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**Coastal artisanal fisheries and community-
conservation in Costa Rica**

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List of Acronyms

CBNRM Community Based Natural Resource Management
FAO Food and Agriculture Organization of the United Nations
INCOPESCA Costa Rican Institute of Fishing and Aquaculture
MARAFT Community-based Marine Area of Responsible Artisanal
Fishing of Tárcoles
MINAET Ministry of Environment, Energy and Telecommunications
MTZ Marine Terrestrial Zone
NGO Non Governmental Organization
PAs Protected Areas
SINAC National System of Conservation Areas

Abstract

This research paper studies an initiative of community-conservation in an artisanal fishery on the Pacific of Costa Rica. The case-study is linked with the wider history and situation of conservation and development in Costa Rica in order to understand the context in which it is embedded.

The case of the Community-based Marine Area of Responsible Artisanal Fishing of Tárcoles (MARAFT), in the light of its context, conceptualization elements and process of recognition, is analysed focusing on the issues of the politics of conservation, natural resource management and development that an initiative of community conservation entails and pretends to transform.

Relevance to Development Studies

Many rural communities are trapped in between exclusionary conservation policies and wider economic-driven models of development. This is the case of coastal artisanal fishing communities, who are seeing the resources they depend on either protected under strict conservation measures that prohibit their access or depleted as a consequence of the dominant model of development. Both of these patterns are affecting the livelihoods of many poor fishing communities and restraining their own terms of development.

Keywords

Community-conservation, Protected Areas, Artisanal Fisheries, Costa Rica

Chapter 1 Introduction

1.1 Research Problem

Small scale fisheries constitute part of the world's fisheries and are the source of livelihood and well being of many poor coastal communities. According to FAO (2007: 2) 'around 90 percent of the 38 million people recorded globally as fishers are classified as small-scale, and an additional more than 100 million people are estimated to be involved in the small-scale post-harvest sector'. Artisanal fisheries are the majority in tropical developing countries (King in Berkes et al. 2001). In the case of Central America it is estimated a total number of 93 612 artisanal fishers (OSPESCA 2006), and for the case of Costa Rica, a number of 6 572 fishers have been recorded (INEC 2008). However, it has to be kept in mind that the statistics of Central America and Costa Rica are not accurate as they do not record the number of illegal fishers that exist, reason why the real total number of artisanal fishers in Central America and Costa Rica is actually higher.

The Food and Agriculture Organization of the United Nations (FAO), when referring to ethical issues involved in fisheries and in its management and development, recognizes that a 'a major moral imperative in fisheries is to avoid overexploitation and ensure resource conservation in a just and sustainable manner, enhancing people's well-being' (Fao 2005: 19). In many cases the conventional management systems and the economic-driven development models have not been successful in avoiding overexploitation, maintaining healthy fisheries and ocean ecosystems nor in ensuring the well-being of those that depend on them, especially those of the small-scale, artisanal fishing communities. Noting the high number of the small-scale fishing sector and its vulnerability and the limitations of the mainstream fisheries management methods, Berkes et al. (2001) have made a call in the importance of "management at the communal level". Many other scholars have as well emphasized the value of the involvement of local fishers in the decision-making processes and fisheries' management (Jentoft 1989, Kuperan and Abdullah 1994, Mcconney and Charles 2008, Pomeroy 1995, Pomeroy and Berkes 1997, Sen and Raakjaer Nielsen 1996). Considering that many fishing coastal communities in the South are 'marginalized and have very little bargaining power when it comes to access to resources or participation in management' (Chuenpagdee et al. 2003: 2), this kind of initiative seems imperative given that these communities are the ones that most suffer from deficient management strategies, unequal access to fishing resources and unhealthy marine ecosystems.

Community conservation is as well part of wider conservation and natural resource management practices and discussions. An increased attention to social considerations in conservation and natural resource management produced a major global shift in its paradigms and practices since the 1970's and 1980's towards the recognition of other forms of governance such as community based management and co- management (Adams and Hutton

2007). However, in Costa Rica the first attempts of community conservation were not made until the mid 1990's. Nevertheless, the shift towards this paradigm is still not visible in practice nor in the conservation and natural resource management models of the country. A case of an effort of community conservation in an artisanal fishery that searches to change the course of this history in Costa Rica is presented in this research paper.

Moreover, presenting this case will shed light on the problems that coastal communities face in Costa Rica. According to the report "Estado de la Nacion" (Programa Estado de la Nacion 2008), Costa Rica's development model has not provided an adequate attention to rural areas, where the economic policies have failed to deliver an equitable model of development. This explains why the communities located in coastal, indigenous and border areas are the ones with the least economic and social development (ibid). Furthermore, some rural communities are affected by restrictive conservation measures that the country has put forward.

A tension between economic development and resource conservation exists in Costa Rica, 'derived from conflicts in competing use of resources, accelerated economic activities and the involvement of more powerful actors and interests' (Programa Estado de la Nacion 14 2008: 61). Tárcoles is a community, like many others in Costa Rica, where these conflicts are lived, and where the marginalization of rural communities from the country's conservation and development model is evidenced. This coastal community, located on the Central Pacific of Costa Rica, has largely depended on fishing. However, depending on fish has become increasingly difficult in the local context where the depletion of the fishery and the limitations of access to its resources are a reality. The artisanal fishers of this community, as many others in Costa Rica, have expressed their desire to be able to continue fishing in the future and to improve their life conditions. To reach these objectives, it seems imperative to develop management strategies that defend their concerns and improves the health of the fishery. CoopéTárcoles, the fisher-folk organization of the community, has embarked in a route that struggles for the recognition of an initiative of community conservation of the local fishery that pretends to defend their livelihoods.

Fisheries community conservation and management strategies, based on the involvement of grassroots fishing organizations, seem imperative to raise the artisanal fishers' concerns and to give a voice to a sector that is vulnerable. But how does this take place in the current context of the conservation and development model of Costa Rica, and what kind of issues arise when the artisanal fishing sector is given a voice? is what will be explored in the next pages.

1.2 Research question

How has Costa Rica's current context of conservation and development influenced an initiative of community-conservation in the artisanal fishery of Tárcoles?

1.3 Objectives

This research paper will examine the contradiction and exclusion that Costa Rica's conservation, natural resource management and development model has generated in coastal rural communities, through the analysis of one specific case-study of an artisanal fisher's initiative for community conservation. For this I will: first, discuss Costa Rica's national context of conservation and natural resource management to understand its problems, contradictions and consequences on rural communities; and second, analyze the case-study of the Community-based Marine Area of Responsible Artisanal Fishing of Tárcoles to understand how is this community-conservation initiative embedded in the wider national context of conservation and development, and what is the struggle that it represents in this context. These will help us to better understand the situation of conservation and development in Costa Rica, to analyze community conservation in the case of a coastal artisanal fishery, and to inform future marine conservation and natural resource management policies for the country.

1.4 Methodology

The methodology comprised methods for primary and secondary data collection. The data collection was conducted during fieldwork and consisted of semi-structured interviews and document study.

For primary-data collection, semi-structured interviews to key informants were conducted in order to explore the various elements of the case-study, such as the history of the process of the community-conservation initiative, the main elements of its conceptualization, objectives and positions. Furthermore, the interviews would allow me to explore the perspectives of the different actors and institutions involved in the process, in order to research the way this process has been organized and is perceived by the various institutional actors involved or that have a stake. Key informants were chosen for each of the institutions involved, and the interviews were directed to each of them as representatives of the institutions they belonged to (for a list of the people interviewed, see Appendix A). The conduction of interviews allowed me to obtain "depth of information" (Laws et al. 2003) about the case, its elements and process. Furthermore, conducting interviews was appropriate in this case because I could rely on the 'information from a fairly small number of respondents' (ibid: 286) as the people chosen to be interviewed were key representatives of each of the institutions that have been involved directly in the process. All the interviews were transcribed in order to be analysed later. In addition, two group meetings with the staff of CoopeSoliDar were done in order to discuss the advances of the case since September 2008 and to discuss the research problem proposed.

Secondary data collection was done through the study of documentary sources, in addition to the bibliographic research. The study of documentary sources is defined by Bailey (1994: 294) as the study of 'any written materials that contain information about the phenomena we wish to study', including various types such as the ones I mention. A series of CoopeSoliDar internal

documents such as minutes of meetings and workshops, work programs, reports, and project documents and this organization's publications were consulted for the contextualization of the case and process. Other documents that were as well consulted were newsletters, newspaper articles and legal documents (Executive Decrees: "Marine Areas for Responsible Fishing" and "Marine Area for Responsible Artisanal Fishing of Tárcoles", and other several national laws). In addition, a series of reports called *Estado de la Nación*¹ were consulted in order to explore Costa Rica's situation regarding issues of conservation, resource management and development that would serve for the contextualization of the country in this subjects.

Moreover, the Prior Informed Consent (PIC) was an important part of the research process. Both of the organizations directly involved in the case-study, the non-governmental organization CoopeSoliDar and the local fisherfolk organization CoopeTárcoles were consulted for the approval to conduct my research. The PIC is done as part of an ethical code for research, which has been adopted by CoopeSoliDar. The PIC follows an ethical perspective towards doing research, systematization processes and development work with local communities, following the principle of looking for *better equity and justice* in the use of information of local processes and local knowledge consultation. The PIC is developed as part of a process that is based on the principle of participation, and as a strategy that leads research and development work towards a better respect to the local communities and the use of information derived from it (Solis et al. 2004: 16-32).

1.5 Structure of the paper

This Research Paper is structured in the following way: a theoretical framework in chapter two that will discuss the main conservation trends that the world has followed: fortress conservation and community conservation. This will show their ideological background, the elements that characterize each of them and their aims and notions, which will help to understand its implications in the context of Costa Rica, and to analyze the case-study. Chapter three will present a national context of conservation and natural resource management, which will lay out the background to go into the analysis of the case-study. Chapter four will present the case study of the Community-based Marine Area of Responsible Artisanal Fishing of Tárcoles as an initiative of community conservation, which will be analyzed in terms of conflict and cooperation to understand where does it come from and where is it heading to. Finally Chapter five will present the conclusions of the research.

Chapter 2 Theoretical Framework

This theoretical framework will discuss the main issues found in the literature around two conservation trends: fortress conservation and community conservation. Both of these trends have shaped policies and conservation practices in many countries around the world, and keep being part of global discussions around conservation and natural resource management. Today they are still part of an ongoing-debate that has not been resolved concerning issues of nature conservation and social development. Below a discussion of each approach and the politics that each of them reflects.

2.1 The preservationist ideology in fortress conservation and Protected Area establishment

Conservation thinking and policies have been evolving through time (Adams and Hutton 2007). However the early conservation thinking, what many have called as well *fortress conservation* has had a big impact that is still lived today with conservation measures such as those of the establishment of Protected Areas (PAs) informed by a *preservationist ideology*. This *preservationist ideology* (Pimbert and Pretty 1997) is based on a western ideology or model, in which values of wilderness, pristine nature and the separation between nature and humans predominate (Adams and Hutton 2007, Ghimire and Pimbert 1997, Pimbert and Pretty 1997). Therefore, the conservation measures that have been put in place have involved the exclusion of local people (Adams and Hutton 2007, Ghimire and Pimbert 1997, Pimbert and Pretty 1997), having as a consequence a series of negative implications on the communities who traditionally have been living in these areas. Adams and Hutton (2007) have denominated these consequences as the *social impacts* of PAs, which involve population displacement, understood as the expulsion of local communities from their land and the restriction to resources. In this context, the establishment of PAs has been problematic in terms of food security and livelihoods with consequences on cultural and social marginalization (Ghimire and Pimbert 1997). Moreover, as the rights of indigenous and rural communities are denied in terms of land and access to resources, other industries such as the international conservation organizations and the leisure industry, i.e. tourism industry, benefit from the establishment of PAs (Ghimire and Pimbert 2007).

