

**PAST AND CURRENT METHODS OF
COMMUNITY BASE COASTAL RESOURCES MANAGEMENT
IN THE SOUTHERN COAST OF BELIZE**

Joseph O. Palacio, PhD

With the Assistance of Joseph Iyo PhD and Wil Maheia

**Major Funding provided by IDRC-CBCRM. Additional Support
Provided by the University of The West Indies, University of Belize,
Toledo Institute for Development and Environment (TIDE), and the
Government of Belize**

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Acknowledgement

This has truly been a collaborative effort. One level of collaboration came from the Laval University team of Yvan Breton and Katherine Savard. Another came through the CARICOM Fisheries staff in Belize City, who were intermediaries for the Project administration. A third level comes from persons in several offices who gladly helped with information. From this category Dr. Vincent Gillett of the Coastal Zone Management Authority and Institute deserves special attention for helping with the land tenure map and commenting on first drafts of some chapters of this report.

The often day to day collaboration for weeks on end meant working with several persons. They include the Maritime Wing of the Belize Defence Force under the scrutiny of Major Ogaldez. Mrs. Fairweather and her staff at the Land Information Centre were invaluable. The two Project colleagues Dr. Joseph Iyo of the University of Belize and Wil Maheia of the Toledo Institute for Development and Environment (TIDE) gave much of their time and other resources. I give thanks to Mr. Robert Mariano for his brilliant intuition in the field and in the analysis of data.

My staff at the University of the West Indies School of Continuing Studies have all contributed within the scope of their duties.

Finally, the highest level of gratitude goes to all the people in the study communities, who patiently answered our questions and willingly provided much more information than we asked. In humility we dedicate this work to them.

Joseph O. Palacio
Resident Tutor
School of Continuing Studies
University of the West Indies
Belize City
September 2001

**DEDICATED TO THE PEOPLE OF THE
SOUTH COAST OF BELIZE FROM
PUNTA PLACENCIA TO BARRANCO**

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List of Abbreviations

ACP	African, Caribbean, and Pacific Countries
BAS	Belize Audobon Society
BCES	Belize Center for Environmental Studies
BEMAMCOR	Belize-Mexico Alliance for the Management of Common Resources
BFCA	Belize Fishermen's Co-operative Association
BTB	Belize Tourism Board
CBCRM	Community Base Coastal Resource Management
CCAD	Comision Centroamericana del Ambiente y Desarrollo
CZMAI	Coastal Zone Management Authority Institute
EEZ	Exclusive Economic Zone
FPMP	Forest Planning and Management Project
IDRC	International Development Reserch Centre
NARMAP	Natural Resource Management and Protection Project
PHMR	Port Honduras Marine Reserve
SCMR	Sapodilla Cayes Marine Reserve
SDA	Special Development Area
TASTE	Toledo Association for Sustainable Tourism and Empowerment
TIDE	Toledo Institute for Development and Environment

Past and Current Methods of Community Base Resources Management in The Southern Coast of Belize

Abstract

The main problem definition of this study is the need to generate community-based management of coastal resources for the benefit of the small man and woman in the South Coast of Belize in opposition to the large scale and multinationally controlled shrimp aquaculture and banana agro-processing that have taken control of the area within the past two decades. So far the avenues for small-scale development, which, unlike large-scale investment, filter throughout the community, are artisanal fishery and tourism using the bountiful maritime, coastal, and riverine resources. By focusing on community-based coastal resource management in the past and present, the aim of the study is to show that there had been such a tradition in the past and that its review can help in re-introducing it at this time. In uncovering its data, the study used oral history, ethnography, and varied efforts of a collaborating NGO Toledo Institute for Development and the Environment (TIDE) in natural sciences data collection and community mobilization.

Some of the conclusions forthcoming from a review of community-based coastal resource management in the past are as follows. There was an abiding spirit of egalitarianism that allowed men, women, and children to do fishing. There was a guiding morality controlling human behaviour in setting limits to what could be exploited. Closely related was a cosmological understanding where spirituality mediated between the living and dead and respect for both the land and sea. On the materialist side, a review of the fishing co-operative exposed it as a durable social organization that mobilized community interaction. Finally, kinship was significant not only in bridging ties within the community but also among many persons across the study communities.

These attributes of coastal-based community resource management contrast with the management ethic that both the government and NGO's are imposing on the study communities. Briefly the approach is that with negligible use of history, aesthetics, and cosmology, the community should work together to help diversify the national economy, conserve fishery, and maintain welcoming social structures for tourists visiting the marine protected areas.

The study starts by providing a broad sweep of the rapid large-scale development overtaking the South Coast together with profound changes in ethnicity, demography, and community structure. It does a base-line overview of distinct microenvironments along the coast and their uses. It then goes into considerable detail about fishery and tourism as main current uses, pinpointing how they are performed as community socioeconomic activities.

Finally, the study reduces the narrative into an analytic framework that isolates five pathways for community-based coastal resource management. They include revisiting the basic definition of the minimal qualities necessary to constitute a community and its use of coastal resources; the essential role of the sea within the spirituality of one of the peoples living in the region, the Garifuna; the use of co-operatives as grassroots owned systems for marketing; and efforts – forthcoming from the government and NGO's – at using the little understood concept of co-management in marine protected areas.

By spotlighting past and current ethnographic data and combining it with community development, the study adds tremendously to one of the primary aims of the International Development Research Centre – Community Base Coastal Resource Management Project. It is to provide more studies in the social sciences of the coastal communities to counter the traditional prevalence of natural science studies.

