involved with the LML MUMPA:
6.2. Indigenous communities’ relationships with the LML MUMPA

He came (staff project) to me after I finished my presentation and congratulated me for all that we were doing that was very new, that has not been done elsewhere (referring to Indigenous Park Network), and then he said: [Jorge have you ever thought about the shoreline?] I said right away, that I had thought very much about that and that I was very worried because the arrival of the ME-ARBs and their lack of consideration for their customary rights of the indigenous over the sea […] so he told me that he was the National Coordinator appointed by the government of Chile travelling through Chile his task being to find a suitable place on the coast to create three marine and coastal protected areas and asked me [what I thought about that?] and I said without thinking that it was a great option at that time, when we could do something independently of all the later work of integration, participation that are very complex issues […] there were many meetings. I invited Alvaro Rodríguez to come to the field. We came to see the sea and he told me on the way little by little the idea of how this could be carried out.

6.2.2. Expectations of indigenous communities regarding participation

Following this research, little doubt exists that the GEF Marino generated significant expectations, especially amongst the indigenous communities. These expectations, according to the indigenous people, were never fulfilled. The activities or procedures utilised by the staff changed during the project, but these modifications were not communicated to the local communities. The result was a lack of trust and confidence, which in turn understandable adversely affected the participation of the communities concerned. The following quotes from indigenous people express their expectations of the LML MUMPA:

The people should have known and because they didn’t know they got expectations. Ms Marlene for instance, (the GEF Marino Staff) told her they were going to build a kitchen, they promised that to her and they never carry out that. That is what provoked the people. I know when the women started to work (Cecilia Godoy) they told us that we will have the possibility to put our kids in schools and universities even we would have that choice […] That this project was going to be a sort of coordination with other institutions, thus, they were going to make agreements with universities to take young people from our communities to the universities, even we conducted a survey of how many young people from each community were in conditions to go to university […]. We conducted this survey in the nine communities, and told them (project staff) and in the end nothing has happened. Who is in the university?

Unfortunately the man [Alvaro Rodríguez] had a strong personality and I think that he needed to listen better to the people, because to develop a mega project of this size, in this case in our territory inhabited by communities, we have another rhythm as
indigenous communities, a little bit different to what the government does, because the government proposed and said this is what should be done and want to do it very quickly without seeing what could be the consequences, to see if it is going to bring development or not to the indigenous communities.

The GEF Marino was seen as the solution to all the problems, the solution of all the pain of the coastal range inhabitants specifically, but it was not like that. I don’t know in what corner, in what part of the way everything twisted, I really can’t understand [...] it was true that there were a lot of millions of dollars invested, but we didn’t see where and in what, only some training for indigenous people.

According to the communities, one striking problem with the project’s activities was that most of the meetings were held in Bahía Mansa where the leaders of the indigenous communities lived, or at least travelled to regularly. While leaders often move between the indigenous communities and Bahía Mansa, some people from the indigenous communities hardly ever go to Bahía Mansa. Hence, these people effectively the grass roots of the indigenous organizations, could not participate in the meetings. It was evident during participatory observation and through the informal interviews that, because they were unable to attend meetings, these people did not possess as much information about the GEF Marino project as the leaders of their communities. Indeed, some people knew nothing about the project at all. However, expectations of the indigenous communities were clearly very high, relating mainly to the concrete things promised by Alvaro Rodríguez as the designer of the GEF Marino project.

In the specific case of these indigenous communities, besides their desire to obtain titles to their lands, they also wanted to be able to work with the alerce free from obstacles and to live there if they wanted. In the Caleta Cóndor indigenous community, only one family has owned land, which they eventually sold in 2009. The purchaser of the 140 hectares was a lawyer, Valdemar Monsalve, a non-indigenous person. In 2008, one of the families of the Loy Cumilef indigenous community, the Campos Mancilla, also offered their lands for sale. The father of the family suggested he would sell at a very good price and even offered it to the researcher. This attitude seems indicative of the likelihood that many people who are allocated land titles would sell them if somebody was willing to buy\textsuperscript{108}. Life in the indigenous communities is very tough, and, given sufficient available

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\textsuperscript{108} This seems to contradict the claim earlier in this chapter – when discussing the importance of land tenure for the indigenous communities – that securing tenure would be imperative to more permanent residence, but
capital, community members will not hesitate to move to a better place. Their residence in
the community is the result of a lack of money and other options. The least they expect is
to own land where they live or work and to have access to the alerce as their main source of
income.

6.2.3. Indigenous communities’ socio-cultural dynamics that impacted on the GEF Marino project evaluation

Three aspects of the LML MUMPA critical for the indigenous communities were not
achieved. These aspects directly relate to each other in that they correspond to results of
the approach and discourses of the GEF Marino staff. These aspects are:

- Participation,
- Promised concrete benefits, and
- Trust in relationships with project staff.

Level of participation was a key issue in the LML MUMPA ICDP because the project’s
aims depended on the interaction and interest of the main stakeholders. The development
component of LML MUMPA was based on participation. If participation was lacking, the
project was naturally hampered in achieving its objectives. A majority of the leaders in the
study site felt, however, that they were not able to participate fully in the project. A
significant number of interview records illustrate the negativity which indigenous people
experienced as a result of the GEF Marino project, illustrated by the following opinions of
indigenous leaders about their participation:

_We are being exploited (by the GEF Marino) and because we didn’t have the
knowledge or were not aware we were absorbed. I’m one of the opponents of this
(GEF Marino project) I never agreed with this, for the way the project was carried
out. Firstly, that the project elaboration and the configuration was done top-down and
they came to say this is what we want to do, but the people never had the opportunity
to have their say […]._

_The GEF Marino had a strong relationship with the (Mapu Lahual Indigenous)
Association. I think that (the Association) is participating, but in appearance only_

was also a situation found among indigenous communities’ members that would need further analysis, but it
is out of the scope and aims of this thesis. It can only be stated that both situations co-exist.
and not to be present to say whatever they wish, but it seems you are participating. We
didn’t know how many items there were, we didn’t know what they were going to
spend that money on. A couple of walkie-talkies that they gave us, and do you think
that is development? To give a few radios in a community. We were told that they
were going to build a wharf, trails, and I said to Jorge Loy what things are they going
to give you?, a Bloody but, not even a Bloody but be got, and the project is already
finishing.

The project designer’s manager, Alvaro Rodríguez, engaged the local people by offering
to carry out the eco-tourism-based tasks they were unable to do or complete. The promises
made by the GEF Marino project to the indigenous communities which were unfulfilled
are listed in a letter shown in appendix E. The local communities were very disappointed
with the LML MUMPA because of these unfulfilled promises, feeling that they had been
cheated and the perceived breaches were symptomatic of a wider loss of trust.

The following quote comes from a letter signed by four indigenous leaders, namely
Juan Fica (Huellehue indigenous community), Eduardo Vargas (Nirehue indigenous
community), Ariel Millacheo (Caleta Cóndor indigenous community) and Jorge Loy (Loy
Cumilef indigenous community). In this endorsement, the four leaders agreed to participate
in order to obtain the economic development package they were promised for engaging in
the ICDP.

[…] We were three or four people that signed (the endorsement of the GEF Marino
project) we didn’t know deep enough what was the project going to do, but with all
that they offered we could not say no.

The development aspect of the project was also focused on establishing a commercial
mussel farm for a mussel known in Chile as “Choro Zapato” (Choromytilus chorus), which
had been overexploited in the 1940s. The mussel venture, together with all the ventures
and activities listed in the PDF stage by Alvaro Rodríguez, and in particular establishing the
LML MUMPA eco-tourism infrastructure at the site, could not be fully carried out in the
implementation stage not only because of the lack of land tenure, but also because co-
funding from the regional government was never allocated. The entire promised
infrastructure (see appendix E), therefore, was never completed. The unmet expectations
regarding such promises were frequently a part of the discussion with indigenous leaders
who had signed the project endorsement. The following quotes, for example, outline the
opinions of members of indigenous communities about such unfulfilled promises:
The GEF Marino was going to build a road down from Huellehue bridge that never existed, later that they were going to put a gondola from the Mirador from a place where the road ends and they were going to put a gondola there to come down from the air, it never existed and no money has been allocated, only bandys.* They gave us [...] also the GEF offered us heaps of millions, I have the project, is all written in details and that was money that was going to be invested, and hasn’t happened anything [...] they were going to construct hotels in which members of the community could stay, if you knew how much they offered us and we were so happy about that, [...] we give an endorsement for that project when they were telling us all those things they were going to give us and we needed so much especially the road, imagine we used to walk seven hours from here to there, now I don’t venture to do it, because I’m too old.