Furthermore, Ghimire and Pimbert (1997:2) draw the attention to the problematic circumstances under which PA establishment is happening, namely in rural settings under transformation and social conflict ‘as a result of the dominant patterns of development that have focused primarily on rising income per capita, productivities and technological modernization, (while) the core issues of rural social security and sustainable livelihoods have received secondary attention’. Moreover, with PAs defined under the objective of conservation for the ‘common good’ (Ghimire and Pimbert 1997, Adams and Hutton 2007) and established following national and international interests have had as a consequence the undermining of ‘local subsistence needs’ (Ghimire and Pimbert 2007). Thus, in this context it can be said that rural areas

have been struck by conservation practices and development patterns that have furthered their marginalization. The case that will be described in this research paper will explain how.

This type of conservation measure has become ‘a major source of rural tension in most developing countries’ due to the way in which most of them are established, that is centrally by state authorities and/or by international conservation organizations and scientists (Ghimire and Pimbert 2007). The history of conservation in Costa Rica, described in the next chapter, will show this, and the opposition and negative perception of many local communities to the establishment of PAs described will demonstrate the above said.

From the above, it can be said that biodiversity conservation and the creation of PAs is a political issue (Adams and Hutton 2007), shaped by ‘powerful economic and political forces (...) that promote certain directions and the official histories of their progress’ (Pimbert and Pretty 1997: 304). The way these conservation practices are put forward reflect specific patterns of ‘wider political structures’ (Adams and Hutton 2007), ‘worldviews and political control’ (Pimbert and Pretty 1997).

However, cases of other types of PA governance such as community-conservation have emerged as a reaction to these particular patterns, and the case of the Community-based Marine Area of Responsible Fishing of Tárcoles that will be presented in this research paper will show it. But first an analysis of the main elements of community-conservation and a short overview of its emergence is imperative in order to understand its notions in contrast of those of the early conservation model and preservationist approach.

2.2 Community conservation

Around the 1980’s rural development and conservation theory and discourses were changing (Roe and Nelson 2009). ‘Concerns regarding the negative impact of protectionist approaches based on exclusion of local people’ started to come up and to be part of global discourses² (Roe and Nelson 2009: 7). Community-conservation started to be seen as an alternative (Hackel 1999: 726), fostering the idea of the participation of local communities in ‘resource planning and management’ (Hackel 1999). In this way, ‘the old narrative of fortress conservation was largely displaced by the counter narrative of development through community conservation and use’ (Murphree in Berkes 2003: 622).

Community conservation started being part of mainstream conservation policies and practices. However, the not always successful results awoke various critiques to the approach (Blaikie 2006). The notion and misconception of community as a homogenous unit was one of the most discussed critiques in the literature on community conservation (Agrawal and Gibson 1999, Barrow and Murphree 2001, Blaikie 2006). However as Murphree (2000) suggests I will not be focusing on the “community” issue but paying more attention to the ‘functional and organizational essence of community conservation’, that is: its function ‘directed towards collective management, use and control and benefit derivation and distribution from such use’, and on its

organization ‘directed at locality levels below those of larger scale bureaucratic units at national or district levels’ (ibid: 4).

Community conservation has embraced many different approaches, such as Community-based Conservation (CBC), Community-based Natural Resource Management (CBNRM), Collaborative or Co-Management (CM), Protected Area Outreach and others, developed as ‘benefit-sharing arrangements for the involvement in natural resource management of people who are not agents of the state’ (Barrow and Murphree 2001: 24). However we will understand the concept here as what CBNRM refers to. CBNRM has been defined as a ‘term to describe the management of resources by collective, local institutions for local benefit’ (Roe and Nelson 2009: 5). However it has to be taken into account that ‘CBNRM takes many different forms in different locations and different socio-political and bio-physical contexts’ (Roe and Nelson 2009:5), meaning that they vary in definition, implementation and the degree of local involvement (Binot et al 2009, Barrow and Murphree 2001). Furthermore it has to be considered that CBNRM exists already and has existed for centuries with communities who traditionally have managed the resources across generations (Binot et al. 2009, Roe and Nelson 2009). Thus there is a distinction between formal (*de jure*) and informal (*de facto*) CBNRM, however it is important to point out that *de facto* CBNRM is in some cases much ‘more representative of CBNRM than many of the formal, externally supported projects and programs that also define themselves as CBNRM’ (Binot et al. 2009). In the case of Tárcoles, the community-based management of the fishery resources is considered to be already there, with or without the government recognition (Solis³, Interview 2009).

For the purpose of this research paper, we will understand CBNRM as referring to ‘local and collective resource governance arrangements and practices, characterized by local groups of resource users (‘communities’) developing and agreeing to shared rules that limit and regulate resource uses’ (Roe and Nelson 2009:8). Moreover, it will be understood that CBNRM should involve communities managing and conserving natural resources ‘based on their own social and economic interests(...) requiring that local people make decisions about resource use, access and allocation’ (Binot et al 2009: 14). In this sense it is important to consider, some of the elements found in the community conservation literature that will be discussed below (and considered essential), in three main points.

Community conservation is considered, by some authors, to deliver important ‘social and political benefits’ such as ‘equity- fairness in the distribution of benefits’, ‘empowerment⁴’ (Berkes 2004: 627) and ‘greater authority’ to local groups (Agrawal and Gibson 1999). Berkes (2004) and Agrawal and Gibson (1999) suggest that ‘community conservation projects need to pay more attention’ to these issues (Berkes 2004: 627). These elements seem imperative considering that ‘local groups are usually the least powerful among the different parties interested in conservation’ (Agrawal and Gibson 1999: 641).

Lastly, two other important elements in the theorization of community conservation need to be considered. These are: *rights over resources* (Roe and Nelson 2009) and *devolution* of resource governance as Murphree understands

it, two elements that Roe and Nelson (2009) link together. For Roe and Nelson (2009:10), ‘the core underlying basis for CBNRM is the establishment of secure rights over resources in the hands of local, downwardly accountable collective institutions’. The establishment of these rights is done through what Murphree (2000:5) denominates as *devolution*, ‘in which the locus of initiative and decision-making is shifted from the state to relatively autonomous localized jurisdictions’, what allows granting ‘the authority over resource management and uses’ in CBNRM (Roe and Nelson 2009:10)⁵ and ‘responsibilities’ to communities (Barrow and Murphree 2001:28). However, as it will be demonstrated with the case described later, establishing rights over resources and devolution are contested issues when CBNRM is trying to be recognized.

To summarize, according to the reviewed literature, community conservation is conceived as a *resource governance arrangement*, in which the decision-making is shifted to *secure rights over resources* to local groups, and as a tool to deliver *political and social benefits*, such as equity, empowerment and greater autonomy.

It needs to be pointed out that still today, and especially in the case of Costa Rica, the two conservation paradigms are still in conflict and producing tension in many resource-dependent communities as it will be described in the next chapters.

In this framework I have exposed the ways in which conservation has been approached and the elements that pertain to each of these trends. Furthermore this theoretical framework has linked issues of conservation with wider social and political matters that are relevant to understand the context of conservation and development in developing countries. The main elements that have been discussed will help in analyzing the situation of Costa Rica in these matters and to critically examine what is being put forward.

Chapter 3 A national context of conservation and natural resource management

3.1 Introduction

This chapter will describe and analyze the national context of conservation in Costa Rica, understanding context as the background state of affairs that explains the current situation regarding conservation in the country. This is important because the case that I will be describing in the next chapter regarding Tárcoles is entrenched in a wider history of social, political and economic dynamics of Costa Rica. Therefore in order to understand the case it is imperative to describe five elements of this context: One, a description of Costa Rica's general history in conservation tracing back to the history of the establishment of Protected Areas (PAs) in the country. Two, a brief look on PAs and conservation in Costa Rica, focusing on the issue of the *social impacts of PAs* (Adams and Hutton 2007) centering the attention on the issues of population displacement and denied access to resources. Third, an overview of the community conservation scenario in the country to expose its short and failed history and the limitations that it faces. Fourth, a brief description and analysis of the tourism industry context in Costa Rica linked to the conservation history and the contradictions it has caused, reviewing the impact it is having on the environment and on social aspects related to the local communities. Lastly, as a fifth point I will move on to marine conservation and fisheries management in the country to locate other problems closely related to specifically the artisanal fisher communities. All the five subsections of this chapter will help me locate the "problematique" that the coastal (and other rural) communities experience regarding the context of conservation and resource management in the country.

3.2 Costa Rica's General History in Conservation

This section leans heavily on four main authors: Evans (1999), Boza (1993), Brüggemann (1997) and Campbell (2002) because these have provided the most extensive overviews of the history of conservation in Costa Rica.

Costa Rica is internationally known as a biodiverse and conservationist country. It has earned its reputation due to two main factors: one being its abundance and richness of flora and fauna concentrated in such a small country, and two because of having a large percentage of its territory under a conservation category. According to Evans (1999:2), Costa Rica has "one of the most complex systems of Protected Natural Areas in Latin America". This country alone contains 7% of the world's biodiversity (IUCN in Campbell 2002). The high percentage in biodiversity can be explained due to its geological history, topography and climate conditions (Evans 1999). According to this author, the country's rich biodiversity is due to the fact of its position in the continent as a 'land bridge between North and South America

permitting a free transfer of species from north to south, enriching the flora and fauna of the isthmus' (Evans 1999:2). Moreover, the high diversification of species in the country has been influenced by the different topography and microclimate system of its territory (Evans 1999).

In the nineteenth century many areas in Costa Rica went through high rates of deforestation as a consequence of agricultural development; forest land was replaced with land for crops, plantations and pastures⁶ (Evans 1999, Boza 1993, Brüggemann 1997), and chaotic land settlement by landless peasants was also contributing to the on-going intensive deforestation (Boza 1993). These events were responding to the international market demands and structure and to the suitable agricultural conditions of the country (Evans 1999, Brüggemann 1997). Furthermore population growth was also seen as a cause of the destruction rate of the environment (Evans 1999).

Due to the environmental pressures described above associated with the economic model of development that the country was pursuing based on agriculture production and expansion, the solution sought was the development of a conservation model that could enhance the protection of the country's biodiversity and resources (Evans 1999). In 1969, the Forestry Law was approved, establishing as the State's task 'the protection, conservation, use, industrialization, administration and promotion of forestry resources' (Legislative Assembly, 1969). Furthermore it 'established categories of PAs and a process for their creation' including the permission for land expropriation (Campbell 2002: 34). This law also established the National Parks Department, led by Mario Boza and Alvaro Ugalde, two conservationist biologists that ended up being key figures in this process⁷ (Campbell 2002). Boza and Ugalde together with others launched a conservation movement in Costa Rica and found themselves in the 'responsibility of developing a system of national parks and equivalent reserves'⁸ (Boza 1993: 240). The decision was made to begin creating national parks in 'areas of stunning, scenic beauty, on historic sites commemorating heroic exploits of the past, and in areas of demonstrated importance for conservation'(Boza 1993: 240).