Map of Belize Showing Study Communities

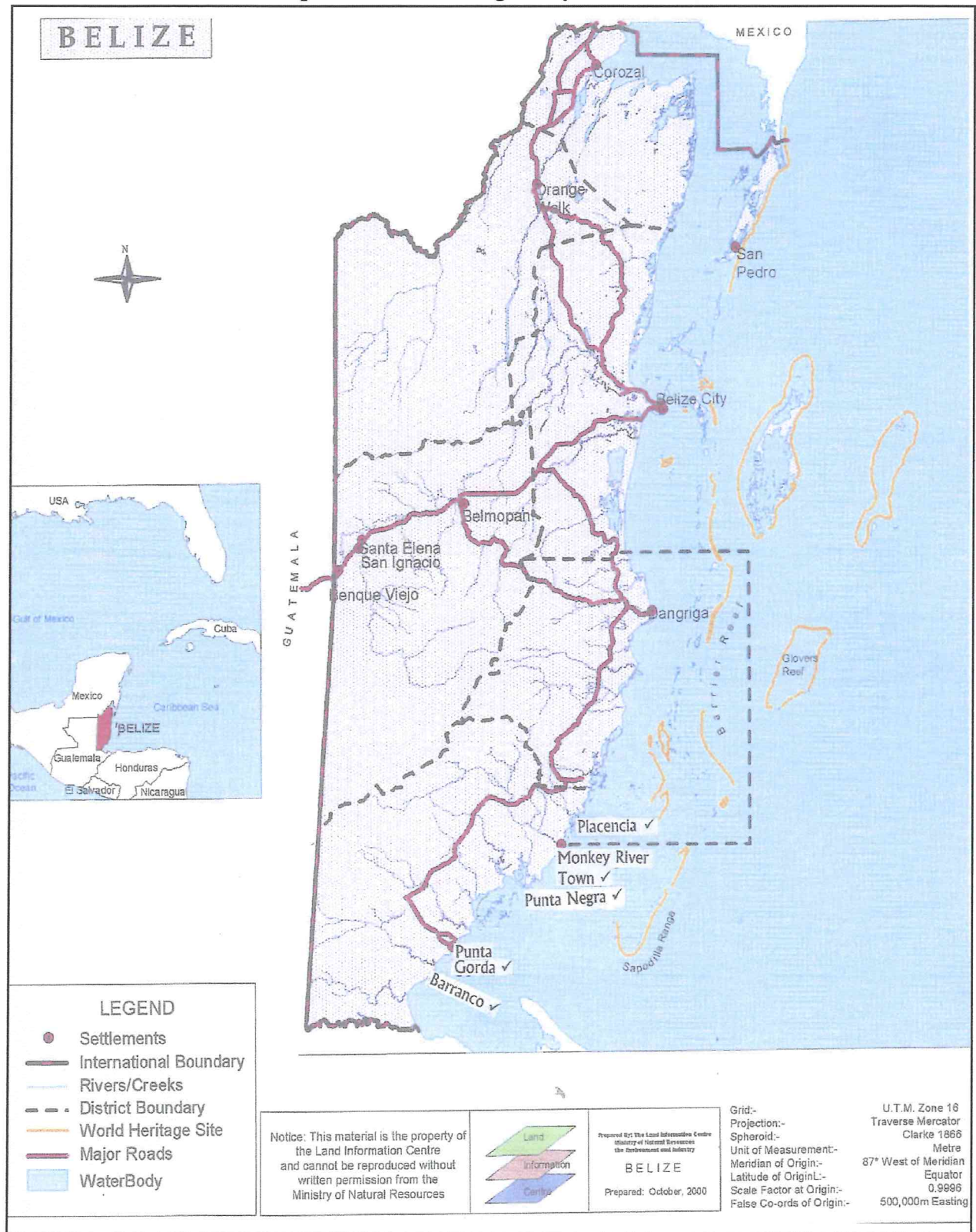


Fig. 1

PAST AND CURRENT METHODS OF COMMUNITY BASE COASTAL RESOURCES MANAGEMENT IN THE SOUTHERN COAST OF BELIZE

Chapter 1 Introduction

The Scope

In discussing the conceptual scope of this study we focus on the following topics prescribed by the IDRC-CBCRM (International Development Research Centre – Community Base Coastal Resource Management Project) Document for the Caribbean.

1. *Social Sciences and Coastal Management – the need for the social sciences to be more involved in the study of coastal management as against the traditional lead taken by the natural sciences.* The tremendous lead that the natural sciences have taken over the social sciences is certainly the case in Belize. A brief survey of the catalogue cards in the University of Belize Library collection substantiates this. Although there has been considerably little social science research on the coastal resources of Belize, there has been an impressive record of advocacy and management with the NGO's taking the lead. In 1969 the Belize Audobon Society (BAS) acquired from the government the rights to manage Half-moon Caye. It was an historic concurrence of several firsts. It was the first effort by the fledgling BAS to take on such a task. It was the first marine protected area in Belize and the first in Central America (Waight and Lumb 1999: 128-138). Within the past decade several NGO's have joined the BAS in promoting the welfare of coastal resources. They include the Programme for Belize, Belize Enterprise for Sustainable Development (BEST), Green Reef, Toledo Institute for Development and the Environment (TIDE). Furthermore, these NGO's have formed working relations with community-based organizations that serve localized interests.

By the late 1990's protected areas had become increasingly integrated into tourism development. It arose from a public policy that has set aside about 30 per cent of the land area of the country to remain in some form of protection together with large areas of the sea (see Fig. 2). The government and NGO's have commissioned studies for their management and enhancing their revenue potential. A good example of the latter is Melanie McField's *Evaluation of Management Effectiveness – Belize Marine Protected Areas (2000)*. While this applied, policy oriented approach to the social sciences is healthy, there is another and more analytical level that needs much complimentary action. It includes studies in cultural geography, regional and community planning, and ethnographies. This study is an effort to introduce past and current ethnographic methods in the study of communities in Southern Belize.

2. *Interdisciplinarity - widening the scope of disciplines and institutions in the study of coastal management.* Almost as if we had planned to deliberately counter the traditional bias of the natural sciences, two social scientists dominated our study. The Principal Investigator is Dr. Joseph O. Palacio, a social anthropologist and Dr. Joseph Iyo, an oral historian. Participating in the study were two universities, an NGO, and two government departments, extending to the study an unusu-

ally significant amount of locally based interinstitutional support. The universities are the University of the West Indies and University of Belize. The NGO is the Toledo Institute for Development and Environment (TIDE), which is based in the study area. The two government departments are the Maritime Wing of the Belize Defense Force and the Land Information Centre of the Ministry of Natural Resources, Industry, and the Environment.

3. *Governance, Women, and Community – redefining the structural links between governance, the community, and the role of women.* The topics of governance, community, and women were adjusted by the realities forthcoming from our informants. Governance, therefore, was not only associated with the usual trio of votes, taxes, and patron-client ties. Instead the main concern was the excessive illegal intrusion of Guatemalan and Honduran fishers resulting in – the words of our informants – depletion of the stock in national waters. There are currently no scientific studies on the state of the fishing stock in Belize. On the other hand, throughout our field interviews there was great concern on its lessening with illegal fishing taking most of the blame. A second primary concern was not knowing about marine protected areas – their function and the rationale behind the restrictions within them. Thirdly, there was strong awareness of and approval for the wide-ranging support that the government is providing for the management of fisheries as well as the emerging tourist industry.

Not coming as loudly in the interviews but worth recording is the very weak structure that the central government allows for local government and the excessive centralization enabling government ministers to dictate the minute details of decision making in community affairs. In their survey within the Anglophone Caribbean, Brown and Pomeroy (1999: 1-22) describe this as a pervasive problem built into the public administration system of CARICOM countries. Two other elements of community concern that we found were the runoffs from the banana agro-industry and increasingly from shrimp farms that could affect the tourist industry in Placencia; and the need for more of the assistance traditionally extended to the South, which ends up most often for agricultural development in the inland communities (Palacio 1999).

At the community level the public concern revolved around the dwindling numbers of residents, further limiting the viability of some village communities. In communities, notably Barranco and Punta Negra, there continue to be the outflow of inhabitants, including fishers. Those remaining want their sons, daughters, and other relatives to return to help civilize the overgrown house lots and re-constitute the community. In another community, notably Placencia, there is the reverse occurrence. It is the considerable inflow of new residents responding to the tourism boom. The changing character of the new residents – many expatriate North Americans – and their demands on land and other infrastructure are major concerns to the traditional residents.

