

## **Governing Common Pool Resources in Cuban Coastal Zones: Transitions, Ambiguities and the Revolution**

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Common pool resource analysis has been mainly based on the study of determined set of independent variables, which now include a more in-depth study of communities (Ostrom 1990; Wade 1994). Indeed, a renewed interest in integrated, community-based resource management, and especially coastal resource management after the 1992 Rio conference stimulated this trend. However, for some of these studies, the notion of community is taken for granted and its analysis does not include an in-depth study of community characteristics. Instead it remains focused mainly on a vision of communities as homogenous units formed by individuals who share common values, interests and ideologies. Another shortcoming of common pool resource studies is linked to the fact that they have been mostly conducted in western capitalist countries without sufficient comparative attention to their socialist counterparts.

This paper hopes to redress those shortcomings with the particular case of Cuba. It will do so by analysing the ambiguities in common pool resources management in the country since the beginning of the Revolution in 1959. Since that time, there have been many transitions in the tenure system, from private to collective, common, and State owned natural resources, which have led to many uncertainties and ambiguities as to how natural resources tenure is perceived, who can use resources, and how they should be managed within the population in general, and in local communities, the State, and its institutions and representatives. These changes and different perceptions and practices regarding natural resources have a direct impact on environmental conservation. Based on an anthropological political ecology approach (Doyon 2002, 2003), this paper is intended as a contribution to common pool resource governance studies by showing the importance of considering inter-scale relationships and the larger social, political and economic context in the study of local uses of common pool coastal resources, and of taking into account the role played by community diversity, politics, power forces, and agencies in this process (Agrawal 2003).

Such an approach is necessary because most of the Cuban social sciences studies have been oriented toward the study of issues linked to the economic and political situation of the country from a structural perspective. They tend to remain at the level of theoretical and statistical debates, without “on the ground” data (Baloyra & Morris 1993; Monreal 1999). As a result, little work has been done on environmental issues in a social perspective looking at common pool resource governance questions. However, there has been significant environmental deterioration in the country, which is in part due to changes in the property rights system. Starting in the 1900s with the independence process and the expansion of the sugar cane industry, environmental deterioration increased radically with the 1959 Revolution, and transformations in the use of natural

resources took place alongside industrial production, with the financial and technical assistance of the Soviets (Bethell 1993). Since the 1990s and the severe crisis induced by the collapse of the ex-communist bloc, environmental destruction has increasingly affected the general population, and more particularly rural communities who depend heavily on natural resources for their survival (Skidmore 1997). Deforestation, soil erosion, water contamination, and biodiversity loss threaten the country's socio-environmental equilibrium, and particularly affect coastal regions (Díaz-Briquets & Pérez-López 2000).

Based on the case of the coastal community of Las Canas<sup>1</sup>, the analysis will present how the concept of common pool resources has been subjected to different transitions over time and how, since the Revolution, the State has not resolved the ambiguities in its various meanings. I will then outline how, with the crisis of the 1990s, the population of Las Canas has capitalized on these ambiguities and turned them into opportunities for the use and exploitation of coastal natural resources. Finally, I will expose how the State's rationalization process and the introduction of conservation incentives with the help of external aid agencies are trying to resolve past ambiguities and to redress common pool resources governance. But first, let us consider how common pool resource studies can be enriched by an anthropological political ecology perspective.

## **1. Common Pool Resources and Anthropological Political Ecology**

The community of Las Canas is a small coastal village located on the south coast of the most western province of Cuba, Pinar del Rio. With approximately 250 inhabitants, the community survives makes a living from the port and the fish factory in a neighbouring small town, as well as from national and more recently international tourism, and the illegal artisanal use of the mangroves and marine resources. The village has lived in relative peace and tranquility since it was founded over 70 years ago; as people often say, "here everything is quiet, people get along well, we are like a family and there are no problems"<sup>2</sup>. However, upon closer examination, it is soon evident that the community is not a homogeneous entity where relations are simple and people all share the same practices, discourses and values. Instead, social relations are complex and are articulated within changing social networks where the diverse survival strategies developed by the population through the use of the environment are combined with a variety of connections to the local, provincial and national governments in a context of globalization. A number of power struggles and diverging interests conflict with each other and are negotiated by actors.

The community is one element of a network of complex relations with world capitalism, international tourism, and foreign development agencies through the unique lens of Cuban socialism. The relations between community members and the environment are

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<sup>2</sup> The quotations from the Las Canas inhabitants are excerpts from interviews carried out in the winter of 2002 with village members. The translations are mine.

therefore coloured by their relations with these different actors. What is more, the inhabitants of Las Canas are divided into several sub-groups based on family, household, friendships, and business relations, in which environmental practices are rooted, and whose interests may at times differ and at others, converge, creating both networks and conflicts between community members. These complex relations create a diversity of environmental practices and discourses that are part of the struggles and resistance strategies of the inhabitants of Las Canas. This diversity of coastal natural resource uses stems in part from the ambiguities in resource tenure that have existed for decades now, and an anthropological political ecology can contribute to its understanding.