So far they (the GEF Marino project) haven’t fulfilled anything, only they have given us a few radios (bandy), almost nothing only trails that they hired us to make, but this is a minimum [...] I think that CPALO have received more benefits.

I wouldn’t need another environmental project [...] because I know that many people come with those projects and they try to convince us of things that after they don’t fulfil and that we don’t like it, most of the people say that we don’t want or need more projects, we don’t want more projects because they earn money using us as an excuse and then they go and leave us and so are not helping at all.

The GEF Marino was a project elaborated by them, they said that their aim was to help the indigenous communities, but to help the indigenous communities in the protection of the sea [...] when Mapu Lahual Indigenous Association supported the GEF Marino, the project was focused on the indigenous communities and later there was a twist and the GEF Marino staff said this was only to protect the sea, to undertake research relating to the sea and as indigenous communities we have not received any benefits, only we have been allocated walkie-talkies [...] when the project started they told us the project has this many millions and will be split between the nine indigenous communities [...] they told us we were going to build a lodge, huts, all those things they offered us.

The project expanded too much and we were left behind, now this year (2008) changed all the system the coordinator (Godoy) she said that now she is only going to include in the project the communities that are in the LML MUMPA.

As discussed above, most of the indigenous people of these communities have low levels of formal education and literacy, and thus found it extremely difficult to participate in the GEF Marino meetings, make their opinions heard, and understand the blueprint of the project. They described this as another significant reason for their frustration with the project:

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* Two-way radios.
Well, more than anything they don’t understand, if you have a little more studies you understand, but there are people who do not and are of the opinion that this study is not beneficial because it is not focused in all topics, but you can’t encompass it all if it is one project.

[…] because we don’t have the same level of education that the decision makers have but we are important because we are in the territory and that we have as you said traditional knowledge that can help the development of the project.

The most polemic issue emerging from the project’s implementation was the mistrust generated by the GEF Marino regarding the projects’ funds and its capacity to set access restrictions in order to protect the marine and coastal resources. Leaders of the indigenous communities emphasised that, given that trust constitutes the basis of any future negotiation of the project, mistrust was completely counterproductive:

I also don’t trust the development of the project (the GEF Marino), in my mistrust I have and that I will never stop to have it, however, I want to be there, because I agree with the government and the international organizations that are supporting to protect the natural resources and is something that we all share, but the development of the project and how it has to be carried out in the future that is a topic that we don’t have confidence in, that makes me think a lot but also motivates me to be committed and to participate in the decision making and to try to find the way to negotiate […].

I still don’t quite understand deeply enough what is the GEF Marino, we always have been suspicious with the GEF Marino, because at this moment they have said they are not going to interfere with what we are doing but suddenly in the future they can say you can’t fish or harvest anything […] so we are always a wee bit worried […].

The expectations held by the indigenous communities in the ICDP in terms of benefits and outcomes produced an escalation of problems, which were not addressed appropriately. Two key factors in the interaction of the project staff and local communities were, first the ability to gain respect, and second the capacity to carry on with the agenda established with the communities. In this respect, the communities’ assessment of the project was influenced by both their specific history and by their cultural and socio-economic characteristics. In summary, the two main reasons for the GEF Marino project staff not honouring their commitments to indigenous communities were: (i) financial, in that local government pledges were never upheld (this caused lack of funds) and (ii) government land was not available in the indigenous communities.
6.2. Indigenous communities’ relationships with the LML MUMPA

6.2.4. Summary

The GEF Marino project demonstrates that the idea that biodiversity conservation can underpin social development is not something that can be realised in the short term. Indigenous communities experience a very difficult and unstable economic situation, as do historical artisanal fishers, which increases their vulnerability. Thus, they are prone to dependence on additional assistance from activities such as the GEF Marino project, which in turn leads to unrealistic expectations. The GEF Marino showed insufficient consideration for this critical aspect of the project. At a later stage, however, they were not able to fulfil these commitments, including awarding a significant amount of funds via the project. The initial actions of the project encouraged the people to fantasise about being allocated part of those funds, which then, inevitably, resulted in considerable frustration and disappointment when the funds did not materialize.

The visions of the indigenous communities’ members are limited to owning their lands and having access to the alerce, and consequently, it appears unlikely that these communities would be able to successfully develop long term projects, such as the LML MUMPA, if they remain restricted practically and ideologically by their main economic needs.

The indigenous communities were chosen as the main participants of the LML MUMPA project for their apparent commitment to biodiversity protection. It was expected that this commitment would contribute to the aim of the LML MUMPA, as they would be the people protecting and policing the area from other artisanal fishers. However, despite this idealized construction, they were in reality not the ideal group to be in charge of that task because of their particular social and cultural characteristics, including high levels of mobility through the area, limited time and funds to dedicate to the task, lack of equipment\(^{110}\) to undertake maritime occupations, and their focus on non-maritime activities such as alerce logging.

External agencies, such as the WWF, that value the coastal range rainforest as a biological “hotspot”, have been advocating for the protection of this unique ecosystem by articulating the value of natural resources and the intrinsic ecosystem to Huilliches culture.

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\(^{110}\) The most of the indigenous communities’ members have wooden boats but not fiber boats with high speed engines more appropriated for protecting the MUMPA.
and identity as an indigenous people. Demonstrating the presence of indigenous people who they claim are defending indigenous cultural and natural landscape in their media and political strategy, has been pivotal for the WWF-Valdivia in their aim of protecting the unique biodiversity of the forest. They have, for instance, used the fact that Huilliche people are living in this forest as motivation for public environmental protest over construction of a coastal highway in 2004. This marketing is, however, based on the false idea that the people who currently live in these indigenous communities have been living there since ancestral times.

The engagement of the indigenous communities within the LML MUMPA demonstrates an important aspect of indigeneity. When referring to indigenous people in such situations, it is necessary to establish the nature of their claims to indigeneity. Are these people solely interested in achieving legal status as a means to participate in projects; or is it part of a larger attempt to maintain their culture and language? A more precise reference to the indigenous concepts being utilised allows for more informed engagement with the people. The concept of “being indigenous” is far more complex and dynamic than its common usage suggests. Thus, the inclusion of these important dynamics is essential to any analysis that aims to be relevant.

6.3. Issues identified in relation to artisanal fishers and indigenous communities

Throughout this research, many issues were identified by artisanal fishers and indigenous communities related to the implementation of the LML MUMPA. Five of the most important include: (i) Lack of understanding of community livelihoods; (ii) Lack of understanding of community social and cultural complexities; (iii) Lack of involvement of local communities in all phases of the project; (iv) Inadequate interaction with local communities; and (v) Inequity of the distribution of benefits amongst local stakeholders. These issues are now discussed:
6.3. Issues identified in relation to artisanal fishers and indigenous communities

- **Lack of understanding of community livelihoods:** while primarily funded by a private organization, namely GEF, the GEF Marino project also received funding and support from international organizations such as the UNDP and the World Bank. These types of projects are based on policies formulated by both national governments and environmental NGOs in international arenas. As discussed above, decisions made in these contexts had consequences for the local communities of Mapu Lahual Territory, who found their everyday activities banned by international laws and their economies, based on artisanal fishing and *alderce* logging, undermined by the campaigns of NGOs such as the GEF and WWF.

Specifically, the GEF Marino staff were unable to engage the local fishing and indigenous communities on a lived-reality level. Part of the GEF Marino’s initial implementation should have included addressing the needs and interests of the small-scale fishers who depend on coastal and marine resources for their livelihoods. Regardless of their good intentions, not only did the GEF staff aggravate internal problems in local communities, but their projects were not suitably designed for the specific social, economic and cultural reality in the locality. Therefore, the project as a whole did not go well and was not fully implemented.