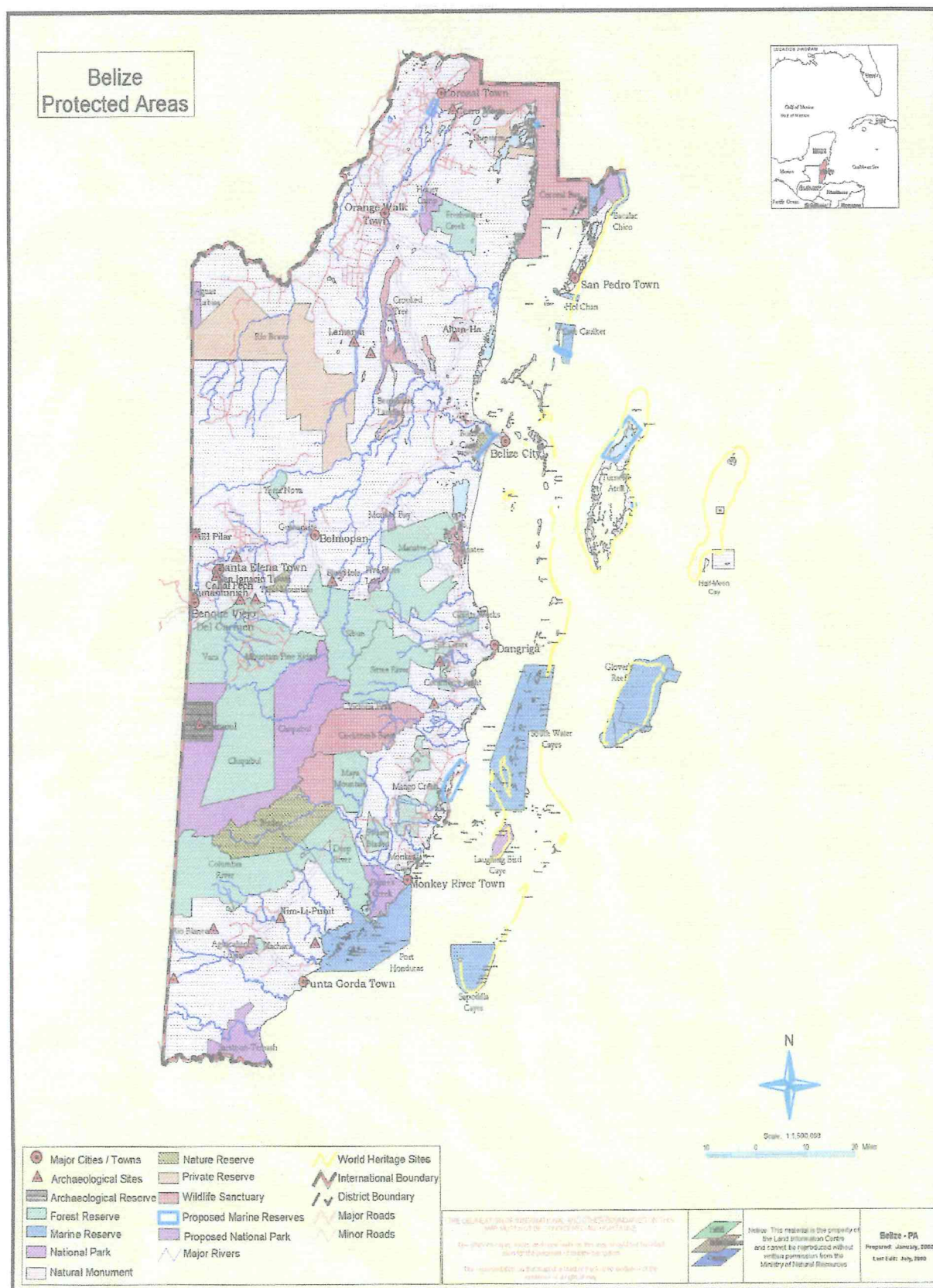


Fig. 2

The vital role of women in Belize and the study communities is still untouched territory. Before the commercialization of fishing there was an abiding egalitarianism in fishing as an economic activity throughout the study communities. Men, women, and children went to catch primarily for the family pot. Commercialization led to gradual specialization in target species. The role of women shifted to that of support in processing the catch for sale. Currently tourism has again widened the scope of women's roles. Some are responsible for the management of the family guesthouses at Placencia. Others are involved in cheap wage labour in service industries at hotels and restaurants. Others bring their traditional handicrafts to sell at the hotels. Those involved in these activities are mainly Maya women who travel to the coast from their villages some miles away.

4. *Economy, management, and coastal zone – recognizing the plurality within the concepts of economy, management, and coastal zone.* Given the small scale and predominantly rural nature of the study communities, the formalist perspectives that normally maintain in the study of the economy, management, and coastal zone were not appropriate for us. In focusing on the economy we attempted to collect some gross figures of fish production and tourist occupancy. But our primary focus remains the socio-economy, namely the roles of fishers, those involved in tourism, and other stakeholders. Similarly, in terms of management our focus has been to trace its evolution from an egalitarian base revolving around an abundance of coastal resources and behaviour controlled by a folkloric belief system to the current situation where management is being imposed due to declining stock and the need to diversify the economy into other income generating sources.

For the coastal zone we use the definition found in the Coastal Zone Management Authority and Institute (CZMAI) State of the Coast Report 1999, page 3. It is ... "an area on either side of the coast of any land mass where land, water (seawater and freshwater) and air interact. Landward the coastal zone includes coastal land which is influenced by tides, salt intrusions, and ocean-generated pollution and which influences the coastal sea through watershed discharge and human activities; seaward it includes coastal sea influenced by natural or man-made processes on land or the continental shelf." In keeping with conventional practice in Belize we exclude the 200 mile Exclusive Economic Zone (EEZ). Between the Barrier Reef and the shore we isolated several microenvironments. We also identified the area located a short distance inland which includes mangroves, estuaries of innumerable streams, and lagoons. All of these have significant uses, some of which we were able to identify with the help of our informants.

5. *Local Ecological Knowledge – validating local ecological knowledge and integrating the contribution of the small person/group into the research effort.* Most probably as a result of the emphasis emerging in the post-UNCED International Convention on Biological Diversity and Agenda 21, both of which underline the unique and lasting stewardship that indigenous peoples have placed on their physical environment, there has been tremendous interest in the ecological knowledge of indigenous and traditional peoples. Some of the topics include capturing, validating, and measuring it together with assessing its compatibility with western science (Grim 2001). Among the peoples in the study communities are the Garifuna, who are indigenous to the larger insular Caribbean and traditional peoples made up of the intermixtures of Maya, African, European, and East Indian. Fishing habits reveal that proximity among them has resulted in more similarities in coastal ecological knowledge that belies ethnic differences among them.

Aims and Objectives

We did the research from February 2000 to March 2001 using field methods and archival research. We made all efforts to project the small person's perspective in the true mission of ethnographic research. The aim of the study was to generate sensitivity among community residents, social scientists, and policy makers toward the welfare of the community and its traditional methods of co-existence within the coastal environment. The need for this emphasis stems from the observation that the current and future trend of development in the South Coast should not follow the historical trend found throughout the country of being unsustainable and driven by the rapacious exploitation of natural resources for quick profit; that the bountiful resources – on both the land and sea – remain under proper stewardship so that their exploitation mitigates whatever degradation would take place; and that cultural traditions and values not be hastily dumped within the haste of modernization.

Our first objective was to outline the increasingly very important part that Southern Belize is playing in the new economic policy of the government that promotes alternative revenue generation. Our second objective was to review some precedents in the efforts to integrate groups in Southern Belize within the stewardship of their physical environment, which took place during the 1990's. These topics are covered in the rest of Chapter 1.

A third objective was to do a base-line outline of the cultural geography of the study region. We did this by highlighting a sequence of coastal micro-environments and their uses together with the following topics - an overview of the land tenure pattern; the larger parameters of the study area extending to adjoining parts of southern Belize and the adjacent parts of Guatemala and Honduras; socio-cultural diagnostics of the study communities; and the regional commonalities they share. These topics are covered in Chapter 2.

A fourth objective was to describe the current use of coastal resources in the study communities. In Placencia and Monkey River fish (lobster and conch) and tourism dominate. In the other communities scale fish catching, water taxis, and retail trading activities associated with the neighbouring port town in Guatemala are prime uses of the coastal resource. This is the topic of Chapter 3.