'In other words, the idea was to merge historical, scenic and natural values so that no one could object, making it easy to sell the public on the idea of conservation' (Boza 1993: 240).

Following this conception, the first national parks were created in 1970-1971: Poas Volcano, Cahuita, Santa Rosa and Tortuguero National Parks⁹ (Boza 1993). Funds for the parks' creation were obtained from the Legislative Assembly and from international conservation foundations (such as the World Wildlife Fund) and bilateral assistance agencies (from, Canada, Denmark, Finland, Norway, Sweden, UK and USA) (Boza 1993, Campbell 2002). The basic research for the creation and planning of the parks was done by scientists associated with the Organization for Tropical Studies¹⁰. Moreover, obtaining national and international support was a major concern for this initiative. For this reason scientists and other people were brought to talk and offer support to the idea of conservation. People such as the First Lady of the country (from 1970-1974) and even Prins Bernard of The Netherlands and Prince Philip of England supported the cause of conservation in Costa Rica (Boza 1993).

Furthermore, the Ministry of Natural Resources, Energy and Mines, today MINAET, was created as the institution in charge of the administration of the natural resources of the country. Thus the National Parks passed from being under the Ministry of Agriculture and Livestock to the newly created Ministry. The legal framework that defined the prohibitions and regulations of the park, the National Parks Act, was elaborated and approved (Boza 1993: 240). Later on other conservation organizations and foreign scientific researchers would be involved in the establishment of some of the others current PAs such as Ostional Wildlife Refuge, Baulas Marine National Park and Gandoca-Manzanillo Wildlife Refuge (Campbell 2002).

Engrained in a wider global context of environmental governance and conservation policies, the solution sought in Costa Rica followed the international trend of conservation strategies and the recommendations and ideas of international conventions and forums such as the 'International Convention for Flora and Fauna and Natural Scenic Beauty Conservation, an initiative by the United States to create national parks and reserves signed by Latin American countries and ratified in 1966 (Rodriguez in Brüggemann 1997), the 1972 Stockholm United Nations Conference and the 1972 World Conservation Union-National Parks Conference. All of which laid the 'foundations for establishing and managing National Parks in Costa Rica' (Brüggeman 1997: 73).

Today, Costa Rica has 26.3% of the total land area of the country under conservation in public and privately-owned PAs (Programa Estado de la Nacion 2008). Costa Rica developed and established a system of PAs, known as *Áreas Silvestres Protegidas*, consolidated under different management categories (Arturo Sánchez-Azofeifa et al. 2003) (See Table 1) and managed by the National System of Conservation Areas (SINAC), a division of MINAET that replaced the National Parks Department (Campbell 2002).

Table 1
Management Categories Adopted in Costa Rica for the Protected Areas

Management Categories in Costa Rica	
Biological Reserves	Unaltered areas with ecosystems, characteristics or flora and fauna species extremely vulnerable, in which human interference has been minimum, and where only research and education activities are allowed.
National Parks	Areas with singular characteristics of national and international interest, ecosystems of national importance, with evidence of small human activity set off for the recreation and education, for tourism and for scientific research.
National Monuments	Areas that contain a historical or archeological cultural resource of national and international importance.
National Wildlife Refuges	Areas with special geographical conditions and biodiversity declared for the protection and research of flora and fauna, especially those in danger of extinction, where the extraction of flora and fauna is prohibited. These areas include state-owned, private-owned and mixed.
Forestry Reserve	Forest land acquired for wood production with a system of sustainable management.
Protection Zones	Forest areas or with forestry characteristics in which the main objective is land protection and the regulation and conservation of the drainage basins.
Wetland	Ecosystems dependent on aquatic regimes, natural or artificial, permanent or temporal, of fresh water or salt water.
Natural Monument	Areas with one or more natural elements of national importance because of its unique or exceptional characteristics, natural beauty and/or scientific value.
International categories	Biosphere reserves, RAMSAR wetlands, World Heritage
Special categories	Biological Corridors, Private Natural Reserves and Marine Biological Corridors

Source of information and definition of categories: SINAC (www.sinac.go.cr). Date of Access September 2009.

As it can be noted from the above definitions, the established categories for PAs reflect the early conservation thinking and the preservationist ideology presented in chapter two.

In Costa Rica, ‘national parks and biological reserves are strictly PAs which exclude, by definition, human settlements and resource use. In some PAs, for example in wildlife refuges, resource-use regulations were issued for conservation purposes; and in others such as forest reserves and protection zones, with the intention to sustain ecological processes and sustainable production’ (Brüggemann 1997:73).

Moreover, the aims that were established for each of these categories reflect an instrumental perspective on nature and its resources. Objectives such as scientific research, recreation, education, tourism¹¹ and resource exploitation were part of what PAs were set to fulfill. In the case of the category of Forest Reserves, an economic-productive view of nature is reflected in the objective

of setting aside these areas for wood production and logging. Thus it can be said that a 'utilitarian-multiple use perspective' prevails in the language of the definitions of the management categories in Costa Rica (Evans 1999). In the next section the social consequences of adopting the traditional conservation thought for the management categories in the country will be discussed.

3.3 PAs and Conservation in Costa Rica: social impacts

The established categories of PAs in Costa Rica have not left enough space for the social considerations in conservation. With the main objective being conservation of biodiversity and natural resources, PAs have left local communities in a vulnerable position, outside of the conservation schemes and without access to resources. The establishment of PAs in many countries around the world has had problematic consequences on the local communities that are located within the area established or in its surroundings. These negative consequences are what Adams and Hutton (2007:148) call the *social impacts* of PAs, referring to population displacement¹², and to issues in the 'relation between biodiversity conservation and human welfare' linked to impacts on the local communities' livelihoods, and consequences of impoverishment and marginalization.

Examples of social impacts due to PA establishment exist globally and Costa Rica is no exception. This conservation policy has been problematic in the country since the beginning. The creation of one of the first National Parks, Santa Rosa, encountered resistance and lacked local support (Evans, Harber in Campbell 2002). The creation of another of the first PAs in 1970, the Cahuita National Park on the Caribbean coast, created conflict with the local communities derived from land expropriation, denied access to the resources and regulation of activities they used to depend on for their livelihoods such as hunting, turtle egg collection, turtle hunting, coral extraction, fishing and others (Fonseca 2009). The establishment of a Wildlife Refuge in Ostional, Pacific coast, in 1985 did not have local support either (Campbell 2002). The Ballena Marine National Park, on the South Pacific coast of Costa Rica, is another example where the creation of the national park, in 1989, was done without consultation to the local communities nor to local resource users, and where access to land and resources was denied, circumstances that generated conflicts between community members, especially the local artisanal fishers and the staff members of MINAET (Fonseca 2009). Moreover, on the North Pacific lies a similar case in Las Baulas Marine National Park, created in 1991, where the local community had to change their livelihood strategies, majorly dependent on the marine and coastal resources, once the national park was created. Restrictions on the use of natural resources in these PAs and in others constituted a 'source of social conflict' (Utting 1994). As it has been experienced by these cases and many others, displacement and restriction of access to resources as a consequence of PA establishment is a serious social impact derived from conservation. Furthermore, an important point to make is that these kind of actions in the name of conservation continue, even though 'there are few studies that establish a relationship between the displacement of humans from the PAs and

the marginal gain such displacement confers to biodiversity conservation' (Agrawal and Redford 2009:8). The experience of Costa Rica's PA's establishment shows that, its approach has 'ignored the socio-economic and cultural situation of thousands of families who live in the areas affected' (Utting 1994), posing restrictions for the development of the local communities in prohibiting access to resources and thus changing their traditional patterns of livelihoods.

As Adams and Hutton (2007) point out an important question derived from the social impacts of PAs lies here, for whose benefit and at whose costs are PAs created? Until now in Costa Rica, PAs have not been created for the benefit of the rural poor, who on the contrary have been further marginalized with policies of restricted access to resources and local control over their territory. On the other hand, PAs in Costa Rica seem to be benefiting the national economy with tourism, while in general the benefits do not seem to be rewarding the local communities of the surrounding areas. As Krueger (2009: 21) mentions, 'many benefits (of PAs) accrue to a broader community while nearly all the costs are borne by individuals and groups who live in and around those parks and who may lose access to land, resources and development opportunities'. Moreover, Adams and Hutton (2007) argue that costs of the creation of PAs are borne locally. These authors question the unequally distributed benefits and highlight the costs derived from PA establishment raising the issues of rights and access to resources of indigenous and local communities and their needs; debates that have given raise, according to the authors, to other more inclusive forms of governance such as community conservation models in the forms of community-based management and co-management.

In Costa Rica, co-management models were put into practice in two of the cases mentioned above, implemented as conflict management strategies after the problems that the establishment of the PAs created with the communities (Fonseca 2009). An overview of the situation of community conservation in Costa Rica will be presented in the next section.

3.4 Community conservation in Costa Rica

This section will take a brief look at the scenario of community conservation strategies in Costa Rica, serving the purpose of a review that justifies the importance of the case study that will be introduced in the next chapter, in terms of community-conservation.

As noted in chapter one, the country has taken to this trend only very recently (in 1996-1997). According to Solis (personal communication), President of CoopeSoliDar, this has been as a consequence of a very slow incorporation of the global and regional discussions on the subject. Late global and regional debates around this subject were an influence to the history of Costa Rica's community conservation: in Latin America, the IV Congress of National Parks and Protected Areas "Parks for Life" in Caracas, 1992, where the urgency of the integration of local communities in the management and decision-making of PAs was discussed, and later on the Fifth World National

Parks Congress of IUCN, in Durban 2003 and the Conference of the Parties of the Convention on Biological Diversity in Kuala Lumpur, 2004. These last two considered essential turning points in the global discourse of the debate (Adams and Hutton 2007).

The country began with community-conservation efforts implementing co-management in three PAs, Gandoca-Manzanillo National Wildlife Refuge, Cahuita National Park and Ballena Marine National Park¹³. However, still now the shift towards this form of governance in natural resource management is not visible in the conservation practices of the country. According to research done by Campbell (2002: 51) in Costa Rica 'the community-based conservation component with attention to local control and empowerment remains elusive' because the *narratives* and practices that dominate conservation in Costa Rica, are based on a neo-liberal agenda where economic profit and capital accumulation through conservation and its link with tourism dominate over local social well-being (ibid).

Two cases will help in analysing the situation of community-conservation in Costa Rica and its linkages with the conservation history of the country: the experiences of Cahuita National Park, on the Caribbean coast and Ballena Marine National Park, on the Pacific coast¹⁴. The two co-management arrangements in these two national parks were applied as conflict management strategies to mediate in the problems that arose with the local communities related to the establishment of the PAs. Conflicts like the ones that have already been mentioned were the ones that arose in these cases: physical displacement, denied and restricted access to the natural resources (that the local communities used to depend on for their livelihoods), problems related to the payment of the expropriated land, and in the case of Ballena, the closure of the fish collecting and marketing centre of the local fishers (Fonseca 2009). The point here is that although these co-management arrangements were implemented, they did not promote a real break-through in the conservation practices of the country, failing to recognize the rights of the local communities and the objectives of co-management as a recognized form of governance (Fonseca 2009):

'Even though these two cases of co-management strategies were implemented, a change in the traditional form of PA management established since the 1970's was not achieved. There is not a recognition of the right of community participation in key processes such as decision-making, responsibilities, management, access and, on the distribution of benefits derived from biodiversity conservation in situ' (Fonseca 2009: 219).