(ii) **Lack of understanding of community social and cultural complexities:** during the creation of MUMPAs, the GEF Marino project needed to grasp the culture and social dynamics and perspectives of local communities and stakeholders before initiating the foundation of the ICDP and its future activities. However, the project model failed to account for the social history and identities of these groups, which constituted a significant factor in failures at the local implementation level. While the social history of these groups is different, in some aspects, it is very similar in others. The groups have, however, built up different identities related to their ethnic status and work activity.

- **Inequity of the distribution of benefits amongst local stakeholders:** the historical fishers viewed the GEF Marino project as a way to alleviate their economic problems, as mentioned above, but they were also not targeted for the allocation of money to buy equipment such as fishing gear or a boat. Thus, the historical artisanal fishers experienced negative effects from the LML MUMPA produced by the restrictions on
fishing in conjunction with not receiving the benefits of economic support allocated to others in the local communities.

(iv) Inadequate interaction with local communities: the GEF Marino staff could not have a sound and constant interaction with the artisanal fishers and indigenous communities, as they only interacted to some extent with stakeholders in leadership roles. Thus, the majority of the stakeholders were not fully engaged as they did not understand the extent of the project and could not truly support it and became increasingly distrustful citing examples of what they perceived as breaches of promises.

Indigenous people, because of their specific social and cultural characteristics and difficult life conditions, were not likely to work in environmental conservation purely for the sake of conservation. Rather, they were trying to survive by improving their economic livelihoods and securing access to resources and land rights. Thus they would only work in the LML MUMPA if they felt it brought in more revenue than their current economic activity. This is because, even though they are often in the best position to identify and address root causes of degradation, they have other priorities, such as being able to eat daily, and thus de-prioritize future consequences of their present actions even though these could damage the environment. Nevertheless, their legitimacy was essential for building broader public involvement and support.

The current economic situation of these indigenous communities reduced both their ability to act as main stakeholders of the LML MUMPA and as people who should be in charge of policing the area to protect it. The topics of most concern for the indigenous communities extended to include land issues, poaching, poor relationships with local government, mistrust, failures and disagreements with the GEF Marino, and conflicts with the Mapu Lahual Indigenous Association. The next most pressing issues included other issues and abuses of other projects, and competition over marine resources access rights between indigenous and non-indigenous fishers. As a result of this interaction of issues, indigenous communities did not engage completely in the implementation of the LML MUMPA.

(v) Lack of participation of local communities in all phases of the project: significantly, most of the indigenous people of these communities have little formal
education, which hindered their capacity to actively participate in the awareness process meetings mentioned. The needs and perceptions of the indigenous communities of the LML MUMPA were closely associated with their livelihood, as stressed in their narratives which form a large part of their cultural discourse. Their entire lives consist of surviving in poor and very hard conditions. To grasp fully the ICDP, these people needed to be able to process the information in their own time-frame and to participate on a regular basis in the entire process of project implementation.

This situation led to confusion about the objectives and goals of the project among community members, with some local participants misunderstanding the aims or activities of the LML MUMPA, or only understanding which parts of the project would benefit them. The LML MUMPA efforts to facilitate incorporation and participation in the implementation stage with the indigenous communities did not, however, deliver what the staff expected, because they did not achieve the engagement of indigenous communities as the main stakeholders in the LML MUMPA project.

6.4. Potential strategies for future MPAs with integration of conservation and development

Having identified what went wrong with the GEF Marino project, it is important for the responsible practice of anthropology to make some positive suggestions as to how to do things better in the future. This research identified six potential strategies or best practices, namely: (i) Greater awareness of the cultural barriers and local social dynamics; (ii) Clarification and understanding of the cultural and social complexities of the indigenous groups; (iii) Conducting wider community consultation; (iv) Hiring a consultant anthropologist to identify community issues; (v) Including local communities early in the project planning and in the decision-making process; and (vi) More transparent reporting of the allocation of funds. These suggestions for future implementation of similar projects are now discussed:

- **Greater awareness of the cultural barriers and local social dynamics**: during the Design Stage of the GEF Marino project Alvaro Rodriguez (Designer coordinator) hired
Cristian Andrade to complete a socio-cultural baseline of the LML MUMPA. Somehow, however, the coordinator of the LML MUMPA implementation, Cecilia Godoy, did not know about this baseline, as she explained when asked by the researcher why she did not use it. Alvaro Rodríguez told the researcher that this baseline was available in CONAMA-Santiago. According to Rodríguez, CONAMA staff should have told Godoy about this baseline. On the other hand, Godoy hired an anthropologist, Bernardo Arroyo and his team, to conduct a socio-cultural baseline in 2007, two years after the implementation project started, but this baseline was left incomplete. Arroyo provided Godoy with a brief report, but not a final one.

Awareness of local cultural and social dynamics during the implementation of environmental projects could make such projects more sensitive to local needs and thus more likely to be successful in their overall goal of achieving conservation. This should include addressing the full range of potential stakeholders to determine who are the most appropriate to be included in the project. Awareness of local social and cultural factors can contribute to ICDPs tailored to the local context. If an ICDP is designed according to the potential local social and cultural capacities, the project will be able to establish mechanisms to efficiently overcome local obstacles or to enhance local capacities, and therefore be more likely to succeed.

Clarification and understanding of indigenous groups’ cultural and social complexities: one of the major issues highlighted in this thesis is the “idealised”, or constructed, role of indigenous people and their TEK. The indigenous inhabitants of the Huilliche communities arrived in the region to exploit the *alerce*, which appears to not contribute to a desire to conserve the trees. The indigenous leader who claims the largest extension of land in Caleta Huellelhue argued that they should get rid of any native trees that are not suitable for logging as these are of no interest to him personally. Families from the indigenous community will also openly burn native forest areas, typically as a means to procure grass for cattle and sheep or to clean patches for private cultivation\textsuperscript{111}. In addition, community members recall a big fire that occurred a few years ago caused by a member of Loy Cumilef indigenous community burning rubbish. The fire got out of control, burning large extensions of native forest. Many cattle also roam the area, eating the native tree

\textsuperscript{111} The researcher once witnessed one such large fire made by an indigenous community family when staying in their community.
6.4. Potential strategies for future MPAs with integration of conservation and
devlopment

saplings that grow in the grass. As such, their relationship with their local environment is at risk of being stereotyped, rather than reflecting their local reality. As “indigeneity” is a significant element of the ICDPs, this is a concept that requires not only further assessment, but also more critical elaboration.

- **Conducting wider community consultation:** in a project where success depends on the adherence of local communities and where local communities can be critically affected by restrictions and actions carried out by the project, consultation and ongoing dialogue is crucial. A consultation process must be conducted at all stages and on a regular basis, including whenever important decisions have to be made. The first consultation process has to be conducted as a baseline, and the last one should act as an evaluation of the project. Consultation is an important way of acquiring feedback and local knowledge and, at the same time, is paramount for gaining local engagement.

- **Hiring a consultant anthropologist to identify community issues:** this thesis has established the methodological relevance of anthropological data collection and analysis in determining the pertinence of socio-cultural characteristics and dynamics in ICDPs. Employing a fieldwork-based methodology, this thesis explored real world relationships and conflicts between artisanal fishers, indigenous communities and conservationists in the Mapu Lahual Territory. Mapu Lahual Territory is undeniably complex, geographically extensive, and diverse. This research, therefore, contributes to providing ethnographic data relevant to a specific area in Chile about which little was previously known and written. This in-depth knowledge collected about local social and cultural factors, had it been available, integrated and acted upon during the implementation of the GEF Marino project, could have aided in the successful execution of this project.

- **Including local communities in the decision-making process:** the GEF Marino staff were asked about the participation of local communities in the project. In reply, they referred only to meetings with them and talking to them. The staff never discussed the level of decision-making of the local community in those meetings, which were instead intended to answer questions, inform the population about activities, and to provide a forum where the stakeholders could voice their concerns and claims. Some of the meetings were also requested by the local communities to clarify concerns about the LMI MUMPA project.
Hence, the implementation of the LML MUMPA project is an example of a top-down decision-making approach where little input was asked for, or gained from, the local communities at the project’s operational decision-making stage. This inhibited a process of dynamic and inclusive engagement with local communities, which is essential to process of project’s overall success.