This approach takes into account and analyses the different aspects of common pool resources (CPR) management. First, it places socio-environmental relations within the broader global contexts that affect them. Relations between society and environment are affected by various actors and groups of actors at different levels of the decision-making process: individuals, families, households, communities, local and regional governments, State, private national and international companies, international development agencies, NGOs, the world market, etc. Since these actors are located at different levels (Blaikie & Brookfield 1987; Stonich 1993, Shmink & Wood 1987), their practices and discourses concerning the environment are influenced by how they transform the environment on the basis of their interests and objectives, which in turn imply different relations of power and resistance. These relations between different actors are connected in an explanatory chain (Blaikie & Brookfield 1987) and can be understood within the broader social, political, economic, and historical contexts that together transform the relations between society and environment and are at the core of socio-environmental dynamics.

Second, anthropological political ecology places the environment at the centre of analysis. Post-structural and “Third World” trends (Bryant & Bailey 1997; Escobar 1996, 1998, 1999; Painter & Durham 1995; Peet & Watts 1996) emphasize the importance of not focusing research on a specific environmental phenomenon, but instead considering the environment as a whole, as a dynamic and changing system and not as an immutable entity, for “it is important to realize that not only do society and policy evolve and change, but so also does the land on which the system of production basically depends; the natural conditions of production are not a “free gift” and the earth does not abide” (Blaikie & Brookfield 1987, 250). Within this perspective, the environment is not viewed as being opposed to society, but is analyzed as intimately connected to it; the dialectical relations between environment and society transform both. These relations, which are affected by the broader contexts in which they are embedded, evolve, change and influence each other. Thus, the environment is socially constructed (Escobar 1996, 46) by the decisions, and the historical and contemporary interests of various actors who have shaped its current configuration and the conceptions that societies have of it. This approach makes it possible to move beyond the society/environment dichotomy and to instead represent the environment as a hybrid, a “collective” with human and non-human elements (Latour 1997) whose contours shift as the relations between them change (Doyon 2003).

In this perspective, the environment is a politicized space (Bryant & Bailey 1997) that is not neutral, and that cannot be objectified and isolated from society and the context in which it exists: “(c)entral to the idea of a politicised environment is the recognition that environmental problems cannot be understood in isolation from the political and economic contexts within which they are created” (Idem, 28). The environment and CPRs are therefore the locus of different struggles and interests that are marked by relations of power and resistance expressed through the practices and discourses of actors. This perspective contributes to an understanding of how and why the environment is manipulated and transformed by actors, in both practical and discursive terms, and how it has acquired the meanings that the different actors give to it. This makes it possible to go beyond the “exploitation-use-conservation” trilogy that is one of the ways in which the environment and related practices are conceptualized, and instead analyse the views, representations and understandings of the environment, of natural resources and of environmental practices typical of each of the actors, and in which relations of power and resistance are played out.

In the study of society-environment relations and of CPR management, it is important to acknowledge the internal diversity of communities (see Agrawal & Gibson 1999; Doyon 2002), and to analyse the agency and interests of actors (see Giddens 1987; Labrecque 2001; Long 2001). These actors are active agents in the social dynamic, affecting the dynamic through choices, and transforming it through social relations that they establish and negotiate based on the discourses and representations that they have of society and the practices in which they engage. Likewise, it is important to examine the shifts and fluidity of sub-groups, as well as community politics in order to grasp environmental experiences and CPR governance, and their impacts on society. Hence, in the analysis of CPRs, the lack of attention typically given to State policies and the nature of community-State relationships, as well as individuals’ links to the environment and social institutions, which are central to an understanding of CPR governance, can be rectified by an anthropological political ecology approach (Agrawal 2003). Moreover, this perspective helps to better analyse coastal common pool resource governance in a context where, as in Cuba, no clear institutions are managing them and where there are ambiguities concerning their regulation strategies.

In this paper, the anthropological political ecology perspective will help us to understand the subtleties of common pool governance, its transition process, its diversity and ambiguities in the community of Las Canas, and in Cuba in general. In the next section, we will see how private tenure of resources became collectivized and nationalized with the Revolution, and how there has been a confusion between State and common property of resources in State discourses since that time. We will also see how the local population has perceived resource tenure and has used the natural resources involved. This perspective will help to elucidate how the population of Las Canas has used the ambiguities of State discourse concerning resource tenure in order to develop new environmental practices, most of which are illegal, for their survival in the context of the economic crisis of the 1990s, and to reject the State’s responsibility for resource use. Lastly, we will analyse the processes of State decentralization and rationalization, including the devolution of environmental protection and conservation responsibilities to

the communities and local government, and the introduction of a conservation project in the region with the same objective. Throughout, we will look at how Las Canas has responded to those regulation incentives, and what their impacts have been for common pool resources governance. This approach will show how inter-scale relationships, community diversity, and individual agency can enrich the view of common pool resource management and shed light on some shadow zones inherent in it, such as perceptions, discourses and interests.

## **2. Common Pool Resources Ambiguities and the Revolutionary Process**

Cuba got its independence from Spain late, compared to other Latin American countries. It did so finally in 1898 with the help of the Americans, who would retain a control over all of Cuba's internal affairs, politics and economics, through the Platt amendment, "which gave the United States the right to oversee the Cuban economy, veto international commitments, and intervene in domestic politics at will" (Skidmore 1997, 265) until 1934. Thereafter, they maintained a certain control over Cuba by manipulating the elections and the elected presidents, as well as by monopolizing the lucrative sectors of the economy. Indeed, Americans owned more than 20% of the arable land and produced almost all of the sugar, 80% of which was sold to the United States. This prosperity created great social inequalities: rich entrepreneurs in Havana lived off their investments while a rural proletariat composed of indebted labourers worked in slave-like conditions on farms owned by Americans. These rural poor periodically travelled between urban centres and the countryside and had no access to basic services such as schools, hospitals, decent housing and land.