Even though a big legal basis that promotes citizen participation in environmental issues exists in Costa Rica¹⁵, the legal back up for community conservation policies do not exist yet in the country. The legal tools for the implementation of community conservation initiatives that recognize the rights of local communities and that commit to the aims and objectives of this kind of governance, have not been developed yet (Fonseca 2009: 51-64, 209-221). Even though the exercise of civil participation in environmental issues in the Costa Rican state is recognized as a right and there is a legal framework for its exercise, 'the legal framework does not refer expressively to procedures that promote and facilitate participation in the formulation of strategies, programmes, policies and plans' (Programa Estado de la Nación 2004: 217),

element that translates into a serious limitations for the implementation of community conservation. In an IUCN report on collaborative management in Costa Rica, it is said that ‘there is not a precise and clear definition of the legal possibilities for the different forms of civil participation in environmental management’ (IUCN 2006: 21) and that a ‘clear political and legal framework for the collaborative-management of PAs is inexistent’ (ibid: 25). Moreover, ‘in Costa Rica the administration of natural patrimony of the Estate corresponds exclusively to the Executive Power and the definition and follow-up of strategies, plans, and budgets of the PAs are considered responsibilities that cannot be delegated’ (Fonseca 2009: 209).

From the above, it can be said that community conservation in Costa Rica faces many limitations and constraints. Adding up to the legal limitations explained above, the IUCN (2006) report argues the limited capacity of SINAC to manage participatory processes, making more profound the difficulties for the implementation of this type of initiative.

Furthermore, community conservation in Costa Rica has not fulfilled with the *functional essence* as conceptualized by Murphree (2000) nor has achieved any of the fundamentals of community conservation described in chapter two. Even though in the initiatives described above, the co-management arrangements have directed its efforts of organization at local levels (what Murphree calls the *organizational essence*) with the conformation of groups of community representatives to be involved in the “co-management” of the PA, these local groups have not been involved in the decision-making of regulations for the management and access of the resources (nor agreeing to these rules and regulations). Thus *devolution* has not been achieved nor have *rights over resources* been secured. The model of community conservation experienced formally in Costa Rica has been far from delivering *social and political benefits* (as described in chapter two) to the local communities, and far from management and conservation schemes that are based on the *communities’ social and economic interests*. It has remained as a top-down approach, where the state still has the control and power of the decision-making over the resources.

3.5 Conservation and tourism

As it was described in the section of Costa Rica’s conservation history, the country’s high biodiversity of species and ecosystems and the system of PAs established, made the country renowned internationally. The rich biodiversity had already attracted tourism since the 1950’s (Latham in Campbell 2002) and years later the national park system contributed to higher tourism visitation (Boza 1993). In this way conservation was linked to economic growth through the tourism industry, which contributed in solidifying conservation politically. The tourism visitation started growing steeply since 1986, and from that year on the country lived a tourism boom that still continues today (Campbell 2002).

Even though Costa Rica has been consolidated as a “green destination”, the expansion of tourism today shows contradictions with the “green label” and the ecotourism ideal of sustainability. Today the expansion of Costa Rica’s tourism is characterized by transnational chains of luxury hotels and large-scale

tourism projects with government policies that value this kind of tourism development (Campbell 2002, Honey 1999, Horton 2009). Moreover, the development of tourism infrastructure has been characterized by lack of planning, insufficient regulations and the non-accomplishment of existing regulations, causing problems at the level of land use planning and impacts on other natural ecosystems (Programa Estado de la Nacion 2008). According to the studies elaborated by the *Programa Estado de la Nacion*, (2007), the areas on the Pacific coast have undergone a process of accelerated urban development, even higher than those of the Great Metropolitan Area¹⁶. The canton¹⁷ of Garabito, where Tárcoles is located, was one of the cantons with the highest area of urban development in 2007 (Programa Estado de la Nacion 2008), and where the lack of urban development planning and the non-compliance of regulations have caused pressure and negative impacts on the area's resources (such as sea pollution, water shortages). The tourism industry 'has become a political and economic powerhouse in the country' (Evans-Pritchard 1993: 778), with such an importance that its influence surpasses all kind of planning and environmental regulations. The laws and regulations that already exist are in some cases ignored in order to benefit the private investors of tourism development¹⁸.

Even though, some local communities benefit from jobs derived from this type of industry and in some cases from an improvement of the area's infrastructure and services, this type of tourism development has caused problematic social impacts. For example, it has posed many problems regarding equity in the access to natural resources. In many cases direct access to the public Marine Terrestrial Zone (MTZ) is denied because of private property enclosure (Programa Estado de la Nacion 2007). As Horton (2009:104) argues '(eco)tourism has further eroded local control of and access to land and natural resources, while advancing state and foreign influence'. Access to the sea has been denied to fishers in this sort of context (for example in the case of marines or other beach developments). Moreover, it has not delivered economic equity in coastal and other rural areas in Costa Rica: the areas with more large-scale tourism development on the Pacific coast continue to be the poorest areas in the country, evidence that large-scale tourism is not delivering an equitable model of development. Furthermore, problems such as prostitution, drug trafficking and consumption have come along with tourism development, affecting the lives of many local communities and their social development, as well as the (mental and physical) capacity of individuals to be agents of change and actors of their own development (Solis Interview 2009). Lastly, the type of tourism model being developed is one unconnected to the local reality and culture.

It can be said then, that the tourism development in Costa Rica is characterized by a chaotic urban expansion that is having not only negative environmental impacts but as well harmful social implications. Moreover, it is inserted in a political context of lack of regulations and legal enforcement, and one that prioritizes foreign large-scale tourism investment over local endogenous/endemic development. Engrained in a neo-liberal development model, tourism has commodified nature, privatized natural resources (such as beaches and PAs), produced benefits for foreign investors, and caused the

exclusion of many poor rural communities (Duffy 2002, Igoe and Brockington 2007).

3.6 Marine Conservation and Fisheries management

A brief review of marine conservation and fisheries management in Costa Rica will be described in this section, presented as part of the problematic lived by artisanal fisher coastal communities.

Efforts in marine conservation have been made with the establishment of PAs (National Parks, Wildlife Refuges and Biological Reserves) that contain a marine portion. Here we will name them Marine Protected Areas (MPAs). Hence marine conservation has not been any different in causing serious social impacts such as the ones discussed earlier. MPAs have caused displacement of fishers and coastal communities that depend on marine and coastal resources. Three of the cases presented in section 3.3., Cahuita, Ballena and Baulas are all examples of the exclusionary approach as well present in marine conservation.

Even though, Costa Rica has made efforts to protect the marine and coastal ecosystems with the establishment of PAs, these ecosystems are still under threat because of several reasons. Only 0.9% of Costa Rica's Exclusive Economic Zone (EEZ) is under a conservation category, which is only 17.2 % of territorial waters (Programa Estado de la Nacion 2007). Moreover, the model of development that Costa Rica has followed regarding its fisheries has been one centered in the industrial extraction (context where the small-scale artisanal fisheries are not the priority) (CoopeSolidaR R.L. and CoopeTárcoles R.L. 2006), focused by a 'management perspective that addresses fisheries as an exploitable resource' and that centers in 'fisheries production-maximization' (Quesada Alpizar 2006: 645). This management perspective is evidenced in its policies and in the fact that in INCOPECA's Directive Board, composed by governmental and fishing industry representatives, there is no single representation of the artisanal fishing sector. Thus the interests of this sector are being underrepresented.

In addition, other factors related to problems in the national regulations are threatening the health of marine ecosystems. Fisheries management regulations in Costa Rica have been poor, limited only to gear regulations, fishing licenses and time and area closures¹⁹. Their poor enforcement has been another limitation: the National Coast Guard Service, institution in charge of the fisheries regulation enforcement and vigilance together with INCOPECA are both constrained by budget and staff shortage (Quesada Alpizar 2006, Porras²⁰ Interview 2009, Castro²¹ Interview 2009). To add up, the institution does not keep up with the fisheries information production and systematization. Adding to this that the information produced is generic, without specifications on regions or areas (Chacon Interview 2009), factors that limit availability of information on the state of specific fisheries and the production of adequate management policies. Another big issue is that the National Fishing Law from 1948 was renewed in 1995 after the 'Constitutional Court repealed the article that corresponded to the sanctions' (Quesada Alpizar 2006), lasting over ten years in Congress waiting to be passed. For this reason, there were not any fishing regulations nor sanctions for ten years in Costa Rica,

fact that caused control deterioration over fisheries and severe overexploitation (Quesada Alpizar 2006, Porras Interview 2009).

Furthermore, the marine resources are being impacted by other kind of activities carried out far away from the coast such as activities in urban centers, intensive agriculture (that involves high use of pesticides), and industrial activities (Programa Estado de la Nacion 2004) plus coastal tourism development, as noted in section 3.5, all events alien to the local dynamics of the coastal communities. In the case of Tárcoles, pollution due to the river that takes its name is one of the biggest problems. This river is one of the highest polluted rivers in the country; which carries the contamination produced in the Central Valley to the ocean. Fishers are convinced that the pollution of the ocean caused by this river has been detrimental for the marine ecosystems and for the depletion of the fishery (David Interview 2009, CoopeSolidar and CoopeTárcoles 2006).

From the above, it can be said that local coastal communities and artisanal fishers have not only been negatively impacted by the traditional conservation schemes of MPAs, but as well from the deterioration of the marine resources caused by the utilitarian management perspective taken by state institutions, poor regulations and enforcement, misrepresentation of the artisanal sector in fisheries management and to activities that respond to the development direction and model that Costa Rica has taken. Thus, it can be said that the horizon is bleak regarding the health of coastal-marine resources and as a consequence the well-being of those that depend on them for their livelihoods.

3.7 Conclusions

The conservation history of Costa Rica demonstrates that it has been informed by the wider traditional conservation thought and the preservationist approach. The PA establishment has been linked to the protection of nature along with other activities such as scientific research, tourism and recreation but not to the well-being of the local communities, who have suffered from the *social impacts* of PA establishment. Moreover an economic perspective has dominated not only the conservation policies but as well the fisheries policies which have focused on the industrial exploitation of the oceans, with no attention to the social concerns of the poorer fish dependent livelihoods. This context has formed a precedent that has marginalized rural communities and their development. Furthermore, the few community conservation strategies that have been put in place have not changed the situation regarding local communities and conservation in Costa Rica, and have on the other hand perpetuated the vertical patterns of conservation and natural resource management. This history provides the background in which the case study that will be presented in the next chapter develops from. An initiative that represents the ‘struggles between local communities, the State and capitalist enterprises over livelihoods, the structure of control over access to land and resources and the importance of local knowledge (...)’ (Neumann 2005: 83).