- **More transparent reporting of allocation of funds:** it is vital for ICDPs to review all promises related to funds and economic commitments assumed with local communities and to allow stakeholders to participate in the decision-making in terms of the allocation and expenditure of funds. Broken promises due to changing wider political realities can constitute an important cause of failure of a project, as this can directly lead to disappointment and frustration in local communities which in turn decreases the level of engagement in a project. It is the responsibility of the project to be realistic in forward planning of funding, to explain the reasons if and why promises are not carried out, and to be more open in listening to local communities’ opinions and strategies for allocation of funds.

### 6.5. Summary

This chapter has related the ethnographic data provided in Chapters 4 and 5 of the two relevant groups, artisanal fishers and indigenous communities, to the problems (and their potential solutions) of the LML MUMPA implementation. Here the discussion of the fishers’ and indigenous communities’ discourses relating specifically to the LML MUMPA provide critical information both in terms how the LML MUMPA played out in a specific context, and also the consequences of their approach and actions. This chapter argued that taking an ethnographic approach helps to reveal two major dynamics in relation to ICDPs. The first is the ‘socio-cultural dynamics’ in project areas that are potentially being ignored, and the second is the ‘problem of participation’ at the heart of the methodology of ICDPs.

This research has taken previously unrecorded yet vital ethnographic data to assess the LML MUMPA project and to understand where it failed, or did not achieve the success it could have. From this discussion, new strategies that may assist future ICDPs were
provided. This clearly demonstrates the applicability and need for social science or ethnographic research in an ICDP, and more widely any environmental/conservation project that has the potential to impact local communities directly.
Chapter 7

Conclusion

7.1. Introduction

This thesis has investigated the implementation of the GEF Marino project and, more specifically, the LML MUMPA, through examining local cultural and social factors and their effects on ICDPs. As such, this research has focused upon examining the extent to which the GEF Marino staff considered social and cultural characteristics and dynamics in implementing their project and how these influenced the participatory intent of the project methodology.

The ethnographic evidence collected in the LML MUMPA was organized into the discourses of artisanal fishers and indigenous communities. The discourses identified criticised the implementation of the LML MUMPA, reinforcing the critiques of ICDPs identified in the literature, one of which is the lack of inclusion of social and cultural factors (for example Hughes and Flintan, 2001; Jeanrenaud, 2002, Chapin, 2004; Well and McShane, 2004; West, 2006; Johannesen, 2006; Baral, 2007; Shrivastava and Heinen, 2007; Metcalfe and Kepe, 2008; Adams, 2009; Sodikoff, 2009; Carrier and West, 2009; Pereira, 2010; Blom et al., 2010; Mistry et al., 2010). The ICDP literature demonstrates that the GEF Marino project was executed by common ICDP practices (Milton, 1993; Hughes and Flintan, 2001; Trusty, 2010; Kabiri, 2010; Blom et al., 2010).

The results of the research undertaken in the particular context of the LML MUMPA, however, focused attention on specific cultural and social characteristics and dynamics of local communities and potential stakeholders. These characteristics and dynamics have not
been dealt with extensively in the literature but, nevertheless, have the potential to influence greatly the implementation and success of an ICDP. These factors, in this study, include land tenure issues, ethnicity, local groups’ economic situations, educational level, conflicts between fishers and indigenous communities, local political context and conflicts between local organizations. The results of this research showed that one of the major problems with the LML MUMPA project was a lack of inclusion and consideration of these factors.

This thesis has also shed light on how the limited knowledge of, or incorrect assumptions about, cultural and social factors when developing the foundations of an ICDP negatively impacts on ecological objectives, because these factors can become obstacles to the overall implementation of an ICDP. As such, the LML MUMPA can be used to analyse the implications and actions of different ICDP approaches.

At a more specific level, this thesis has aimed to address the elements in the deployment of the LML MUMPA relating to the participation of local peoples associated with an ICDP approach. This was derived from an analysis that covered the history of these stakeholders, alongside their significant social and cultural characteristics and dynamics. The results of this analysis showed poor and limited local participation, in addition to tensions and conflicts arising from the selection of one main group of local participants for the project. These results are valuable in understanding the interaction, implications and type of participation both artisanal fisher and indigenous communities had with the GEF Marino project. The exclusive focus on the socio-cultural consequences and impacts of implementation of this public-private ICDP was motivated by the fact that ICDPs are usually implemented ‘top down’ on local people rather than developed based on local communities’ needs, visions, concerns and expectations (for example Hulme and Murphree, 2001; Nepal, 2002; West et al., 2006; Blom et al., 2010). In terms of participation, one of the major results of the thesis has been the proposal to include social and cultural elements such as economic needs, local political issues, characteristics of local internal organization, assessment of allocation of economic benefits, regular interaction of project staff with local communities and awareness of the communities’ formal education level to encourage full and correct forms of local participation.
This chapter summarizes the main findings of the thesis. Section 7.2.1 examines the implications of understanding socio-cultural dynamics on ICDPs, while Section 7.2.2 explores the political dynamics and effects of certain policies in conservation. Sections 7.3.1, 7.3.2, and 7.3.3 provide recommendations and contributions in theoretical, methodological and political spheres. Finally, Section 7.4 proposes directions for further research.

### 7.2. Major findings

The description and analysis of the current discourses within the artisanal fishers and indigenous communities illustrated some of the problems encountered during the implementation of the GEF Marino project.

Based on the analysis in this thesis, the socio-cultural and political shortcomings of the LML MUMPA project are as follows:

- Top-down project
- Lack of cultural and social assessment of local communities.
- Project staff’s lack of social and cultural science skills.
- Incorrect assumptions about the indigenous communities’ cultural background.
- Incorrect assumptions about indigenous communities’ engagement in conservation.
- Working exclusively with two local organizations that project staff mistakenly thought represented the majority of the stakeholders.

### 7.2.1. Implications of socio-cultural dynamics for ICDPs

This thesis has identified a specific set of socio-cultural features that have failed to receive sufficient attention in ICDPs since they began to be established (Hughes and Flintan, 2001; Chapin, 2004).
Chapter 7 - Conclusion

a) Top-down project

One of the most important aspects that this thesis highlighted is that the implementation of conservation programmes through any type of MPA, such as the LML MUMPA, must address local social, cultural, political and economic complexities and dynamics of national, regional and local communities, in addition to the main aim of biodiversity conservation. If a project is designed and implemented with a bottom-up approach, these complexities are more likely to be considered. The particular aspects of these “complexities” identified in the LML MUMPA are that the ‘ideal’ group to work with (the indigenous communities) in reality proved detrimental to the aims of the project because of the critical difficulties associated with their socio-cultural characteristics and dynamics.

b) Lack of cultural and social assessment of local communities

The establishment of the LML MUMPA caused an escalation of tensions between artisanal fishers and indigenous communities. This was largely due to the GEF Marino staff concentrating on working with and providing direct socio-economic benefits to the indigenous group located adjacent to the LML MUMPA and not the historical artisanal fishers112, who may have been more suitable due their knowledge of the marine environment they sustain. However, the intention of this thesis is not to advocate for the inclusion of historical artisanal fishers as a better group of main stakeholders of the MUMPA, but to describe a situation that required further attention from the GEF Marino authorities. The attention of the later situation could have been achieved with an assessment of the social and cultural factors of local communities. On the other hand, the positioning and cultural context of the demands of indigenous communities and fishers on the benefits of the project made the context highly complex for the deployment of the LML MUMPA, and this could also have been addressed by such an assessment.