The rising rebellion against the government system of the time was therefore embedded in a subversive social, economic and political system in which the population did not benefit in any way from the wealth produced. Poverty was rampant, as "[a]n inequitable distribution of land, the seasonal nature of sugar employment, and an urban, if not industrial government investment bias, in turn, kept the rural population poor" (Eckstein 1993, 18). A dictatorial system governed by the corrupt President Batista, a two-tier economy, a culture of colonialism, slavery, racism and Catholicism drove young idealists, largely supported by unionized workers representing half of the active population, to rebel against a system that perpetuated difficult living conditions. On July 26, 1953, Fidel Castro, a young lawyer who was the son of Spanish immigrants, launched an armed attack against the headquarters of Batista in Moncada. In 1959, the Revolution was victorious. Castro and his allies sought to set right the injustices endured by the Cuban people and to establish an egalitarian system in which all citizens would have access to education, an effective health care system, employment and land, and in which everyone would have enough to eat and a decent roof over their heads. To reach this objective, the population would have to develop new values based on what Ché Guevara called the "new man": "egalitarian, selfless, cooperative, nonmaterialistic, hardworking (at both manual and non-manual tasks), and morally pure" (Eckstein 1993, 4; Guevara 1968). These new values were to be acquired through a Marxist-Leninist ideology inspired by the heroes of Independence relying on the nationalism of Cubans to consolidate the Revolution.

The principal means for achieving the Revolution's goals of justice were nationalization and collectivization. Once in power, laws were passed to confiscate both properties and funds controlled by Batista and his collaborators. In the second half of 1959, the government took control over the country's main industries (oil refineries, electricity and telephone companies, sugar refineries, nickel mines), and in 1960, it finalized the nationalization of the other goods and properties that belonged to Americans and other foreigners, such as textile, tobacco, and construction companies, and banks. At the end of the 1960s, Cuba began its "Revolutionary offensive" and finished the project by nationalizing over 55,000 small businesses and companies (Eckstein 1993; Diaz-Briquets & Pérez-López 2000), an initiative that was intended to decrease social stratification.

Alongside the nationalization of companies, industries and businesses, Cuba began to collectivize farmlands, "the process including nationalization or expropriation of private farms and the creation of large-scale cooperative and State farms" (Pryor 1992, 7), which had a significant impact on the environment. Collectivization, considered the path to the highest degree of socialism, was justified by management interests in line with a centralized economy that would make possible economies of scale, while ensuring the loyalty of the peasantry (Sáez 1997; Wunderlich 1995). The first agrarian reform act of May 1959 permitted the confiscation of farms of more than 400 hectares, with the exception of a few sugar refineries, rice plantations and livestock farms whose production was above the country's average. Although these farms were supposed to be redistributed to peasants, instead they were organized into cooperatives controlled by the State, like Soviet Kolkhozes, and later became State farms. As part of the same process, large and medium-sized farms were nationalized in 1962, and the second agrarian reform act, in 1963, nationalized the remaining private properties and all properties over 67 hectares; "as a result of these two laws, 70% of Cuba's agricultural sector ended up in state hands » (Díaz-Briquets & Pérez-López 2000, 89), a proportion that reached 92% in 1989 (Pryor 1992), that is 80% of all arable land (Sáez 1997; Zimbalist & Brundenius 1989). Other sectors of the economy were also subject to collectivization, such as fisheries in which privately-owned equipment (boats, tackle) were pooled in State-run cooperatives or State-owned companies, as was the case in the region of Las Canas.

In this process of nationalization and collectivization aimed to fulfill the "utopian Marxist project," the former employees of the *latifundistas* worked on State farms, and peasants with private lands that they had not annexed to State farms had to work part time on the latter (Eckstein 1981). Government policies also included the eradication of private property, an increase in the salaries of the poorest workers, and a policy of guaranteed employment, which resulted in Cuba having one of the most egalitarian systems of wealth distribution in Latin America; "the government expanded free social services. [...] All education, medical care, social security, day care, and much housing were provided free of charge, with access to them more equitable and need-based than ever before" (Eckstein 1993, 34).

One of the means for achieving these objectives was a new approach to managing and exploiting natural resources based on industrialization and large-scale production, which

were expected to give the country access to the level of development and modernism of Western nations. Small-scale local production and subsistence activities were rejected as they “chained” people to their poverty. With the support of the former USSR, Cuba developed various techniques and acquired production and processing equipment that corresponded to the country’s new objectives in which the environment became an object to conquer and dominate. Various sectors were developed along these lines, the main one being agriculture, which was based on the intensive monoculture of sugar stimulated by chemical fertilizers and other additives. Although fisheries were less important in the eyes of the government at the time, they too entered into a process of industrialization, marginalizing artisanal inshore fishing with smaller means of production in order to focus on larger scale offshore fishing. As Castro said, “Ya no será el pescador de la chalana de remos y velas; será el pescador con medios de producción cada vez más moderna, con barcos cada vez más grandes; no serán solo los pescadores de plataforma, serán los pescadores que adentren en el Océano” (Castro, 1962 in Morales, 1972, 29).