Schema of the Flow of People and Industries Into and From the Study Communities

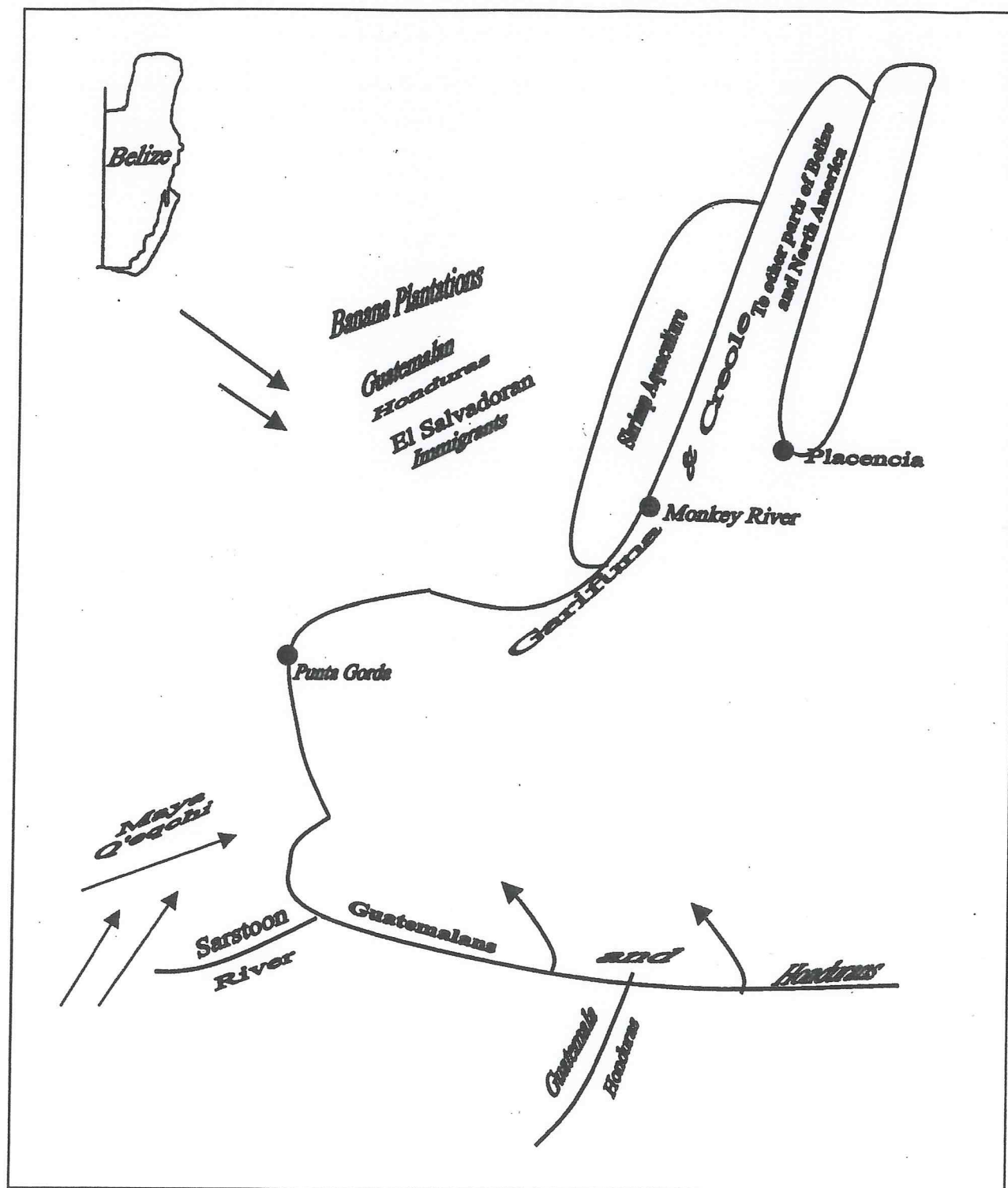


Fig. 3

A fifth objective was to describe past uses. The discussion starts with a review of a main trigger for commercialization in Placencia. It continues with a description of traditional fishing habits around the 1930's, including the influence of belief systems. Finally the description shifts to the location and use of fishing drops. These are covered in Chapter 4.

A sixth objective is to place the previous narrative into an analytical framework that isolates five pathways for community-based coastal resource management. They include revisiting the basic definition of the minimal qualities necessary to constitute a community and its use of coastal resources; the essential role of the sea within the spirituality of one of the peoples living in the region, the Garifuna; the use of co-operatives as grassroots owned systems for marketing; and efforts at using the so far elusive concept of co-management in marine protected areas.

The Larger Belizean Context

Within the larger national context the beginning of this century has found Belize vigorously transforming its economy from dependence on the traditional export crops of sugar, citrus, and banana. The writings on the wall had become bigger since the latter years of the last century urging Belize and other African Caribbean and Pacific (ACP) countries to rely less on the preferential tariff that the European Union has been extending to their agricultural export. The response in Belize, among other efforts, has been to diversify into tourism and shrimp aquaculture as two primary alternatives. Both are proving to be quite lucrative but are generating strong impact on the environment and demography of the southern coastal area (see Fig. 3).

Of the nine producing shrimp farms in the country five are located within our study area adjoining the Placencia-Monkey River area (The Coastal Zone Management Authority and Institute (CZMAI) 2000: 55). All the shrimp farms in the country, which in 2000 covered 15,000 acres of cleared pinneridge and adjacent wetlands (*Reporter*, September 10, 2000) generated almost \$45 million export earnings or 11% of the almost \$396 (\$1.00 Belize is \$0.50US) million of principal domestic exports. It represented a 500% increase since 1996 (Prime Minister's Budget Speech 2001/2). Furthermore, the banana industry remains concentrated in the hinterland behind the Placencia Lagoon in the border area of the Stann Creek and Toledo Districts. In 2000 that industry generated almost \$64 million or 16% of the total domestic exports (Prime Minister's Budget Speech 2001/2). Through the combined export value of banana and shrimp products the area surrounding the northern tip of our study area (between Monkey River and Placencia) has assumed high national significance in the new economic strategy of the government.

Another type of development has been mushrooming within the past five years. It is world validation of the environmental uniqueness of the coast of Belize. In 1996 UNESCO declared the Belize Barrier Reef as World Heritage Site, pinpointing seven sub sites as being especially worth of note. All except one lie south of Belize City and two are located within our study area, Sapodilla Cayes and Laughing Bird Caye. Subsequently, the World Bank, Comision Centroamericana del Ambiente y Desarrollo (CCAD), and the UNDP have offered funding and technical assistance to mitigate pressures away from the Barrier Reef and substantially assist communities' projects toward this objective. Such global recognition is not incompatible with economic development currently taking place along the South Coast. It does mean, however, that there is even greater moral pres-

sure on the government to undertake a comprehensive subregional plan to exploit this fragile ecosystem.

Increasing pressure will also be forthcoming from transborder advocacy efforts spearheaded by NGO's in Belize with counterparts in Guatemala and Honduras in one case and in the other with Mexico. The Belize-Guatemala-Honduras organization is called Tri-National Alliance for the Conservation of the Gulf of Honduras (TRIGOH). It was started in 1997. The Belize-Mexico organization is the Belize-Mexico Alliance for the Management of Common Resources (BEMAMCOR) formed in May 2000. For more information about these two organizations see Appendix 3.

Having touched on the type of economy and global validation overtaking our study area, it is now necessary to spotlight the changing nature of the society. Three questions present themselves for scrutiny. They are the kind of tourism; the conflicts, if any, that are taking place between intensive agro-industry and tourism; and the unfolding population dynamic.

On asking a Punta Gorda informant about tourism as an income earner in his area. He added shaking his head negatively that he does not see any staying in the town. Rather they use the Immigration and Customs Department facilities and public transportation available on buses and water taxis as they enter or leave the country. He added that a few persons were coming to do fishing in the Port Honduras area. He was correct. Placencia is by far the largest tourism destination in our study area. Statistics from the Belize Tourism Board confirmed that in 2000 Placencia had 47 hotels as against 28 for the Toledo District, which would include Punta Gorda (BTB 2001:16).

Even then the scale of tourism in Placencia is quite small. Of the 47 hotels only three had eleven to twenty rooms, the others being from one to ten rooms. It is nature-based tourism. The attractions are trips to the sea, to the Monkey River for sightseeing riverine flora and fauna, to the Jaguar Reserve located about one-hour drive away, and archaeological sites further south in the Toledo District. Placencia is still a relatively newly discovered destination. Among residents there is consensus that tourism became a major activity starting in the mid-1990's. A review of the statistics shows that occupancy rate has been steadily increasing from 1997 when it was 25% to 2000 at 43% (BTB 2001: 17). Just as the number of visitors is still few, the accommodations are small, and the village still retains its charming, friendly, and rustic character.

Given the embryonic nature of both tourism and shrimp aquaculture, it is still premature to say whether there are adverse impacts contaminating the sea, which is the primary attraction in the Placencia-Monkey River area. Some tour guides raised the fear that there may already be some effects based more on their intuition. For example, they wondered whether the unexplained bleaching of corals, that they have seen come and go, might not be such an impact. Coastal water quality is part of the mandate of the CZMAI. In its 1999 report there is a brief description what they are already doing as they undertake what is a monumental task for the whole country. The need to pursue the conditions in the South Coast at this time, however, may come more from the prolonged outflow of effluents from the banana industry.