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112 Many of whom are indigenous, but who do not possess the legal recognition and/or are not members of an indigenous community.
7.2. Major findings

c) Project staff's lack of social science skills

Different communities also laid claims to distinct resources within the same ecosystem as the LML MUMPA. Specifically, indigenous communities claiming the *alerce* and more recently marine resources and artisanal fishers also claiming marine resources, specifically, the *loco* snail, as well as trying to initiate eco-tourism activities, contributed to broader and important socio-cultural and economic dynamics. The socio-cultural dynamics are important because in this thesis they illustrate: (i) How the local communities are organized; (ii) What their positions are regarding land and marine resource claims and actions that validate these claims; (iii) What the tensions are between different local groups; and (iv) How local communities frame their interaction with the environment as a product of their history, culture, economy and social relations. However, the LML MUMPA staff were unable to assess accurately these characteristics and dynamics because of a lack of social and cultural training. Instead, all possessed backgrounds in the natural sciences.

d) Incorrect assumptions of indigenous communities’ cultural background

The cultural characteristics of indigenous communities that proved to be detrimental to the aims and deployment of the LML MUMPA include: (i) Indigenous people had not spent sufficient time in the location to develop locally relevant knowledge; (ii) They did not have a strong indigenous cultural identity expressed in language or cultural practices; (iii) They were not residents of the indigenous settlements; (iv) They did not demonstrate obvious cultural differences in practice with non-indigenous people; and (v) Their TEK was more likely related to the *alerce* and included some practices that damage that environment. None of these social and cultural factors were considered from an anthropological point of view, in spite of the vital role of these factors. These characteristics therefore obstructed the engagement and participation of the indigenous communities. Clearly, their assessment is paramount for the success in the implementation of future MUMPAs.

e) Incorrect assumptions of engagement in conservation of indigenous communities

Furthermore, the LML MUMPA was based on social and cultural assumptions that resulted in a lack of coherence in the implementation stage of the project. These
assumptions included that the indigenous communities targeted to participate in the project were already fully participating and engaged in conservation, and that the indigenous communities still maintained their indigenous culture. The LML MUMPA project staff did not consider these cultural characteristics because they did not complete a cultural and social baseline before implementing the MUMPA which would have provided a better understanding of the local indigenous communities. Similarly, the LML MUMPA lacked consideration of the socio-economic needs of the local communities. Overlooking cultural characteristics, poor assumptions, lack of understanding of community livelihood needs, and unfulfilled promises and expectations combined to hamper the willingness of the artisanal fishers and of the indigenous communities to engage and participate in the LML MUMPA.

f) Working exclusively with two local organizations that project staff wrongfully thought represented the majority of the stakeholders

The dearth of real participation impacted heavily on the LML MUMPA. Early levels of participation, for instance being informed about the project, were important first steps to legitimate participation. However, some groups of fishers, expressed that they were not consulted or involved, or even considered as a local group with as many needs as the indigenous communities. Thus, according to the communities themselves, the extent of participation that the GEF Marino had with them was insufficient. In contrast, the project staff explained in their interviews that the participation had been adequate. This difference in opinion is clearly significant, given that participation in any type of conservation project is mentioned in the literature as a key factor to success (Howe, 2001; Berkes, 2004, 2009; Waylen, 2010; DeReynier et al.; Pita et al., 2010; Banks and Skilleter, 2010; Blom et al., 2010; Glaser et al., 2010; Voyer et al., 2012).

7.2.2. Political dynamics and policy effects in conservation

Political dynamics should also have been considered in the deployment of the LML MUMPA. These dynamics hampered the project because the GEF Marino staff expected some financial and political support from the government that failed to eventuate\textsuperscript{113}. As in

\textsuperscript{113} Information provided by interviewees Cecilia Godoy and Alvaro Rodríguez.
7.3. Contribution to wider debates on ICDPs

this specific case, the economic development components of ICDPs often rely on governmental funds and are implemented by governmental bodies (Hughes and Flintan, 2001; Chapin, 2004). However, the allocation of these funds, is often sporadic or insufficient for the aims of the projects (Thur, 2010; Angulo-Valdés and Hatcher, 2010; Diedrich et al., 2010). In this case, there was a lack of continuity in political support due to electoral outcomes to back-up this long-term project. In addition, there was a lack of coordination between the different governmental institutions involved.

Hence, the LML MUMPA implementation should have considered political dynamics as a variable of major relevance to be able to achieve the goals of the project. However, due perhaps to the fact that the background of the staff was limited exclusively to the natural sciences, it is likely that they did not envision these situations. Political dynamics and government policies also had implications for how the artisanal fishers and indigenous communities shaped and determined their responses and attitudes towards the LML MUMPA aims and regulations.

Another important pitfall related to political dynamics concerned the issue of unresolved land tenure, which meant that implementing a project of this nature was impractical. One of the striking findings of this thesis was that the main indigenous participants selected by the LML MUMPA staff were experiencing on-going difficulties in obtaining ownership of the lands in which their communities were located. This issue was of critical importance to indigenous communities. The obstacles imposed by the Chilean political context caused the GEF Marino project to have overly optimistic goals.

7.3. Contribution to wider debates on ICDPs

7.3.1. Theoretical contributions

The findings of this thesis draw attention to the complexities of developing effective ICDPs to address the three most important elements of sustainable development, namely the environment, the economy and socio-cultural issues (George, 2007; Brooks, 2010). The social and cultural aspects specifically create greater challenges for conservation projects
which should be planned and implemented by multidisciplinary teams including staff not only from the natural sciences but also with staff from fields such as anthropology and sociology. As emphasised throughout this thesis, the long term future of a MUMPA, or any type of MPA, depends on the engagement of local stakeholders (Berghofer et al., 2008; Haapasaari and Karjalainen, 2010; Cinti et al., 2010; Suuronen et al., 2010). If this is not achieved, and despite any economic success, the project’s objective could fail. Understanding social and cultural characteristics and dynamics has direct implications for the ability to address concerns of resident populations. Addressing these concerns will, in turn, assure that project staff can obtain the support, positive attitudes and engagement of local communities with the ICDP (Rinzin et al., 2009).

The specific context described in this thesis case study illustrates the challenges that remain for ICDPs. The social and cultural factors identified by this thesis bring an opportunity to design more efficient processes and activities with local groups to carry out such projects. As this thesis has described, challenges also exist in terms of interacting with different personalities and different cultures at interpersonal ecological, economic and social levels. Understanding national and regional political frameworks and local cultural difficulties indicate not only where to focus attention but also difficulties that may need to be overcome. Political and socio-cultural characteristics will also show where the strengths are.

This task can only be undertaken with a sound multidisciplinary team and approach in conservation projects. This is now an acceptable solution that is expressed both in the literature and in international agreements. To accomplish the dual aims of conservation and sustainable development, it is necessary to provide a strong link between different disciplines (Christie, 2005a; Barnes and McFadden, 2008; Adams, 2009; Paterson et al., 2010; Bess, 2010; Voyer et al., 2012). Now it only remains to put this resolution into practice. Hence, a major shift is necessary in the requirements of the donor organizations and governments, demanding teams with staff from natural sciences and social sciences who have a proven interest in developing conservation projects with a people-oriented approach.

As Seixas (2002, p. 228) argues, “resource users are not homogenous as groups nor in the knowledge they provide”. This thesis demonstrates the existence of four different
social and cultural realities where conservation projects are implemented: a) that of indigenous communities with traditions, cultural knowledge and beliefs that promote conservation; b) that of indigenous communities who, for different reasons, have lost the cultural elements that promote and reinforce belief in conservation; c) that of fishers who are indigenous but do not hold legal status and who have diverse strategies for their livelihoods; and d) the artisanal fishers who are not indigenous.

The identification of the realities within the local groups mentioned above are important to bear in mind as the aim of ICDPs should be to increase the flexibility of donor agencies and encourage them not only to fund projects or programmes engaged with the first type of indigenous group described above. This will allow the NGOs to develop more realistic goals (Blom et al., 2010).

From the original seven aims of the LML MUMPA, only three have been totally or partially fulfilled: (i) to establish the MUMPAs physically and legally; (ii) to create administrative and governance structure; and (iii) to promote environmental awareness and education. The other four, to develop an adaptive management system, to generate a pilot tourism project, to repeat this initiative regionally, and to repeat this initiative nationally, unfortunately were not carried out.

The unfulfilled development of an adaptive management system and the impossibility of generating a pilot tourism project resulted in problems for the local communities. Some of the major problems identified by the local communities included, inaccurate information provided about the benefits to the people affected by the LML MUMPA; unfulfilled promises made to the local people involved in the project; and the ineffective relations between local communities and local government. These failures made engagement of the indigenous communities in protecting the LML MUMPA difficult.