In this process, almost all Cubans became State employees. Employment involving the use of natural resources was like any other salaried labour; employees entered the field as they would have entered an office. Subsistence-based use of the environment by families was gradually eliminated because, on the one hand, people were able to provide for their needs with State rations, and on the other hand, the majority of the population shared the government’s ideals of modernism and development, which was not in keeping with the localized use of resources, seen as restricting, difficult, and “uncivilized.” As this shift took place, the special connection and responsibility that people felt for the natural resources that they used for subsistence purposes gradually eroded, and the traditional relationship that they had with the environment changed in favour of a disengaged, external relationship that did not involve the same awareness.

As we can see, the resource tenure system first went through a period of transition marked by the historical context of the country and the international influences of the period related to the socialist movement. Private properties were almost completely eliminated, with the exception of a few small plots of land not put into common, and all the goods, equipment and resources were nationalized and collectivized. However, there is an ambiguity in what was collectivized and the status of this “object,” which had negative consequences for environmental protection. Resources such as arable land and fish stocks were placed on the same footing as work equipment and other means of production in the process of pooling resources. This way of organizing development within the ideology of the Revolution, wherein nature must be mastered and exploited to the maximum, did not foster environmental conservation and led to a certain confusion concerning the appropriation and use of natural resources, which were viewed as replaceable and inexhaustible, much like manufactured consumer goods.

The ambiguities in resource tenure and property since the beginning of the Revolution are rooted in this perspective. In the Revolutionary system, everything that was collectivized, in principle, became the property of the people, as official discourses often repeated. However, the people did not have control over the management of such resources, nor were resources managed in their best interest. Instead, they were managed by State

administrators who had to reach pre-established economic objectives, and who were chosen on the basis of their connections to the government and not their skills as environmental managers. Resource management did not take into account the experience of those who had used the resources for generations, but rather pursued the interests of modernization and industrialization put forward by the State's development principles. In this new system, the population became a labour force for extracting value from natural resources, as was the case in the pre-Revolutionary period during which tenure was private. They were not key actors in sharing common resources. This confusion was heightened by the occupational organization developed by the government in which individuals were State employees and were not held responsible for resource use.

This contradiction between the State's discourse on CPRs, which were administered in a State tenure system, was combined with the weight of the past and individual interests. Indeed, in spite of collectivization, some individuals held on to their own land and their fishing equipment and continued to practice environmentally-based activities. Although the State allowed such activities as long as they were solely for subsistence purposes, they were perceived as counter-Revolutionary, because they lay within a capitalist logic. Nonetheless, they were marginally tolerated by the government as it could not entirely break with all references to the pre-Revolution system, nor could it suppress all practices related to that period; certain former activities therefore continued. As an inhabitant of Las Canas said, "In my house, there are always little chili peppers, a few tomatoes, and sweet peppers. I also have spices to season my food, and a few herbs to calm my nerves." People never put their own interests aside in spite of the control that the Revolution had over their lives, and they continued (often only occasionally and in hiding) to use environmental resources to make their daily lives easier and to increase their income. Since the State itself asserted that Cuban resources belong to the people, Cubans demanded the right to practice such activities on the basis of the collective nature of Cuban resources and the people's right to use them.

These ambiguities were more evident in cases where the administrators and production leaders named by the government were those in place before the Revolution. In order to fill positions, particularly in more remote regions, the State assigned some local leaders to management positions, thus securing their loyalty. In such cases, the personification of power among the people was greater as it was combined with the former identity and power system, thus contributing to the confusion surrounding resource tenure and management. In fact, former administrators who had become Revolutionary leaders set up personal forms of resource management, as if the resources belonged to them, distributing "favours" among the people for resource use for personal purposes, somewhat like before. Ambiguities in the control over common resources related to the central State but administered by local leaders arose from this type of management, making people's responsibility for the environment and its conservation all the more tenuous. A system of tenure combining both collective and State elements replaced a private regime, thus affording greater social and economic justice. However, the habits, perceptions, and practices of the past were not completely abandoned, creating a multi-tiered system in which various confusions persisted alongside official discourses. We will see in greater detail just how these ambiguities regarding the definition, interpretation and

management of CPRs in Las Canas, affected environmental use, particularly in the context of the crisis of the 1990s.

### **3. Local Level Diversity of Common Pool Resources' Uses and the Opportunities of Ambiguity**

The community of Las Canas was founded in the 1930s by rich entrepreneurs from the provincial capital who built their summer homes there, but the village's vocation changed with the Revolution. The neighbouring village of La Coloma, which was overpopulated with poor immigrants from inland seeking better living conditions on the coast, relocated these immigrants to Las Canas. The new inhabitants moved in to the luxurious homes of the rich landowners who had been evicted by the process of nationalization and collectivization, and whose houses were loaned to the newcomers. This process created a number of confusions, as these inhabitants do not completely own their homes, because the State can repossess them at any time. Their sense of identity is adversely affected by the status of their dwellings, for which they sometimes feel responsible and sometimes do not, depending on the circumstances and the investments that need to be made. Likewise, this change in real estate tenure sometimes led to certain aberrations, as in the case of a poor immigrant who had to leave the house he had built with much effort to leave it to another family, and eventually lived in Las Canas in another house that is not his: "I began building the house in 1966 and I finished in mid-1967, and in 1968, the government asked me to lend it to them for eight or nine days, the leader in Pinar del Rio asked me, and I lent it with everything inside. They closed it up for 15 or 20 days, they took everything that was inside and they gave it to a family from La Coloma. They came here and they stayed 18 and a half years." This situation, which was supposed to be temporary until the State built new houses, continues to this day. Although the inhabitants were opposed to the move from the outset, they had to accept it and have nonetheless developed a community life.