If there are unanswered questions about the correlation between industrial activity and water quality, it is certainly not the case on population movements. In the northern part of our study area

there is evidence of population growth but the reverse is taking place in the extreme southern portion, where there is much less economic intrusion. The following discussion shows that there are other reasons accounting for the movement, especially within the hinterland buffer zone. Given the close interrelations between the hinterland and coast, it is necessary to review them.

There has been growth in the population of Placencia from 1980 but more so between 1991 and 2000. Table I and Fig. 4 elaborate. The same kind of increase is noticeable in the buffer communities; notable examples include Seine Bight and Hopkins, which surround Placencia. It is also worth pinpointing Mango Walk and Nova Shrimp Farms, two communities that were non-existent before 2001 (see Fig. 4). Banana agro-industry is primary attraction in these communities, especially in Independence, the capital of the banana belt, which doubled in size between 1980 and 2001. Going by population growth in Placencia and Monkey River, tourism has been far less an attraction for residents. However, many of those taking up residence in Placencia are new arrivals within the larger subregion, including workers in hotels and restaurants from Honduras and surrounding Maya villages. In short, newcomers are taking jobs wherever they are available but agro-industry is demanding more of them than tourism.

From Monkey River south the pattern is one of decline in our study communities. It is the case in Monkey River and Barranco. It would also be the case for Punta Gorda, were it not for the large inflow of new arrivals from the surrounding Maya villages. A review of the 2001 census enumeration districts showed decline in the older parts of the town but marked increase in the newly settled outskirts. On the other hand, the buffer communities in the southwest of our study area display increases with some not having existed even in 1991, as shown in Table 1. The main attraction here is the availability of public lands in the coastal plain to Maya people, who have exhausted swidden agriculture lands in the uplands further in the interior. This to-and-fro introduces some of the forces influencing the complex demography taking place within the larger South Coast subregion.

The additional question of the effect of these movements on the composition of our study communities is still unfolding. We can mention a few. One is that the meeting of peoples from various origins is adding to greater intermixture and the blurring of ethnic identities. Traditional communities with their own coastal orientation, among other cultural traits, are now adjusting to new peoples. The reverse is also happening, namely that the arrivals are also acquiring the traits of their hosts. These arrivals are from places – near and far – within Belize and further beyond. Secondly, fishers from neighbouring countries are coming to settle and do fishing. In many cases, they are welcome as there continues to be a lessening of fishers either from migration from the southern most portion of our study region or taking up tourism in the north. Finally, the newcomers contribute to consumer goods and services in demand by tourists, including distinctive arts and crafts.

The one underlining characteristic among all our study communities is that one can no longer regard them as culturally homogenous units. They have all experienced new residents especially within the past two decades.

Study & Buffer Communities in Stann Creek & Toledo



Fig. 4

The Study

The period of public enlightenment in Belize toward the wealth of its natural resources and their potential for economic development through tourism started in the 1990's. There were two contemporaneous projects that acted as midwives. They were the British funded Forestry Planning and Management Project (FPMP) that lasted from 1990 to 1997 and the USAID funded Natural Resource Management and Protection Project (NARMAP) (Rai and Hyde 1995) that lasted from 1991 to 1996. The FPMP had social planning as a primary component. It introduced forestry management among communities in the buffer zone of forestry reserves. Maya villages located surrounding the Columbia Forest Reserve received considerable attention. Many other communities in the Stann Creek and Toledo Districts benefited from NARMAP support, which worked in tandem with FPMP. One result was that for the first time scores of rural communities received grants to initiate their own conservation and tourism-enhancement projects. Many of their leaders received training locally as well as abroad in these fields. One extreme example of this form of integrated assistance was a group of communities surrounding Five Blues Lake, who conceptualized and initiated development plans for what became Belize's first community-managed national park (Bass et al 1995: 42). Many other communities were inspired to do likewise.

During that period the Southern Coast received its fair share of recognition, probably more so than other parts of the coast of Belize. The FPMP funded a study of Monkey River as Special Development Area (SDA) (McGill 1994). Briefly, the SDA was a government designation for an area that would be slated for integrated community development. The adjacent coastal zone was included in the study. But it was the Belize Center for Environmental Studies (BCES) that spearheaded a series of studies on the Southern Coast with assistance from USAID, The Nature Conservancy, and other sources. Its 1990 *Critical Habitat Survey* was crucial in being one of the early seminal efforts generating awareness of the limitations within the physical environment at the level of the country, including the South. The other BCES claim to fame was in making the initial argument and studies that eventually led to the drafting of the management plan for the Port Honduras Marine Reserve and afterwards its formal declaration.

The studies done through the auspices of BCES and later TIDE include *Site Characterization for Integrated Coastal Management (ecology, oceanography, and geography of Port Honduras, Belize – a proposed marine protected area)* (1996), *An Analysis of Commercial Sport Fishing in the Proposed Port Honduras Marine Reserve* (Heyman and Hyatt 1995), *Voice of the Fisherman in Southern Belize* (Heyman and Graham 2000 (c)), and *Characterization of Reef Fish Spawning, Aggregation, Whale Shark (*Rhincodon typus*) Occurrence, and Physical Oceanography at Gladden Spit, Belize* (Hyman, Kjerfve, and Graham 2000). These are only a few that we have identified. We suspect that there are several more.

These studies show the conventional predominance of natural science bias. But some contain data on fishing practices that need to be culled in a more thorough study and beyond the scope of our current work. Such an effort could begin to do justice to the tremendous amount of material that could be unearthed in dozens of studies that would reveal much on the social dynamic taking place in the Southern Coast. This is the scholarly context within which the IDRC-CBCRM fits in the case of Belize. It is enabling a base line study within a part of Belize that can contribute to the wealth

of sociological analysis already generated by Brown and Pomeroy (1999: 1-22), Craig (1966 and 1968: 264-279), Espeut (1994), and Gordon (1981), among others.

At the outset we divided the workload as follows. Wil Maheia of TIDE would provide field support, do mapping of the fishing drops; and provide information on the procedure leading to the declaration of the PHMR, and ongoing natural sciences studies in which TIDE is involved. University of Belize's Dr. Joseph Iyo would provide oral historical data about fishing and other coastal activity. Dr. Joseph O. Palacio of the University of the West Indies would do the ethnographic research and provide leadership to the entire project. Iyo and Palacio would have research assistants do much of the fieldwork under their supervision, as part of their teaching function within their respective universities. This way much could be done during the twelve-month period assigned to the fieldwork. Of the three parties only Maheia lived in one of the study communities. Iyo and Palacio live in Belize City from where they had to travel by air or road to the field, both of which proved either expensive or unduly long in time.

Even before its official registration in 1997 TIDE had been the premier NGO working with the small person on conservation and promoting alternative income generation in both terrestrial and marine subregions of the Toledo District. For this it has received high acknowledgement from within Belize and internationally. Dr. Iyo's participation was built on his university's history of teaching and research in business management and natural resource management. The mandate of the UWI School of Continuing Studies, which Dr. Palacio heads in Belize, includes promoting opportunities for lifelong learning and to engage in research around cultural identity, where the small person remains the centre of investigation. His ethnographic sessions became efforts where both sets of activities took place. The informants willingly provided information about their past and current activities. With little probing they further elaborated where all of this fitted within their culture and economic development. They became learning and teaching experiences in mutual reciprocity.

In actual fact the workload shifted considerably. Two of our trainee researchers dropped out after we had trained them. TIDE could not provide a staff person who could be dedicated to the work we wanted done. In the end a visiting intern student Jessica Rosien from Oregon State University helped in the Punta Gorda TIDE office with the research on procedures leading to the declaration of the PHMR. Dr. Palacio had to substantially update the information that TIDE provided on the fishing drops. Both Palacio and Iyo spent considerable time in the field. The overlaps in their topics allowed covering both past and current practices fairly easily. In the end the study became a lesson in appreciating the strengths of the collaborating institutions.