Chapter 4 The case of Tárcoles: struggling for inclusion

4.1 Introduction

In January 2009 the Community-based Marine Area of Responsible Artisanal Fishing of Tárcoles (MARAFT) was finally recognized in law in Costa Rica. But the process that led to it and to its final recognition was a long and difficult one.

In order to understand why this Community-based Marine Area came into being we need to understand the background problematic and the process that led up to this initiative. Hence, in order to do that, I will: one, discuss the problems that the artisanal fishers experience and that lie behind this initiative, two, describe how the process towards the Marine Area of Tárcoles started by exposing how were the solutions to this problems sought, the main outcomes reached and the conceptualization of the initiative as a community conservation one, and three an analysis of main points of conflict that came up.

This chapter will analyze my research findings from fieldwork in order to do the above. The thread that I will follow as a guiding principle is conflict and cooperation.

4.2 Problematic that lead to the Community-based Marine Area of Responsible Fishing of Tárcoles

Models of community conservation in fisheries are derived from specific realities or situations. Pomeroy and Berkes (1997: 476), talking about the emergence of fisheries co-management, realize that these kind of models are generated after the acknowledgement of resource management problems such as ‘resource deterioration (...), conflicts between stakeholders (...), conflicts between management agencies and local fishers (...), and governance problems in general’. In the case of Tárcoles, the initiative of community-based management is derived from a combination of all the factors mentioned above, which should be seen linked to deeper factors engrained in the conservation history of Costa Rica and in the model of development and natural resource management that Costa Rica has adopted.

The Community-based Marine Area of Responsible Fishing of Tárcoles responds to a specific problematic experienced by the artisanal fishers, engrained in the wider national context that was described in chapter three. Due to space constraints I can only give the very main points of this problematic: the first one is the overexploitation of fisheries and industrial fishing, two Marine Protected Areas, and three coastal tourism development.

Overexploitation of fisheries and industrial fishing

In the 1950's industrial fishing started developing world-wide and by the 1980's the trawling fishing boom started in Costa Rica contributing to fish stock and marine ecosystem's depletion. Fish stocks globally have been decreasing dramatically, and Costa Rica is no exception in this matter. Several species (such as *lutjanus aratus*, *lutjanus colorado*, *cyanoscion similis*, *centropomus undecimalis*) have already being reported as overexploited in the Pacific waters of the country (Programa Estado de la Nacion 2004, Caton²² Interview 2009, Elizondo²³ Interview 2009). The artisanal fishers of the cooperative of Tárcoles perceive a series of problems in the health of their local fishery as well.

The overexploitation of fish stocks in Costa Rica and in the case of Tárcoles has been due to several reasons²⁴. As it was explained in the previous chapter, other causes such as pollution and lack of legal enforcement have affected the fisheries in the national context and especially in Tárcoles. However here I will only focus on the industrial fishing problematic. According to David Chacon, President of the fisher-folk organization of Tárcoles, since the boom of trawling fishing in the 1980's the fishers of Tárcoles have seen a decrease of about 70% of various species (Chacon Interview 2009). The use of destructive fishing practices and an augmentation of the fishing effort increased dramatically with industrial fishing practices²⁵ causing negative impacts of the local fishery.

The development of industrial fishing in the country has caused conflict between the industrial fishers (trawlers) and small-scale artisanal fishers because of resource depletion and problems of access to resources, aspects that end up affecting the resource-dependent livelihoods of the artisanal fishers. In the case of Tárcoles, being a rich fishing area, this conflict is lived every day. The artisanal fishers do not compete equally with the industrial fishing fleets for the same fishing grounds and resources²⁶, a situation of disadvantage that can cause serious implications for the achievement of a better quality of life and for the reduction of poverty in coastal artisanal fishing communities (CoopeSoliDar R.L. and CoopeTárcoles R.L. 2006).

Small scale fisheries often find themselves in growing competition with industrial fisheries for space, resources, inputs (labour and finances) and markets, with a strong impact on incomes distribution. (...) Small scale fishers, on the other hand may become increasingly uncompetitive and may eventually find their sources of livelihoods severely compromised (Fao 2005: 8).

Marine Protected Areas (MPA's)

As we have seen in the previous chapter, conservation policies in Costa Rica have been exclusionary from the point of view of the establishment of PAs. In this sense, the coastal communities have been banned or restricted from the use of resources. This is the case of the artisanal fishers who have seen their fishing areas reduced (CoopeSoliDar R.L. 2007). This has had serious implications, such as in the case of the Marine National Park of Ballena, where

a solid organization of artisanal fishers existed, and the establishment of the park provoked the disintegration of the fishers association and the displacement of the fishermen. These fishermen ended up leaving the community or turning to other industries, such as tourism, construction and land labor, often meaning they earned less (CoopeSoliDar R.L. internal document). Furthermore, this kind of conservation policy and its consequences of displacement can be detrimental to the artisanal fishing culture. Krueger (2009: 21) argues, in this respect, that 'local communities may suffer cultural losses if traditional natural resource use practices are restricted or denied'.

In the case of Tárcoles, there are not any MPA's in the areas where the fishers fish, however the fishers of this locality are conscious of the negative consequences that MPA's have created and the conflicts that exist between fishers and the conservation policies that have excluded them. For this reason they wanted to look for a solution that would conserve the local fishery while still allowing them access. In some cases, artisanal fishers have thought that MPA's will benefit them with the ban of trawlers in the area, until they realize that the general areas of fishing ban end up excluding them as well (Frangoudes and Alban 2004).

Coastal Tourism Development

As it was discussed in chapter three, Costa Rica has focused on the industry of tourism as one of its main economical activities. Thus it has grown as a powerful industry with high levels of influence in the Costa Rican policies. As it was exemplified it is not only generating environmental costs but as well social ones.

In the Central Pacific Area of Costa Rica, where Tárcoles is located, tourism is the highest-growing industry and where major tourism developments have been taking place without any planning (Programa Estado de la Nacion 2004:185). In the case of Tárcoles, various big-scale tourist developments have been built close to this community. The development of tourism infrastructure on the neighboring coastal community of Jacó has generated marine pollution, water scarcity, and chaotic land use planning (Cantero 2008). Furthermore, a marina together with hotels and tourism facilities have been developed in other neighboring beaches, Herradura and PuntaLeona, and this has caused problems of access to the beach and of transit in areas of the sea located in front of these developments. The high level of priority that tourism has in the country and in this area has inhibited a more integral model of development for the rural coastal communities. As the representative member of the local government body of the Municipality of Garabito, Jose Arroyo pointed out, all of the resources of the Municipality are being directed to tourism development of Jacó, and none have been destined for projects for the local communities (Arroyo Interview 2009). Moreover, tourism has had an impact on the levels of drug consumption in the locality, and in neighboring communities such as Tárcoles.

Conflicts between fishers and tourism due to displacement, unequal power positions, environmental pressure and negative impacts on marine resources

are common and lived in many countries of the world where this industry has taken over or is developing (Boissevain 2004, Pascual 2004, Seixas and Berkes 2004). In this sense littoral communities have suffered from impacts of tourism either because of 'displacement of fishing families from the shore, the construction of tourist infrastructure, the impossibility of using many of the traditional beaches for fishing or even for preparing nets, the transfer of workforce to new activities, and the destruction of fishing grounds near the shore due to the building of tourist resorts' (Pascual 2004: 65).

As it has been described all the above problems are based on conflict due to the exclusion of artisanal fishers' interests and livelihoods in terms of access to resources and user rights, aspects that further their marginalization and might hinder poverty alleviation. A description of how the local fishers of Tárcoles have created a process towards the quest of a way out of the marginalization of their livelihoods and development is presented in the next section.

4.3 Building a process towards the Community-based Marine Area of Responsible Artisanal Fishing of Tárcoles: searching for solutions

The Marine Area of Responsible Fishing of Tárcoles is a result of a search for a response to the problematic described above. The process of looking and working for possible solutions has been long and has involved the work and cooperation of two organizations that have been crucial in this process: CoopeTárcoles R.L. and CoopeSoliDar R.L. In 2002, CoopeSoliDar R.L. a non-governmental organization working on development and conservation issues, and CoopeTárcoles R.L., the fishers' cooperative founded in 1985, decided to associate in order to join their efforts in a process to bridge coastal-marine resource conservation, artisanal fishing and local development. CoopeSoliDar and CoopeTárcoles argue that their joint work was created as a process that would strengthen sustainable fishing practices in the artisanal fishery, develop knowledge and experience in the sustainable use of marine biodiversity and that would aim to seek for a just and equitable model of local development (CoopeSoliDar R.L. and CoopeTárcoles R.L. 2006: 25).

The cooperation between these two organizations in the process has been vital because of several reasons. First, the nature of each organization: CoopeSoliDar with experience in conservation and development issues in Costa Rica and that has seen and analyzed its problems and fails, and CoopeTárcoles a well established fishers' organization with a solid trajectory of work and experience as a collective group of fishers. Second, the two organizations complemented each other: as David Chacon mentioned, CoopeSoliDar helped CoopeTárcoles in the transmission of ideas, and CoopeTárcoles as the individuals who lived the problematic could put their knowledge and experience to work towards solutions (Chacon Interview 2009). In addition, the fishers' cooperative was the entity that provided the local

political pressure to make the needed demands to the governmental institutions (Solis Interview 2009). Furthermore, the on-going support of CoopeSoliDar was vital in order to carry-out the process and be the link between governmental institutions and the fisherfolk organization for the expression and support of their concerns. Third, their mutual cooperation led to the building of a range of strategies or outcomes that were key to the recognition of the Community-based Marine Area of Responsible Fishing of Tárcoles. These strategies were built up, in words of the President of CoopeTárcoles, David Chacon, as a “jigsaw puzzle”, with the motivation of reversing the process of the decrease of the fishery’s resources and with the aim of finding a way that will enable artisanal fishers to continue fishing in the future (Chacon Interview 2009). Next a brief description of five main outcomes of this process of cooperation follows.

This “jigsaw puzzle” started in 2004 with the adaptation of the FAO’s Code of Conduct for Responsible Fishing. This Code was developed and voluntarily adopted by the cooperative of artisanal fishers and adapted to the context of Tárcoles and its necessities (CoopeSoliDar R.L. and CoopeTárcoles R.L. 2006). The adoption of this Code is part of the compromise that the fisherfolk organization developed for a sustainable use of the fishery resources and as an instrument to create awareness between the fishers of the organization.

For the fulfilment of the Code of Conduct for Responsible Fishing, having the information on the catches and on the state of the fishery was considered essential. For this reason a fisheries data-base was developed in 2005 (CoopeSoliDar R.L. and CoopeTárcoles R.L. 2006:83). The data-base integrates the following information: date of fishing, hours of work at sea (fishing time), species caught, size, fishing zone, and fishing gear (ibid). It is managed and updated locally by a fisherwoman who is in charge of the data entry, and periodically a statistical analysis of the information is done with the support of CoopeSoliDar. This data-base has turned into an important management tool developed and used locally by the artisanal fishers. According to David Chacón, with this method the fishers can ‘justify management decisions based on data collected and produced not by scientists but by the fishers themselves based on the fishers traditional knowledge’ (Chacon Interview 2009). The analysis of the data-base would ‘allow the fishers to identify tendencies in the fishing captures, plan for future periods, and improve the management of the fishery’ (CoopeSoliDar R.L. and CoopeTárcoles R.L. 2006: 84). In the absence of data from the government and from other conservation organizations, this was seen as even more relevant. As Berkes et al. argue ‘user knowledge may supplement scientific data especially in areas where scientific knowledge is scarce, as in most developing countries’ (Berkes et al in Seixas and Berkes 2004: 184).