Until the 1990s, most Las Canas inhabitants lived in the tourist centre of the community where they worked as waiters, cooks or cleaning staff, as well as in the fishing port of La Coloma, referred to as the *combinado pesquero*. Individual environmental use practices were almost totally abandoned since the salaried employment filled their needs and their desire for modernity. The State salaries and its ration system worked very well and provided for basic needs. In this context, the environment was no longer the main source of subsistence, but became a transformed and pleasant place in which to live. Flowers and other ornamentations replaced agriculture, and despite the day-to-day problems, the difficult years of living off the land seemed part of the past. As a result, the relationship between the people and the environment was transformed. Several forms of local ecological knowledge were lost as a result of these changes in practices and conceptions, combined with the relative material comfort of the Las Canas population. The older generation stopped carrying out their former environmental practices and could no longer hand down that knowledge to their children, most of whom were not interested anyway. In addition, social relations in the community have been transformed as people no longer need their extended family and neighbours to cooperate in daily environmental practices.

Exchange networks are not needed as much, and the community, which was already composed of individuals from a variety of different places who ended up living side by side because of State policy, has become fragmented. Neighbourly relations nonetheless continue. The use of CPRs, aside from housing, is not a significant source of conflict because the resources are not used very much outside the context of State use, and the remaining secondary activities, such as artisanal fishing, are tolerated by the State and its local leaders. Thus, the State's development plans that involve environmental use are well underway, and they are mostly in keeping with the needs of the people and the government. However, the situation is changing with the crisis of the past decade.

At the beginning of the 1990s, the Soviet bloc fell and the global configuration began to shift. For Cuba, the event was dramatic on all levels and in all areas; it signaled the beginning of an extremely difficult period for the population, which the government refers to as the "special period in times of peace."<sup>3</sup> The economy declined drastically: the GDP dropped by 50% between 1989 and 1992 (Jabra & Jankarik 1999); imports and exports between Cuba and the countries of the Soviet bloc, which accounted for 75% of the economy, were brought to a halt (Mesa-Largo 1994); many workers were dismissed; there were major cuts in all sectors; industries and businesses almost completely stopped all activity. In the population, severe economic and social problems were caused by cuts in electricity and water, dizzying rates of inflation, a black market for dollars, the absence of food in shops, and the rationing of drugs and other essential goods (Eckstein 1993; Rodríguez Calderón 1995). People began looking for alternatives, and illegal activities such as theft, illegal trade, prostitution and delinquency became more prevalent.

In Las Canas, the national tourist centre was closed and many employees of the *combinado pesquero* were dismissed, leaving almost the entire Las Canas population without employment. The lifestyle of the inhabitants and the society as they had known it changed dramatically; there are many horror stories of the hardships endured and the actions to which many were subjected, and they are told with pain and bitterness. In order to survive, the inhabitants had to turn to the environment around them, a prospect that many had never even imagined. For a portion of the community members, the environment was a place of recreation and entertainment, not a place to work, to exert energy or to spend large amounts of time, and they were unfamiliar with how to use it.

As a result, new environmental practices were developed in Las Canas, mainly involving cutting down the mangroves and inshore fishing. A few people had continued these activities during the 30 years of the Revolution, mainly as recreation, but most had no detailed or effective knowledge on how to do so. The learning process was slow and sometimes difficult, as people felt their way along on their own or imitated those who had more in-depth knowledge. The people in the village who had ecological knowledge and knew how to make charcoal ovens did not share them openly with other community members, but only with their immediate family and members of their household. As one informant said: "the sea gives herself to those who know how to use it." However, new mutual assistance and work networks emerged between various households in the

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<sup>3</sup> This term refers to the exceptional measures that were adopted, such as surveillance and rationing, and that are normally in force in times of war.

community, thus strengthening the community in a difficult context and enabling its members to develop new knowledge, skills, interests and strategies.