Two institutions provided vital support to the project, the Maritime Wing of the Belize Defence Force and the Land Information Centre of the Ministry of Natural Resources, Industry, and the Environment. The former did a full week in the field providing a boat, fuel, and a crew of three men. Using GPS they noted the location of the 43 drops that local fishermen guides identified off the study communities. They did the firsthand mapping, which was fine-tuned by the Land Information Centre using digital equipment for electronic storage. The Land Information Centre is the national repository of cartographic data for the entire country. For this they have state of the art equipment and a well-trained staff.

Field methods provided the core of the data. They include interviews, participant observation, and field demonstration. A field assistant Leonardo Chavarria, Iyo, and Palacio did extensive interviews. Iyo and Palacio did open-ended and semi-structured interviews. For more information on our field instruments see Appendix 1. We extended our interviews to some communities not originally covered in the study. They include Hopkins, Seine Bight, Georgetown, Dangriga, and Cattle Landing. The extended scope they provided supplemented what we had collected from the study communities. We interviewed a total of 65 persons listed in Appendix 2.

A prime example of field demonstration was the survey of fishing drops that Palacio undertook. It was a full week of traveling to four of the five study communities – Placencia, Punta Negra, Punta Gorda, and Barranco – and going to main drops under the direction of local fisherman. At each of the 43 drops that we visited, we collected the GPS co-ordinates and had discussions with the guide about folk triangulation methods, and the main species caught. Between drops we took the opportunity to find out from the guide additional information specific to the areas we passed. The entire exercise, therefore, became an encyclopedic grab bag of several bits of information that we could not gather otherwise. Repeatedly we were overwhelmed by the wealth of knowledge that the guides retained and their willingness to share with us.

Participant observation came through two trips that Palacio made. One was a day's fishing trip offshore Placencia. He participated in most of the activities that included locating spots for bait, catching them with a castnet, fishing using handlines, free diving with the use of snorkel and fins for conch. The second trip took place away from the study area but proved to be equally helpful. It was to Hol Chan Marine Park in Northern Belize to see what tourist spectacles are available and how the local people from San Pedro Ambergris use it. The aim was to gain comparative experience with what is already available in Belize as the discussion on marine protected areas in Southern Belize picks momentum.

There is another aspect of the fieldwork that is worth mentioning in broadening the context for data gathering and appreciation. Palacio often took along Robert Mariano as field assistant. He proved to be a very helpful assistant as well as being himself an informant. A fisherman with more than forty years experience in the waters of Central Belize, he had not done any fishing in the southern waters for several years. He was immediately able to distinguish the similarities and differences with what he normally does. More particularly, he was able to identify the special advantages of fishery and other resource endowment in the South. The crosscurrents in his rich observations and infectious enthusiasm proved indispensable to data gathering, resulting in access to more than we had anticipated.

The archival research took place mainly in the Belmopan Archives Department. It was to collect data about trade and economic activities that took place in Southern Belize during the early part of the last century. Besides, Palacio referred to fieldnotes that he had collected on fishing while doing his doctoral fieldwork in one of the study communities in 1979-1980. They proved to be of historic significance, given the overwhelming changes that had taken place in that community by 2000.

CHAPTER 2

THE STUDY COMMUNITIES

Introduction

Our study communities are Placencia, Monkey River, Punta Negra, Punta Gorda, and Barranco (see Fig.1). In describing them we start with the larger geographical subregion showing where it fits within Belize and the adjacent portions of Guatemala and Honduras. We continue with a profile of the microenvironments stretching westward from the Belize Barrier Reef to the coastland. We conclude with brief diagnostic descriptions of the study communities together with shared sub-regional qualities.

The Cultural and Geographic Parameters

Although there is talk among public officers and researchers (see, for example, Craig 1966: 6-9) about the northern, central and southern parts of the Belize coast, there do not seem to be distinct markers that separate them. Our study area has affinity – both in culture and natural resources – with the remaining portion of the Stann Creek District (see Fig.1), especially Seine Bight, Maya Beach, Riversdale, Sittee River, and Hopkins. Some of them are included in the buffer communities listed in Table 1 and Fig. 6.

The cultural affinity extends south into the two countries of Guatemala and Honduras, especially its Bay Islands and North Coast. Historically, the peoples of the South Coast of Belize derive from periodic migrations from the adjoining parts of these countries. Furthermore, a two-way flow has existed for several generations following extensive kin ties. Persons from communities cross the border frequently to do shopping and attend social gatherings in other countries. The cultural affinity does not carry over into the natural resources. The marker for the coastline of Belize, the Barrier Reef, ends in front of the Toledo District; so also the familiar features such as the atolls, cayes, seagrass beds, shoals, and extended fishing drops.

For its size the southern part of the Belizean waters has far fewer fisherfolk than the other parts. Out of the 2100 licensed (CZAMI 2000: 53) fisherfolk in the country there were only 251 (Ministry of Fisheries figures for 2000) who regularly worked in the Southern waters. Many non-Southerners, therefore, flock there to take advantage of the lessened exploitation and the resultant higher fertility. The attraction of Belizean Southern waters to fisherfolk from the neighbouring countries dwarfs these incursions from northern and central Belize. There are over 200,000 persons in those countries inhabiting their Caribbean waters adjoining to Belize, which have less of the natural bounty with which Belize is blessed. This figure contrasts with the approximately 5,000 Belizeans inhabiting the South Coast (Heyman and Graham 2000 (c): 4).

The eastern border of the Southern Coast slopes gently to the southwest from the Placencia Peninsula forming a semicircular loop (see Fig. 1) north of Punta Gorda. Within this bay there are scores of mangrove islets that form the western most protrusion of the Port of Honduras. There is

another large indentation south of Barranco that takes an easterly swing along the coast of Guatemala and Honduras. It is the western edge of the Gulf of Honduras, where the borders of Belize, Guatemala, and Honduras overlap. The conflicting claims of Honduras and Guatemala for parts of Belizean waters are the subject of diplomatic talks. In late 2000 the country more aggressive in its claims, Guatemala, threatened military invasion resuming a path that she had taken over the past years. During periods of such tension the worst impact on the coastal communities is the increased military patrols that Guatemala mounts. Discussions between Belize and Guatemala continue to look for a peaceful solution through the intermediary of the Organization of the American States.

The Microenvironments

We describe a spatial profile of microenvironments and their use going in a westerly direction starting with the area east of the Barrier Reef and ending with the terrestrial resources west of the beach. This schema, displayed in Fig. 4, is more appropriate in the northern half of the study area from Placencia as far south as the Port Honduras. Further south the Barrier Reef ends and there are no cayes leaving the coastland more exposed.

Harbours accommodating ocean liners are located in Independence within our study area but at a far larger scale in the adjacent ports of Guatemala and Honduras. Currently the usefulness of the area east of the Barrier Reef is for shipping, only a minimal part of which enters and leaves Belize. Traditionally and extending as far as 1960, it had been the venue for much more traffic in sail boats plying among the three countries of Belize, Guatemala, and Honduras. Apart from this, the popular use of the maritime resources has always been confined between the Barrier Reef and the mainland. But there have been some changes within the past five years. For example, scuba divers enjoy the pristine deeper waters that plunge over 70 meters east of the Reef. There are now tours to see whale sharks (*Rhincodon typus*) that feed on offal from the spawning mutton snapper during the months of April, May, and June in the Silk Cayes area. There is also some interest in game fishing for blue marlin, tuna, swordfish, and ocean jack beyond the Reef. All of these are now providing an added emerging dimension in coastal resource use for tourism.