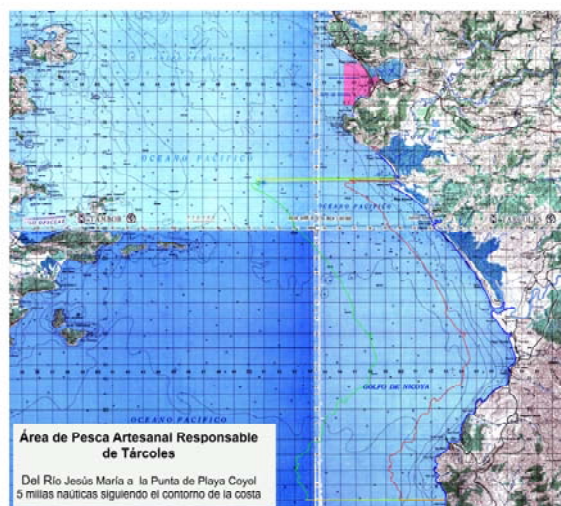
Their effort to continue with a local model of management followed with a Participatory Zoning of the fishing areas that the fishers of the cooperative use. Both organizations worked together in this mapping, joining the knowledge of the artisanal fishers and the knowledge of a geographer to map the areas considered (See Appendix B). Furthermore, these maps were used to define the Marine Area of Responsible Fishing of Tárcoles.

The Data-base and the Participatory Zoning repositions the importance of local knowledge in the management of fisheries and gives a better position and *greater authority* to the artisanal fishers as decision-makers and resource managers, aspects that would help significantly in the next step of the “jigsaw puzzle”: pushing the idea of the recognition of fisheries community-based management and the Marine Areas of Responsible Fishing.

The cooperation and joint work of these two organizations CoopeSoliDar and CoopeTárcoles led to another significant outcome which was the creation of the legal framework for the recognition of Marine Areas of Responsible Fishing, which both of the organizations developed together with the Costa Rican Institute of Fishing and Aquaculture (INCOPESCA). This legal framework was constituted as an Executive Agreement that defined the characteristics of the Marine Areas of Responsible Fishing, its conditions, requirements and regulations, in order to enable the recognition of Marine Areas of Responsible Fishing across the country. It defined the Marine Areas of Responsible Fishing as “areas with important biological, fishing and socio-cultural characteristics, that will be delimited geographically or through other methods, in which the fishing activities will have special regulations to ensure the use of the fishery’s resources in the long term and for which the conservation, use and management INCOPESCA will have the support of coastal communities and/or other institutions” (for further details See Appendix C).

Furthermore, with the creation of this Executive Agreement, CoopeTárcoles R.L and CoopeSoliDar R.L achieved together the official recognition of the Community-based Marine Area of Responsible Artisanal Fishing of Tárcoles (MARAFT)(See Map 4).

Map 4
Marine Area of Responsible Fishing of Tárcoles



Source: CoopeSoliDar R.L.

The MARAFT is based on a search for a governance strategy in PAs that allows the recognition of community conservation in Costa Rica. The concept

of the Marine Areas of Responsible Fishing, coined by CoopeSoliDar, derives from the international discussions on governance sustained in the Protected Areas Congress in Durban and the Convention of Biological Diversity, in a search for the inclusion of local communities in conservation and the distribution of its benefits (Solis personal communication). Furthermore its conceptualization is based on the recognition of fishing rights and access to the sea and its resources for artisanal fishers to fulfill their rights to food sovereignty and to employment (CoopeSoliDar CoopeTárcoles 2006, Solis personal communication). It comprehends as well a strategy for the maintenance of the fishery resources in the long term through an alliance with other organizations and state support for the compliance of fisheries' regulations (Chacon Interview 2009, Solis Interview 2009, Porras Interview 2009). Also it is defined as a strategy for the awareness creation of fishers on the sustainable and responsible use of fisheries resources (Chacon Interview 2009).

Moreover, this initiative contains some underlying principles that are part of a deeper struggle that strives for the inclusion of the artisanal fisher sector in the development and conservation models of Costa Rica: one is to give voice to a sector that has been silenced, two is the search for equity in coastal development, marine and natural resource conservation and management, three, the recognition and respect for the artisanal fishers' knowledge and the local management capacity; and four, the maintenance of the fishers' cultural identity and way of life by assuring the fishery resources for future generations (Solis Interview 2009, Chacon Interview 2009).

In this case-study of Tárcoles, the way community-conservation has been conceptualized captures many of the elements exposed in chapter two. First the concept of MARAFT is regarded as a *local and collective resource governance approach* (Roe and Nelson 2009) in which the local users should be involved in the management of the resources and the decision-making of regulations, resource use and access (Binot et al. 2009, Hackel 1999). Furthermore, it searches to deliver *political and social benefits* (Berkes 2004) by: positioning the artisanal fisher sector in *greater authority* (Agrawal and Gibson 1999) in management through the use of its own information production and knowledge (Data-Base and the fishing zones mapping), and through this *empower* the artisanal fisher sector. Berkes (2004: 629) points out that 'the use of local and traditional ecological knowledge is a mechanism for management and empowerment'. In this case, the local traditional knowledge of the fishers of Tárcoles has worked as a means to make management decisions and a tool of empowerment. As it was explained above, this fisheries data-base and the mapping of the fishing area have been vital to put forward to the government the recognition of MARAFT, and to justify based on the information produced the decisions regarding the proposed management actions. This gave the fishers the possibility to negotiate directly with INCOPESCA. In this sense, knowledge has been a tool of power (Berkes 2004) for negotiation and respect, and has given the artisanal fishers a stronger voice in the management decisions (Western & Wright in Hackel 1999: 727). Moreover, the community conservation approach in the case of Tárcoles as well looks to produce a model that aims for *equity* in various aspects such as in the access and use of

the fishery's resources and in the exclusionary model of development and conservation that Costa Rica has been following. Assuring an area that respects the artisanal fishing rights in an integral way is part of the initiative: safeguarding them from the unequal competition with industrial fishers, the privatization of public resources (with the development of marines and beach private developments), the marine pollution and pressure on resources by unregulated urbanization of the coast, exclusionary conservation measures and tourism development are all constellations of the struggle for equity. Moreover, *securing rights over resources* (Roe and Nelson 2009) and *devolution* (Murphree 2000) are as well part of what MARAFT seeks to achieve: secure rights over the fishery resources to artisanal fishers through the exclusion of industrial fishing in the declared Marine Area, and the shift in decision making from a top-down approach where the decisions on regulations are done by INCOPECA to a decision-making made collectively by the fishers of the cooperative of the locality. However in this case, community conservation has taken a new turn different from the ones exposed before that is a rights-based connotation or approach. The access to resources, food security, employment, the participation and involvement in the decision making and management of the resources, preservation of the artisanal fishers cultural identity through the conservation of the resources they depend on and participation in conservation and coastal development, are all seen as rights that must be fulfilled and that trigger this initiative (Solis Interview 2009).

Even though MARAFT has embarked the artisanal fishers of Tárcoles in a route for the recognition of community conservation and its principles, it has not been an easy journey. As it was described above, the cooperation between CoopeSolidaR and CoopeTárcoles through the work of approximately seven years enabled the achievement of important outcomes that became a solid platform for the initiative of community-conservation as such. Furthermore, the political support provided by INCOPECA, and especially by the Executive Directors of this institution, to these two organizations was fundamental in order to allow the process of the creation of the legal framework and the recognition of MARAFT to continue (Solis, Interview 2009). However conflict was as well part of this journey, and that is what I will take a look at next.

Even though it is too early to analyze and assess if the elements and principles of this initiative as a community-conservation approach were achieved, the main points of conflict that emerged based on the way community-conservation was being conceptualized in MARAFT can be discussed. These are analyzed in the next section.

4.4 Conflict around MARAFT as a community conservation initiative

The elements of *rights over resources* and *devolution* were the main conflicts that revolved around the community conservation initiative of MARAFT.

MARAFT looked to secure the rights over the fishery resources to the artisanal fishers by delimiting an area of five nautical miles in which only regulated artisanal fishing would be permitted, thus excluding industrial fishing

within these miles. The issue of securing fishing rights for the artisanal sector in this way, the consequent reduction of fishing areas for the industrial fishers and the boundaries of MARAFT were the most contested issues. By law, in Costa Rica, (law 8436) the sea is defined as a public good “that belongs to all citizens”, thus securing rights over resources (in this case fishing rights) for only one sector is not legally possible. This was the position defended by INCOPESCA and the argument of the industrial fishing sector. The representative of the trawler fisher industry, Jorge Niño, opposed to the idea of permitting only artisanal fishing in these Areas, as he defended the possibilities to fish there as the industrial fishing sector’s right as well. However, he argued that the industrial sector would accept its exclusion only if a compensation was paid. Tárcoles is a rich fishing area that has been used by industrial fishers for many years. For this reason the trawler sector had major stakes on the Area and was defending its position. Because of this, the extension of MARAFT as a regulated fishing area, which endorsed the exclusion of industrial fishing, was contested politically. As it was explained before, the Directive Board of INCOPESCA has members of the industrial fishing sector, and this added political pressure to limit the exclusion of industrial fishing in Tárcoles. Their political weight was inevitable and from the proposed five nautical miles from the coast, only three were approved for the period of only one year, for now. The position defended by INCOPESCA was that both sectors should co-exist in the Marine Areas of Responsible Fishing with management regulations that would make these Areas a win-win policy for both sectors (Porras Interview 2009).

These points of conflict do not resolve the issue of social justice nor equity for the artisanal fishing sector, but otherwise perpetuate the unequal relations between the industrial and artisanal sectors. These issues in conflict are part of the broader politics of fisheries and bring up the struggles taking place in the case. Moreover, as it was argued by Solis (Interview 2009) referring to the compensation issue, these points further the instrumental vision of the environment and its resources as economic assets and not as a source of social and human wellbeing. ‘Conflicts within and between user groups and other stakeholders, including governmental agencies, are often a result of their very different management goals that may reflect different worldviews’ (Hanna and Smith, Brown and Rosendo in Seixas and Berkes 2004:184). In this case, all of the stakeholders agree in the necessity of improving the fisheries health and its management. However for the artisanal fishers the urgency of maintaining the fish stocks is derived from the concern of keeping their resource-dependent livelihoods and cultural identity, while for the industrial fishers its value lies on the objective of maintaining their industry’s capital revenue. Meanwhile, as it was described in chapter three, INCOPESCA’s take on fisheries is an economic one based on industrial extraction, without the appropriate attention to social issues (Solis Interview 2009). Here the conflict derives as well from different ways in which the fishery resources are defined by the different actors (Berkes 2004): as economic assets and for capital driven extraction or as a source of livelihoods and social and human welfare.