The situation therefore gave rise to a diversity of ways of using the natural resources and to a new occupational diversification within the community and even within the various households in the village, transforming the group's community organization. Common pool resources, which are managed by the State and are supposed to be used for its benefit, were appropriated in various ways by the population, depending on their experience with environmental use, using new techniques based on a particular perception of and discourse concerning CPRs, as in the case of the López and Gómez families<sup>4</sup>. In the Lopez family, the father has worked for the *combinado pesquero* for over twenty years and the mother lost her job in the village's tourist centre where she had worked on a contract basis for about fifteen years. The couple's children, two men who are unemployed and a woman who is a teacher, are adults and live in the family home with their spouses and children. In order to provide for the family's economic and subsistence needs, the woman and her daughter began fishing with a small boat that her husband built for her with some wood that one of the sons cut down in the forest next to the village. The women receive fishing advice from the head of household and use the techniques he taught them informally for years when they went fishing together on Sunday afternoons for fun. They practice line fishing and have preferred locations where they sometimes have access to *pesqueros*, artificial shelters where the fish hide. They are able to catch at least 5 kilos a week that they use to feed family members or sell to purchase household items sold in dollars. The sons build charcoal ovens. However, since they had never built any before the fuel shortages, they use what they can to the best of their knowledge. As one of them says: "I used all sorts of mangrove trees to make the charcoal ovens, black, red, new trees and old ones, I used to cut down everything! There was a shortage of fuel, and when the fuel disappears, so does the forest!" The charcoal they make is used for the family and the surplus is sometimes sold to relatives or friends or is given to the forest warden in exchange for his silence. The Lopez family justifies its actions and activities, which are illegal, by saying that they have always been good revolutionaries, that they had always worked until the situation deteriorated with the crisis, and that therefore the fact that they are using the environment (the "State's CPR") for their subsistence, and that they sometimes make a small profit from it, is not a crime and the government cannot punish them for it because they are Cubans and revolutionaries and are not trying to undermine the State's power.

The Gomez family is composed of the father, who is a retired mechanic, the mother, who stays at home, and their two unemployed, unmarried sons. They also practice small-scale fishing. However, since the sons did not have the benefit of an experienced family member to teach them, they have learned by trial and error. They fish with a tightly woven net, the *chinchorro*, which catches a lot of fish of all sizes with little effort, and without necessarily having to know much about fishing. As one sons says, "You pull the *chinchorro* along the shore and it catches quite a lot of fish, and you don't have to wait to catch the fish with a line or a cage, and even if you don't know how to use it, every time

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<sup>4</sup> These families are fictitious. They have been created by putting together different examples of families in the village in order to make it impossible to identify and specific individuals.

you throw it out, you're sure to catch at least two or three fish." They also fish with cages that they bought on the black market from some former employees of the *combinado* who had stolen them. The brothers also sell spiny lobster on the black market; they have a contact at the *combinado* who fishes for spiny lobster, and before unloading his catch at the fish factory, he illegally and secretly sells a portion to the two brothers at sea. The brothers then resell them in the capital or use them for their mother's small tourist business at home. Foreign tourists sometimes visit the village of Las Canas and when they do, the Gomez mother, like half a dozen other villagers, runs to meet them and offers them homemade meals composed of spiny lobster, fish and other local dishes. This business is also illegal but it is very lucrative for the households and groups of households that practice it, despite the commission that they pay to the local government representative so that he turns a blind eye to their activities. The Gomez family justifies its practices by saying that if the government does not want the people to use the natural resources, it should give them the means to work and to eat decently like before, and that since it does not, they are entitled to use whatever means are available to them to survive. The family also argues that natural resources, like international tourists with whom Cubans are not supposed to have any contact, in principle, were not created by the State, and the State therefore cannot decree that it has exclusive rights over their use. Since no one created these natural and human resources, they belong to everyone and are truly common resources of all Cubans, and everyone should be entitled to profit from them and to earn a living from them.

As we can see, the community of Las Canas has taken advantage of the ambiguities regarding the use and management of CPRs, attempting to manipulate them without however going beyond a legal and revolutionary framework. The State's ambiguous discourse on the status of CPRs, as well as the illegal practices that local representatives allow through low-level corruption, have fostered the emergence of a diversity of activities and interpretations of such activities with respect to government requirements. The villagers justify their actions in a variety of ways on the basis of the principles and ideologies of the State in order to provide for their needs. The inhabitants of Las Canas therefore lay the responsibility on the State for the region's environmental deterioration that their practices have caused, as seen in the creation of salt marshes and the decline in fish stocks. On the one hand, they claim that the government no longer provides for their needs, forcing them to use environmental resources; on the other hand, since the State maintains that they are common pool resources, but has been the only one to manage them since the beginning of the Revolution, people believe that the State should be the one to ensure their protection, especially since the community does not have the means to do so. Therefore, in the context of an economic, social and political crisis, the inhabitants of Las Canas have developed strategies and new socio-environmental relations based on the internal diversity of the community, individual agency and their ability to develop new environmental practices in order to sustain themselves and to survive the partial collapse of the system in which they have lived for over 30 years. The ambiguity of CPRs has been part of the situation, and has been exacerbated by the group's needs and interests. In the next section, we will see how this situation could change as certain institutional transformations take place.

#### 4. The End of Ambiguity? Rationalization and Conservation

Since the mid-1990s, the economy has been slowly recovering and important changes have been taking place on a number of levels. In this period of “late socialism,” (see Yurchak 1997), Cuba has been opening onto the world, particularly the capitalist world, and the basic principles behind the socialist ideology have been somewhat distorted<sup>5</sup>, in spite of the fact it is still strongly promoted and defended by the government. The dollar has been legalized and a two-tier economy is taking shape in which dollar stores sell food and basic necessities, while the shelves in State stores are almost bare, in spite of the fact that the vast majority of the population continues to be paid in pesos, with an average monthly salary of 200 pesos, that is, less than US\$10. Cuba is opening its doors to foreign investment, and investments are flourishing in the mining, agricultural and tourist sectors. Many hotels have been built and millions of tourists visit the island each year. This had led to a number of changes in the society, and overall the people have a better standard of living, but some social inequalities have developed because of people’s differing access to strong currencies, regardless of their professional training.