The several cayes surrounding the Reef are now holding their own in tourism. Tours come for the day for snorkeling and to do sightseeing as each caye differs from the other. A main attraction is the shoals where the water can be shallow, clear, and inviting. Beforehand these cayes had been used mainly as camping ground for fishers and travelers. Some also had a few families living on them who did fishing and making coconut oil from the abundant coconut trees. A prominent feature west of the cayes nearest the Reef is the Victoria (also called Outer) Channel (see Fig. 4). Its depth goes to 10 meters allowing passage for larger boats. It is frequented by shrimp trawlers from further northern Belize and Honduras, who use the channel as marker for their grounds.

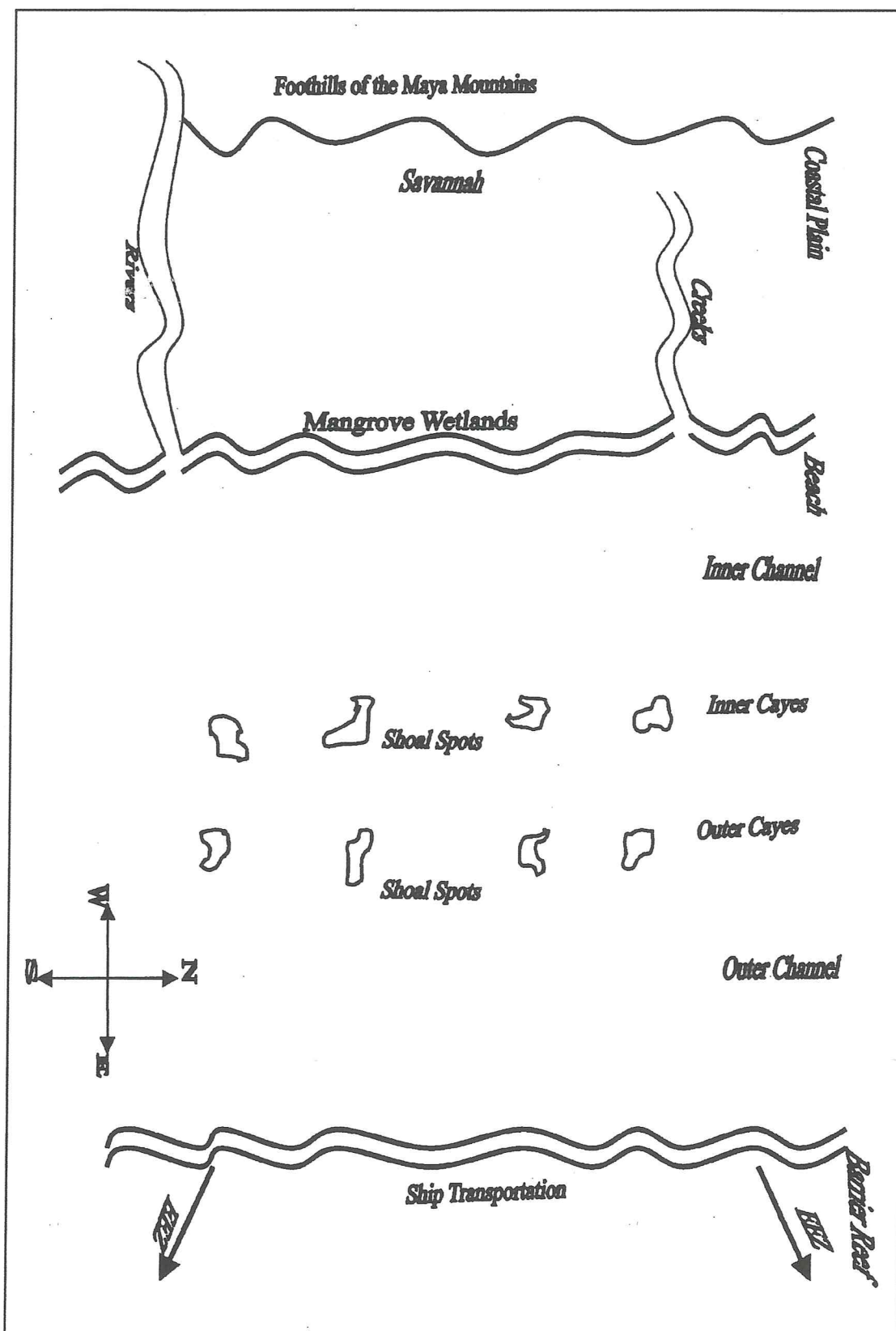


Fig. 5

Going further west one encounters another set of cayes each with its own microenvironment. Again there are the shoals interspersed with rocks that are used for lobster, conch, and hand line fishing. Snorkeling and sightseeing are also a main feature. A highly recommended area is the vicinity of Laughing Bird Caye, a marine protected area with its own management plan. This pattern continues further west crossing the expanse of the offshore cayes (also called the inner cayes to separate them from those closer to the Reef, which are known as the outer cayes) until one comes into the Inner Channel (see Fig. 4). Its maximum depth is six meters and remains the pathway that is used by boats plying along the coast. The Inner Channel and the offshore cayes mark the boundaries of the predominant use of the sea when fishers used only paddle and sail for propulsion. Even today it is usually the furthest some fisherfolk will go not for commercial fishing but for their home use.

One then crosses the Inner Channel and arrives close to the beach, where sets of terrestrial microenvironments take over. These are essential for drainage and marine nutrients. They include numerous streams with their estuaries, sand dunes, mangrove, lagoons, and savannahs. Each set of the microenvironments has specific uses that are exploited for subsistence and commercial use. We include a few. A short distance from the beach one catches some fish species, notably snook and tarpon. Closer to the beach and near estuaries one catches shrimp in small quantities for bait and in larger quantities to sell. Some species of mangrove are used to make dyes useful for wooden furniture and flours. Some species of hardwoods grow in wetlands near the coast. Woodsmen know their distinctive characteristics as against their dry lands counterparts, and use them accordingly. At certain times game animals, especially peccary, come for water in streams and make themselves vulnerable to the hunter men. Iguanas are plentiful on trees overhanging the banks from February to May. So far we have not mentioned resources specific to the numerous lagoons, many found a short distance from the coast.

To a large extent what takes place on land will determine the development of the Southern Coast more than what takes place offshore. Already we have seen the large-scale impact of banana and shrimp farming. Most of the land between Placencia and Monkey River is privately owned (see Fig. 5). The portion closer to the beach, as in other areas of the Southern Coast, is being held in speculation for anticipated tourist development.

South of Monkey River the pattern of land tenure is dominated by national lands. The larger proportion is national parks and forest reserves. The concentration of protected terrestrial areas no doubt was the inspiration for the creation of marine protected areas, a procedure that started in 1996 with the declaration of the Sapodilla Cayes Marine Reserve and continues. The last ones to be declared were Gladden Spit and the Silk Cayes on May 18, 2000. Fig. 2 shows that the proliferation of marine protected areas in the country is south of Dangriga, with the PHMR being one of the largest in the country. The conjuncture of terrestrial and marine protected areas augurs well for the continental biological diversity programme being promoted by the regional initiatives of the Mesoamerican Biological Corridor and the Mesoamerican Barrier Reef Projects. The ensuing consolidation in the management of both flora and fauna could make this part of the country a mecca for naturalists of the tropics – both tourists and students alike. The great need for a comprehensive development plan for the subregion, incorporating these unique features, demands immediate attention.

Community Profiles

Placencia - A community using its coastal resources for fishery and tourism

The first community in the study area is Placencia. More than any of the others it displays a predominantly maritime orientation. Indeed, it started becoming a growing community when the residents started getting relatively good prices for their large and diversified supply of seafood in the 1950's. Before that its economy consisted of some fishing, making coconut oil from the abundant coconuts, pig rearing, and reliance on migrant wage labour in sawmills and timber camps. Since the late 1980's tourism has given stiff competition to fishing as main economic activity. So far the men have been able to balance both activities reasonably successfully. The main target is lobster, which is legally caught between February 15 and July 14. As the lobster season wanes the tourist season, which picks up around December to January, is at its heights. Fishermen transform themselves to tour guides and tour operators using the same boats and working the same waters and coast line that they know so well. So far it is an unusual conjuncture of two different economic activities, where the small man can still benefit using the same tools of production.