MARAFT’s governance approach as a participatory one in which the users are making decisions and developing regulations was recognized by all the

governmental institutions involved (INCOPECSA, MINAET and the National Coastal Guard Service). All of them recognized the local knowledge of the fishers and its support for the management decisions and regulations of the Area, which translated in the fact that the regulations proposal was elaborated according to the fishers' information and decisions. However, in terms of *devolution* is where the conflict lies. Even though the decision-making was shifted from INCOPECSA to the fisherfolk organization, by "allowing" them the possibility of creating MARAFT's management regulations, this was done only partially as INCOPECSA had the ultimate approval. The management decisions made by CoopeTárcoles have to be sent back to INCOPECSA, which as a central government institution 'retains the right to overturn local decisions and can at any time, take these powers back' (Pomeroy and Berkes 1997: 471). This is what Pomeroy and Berkes (ibid) denominate as *delegation*, where not all of the authority and decision-making powers are passed. However, here it is important to note that it is the artisanal fishers who have the information to make decisions over the regulations that are needed, while INCOPECSA does not have such detailed information of the fishery of Tárcoles. This permitted the incorporation of the fishers in the decision-making of the management regulations.

'Devolution of fishery management authority from the central government to local level government and organizations is an issue that is not easily resolved' as initiatives of community conservation are 'embedded in a broader network of laws, policies and administrative procedures' (ibid). In the case of Costa Rica, as it was mentioned in chapter three (section 3.4), various legal limitations are imposed for natural resources management by local users and communities. However, in this case-study political pressure was as well involved as a factor that made *devolution* difficult. As Murphree (2000:2) points out, 'state institutions and its private sector allies might oppose to devolution as they have their own interests in local resources'. In the case of Tárcoles, as it was already analyzed, the industrial fishing sector's interests were of weight for the decisions that would be taken regarding the fishery. In this sense, the different values and interests of the stakeholders involved create tension for the community conservation initiative (Buscher and Dressler 2007) in Tárcoles. All these factors explained above could jeopardize some of the principles looked for with MARAFT, risking the achievement of the complete *authority over resource management and uses* and consequently the *rights over resources* (Roe and Nelson 2009:10).

As of the time of my research these were the politics and issues that were coming up, and where the situation of this initiative was heading. However, the process is on-going and has continued with the negotiation of the regulations and the further elaboration of the Management Plan. As well, other activities are taking place at the moment as essential parts of the process, such as the communication of the initiative to the various sectors that have a stake in Tárcoles fishery (e.g. other artisanal fishers, sports fishers, other industrial fishing sectors) and the direct negotiation with the trawling fishing sector, both with the aim to achieve the support and implementation of the future regulations. After this stage, a new phase can be started which will involve the implementation of the management plan, where new conflicts and

terms of cooperation could arise, aspects that cannot be discussed yet nor extended here.

Although, the elements that can be analyzed here from the above is that a hard negotiation with the industrial fishing sector is expected in a legal and political climate that tends to support this sector and its claims: as it is the legal definition of the sea as a public good and the political influence and power that this sector has in INCOPECSA. However the perceived need by all actors to enhance fisheries sustainability can act as positive sources of pressure. In addition, other pressures coming from international conservation organizations that have stepped in to provide funding to INCOPECSA can push this initiative to happen. However this might as well further the inequity issues discussed if compensation to the industrial fishing sector is provided as a conflict resolution strategy.

For now it is not clear if the cooperation that has been constructed between CoopeTárcoles and CoopeSoliDar can break through this political climate. This is a long-term process and we would have to wait to see if the management strategies result in positive outcomes, fact that would be essential to strengthen the initiative and the artisanal fisher's claims.

4.5 Conclusions

Cooperation and conflict run throughout the history of MARAFT and in its process towards recognition. Conflict over resources and livelihoods, embedded in the wider national context of Costa Rica, has been the constellation from which this initiative is derived from. Cooperation, on the other hand, has been essential to achieve this initiative. The outcomes that CoopeSoliDar and CoopeTárcoles have created together have been a result of these organizations' cooperation, which has resulted in attaining the fishers' empowerment and a stronger voice for them to negotiate in better terms their interests and to create alliances (Solis Interview 2009). Furthermore, the willingness of the fisher-folk organization along with the local capacity to contribute in the management of the fishery has been crucial. As Quesada Alpízar (2006: 649) points out 'local capacity and will are essential ingredients' to reach coordination and cooperation between governmental agencies and local communities, in this case between CoopeTárcoles and INCOPECSA but as well between the fisherfolk organization and CoopeSolidar. These two elements (local capacity and will) have worked as the engine that ran the process. Moreover, the cooperation of the governmental agency INCOPECSA, in the form of political support and recognition and support of the local capacity and knowledge, was as well vital to continue the process in a formal level and to achieve the recognition of the community conservation. However, as it was analysed in 4.4, some other elements of MARAFT as a community conservation initiative have triggered conflict, aspects that put in danger some other of the more political and rights-based aims that are searched with this initiative. It can be said then that cooperation and conflict play an important role in community conservation strategies, elements that may or may not trigger the achievement of community conservation essentials and aims. In order to fully appreciate this in terms of the wider context and of

the theory exposed, we have to move on to the conclusions of this research paper.

Chapter 5 Conclusions

The natural resource management and conservation strategies in Costa Rica have in some cases not been the ideal for the benefit and development of the rural poor. First, the conservation policies have concentrated on exclusionary models such as the establishment of PAs that have denied access and use of resources to local communities. Furthermore the tourism industry that has developed, linked to Costa Rica's "green image", has caused at the same time contradictions with nature conservation in the country and the further marginalization of the local communities, in a setting where the wider economic development of the country has not delivered equitable benefits in rural areas. Second, the utilitarian view on natural resources that predominates in the conservation and natural resource management practices has generated inadequate policies that link nature with capital and economic growth, and not to elements of well-being and livelihoods. As a consequence, natural resources and the livelihoods of those that depend on them have been negatively impacted. Third, the past processes of implementation of community-conservation have not changed the position of local communities regarding management and conservation strategies. These elements have shaped a context of conflict in which local rural communities, trapped in an inconsistent exclusionary model of conservation and development, have to struggle for their livelihoods and social well-being.

The community-conservation initiative of MARAFT is born as a response to the national context of conservation and development and to 'various economic, social, environmental and political pressures' (Roe and Nelson 2009:5) that have marginalized the rural poor in this context. This concurs with the idea that community-conservation is a reaction to 'alienating protectionist policies of the past and to the economic concerns that many rural people face' (Owen-Smith in Hackel 1999: 727). MARAFT is based on a search to redefine and reorganize conservation and development in Costa Rica in three main ways: (1) providing an alternative to the exclusionary approach of PAs and its human and nature divide, (2) looking for a conservation model that integrates the use and management of resources by local communities, (3) including a social well-being perspective linked to natural resource use and livelihoods that could serve as a basis for the development of local communities.

However, achieving the objectives of community conservation has raised conflict and highlighted the politics of fisheries and resource management in general, as well engrained in the wider national context of Costa Rica. Nevertheless, what has been achieved throughout this process of conflict and cooperation has been important in reaching essential outcomes that improve the situation of community conservation in the context of Costa Rica and the position of local users in conservation and development strategies in the case-study. This initiative 'triggered by local fisher action allowed for the incorporation of local knowledge and fisher concerns into federal government regulations' (Seixas and Berkes 2004: 187). In this way, it has given a stronger position and greater authority to the artisanal fishers of Tárcoles to negotiate in more equal terms (Agrawal and Gibson 1999), and has opened an opportunity

for their direct involvement in the decisions of the management of the fishery. Moreover, it has given them voice by forming a structure and a process that has made them visible as actors of natural resource management and conservation. It has as well created some order in the chaos of fisheries management in Costa Rica by looking for new strategies that promote control and regulated use.

All of the above provides some hope for the improvement of the resource-based livelihoods of the artisanal fishers of Tárcoles and for the situation for this community to keep moving forward in its own terms of development. However a long process is still ahead and today might be too early to draw conclusions. MARAFT is a small constellation of the bigger changes that need to be made at greater scales if a more integral and equitable model of conservation and development is to be achieved in Costa Rica.

Notes

¹ *Estado de la Nación*, translated as State of the Nation is an annual Report based on a research programme that focuses on the research and discussion of the state of sustainable human development in Costa Rica, researching on political, economical, social and environmental subjects in the country and a statistical compendium with the objective of serving as an open source of information and evaluation of this matters to the Costa Rican citizens. It focuses on the assessment and appraisal of advances, backward steps and tendencies of development in Costa Rica. It is an initiative promoted by the public universities of Costa Rica and the state institution of *Defensoria de los Habitants*. It is an initiative that was born in 1994 with the support of PNUD, the European Union, the Netherlands cooperation, Swedish cooperation, OIT, OPS, UNICEF and UNFPA (www.estadonacion.or.cr).

² For example since the 3rd IUCN World Parks Congress in 1982 encouragement of local participation and sustainable use can be registered (Wilshusen et al in Roe and Nelson 2009)

³ Vivienne Solis is the President of CoopeSoliDar R.L., a non-governmental organization that has been working in the community of Tárcoles since 2002.

⁴ 'Empowerment understood as 'the process through which people, and especially poorer people, are enabled to take more control over their own lives, and secure a better livelihood, with ownership of productive assets as one key element' (Chambers in Berkes 2004: 627).

⁵ According to Murphree (2000:5) CBC must be linked to devolution and not decentralization, as 'decentralization falls short of the combination of authority, responsibility and entitlement required for Community-based Conservation'

⁶ The expansion of coffee production in the Central Valley, banana plantations in the Atlantic and cattle ranching during the nineteenth century were all export-oriented activities that contributed to large-scale deforestation (Brüggemann 1997).

⁷ Both studied parks management in the United States (Campbell 2002).

⁸ Campbell (2002: 34-35) in her publication traces the conservation history in Costa Rica much earlier. She argues that 'conservation via protected areas emerged in the early twentieth century' with initiatives such as the Poás volcanoes declared 'protected' in 1913, a law to declare 'preserves' around Poas and Irazu volcanoes in 1939, a law to create a 220-meter zone on either side of the Pan-american highway and declare it a 'national park' in 1945, a mission for the designation of areas around volcanoes as national parks in 1955, and another law aiming to protect two-kilometer zones around all the country's volcanoes in 1961. However according to the author's research neither of this law propositions succeeded, they were not adopted nor implemented. Furthermore, other earlier conservation initiatives were put forward by foreigners pushing the government to protect certain areas, such as the Monteverde Cloud Forest, area which American Quackers from Alabama made their home and wanted to preserve since the 1950's and the Cabo Blanco Nature Reserve pushed by Scandinavians Olof Wessberg and Karen Mogensen in 1963.

⁹ Being Poas an 'active volcano with strikingly beautiful landscapes, Cahuita one of the country's best coral reefs, Santa Rosa, the scene of the most important battle for national sovereignty and an area of tropical dry forest and, Tortuguero, the most

critical beach in the western Caribbean for the conservation of the Green Turtle (*Chelonia mydas*)' (Boza 1993)

¹⁰ For the case of Tortuguero National Park, a conservation organization called Brotherhood of Green Turtles, today the Caribbean Conservation Corporation, formed by American biologist Archie Carr was as well involved in the establishment of this PA. (Campbell 2002).

¹¹ During the 1980's, the times of an economical recession in Latin America, the protected areas were seen as an economic asset in Carazo's administration and because of that his administration continued the support for conservation (Evans 1999).