Over the course of the same period, the State began to rationalize spending in an effort to end the ongoing economic crisis, and this has had an impact on the environment, CPRs and conservation. Many government employees have been dismissed, and the management of State holdings and ministries is being based on the model of private capitalist businesses in an effort to put an end to the past excesses of a heavy Cuban bureaucracy. In this process of institutional transition, mixed capital businesses have been developed, and the *combinado pesquero* in La Coloma is one of them. European investors are financing the renovation and modernization of the *combinado*, which is being given ISO accreditation for fishing and transforming spiny lobster and tuna species for the European and Japanese markets. This new market is a good source of revenue for the State (15 million USD in 2000). The practices of the *combinado* have had to change: the fishing teams must now repair their own boats and equipment, and they purchase the materials and gasoline needed for the expeditions from the State, whereas before, the State paid all of their expenses. However, the employees’ salaries have also changed: they are now paid in dollars in proportion to their catches, whereas before, monthly salaries were set. As a result, the salaries of both the fishers and the factory employees have multiplied tenfold as workers have responded to production incentives by significantly increasing catches so they can earn the maximum allowed. Common pool resources from the sea, which have been managed by the State since the Revolution and been divided into sectors granted to predetermined fishing teams, have been over-used, and although the techniques have remained the same, the fishers’ perception of their activity and of the environment has changed. The new fishers employed by the *combinado* do not fish because of any attachment to the sea or by family tradition, but because fishing can give them a very good salary. They are rather unconcerned about the environment, as shown by their relative lack of interest in maintaining equipment, which could prevent the destruction of the sea floor. Thus, integrating the market (Agrawal

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<sup>5</sup> Castro used slogans such as “socialism or death,” and in the same breath, “yes to capital, no to capitalism,” evidence of the ambiguity of the various policies put in place.

2003; Oates 1999) into age-old environmental practices has transformed the local population's relationship to the sea and its resources, as well as their access to and use of natural resources, a change that the State in fact encourages, favouring "semi-private" tenure of CPRs. This institutional transformation, and the local practices it brings about, does not help clarify the situation and status of CPRs in the population.

The rationalization undertaken by the government also involves a process of decentralizing power to local government levels. In order to limit spending, the State has transferred many of its responsibilities to local extensions of the government, called *consejos populares*. In order both to maintain the loyalty of the people, and to keep the values of the Revolution alive in this period of changes and outside influences, the government has integrated this initiative into the revolutionary discourse whereby the people should be honoured to take over the grassroots work of the State. Henceforth, local employment, the maintenance of buildings and structures, and issues related to transportation and housing are the responsibility of the local government. Likewise, some of the environmental and natural resources management also falls to it. Indeed, in order to justify its initiative to the people, the government has used for its own purposes the mainstream narratives on local management of natural resources and conservation that are part of the more global context. Since natural resource supervisors and inspectors, such as forest wardens employed by the provincial Ministry of science, techniques and environment, cannot supervise environmental conservation by themselves, local communities must be enlisted. Although the operation is based on a conservation discourse, it is first and foremost a way for the State to put a halt to the illegal exploitation of the environment, which enriches local populations and draws them away from revolutionary practices. At the same time, it ensures that the State alone can use the natural resources and preserve them for future use, thus giving it a way to fill its coffers later on. Through this process, the government is attempting to exert its power over the environment and to clarify past ambiguities. However, while local conservation is embedded in the revolutionary discourse, wherein conservation is seen as a revolutionary act that contributes to the good of the nation and strengthens the community status of the country's goods and resources, counteracting the confusion regarding CPRs may not be as simple as imagined. Moreover, people do not really have any practical interest in ceasing their environmental activities, because the State is not offering them any compensation for their participation in conservation efforts. What is more, local governments have not been given the budget needed to provide well-integrated surveillance of environmental protection, and they have many more pressing issues to deal with for which the financial, human and technical resources are also lacking. For the time being, the population seems happy to live with the ambiguities related to CPRs so that they can continue to earn a livelihood in whatever ways possible, leaving conservation responsibilities to the government.

The rationalization process and the government's new openness to the outside world have also created a context that is favourable to the arrival of sustainable development and environmental conservation projects funded by international agencies, which Cuba once associated with capitalist imperialism. Las Canas has one such project: it is led by a group of researchers from the provincial university and focuses on the integrated

community management of coastal resources, specifically mangroves, which were largely destroyed during the years of shortages, leading to an increase in the salinity of agricultural land and the contamination of water sources<sup>6</sup>. The project aimed to involve the community in rebuilding and preserving the environment by putting an end to mangrove harvesting, and by instilling community members with notions of sustainable development in keeping with State objectives.