The GEF Marino staff wanted to engage indigenous communities in furthering the project’s aim of protecting the marine and coastal resources. In order to achieve the protection of the LML MUMPA the GEF Marino staff wanted to contribute to the development of indigenous communities though implementing eco-tourism infrastructure because that was a requirement for their project’s success. The revenues gained from eco-

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114 According to the GEF Marino staff this goal was achieved; according to the stakeholders, however, this was not efficiently achieved.
tourism were expected to pay for the administration and protection of the LML MUMPA. Furthermore, if local people shifted to work in eco-tourism instead of exploiting marine and coastal resources, this would further protect these natural resources. However, as Trusty (2010, p. 517) argues, “poor, rural residents cannot participate in these types of income-generation projects without direct cash payments to offset lost productive activities and labor inputs required along with guarantees of assistance should these projects fail”. Here, indigenous communities did not earn sufficient cash from conducting eco-tourism in the LML MUMPA to be able to contribute to the task load of LML MUMPA surveillance.

Thus, this thesis provides the literature with an important case study that demonstrates the implications of not including socio-cultural and political characteristics and dynamics in MUMPAs with an ICDP approach.

### 7.3.2. Methodological contributions

Environmental anthropologists are privileged to work in a discipline that allows them to comprehend, analyse and assess the relation of humans to their environment (Nora and Wilk, 2006; Dove and Carpenter, 2008; Townsend, 2009). Part of their agenda is to observe and analyse the role of social and cultural characteristics such as indigeneity and the identity of local communities in conservation projects (Carrier and West, 2009).

This thesis has presented its analysis of the ethnographic research and results in Chapters 4 and 5 together with the discussion of Chapter 6. As is usual in ethnographic research (Hammersley and Atkinson, 2007), Chapters 4 and 5 analyse and examine the way in which the information provided by each of the relevant communities was narrated and organized. The primary focus here was on those social and cultural characteristics of local groups which are paramount to tailoring conservation and management plans specifically to local context and livelihood needs (McGoodwin, 2000; Blom et al., 2010).

Ethnography provided the most appropriate methodology to research these issues because this technique offers highly detailed accounts of specific social and cultural events, together with in-depth cultural and social information relating to local communities (Bernard, 2006). As a result, the main focus of the thesis was to emphasise and promote the use of culturally-sensitive methodologies by anthropologists and social scientists. These
methodologies can then help to develop new and better strategies for implementing ecological and environmental projects featuring people-oriented approaches. Moreover, the thesis has shown the critical need for an anthropological approach when undertaking such projects, especially in areas where human and cultural factors are highly delicate, heterogeneous, complex and dynamic. Ethnographic methods are especially valuable in that they produce better understandings of the often complicated situations and roles of distinct resource use groups (Johnson and Orbach, 1990; Pinkerton, 1999; McGoodwin, 2000; Cooley, 2003; Zimmerer and Bassett, 2003; Blount, 2007; Puddephatt et al., 2009; Pinkerton and Silver, 2010; Acheson, 2010a and 2010b).

This thesis also describes the potential negative impacts of ICDPs through the application of anthropological methodologies. For instance, anthropological methodologies were used to identify the fact that conservation projects are not founded on the needs of the local people; problems were identified in promoting the opportunities for communities to participate or co-manage the conservation project; the consequences of the project manager were revealed when retrying to engage the local people by offering to carry out tasks that the project staff were unable to complete or undertake; an unconvincing level of local participation was identified; and the failure was documented to include social and cultural characteristics as the baseline to the project’s operation.

The analysis emphasizes some crucial aspects relating to the ability and efficiency of science to address sustainability and conservation issues. Conservationists who are scientists from biological disciplines involved in coastal and marine resources projects present a counterargument, claiming that they cannot be expected to carry out development projects whilst simultaneously conducting conservation projects. Such objectives are considered not only detrimental to conservation, but also to be beyond their skill level and the scope of the project (Brandon et al., 1998). However, as government policies require that ICDPs co-occur with MUMPAs and any type of MPAs (Shiva, 1992; Hughes and Flintan, 2001; Mikesell and Williams, 1992; Rich, 1994; Haller et al., 2008; Blom et al., 2010), there is a clear need to develop aims that consider both the cultural and socio-economic aspects of local communities and incorporate local participation in their projects in order to be allocated funding.
7.3.3. Policy contributions

There are many lessons to be learned from the GEF Marino project in regards to implementation policies for ICDPs and for the establishment of MPAs. These issues and variables will help project staff, policy-makers and local participants both to understand and adapt to new and difficult social and cultural situations in order to implement effective on-the-ground ICDPs.

Better understanding of the political dynamics is paramount for these ICDPs as, patently, this facilitates effective planning of the project. In addition, understanding political dynamics helps to identify the type of political context the project will deal with and what to expect of it. It also facilitates more realistic aims and objectives that can be accomplished within the limited timeframe of a conservation project (Blom et al., 2010).

Informed awareness of socio-cultural contexts allows the strategies of ICDPs to be more accurate regarding local political reality (Waylen et al., 2010; Mahon et al., 2010). Staff of ICDPs who understand political dynamics will not aggravate local issues when planning projects in which local people are expected to participate as stakeholders. At times, in such conservation projects, local people can find their everyday economic activities banned and undermined, because these projects have been intended to protect natural resources at the cost of jeopardising the livelihoods of local communities (Larson et al., 1998; Guha, 2000; Jeanrenaud, 2002; Ross et al., 2009; Wapner and Matthew, 2009; Drayton, 2000; Durand and Vazquez, 2011; among others).

In stark contrast, ICDPs aim to provide realistic economic alternatives to local communities (Sanjayan et al., 1997; Hughs and Flintan, 2001; West, 2004; Fabinyi, 2008; Blom et al., 2010). Many local people, as Agrawal (2005) explains in his research in India, can feel threatened by conservation projects to the point of, in his example, burning the forest resources and undermining the entire project or degrading the resource the programme aimed to protect. This is often a result of people not being considered in the project at an equal level to the organizers, or not being provided with the opportunity to participate in effective consultation and/or decision-making.

On the other hand, the educational impact of the introduction of an ICDP has to be addressed, especially when there is a desire to start negotiations with people who have little
or no formal education and may have difficulty with written text. The information provided of the project, therefore, needs to be adjusted to ensure clarity and prevent miscommunication. Personal contact with the project staff on a regular basis will also assure trust and commitment.

As this suggests, an awareness of the stakeholders’ education levels in an ICDP is of paramount importance as it affects the vocabulary used and the structure of the information provided for complete comprehension. If the real aim of ICDPs is to help in the development of a community, it is necessary to plan a long-term timeframe in order to take account of this (Blom et al., 2010). Usually, however, these projects are planned with a timeframe which does not reflect the length of commitment required to work with local people (Chan et al., 2007). This was the case for the LML MUMPA. The duration of the project should clearly have been longer due to local people having difficulties with reading and writing, which in turn meant that they required extra attention and support in order to present their own ideas and queries. The organisers of the GEF Marino project thought that one or two meetings in which the nature of the project was explained to the local people were sufficient for them to understand and to participate. Obviously, given the evidence, they were not.

The ICDPs need to be aware of specific situations that are part of local social interactions and dynamics, which could help them pay more attention to the choice of whom to involve in negotiations (distributive justice), and to the ways in which they organize their activities (Glaser et al., 2010). Some indigenous groups have highly specific social and cultural characteristics, or may undergo political situations and dynamics that impede the implementation of conservation projects (Schmidt and Paterson, 2009). Despite prior awareness of these situations, contexts which inhibit participation and present obstacles to conservation, project staff often still include the participation of such groups in project proposals (Chapin, 2004). Conservation projects are trapped between conforming to the discourse of conservation and development, the key aspect of which is the participation of the indigenous communities, and the reality of what they must commit to in order to obtain funds for their projects (Chapin, 2004; Ministry et al., 2010; Blom et al., 2010).
The relevance and influence of the ICDPs in the emergence of MPAs such as the LML MUMPA as a conservation and management strategy involves the integration of social and environmental goals. However, this thesis has stressed the implications and challenges that these projects need to address in order to succeed in the future. These implications and challenges require an anthropological understanding of local societies and culture relative to the groups residing in the areas where MUMPAs with an ICDP approach are established.