¹² Displacement understood as loss of or restrictions to access to resources with or without physical population removal from a territory, restriction on resources' dependent livelihood opportunities (Agrawal and Redford 2009, Cernea 2005)

¹³ Other participatory arrangements with community local organizations exist in: National Wildlife Refuge Caño Negro, Protection Zone River Banano, Protection Zone River Siquirres, Protection Zone Nosara, Protection Zone Cerros de Escazu and National Wildlife Refuge Ostional. However according to the IUCN (2006) report on collaborative management in Costa Rica, none of them respond entirely to the idea of co-management.

¹⁴ The Cahuita co-management arrangement still continues to this day but the co-management arrangement in Ballena was eliminated (Fonseca 2009).

¹⁵ Extending on this subject goes beyond the objectives of this Research Paper, but according to Fonseca (2009:210), 'the legal framework that promotes civil society participation on environmental issues is based on the Political Constitution of Costa Rica, the Environmental Organic Law and the Biodiversity Law'.

¹⁶ "Between the years 2005 and 2006, the total area of built square meters augmented the most in coastal areas. In the province of Guanacaste, on the north Pacific, the total built square area augmented in 69.5 % and in the province of Puntarenas, (where Tárcoles is located), province that covers the Central and South Pacific, augmented in 44.3 %. (Programa Estado de la Nacion 2007).

¹⁷ Canton is the administrative division used in Costa Rica as a subdivision below the provinces, and is the unit which has a municipality as the local government body.

¹⁸ Clear examples are the irregularities in the implementation of the laws and regulations regarding the Marine Terrestrial Zone (MTZ) in favour of tourism development. Even though the MTZ is public by law, private properties for tourism have been built along them (Programa Estado de la Nacion 2007), and in 2007 fourteen legal projects sought to make more flexible the requirements to allow rights of concession to investors of marinas (Programa Estado de la Nacion 2008).

¹⁹ The time and area closures have not been efficient regulations: first, they are not scheduled properly according to the species reproduction cycles (Caton Interview 2009), second they do not last the amount of time they should (Porras Interview 2009) and third they are not followed by a majority of fishers (Elizondo Interview 2009, Caton Interview 2009).

²⁰ Antonio Porrás is part of the Technical Direction of INCOPECA.

²¹ Carmen Castro, Division Natural Resources, National Coastal Guard Service representative

²² Javier Catón Martínez is the Director of the Committee “Pro Constitution of the Costa Rican Union of Fisher Organizations” (UCOPES).

²³ Jose Joaquin Elizondo Arguello is an artisanal fisherman of Puntarenas, ex President of one of the first artisanal fisher cooperatives in Costa Rica, Cooperative of Fishers Chacarita, Puntarenas (Coopechapu R.L.) and current fiscal of the Chamber of Artisanal Fishers of Puntarenas

²⁴ There are several reasons that explain the decrease of fish stocks, and those reasons vary from causes from global levels such as climate change, increased global demand for fish, international market structures and others to national and local levels. Due to the space constraints of this research paper, the causal linkages of fisheries’ resource depletion were only briefly reviewed taking into account only the national and local scales (See 3.6 and 4.2).

²⁵ Fishing effort has augmented not only in industrial fishing but as well in artisanal fishing. For example, according to David Chacón artisanal fishers used to fish with lines of 1000 meters while now they are using lines of six miles because lines of 1000 meters would not be enough these days to make a livelihood out of fishing. The same can be said with destructive fishing practices, not only the industrial fishers are to blame for them but as well artisanal fishers use fishing gear that collaborates with stock depletion, however the level of impact between the two has to be considered.

²⁶ In Tárcoles more than twenty trawlers have been counted in the same fishing area used by the artisanal fishers (CoopeSoliDar R.L. and CoopeTárcoles R.L. 2006:99).

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Appendices

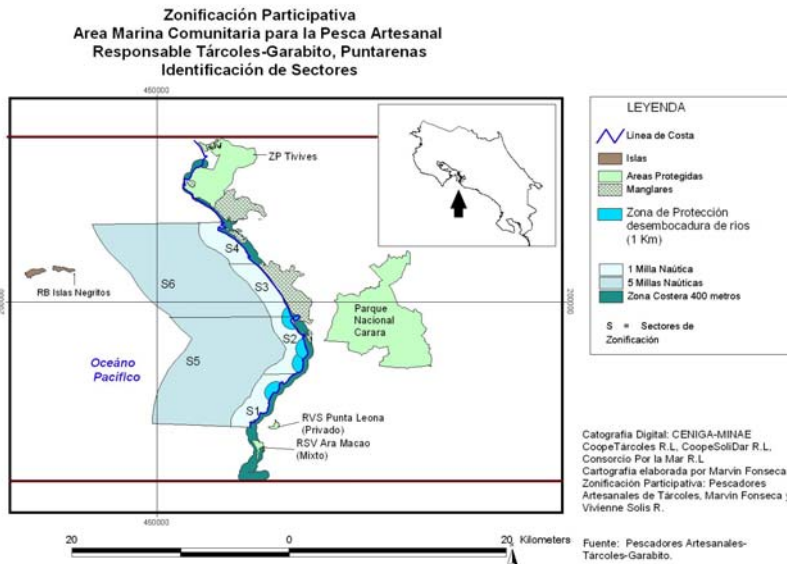
Appendix A

List of people interviewed during fieldwork:

- Eugenia Arguedas, SINAC, MINAET
- Roy Arroyo, Municipality of Garabito
- Jorge Barrantes, Chamber of Artisanal Fishers of Puntarenas and member of Executive Board of INCOPECA
- Carmen Castro, coastal and ocean vigilance service: National Coastal Guard Service
- Javier Catón Martínez, CEO of the Committee Pro Constitution of the Costa Rican Union of Fisher Organizations (UCOPES)
- David Chacon, President of CoopeTárcoles R.L.
- Jose Joaquin Elizondo Arguello, artisanal fisherman of Puntarenas, ex President of one of the first artisanal fisher cooperatives in Costa Rica, Cooperative of Fishers Chacarita, Puntarenas (Coopechapu R.L.) and current fiscal of the Chamber of Artisanal Fishers of Puntarenas
- Jorge Niño, President of the Chamber of Shrimp Trawlers of Puntarenas
- Antonio Porras, Technical Direction, INCOPECA
- Vivienne Solis, President CoopeSolidar R.L.

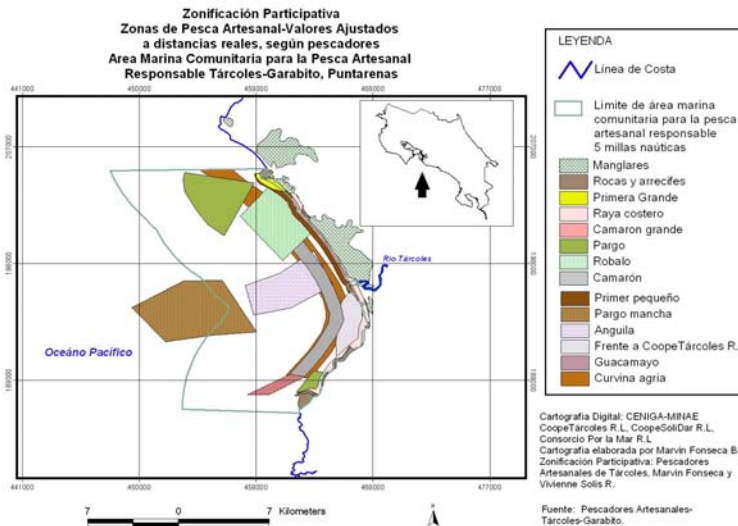
Appendix B

Map 1
Participatory Zoning of Community-based Marine Area of Responsible Artisanal Fishing



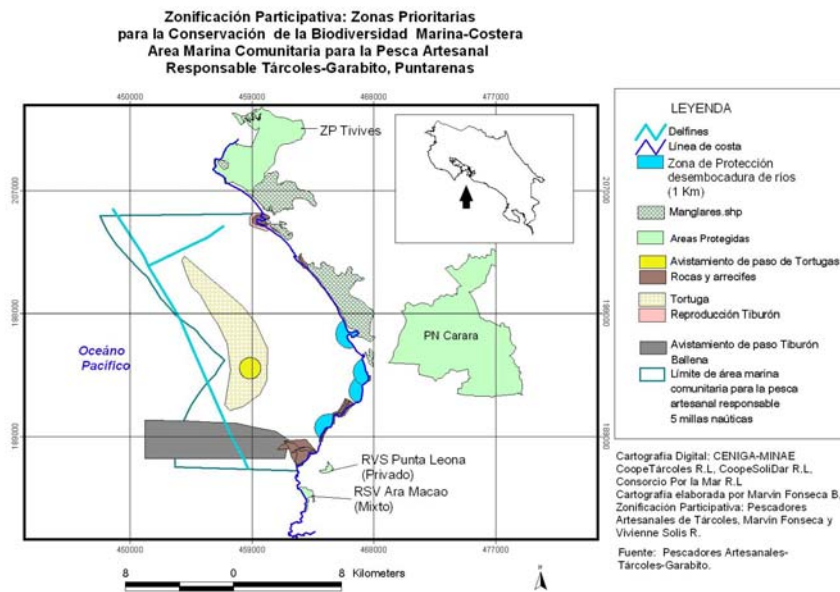
Authors: Artisanal Fishers of Tárcoles and Marvin Fonseca.
 Source: Artisanal Fishers of Tárcoles

Map 2
Participatory Zoning of Fishing Areas according to species



Authors: Artisanal Fishers of Tárcoles and Marvin Fonseca.
 Source: Artisanal Fishers of Tárcoles

Map 3 Participatory Zoning of Priority Areas for the Conservation of the Marine Biodiversity of Tárcoles.



Authors: Artisanal Fishers of Tárcoles and Marvin Fonseca.
 Source: Artisanal Fishers of Tárcoles

Appendix C

Executive Agreement: Marine Areas of Responsible Fishing

Source INCOPESCA 2008

Apart from the definition of the Marine Areas of Responsible Fishing, and the legal justification based on INCOPESCA's legal authority to give the possibility of creating this figure responding to its competences given by the law 7483 (which gives the competence to INCOPESCA to norm fishing zones, fishing periods and types of gear) and by the adoption by Executive Decree of FAO's Code of Conduct for Responsible Fishing, the Executive Agreement defines three important aspects that these Areas should comply with: one Responsible Fishing as the sustainable use of the fishery's resources and the utilization of fishing and aquaculture methods that do not damage the quality of the ecosystems and its resources; two a Code for Responsible Fishing as a voluntary instrument elaborated and adopted by fishing communities or organizations for the management of the fishing activities, and three a Participatory Zoning that the fishers would do to delimitate the Marine Area of Responsible Fishing. Moreover, the Agreement defines a special Commission that will be in charge of the follow up of the objectives defined for each Marine Area of Responsible Fishing. The actors involved in these Commissions were proposed as follows: two members of INCOPESCA, one representative of the fishing community and one representative of the Coastal and Marine Programme of MINAE. The role of this commission would be to define the regulations for the Marine Area of Responsible Fishing, in a Management Plan. This Management Plan, according to the Executive Agreement, will include the fishing arts, gears and methods permitted, the areas of total or partial closed seasons, a programme for the regulation's compliance, a programme for information and register, other for capacity building and another one for monitoring and research (Incopesca 2008).