The project has transformed certain practices and discourses in the community, with variations depending on individuals and social networks. Some complied with the researchers' requests and stopped cutting the mangroves. However, this did not stop them from purchasing charcoal from other households when fuel was in short supply, nor from trading for it within their networks. Others complied with the researchers' requests as long as the latter were present in the community. Some participated only in the teaching workshops, while still others had no interest whatsoever in the project. Whatever the case, environmental activities must be carried out much more discreetly because both the project participants and the State now supervise activities more closely. The project has also transformed some people's perceptions of the environment. Many people realized that what they defined as their surroundings (the sea, forest, or beach), the researchers conceptualized in terms of the environment, and that the government also refers to it in the same way. Their practices have therefore become politicized, and what is at stake in the environment has become more apparent to them. Some actors have adopted the language of development as an opportunity for reaching their own objectives. Different groups have made their voices heard through this project: some want to become sole owners and users of the natural resources in order to earn an income from them; others want government funds in the village for infrastructures so they can attract and accommodate more tourists legally. As one of them says: "The State has to do it, because otherwise things will continue as they are now, with us making cheaper meals than the State can provide, and tourism takes advantage of it, because you know, tourism has become smarter than us." Still other groups want to set up an ecotourism project managed by the local population. In all cases, the different perceptions regarding CPRs have not been clarified with the sustainable development project, although for some the notion of "environment" has been clarified and these people have become more knowledgeable of government discourse and therefore empowered to use it to their advantage. The ambiguities in resource tenure persist and the practices of environmental use have therefore also persisted; indeed some people's interests in resource use have become even more clearly defined.

The local population is not necessarily willing to change its perceptions and practices, in spite of the State's efforts at rationalization and the initiatives it has taken to encourage people to take an interest in conserving coastal resources and to clarify the status of CPRs. On the contrary, people seem to find this lack of clarity rather convenient; they can express their agency and achieve their goals more quickly and easily by cloaking themselves in the confusions of the system to protect themselves against government repression of counter-revolutionary activities. They can either take refuge in the

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<sup>6</sup> The region's salt marshes had reached 21.41 hectares in 2002. For more information on the region's biophysical situation, see Franco et al (2002) and Doyon (2003).

ambiguities surrounding CPRs or feign ignorance of the illegality of these environmental common pool resource activities. The community is therefore empowered by the vagaries in the perceptions and applications of CPRs, and has developed a broader range of means for appropriating the environment, thus increasing its survival strategies.

## **Conclusion**

The example of CPR governance in Cuba demonstrates how important it is to take into account the diversity and vivacity of local communities in the use and perception of CPRs, the role of agency in this dynamic, and the significance of the global context and the relationship between the various institutional and decision-making levels (local, regional, national and global) in an anthropological political ecology analysis. This perspective helps us to better understand the richness and complexity of the Cuban case and to move away from an overly uniform and stereotypical view of governance in socialist contexts.

In an initial phase, environmental management was marked by the political change of the Revolution whereby the country's resources, which had been managed under a private tenure system, were nationalized and collectivized. This transformation was supported by a new national-level system of production and labour. These transitions, which were influenced by the country's historical context and its place in the world system, had local impacts on the use of natural resources; although the government's discourse was that the resources were "common," the central State was entirely responsible for governing them, and individual use declined. As a result, CPRs went through an initial process of transition that was perceived and experienced differently by local communities and the government, and which cannot be understood outside of the historical context within a perspective that takes into account the relations to other actors on the world stage. This broader context led to ambiguities in the management of common resources as the new revolutionary principles blended with local environmental practices, and as the various administrative levels made adjustments to their governance of common pool resources.

During this period of CPR management, CPRs were largely controlled by the State, and some relatively marginal small-scale subsistence practices continued where few problems related to the ambiguity of CPR status existed. With the crisis of the 1990s, another change took place as people were forced by the shortages to use the environment more intensively in order to survive. A great diversity of practices and discourses on the environment, as well as on its tenure and status, emerged out of this situation. Moreover, the relationship between the people and the State changed because people became increasingly independent of the State as they strengthened the social networks within the community. Internal community politics, as well as manifestations of agency through which actors made choices and participated in illegal practices in the pursuit of their interests, also played a very important role in CPR management, and it is important to take these into consideration in any analysis. The same is true when analyzing State restructuring and joint conservation initiatives with development projects wherein local governments and individuals had to support the State in conserving CPRs. A new

transition process then ensued, leading to an official private and State tenure. Here too, individuals have used the ambiguities in common resources as a source of independence and a development strategy so that they can practice their activities, survive and reproduce socially. These elements of analysis must be included in studies on CPRs and cannot be approached using only pre-determined variables. An anthropological political ecology links these elements to common pool resources governance and demonstrates the extent of their impact on resources and on the environment.

An analysis of the ambiguities surrounding CPR governance reveals that the definition, perceptions, understandings and values related to such resources vary considerably between individuals and groups of actors in diachronic terms, and that the concept of CPR is not entirely clear. To begin with, this element of uncertainty and flux must be acknowledged and integrated into conservation approaches. Moreover, as the Las Canas case shows, any clarification in the concept of CPRs must have the support of the local population as changes in the status and intervention strategies related to CPRs are undertaken (Agrawal 2003), and respect for the heterogeneity of communities and for individual agency is essential. The State must also support communities in the process of conserving and using CPRs, provide economic alternatives and participation incentives, and not entertain a romanticized view of CPRs and of the conservation of resources, imagining that communities want to protect resources at the expense of their own livelihood. Lastly, researchers must take into account certain factors that appear at first sight to lay outside of CPR use or environmental management, but which influence community diversity, individual agency, and processes of adaptation, resilience, and resistance wherein people's interests and perceptions have a crucial influence over their relationship to the environment.

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