The varieties of contemporary identities recognised along the Osorno Province shoreline are not common to other projects that have been initiated under ICDPs. Here, a number of complex situations have combined, resulting in different groups residing in the same area. It is a location where, in the 21st Century, specific resources have attracted people from different regions, places and ethnic backgrounds from all around Chile. It is hoped that the audience of this thesis includes conservation NGOs, policymakers and decision makers involved in MPAs and ICDPs initiatives, who might utilize its findings to inform future planning regarding the social and cultural realm of such projects.

7.4. Directions for further research

One topic proposed for further research is a holistic exploration of the human-environment relationship of artisanal fishers and indigenous communities to ascertain which group could have been better equipped as main stakeholders of the LML MUMPA, or if a more effective strategy would have been to include both equally (if the project’s funding and timeframe allow). The unresolved question here is which group is more important for LML MUMPA? And is this the group that utilises the resources of the area that is being protected or the group that lives adjacent to the area but specialises in alerce logging, or both?

A further issue for research relates to the level and form of participation and collaboration the artisanal fishers and indigenous communities themselves would have proposed. In this thesis, the main complaint of both groups in terms of participation was the need for equality in the allocation of funding for infrastructure (pier, road, office, facilities for eco-tourism, etc.), equipment (boats, engine, scuba diving suit, walkie-talkie,
7.4. Directions for further research

etc.), or supplies such as gasoline for their boats. However, in terms of activities or interaction with the project staff, further research could examine whether local groups consider other ways of improving participation, besides the previously mentioned adjustment of project information to local groups’ timing and level of formal education.

This thesis was undertaken with a shorter period of fieldwork than would usually be necessary to achieve ethnographic research. A longer time would have been preferable due to the fieldwork area being located in a remote zone in Chile, where much of the time the weather is severe and interviewees are scattered across a large area. Hence, the scope of the thesis was adjusted to take these limiting factors into account. Further research could explore the culture and common behaviour representations of artisanal fishers and indigenous communities in more detail. What has been illustrated and described in Chapters 4 and 5 is based on the responses of participants, which emphasises their main concerns including a bad economic situation; their poor quality of life the need for external help and restrictions imposed on their main economic occupations; and conflicts between local organizations. However, there is much more to investigate in terms of these groups, such as social organizations; the role of religious belief (which is very important in the area, for example evangelicalism); gender division of work and its role in their main occupations; traditions; and the characteristics of the previous lives of those participants born outside the fieldwork area.

Finally, this thesis can be used to design potential pathways for improved future practices in the social and cultural realm of ICDPs. Such potential pathways could, first, consider that social and cultural baselines are a priority in the design of ICDPs, and second, that local participants’ socio-economic and political issues can hinder conservation targets, and thus, strategies should be planned to overcome them in the design stage.


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Appendix A

Pauta preguntas indígenas
(indigenous people interview guideline)

A.1. Preguntas

A.1.1. Información personal

Edad, lugar de nacimiento, hermanos, estado civil, hijos y ocupación.

A.1.2. Comprensión de las dinámicas culturales/sociales

¿Cuántos años lleva viviendo en esta comunidad?

¿Cuál es su principal actividad laboral?

¿Ha trabajado en alguna otra actividad?

¿Ha pescado alguna vez?

¿Qué es lo que ha pescado?

¿Cómo era su situación, hace 10 y hace 20 años atrás?
¿Cómo cree que es la situación de la pesca artesanal en este momento?

¿Qué cree que debería ocurrir para mejorar su situación como pescador artesanal?

¿Cuántas personas pescan en esta caleta?

¿Cómo se organizan ustedes?

¿La forma en que se organizan es buena, han tenido problemas?

¿Cuáles son sus relaciones con el gobierno?

¿Las políticas que ha implementado el gobierno han afectado su actividad laboral?

¿Cuál es su opinión de las políticas implementadas para la pesca? ¿Está de acuerdo o en desacuerdo con ellas?

¿A dónde vende sus productos?

¿Cómo es su situación económica?

¿Hay conflictos en su comunidad, si hay con quién?

A.1.3. Participación, Conciencia y Empoderamiento

¿Sabe acerca del GEF Marino? Para los que responden que sí.

¿Cómo se enteró, qué es lo que sabe?

¿Le gustaría participar en los Planes de Manejo de los Recursos Marinos (PMRM)?

¿Le gustaría participar en el proyecto GEF Marino?

¿Ha participado en alguna actividad del GEF Marino?

¿Cree que el gobierno incentiva la participación, conciencia y empoderamiento en proyectos como el GEF Marino?

¿Cómo le gustaría participar del GEF Marino?

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¿El gobierno les ha preguntado de alguna forma sobre sus visiones o intereses con respecto al AMCP-MU o GEF Marino?

¿Cuánta información usted cree que se incluye en el GEF Marino que es importante para la pesca artesanal?

¿Se ha beneficiado del GEF Marino, de qué forma?

**A.1.4. Expectativas y motivaciones sobre el manejo de los recursos marinos**

¿Usted cree que los Planes de Manejo de Recursos Marinos (PMRM) son importantes, en qué sentido?

¿Cuál es el rol de la comunidad indígena en su proceso de desarrollo?

¿De qué manera el gobierno está resolviendo los problemas de los indígenas?

¿Qué actividades le gustaría que hiciera el GEF Marino en el Área Marina Costera Protegida LML?

¿Creer que el gobierno está haciendo suficiente para ayudarlos?

¿Hay algún papel que alguna ONG debería tomar para ayudarlos?

**A.1.5. Conocimiento Tradicional Ecológico**

¿Tiene algún conocimiento que tenga que ver con la naturaleza, el medio ambiente o la pesca que usted encuentra que debería incluirse en los PMRM?

¿Cuáles son sus indicadores de sanidad del bosque y mar?

¿Me puede contar acerca de cualquier tradición que sería importante considerar por el gobierno para su desarrollo?
Appendix B

Pauta preguntas pescadores artesanales (Artisanal fishers interview guideline)

B.1. Preguntas

B.1.1. Información personal

Edad, ciudad de nacimiento, hermanos, estado civil, hijos y ocupación.

B.1.2. Comprensión de las dinámicas culturales/sociales

¿Cuántos años lleva trabajando como pescador?

¿Ha trabajado en alguna otra actividad?

¿Qué es lo que pesca?

¿Cómo era su situación como pescador artesanal, hace 10 y hace 20 años atrás?
¿Cómo cree que es la situación de la pesca artesanal en este momento?

¿Qué cree que debería ocurrir para mejorar su situación como pescador artesanal?

¿Cuántas personas pescan en esta caleta?

¿Cómo se organizan ustedes?

¿La forman en que se organizan es buena, han tenido problemas?

¿Cuáles su relación con el gobierno?

¿Las políticas que ha implementado el gobierno han afectado su actividad laboral?

¿Cuál es su opinión de las políticas implementadas para la pesca? ¿Está de acuerdo o en desacuerdo con ellas?

¿A dónde vende sus productos?

¿Cómo es su situación económica?

¿Hay conflictos en su comunidad, si hay con quién?

B.1.3. Participación, Conciencia y Empoderamiento

¿Sabe acerca del GEF Marino? Para los que responden que sí.

¿Cómo se enteró, qué es lo que sabe? ¿Qué es el GEF Marino?

¿Le gustaría participar en los Planes de Manejo de los Recursos Marinos (PMRM)?

¿Le gustaría participar del proyecto GEF Marino?

¿Ha participado en alguna actividad del GEF Marino?

¿Cree que el gobierno incentiva participación, conciencia y empoderamiento en proyectos como el GEF Marino?

¿Cómo le gustaría participar en el proyecto GEF Marino?
¿El gobierno les ha preguntado de alguna forma sobre sus visiones o intereses con respecto al AMCP o GEF Marino?

¿Cuánta información usted cree que se incluye en el GEF Marino que es importante para la pesca artesanal?

¿Se ha beneficiado del GEF? ¿Quién se beneficia del GEF? ¿De qué forma?

**B.1.4. Expectativas y motivaciones del manejo de los recursos marinos**

¿Usted cree que los PMRM son importantes, en qué sentido?

¿Cuál es el rol de la comunidad de pescadores en el proceso de desarrollo de la pesca artesanal?

¿De qué manera el gobierno está resolviendo los problemas del sector de la pesca artesanal?

¿Qué actividades le gustaría que hiciera el GEF Marino en el Área Marina Costera Protegida LML?

¿Creen que el gobierno está haciendo suficiente para ayudarlo?

¿Hay algún papel que alguna ONG debería tomar para ayudarlos?

**B.1.5. Conocimiento Tradicional Ecológico**

¿Tiene algún conocimiento que tenga que ver con la pesca que usted encuentra que debería incluirse en los PMRM?

¿Cuáles son sus indicadores de sanidad del mar?

¿Me puede contar acerca de cualquier tradición que sería importante considerar por el gobierno para su desarrollo?
Appendix C

Kinship graphic of Caleta

Huellelhue oldest family
Appendix C: Kinship graphic of Caleta Huellehue oldest family
Appendix D

Law statements regarding land possession

Art. 716. The simple span of time it does not make you the owner of a land; unless in the case of the article 2510, rule 3.

Art. 2510. The domain of commercial goods that have not being prescribed by the traditional manner could be prescribed by an extraordinary way under the following rules:

1. There is no need to grant the extraordinary prescription a land title; 2. It is presumed the good intention, however the lack of a land domain title; 3. The existence of a tenure title will only be considered as bad intention and will not allocate the land domain title, unless there are these two circumstances:

1. That the one that is considered the landowner cannot prove that in the last ten years has been recognized tacitly his domain for the land he is claiming.

2. The person who is claiming land ownership can prove that he possessed the land without practicing violence, clandestinely and interruption for ten years.
Appendix E

Pledge letter from Intendente and translation of the section of the letter with the promises to indigenous communities
Appendix E.- Pledge letter from Intendente

DE: INTENDENTE REGION DE “LOS LAGOS”

A THIERRY LEMARESQUIER
REPRESENTANTE RESIDENTE DEL PNUD EN CHILE.

El Gobierno de la Región de Los Lagos, integrado por todos sus organismos públicos, realiza un gran esfuerzo por desarrollar procesos y acciones que contribuyen a la superación de la pobreza y a la entrega igualitaria de oportunidades a toda la ciudadanía, disminuyendo los desventajas de los sectores más afligidos.

Para ello, ha creado la Agenda de Gestión 2002-2005 “Unidos Creando Futuro”, la que define los ocho ejes que guían el desarrollo de la región. Uno de ellos, lo conforma la Producción Limpia y el Desarrollo Sustentable, como método de conciliar el crecimiento económico con la sustentabilidad de los recursos y la calidad de vida de las personas.

En virtud de estos esfuerzos, es que la Comisión Nacional del Medio Ambiente, Región de Los Lagos, se encuentra participando activamente de la Propuesta de Desarrollo Sustentable para crear el Área Marina Costera en el sector Huilliche (PDS), enmarcada en la ejecución del proyecto GEF PDF-b “Conservación de la Biodiversidad de Importancia Global a lo largo de la Costa Chilena”, ubicada entre Punta Tiburon y Punta Lobería en la Costa de Osorno, con una longitud aproximada de 30 kilómetros.

Su objetivo general consiste en la selección de áreas marino-costeras que ameritan ser conservadas y la creación de arreglos institucionales básicos que las hagan sustentables administrativa y financieramente. A su vez, el PDS, busca asegurar el sustento de los habitantes del sector, disminuyendo, a mismo tiempo, la presión sobre los recursos naturales, como ocurre hoy en día, tanto por las comunidades indígenas del sector, como por otros privados que llevan a cabo proyectos de inversión en el área. Esta presión no es sólo sobre el sector silvoagropecuario, sino que se hace extensiva a las franjas marinas, características por sus riquezas bentónicas o por su potencial acuícola.

En consecuencia de lo anterior, el Gobierno de la Región se compromete a dar la prioridad necesaria al financiamiento de los proyectos y actividades que a continuación se detallan, a través de una planificación extendida en cinco años:

1. Tres embarcaderos para naves menores ubicados en el sector río Huilliche, (servicio de conjunto, colegio Huilliche y barrio río Choilcuaco en Calcha Cóndor), por valor de M$ 66.000,- (sesenta y seis millones de pesos), mediante Fondo de Desarrollo Regional.

2. Un helipuerto en sector Calcha Cóndor, por valor de M$ 25.000,- (veinticinco millones de pesos), mediante Fondo de Desarrollo Regional.

3. Dos centros de víveres, uno de 200 m2 en el área de Huilliche y otro de 100 m2 en el sector de Cóndor, por un valor de M$ 70.000,- (setenta millones de pesos), mediante Fondo de Desarrollo Regional.

...
Appendix E.- Pledge letter from Intendente

4. Una casa de administración de 100 m² ubicada en el sector de Huellihue, por un valor de M$ 18,000.- (dieciocho millones de pesos), mediante Fondo de Desarrollo Regional.

5. Cuatro casas para guardaparque de 30 m², por un valor de M$ 24,000.- (venticuatro millones de pesos), mediante Fondo de Desarrollo Regional.

6. Tres garitas de acceso al Área Marina Costera Protegida por un valor de M$ 3,000.- (tres millones de pesos), mediante Fondo de Desarrollo Regional.

7. Implementación de servicios terrestres y marítimos por un valor de M$ 15,200.- (quince millones doscientos mil pesos), provenientes del Fondo de Desarrollo Regional.

8. Reconversión turística de pescadores a través del Fondo de desarrollo Turístico, FODETUR, por M$ 50,000.- (cincuenta millones de pesos).

9. Implementación de proyecto Turístico de Pesca Deportiva y Acuicultura a través del FODETUR, por M$ 30,000.- (treinta millones de pesos).

10. Implementación de cinco calles de turismo en los sectores de Huellihue y Caleta Cóndor, por un valor de M$ 25,000.- (veinticinco millones de pesos).

11. Implementación de dos sistemas de electrificación por turbinas en los sectores de Huellihue y Caleta Cóndor por un valor de M$ 31,500.- (treinta y un millón de pesos).

12. Proyecto de la capacidad productiva y desarrollo de las comunidades de los sectores de Nirehue, Huellihue y Cóndor a través del Programa Orígenes por M$ 93,000.- (noventa y tres millones de pesos).

13. Implementación de agua potable en los sectores de Huellihue y Cóndor por un valor de M$ 15,000.- (quince millones de pesos).

14. Camino bajo estádaro desde Puente Río Huellihue (30 km), hasta sector el Mirador en Huellihue, a través del Ministerio de Obras Públicas por un valor de M$ 1,200,000.- (mil doscientos millones de pesos).

15. Tres senderos para caminatas de alto estádaro con un total de 15 km, a través del Ministerio de Obras Públicas, por un total de M$ 75,000.- (setenta y cinco millones de pesos).

16. Implementación básica para gestión del proyecto (oficina, teléfono).

Saluda atentamente a usted,

PATRICIO VALLESF  LOPEZ
INTENDENTE
REGION DE “LOS LAGOS”
Three jetties for small boats located in the river Huellilhue sector (Mirador road, Huellilhue school yard bar Cholhuaco river in Caleta Cóndor), a heliport Caleta Cóndor sector, two visitor centres, one of 200 m² in Huellilhue area and another of 100 m² in Cóndor sector, one management centre of 100 m² located in Huellilhue sector, four houses for the rangers of 30 m², three access checkpoints to the Marine and Coastal Protected Area, terrestrial and Marine sign posts implementation, fishes tourist reconversion, tourist Project implementation of Sport fishing and aquaculture both with funds from the Touristic Development Fund (FODETUR in Spanish), implementation of 5 tourist cottages, power system implementation with turbines, production potential reinforcement in the indigenous communities through Orígenes programme funds, implementation of drinking water system, low standard road from Huellilhue river bridge (30 kms) until the Mirador sector in Huellilhue and three high standard tramping tracks with a total of 15 kms. The last two were going to be funded through Ministry of Public Works and basic implementation for the project management (secretary, office and phone).

(Source: Original letter signed by Intendente Vallespin. Author's translation. The Spanish version is in Appendix E)