The name Punta Placencia could not have been bestowed on a more pleasing site. The village sits on the southernmost tip of the Placencia Peninsula fringed by the sea on the east and lagoon on the west. The sandy beach is most inviting throughout the year. It curves northward from the location of the village proper to the outskirts where there are larger resort hotels. Within the village the hotels are smaller invariably being more like overgrown guest houses, where the oversight of the owner and his family provides a personal level of attention.

The inhabitants are mainly Creole, the descendants of former British loggers and seafarers with African slaves. They originate from a few families, which have intermarried extensively over generations. The overlapping kinship ties gives Placencia a small close-knit character that displays itself in all community structures from the Placencia Fishing Co-operative (abbreviated as 'Co-op' in the village) to the main church (Anglican), and Village Council.

For the purposes of this study Placencia has several auspicious traits. It has mastered the marine and terrestrial resources with which it is amply blessed. They fish not only the sea but also the lagoon, which separates the peninsula from the mainland. It is especially good for tarpon. The community has transformed itself several times taking advantage of economic opportunities as they become available. It has followed this path leading to increases in population within the past twenty years, as seen in Table 1. In reciprocity for the contribution of natural resources to their well being, they are the most environmentally conscious community among the five in this study.

Monkey River – A community with a history of dual orientation to terrestrial and coastal resources.

A short distance south of Placencia there is Monkey River village. It contrasts in several ways with Placencia. It does not have the ubiquitous sand; instead its soil is waterlogged with patches of soft mud scattered among the mainly unoccupied house lots. It does not have many

tourists, guesthouses, and resort hotels. At a population of 107 it is only a third the size of Placencia. It has been losing residents between 1980 and 2001, as shown in Table 1.

The relatively backward conditions of Monkey River have to be appreciated within an historic perspective. The conditions were the reverse between it and Placencia during the first half of the last century. It was then a successful, heavily populated town (downgraded to village in 1981), when Placencia was a struggling hamlet. The contrasts point to the fact that for the past 150 years the fortunes of rural communities in Belize are ultimately linked to demands originating from the metropolitan market for the fruit of their labour and natural resources.

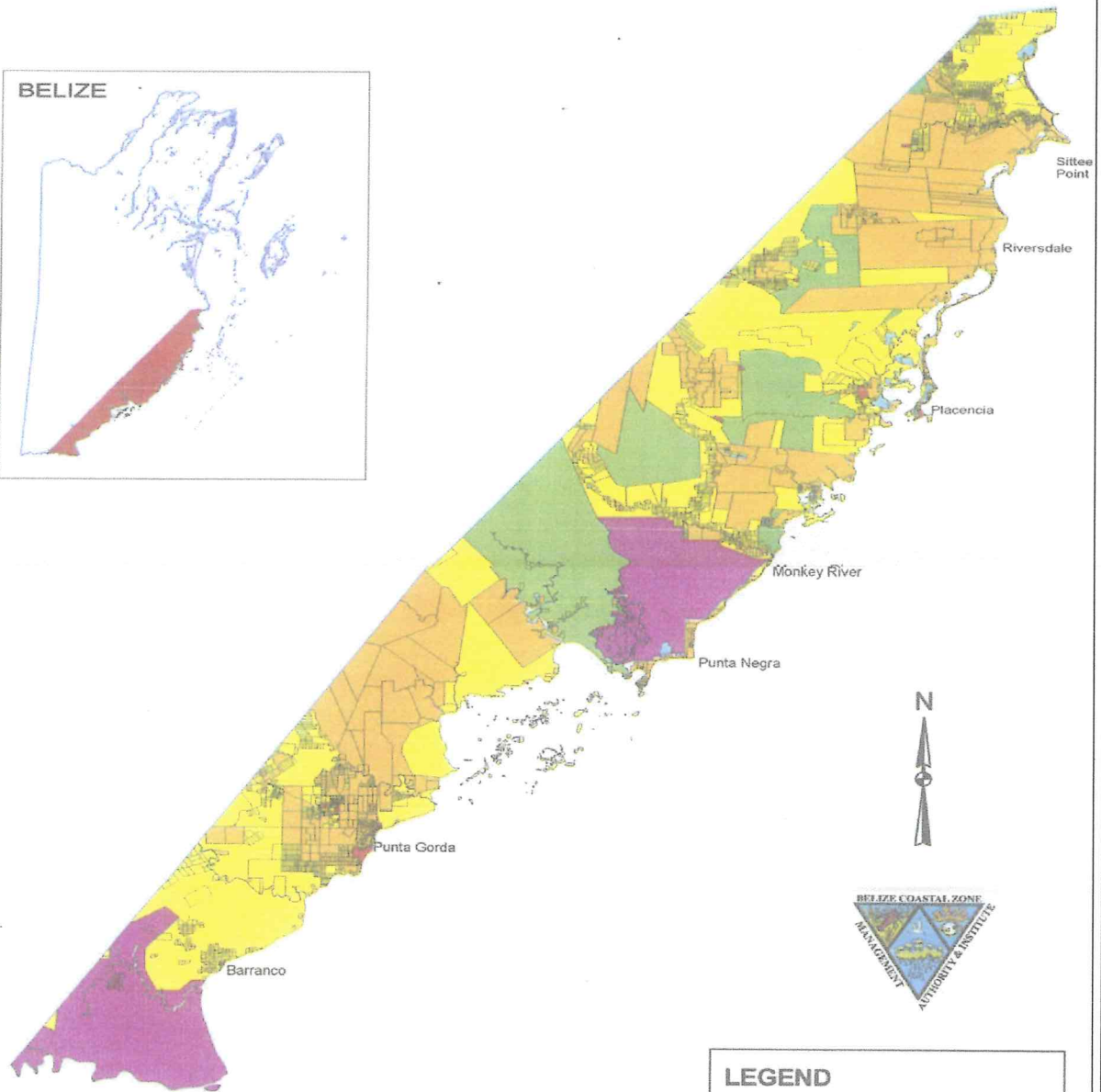
Monkey River was a primary banana producing community from the turn of the century to 1940, exporting the fruit to U.S. cities. Its inhabitants invested a great deal opening hundreds of acres of agricultural lands upstream. Even after the banana decline, they relied on their farmlands for subsistence crops up to the 1960's and '70's, while reaping their protein from game meat, river fish, and sea fish.

A tradition of the dual use of marine and terrestrial resources is strong in Monkey River. Villagers told us that they preferred river to saltwater fish as the latter were more rank. Among the study communities it is the only one where there is still a man, Godwin Coleman, who does dory carving. They measure up to five meters and are used mainly for fishing in many coastal communities throughout Belize. The skill entails a detail knowledge of several types of woods as well as difference in species between those growing in wetlands as against the dry lands. Villagers were aware of the roosting of birds on one of the cayes immediately offshore as a prime tourist attraction for bird watchers. They are deliberately leaving vegetation along the riverbank for the use of animals and sightseeing by tourists.

Currently the village is benefiting from its proximity to Placencia. The fishers sell to the Placencia Co-operative and tourists from Placencia travel to the village for river tours. There is an understanding that Placencia guides allow their Monkey River counterparts to accompany the visitors, thereby guaranteeing their share of the tourist dollar.

There is another trait, found in the other study communities, that was outstanding in Monkey River. It is the dedication of a few villagers to remain at home even during the decades of steady decline after banana. They formed voluntary associations for support. One of the last examples was the Association for the Preservation of Monkey River formed in the late 1980's. It lobbied to have Monkey River declared a Special Development Area (SDA) in 1993. The aim was to safeguard an integrated community development approach to the village and its environs. With technical support from the government, the villagers zoned areas for specific kinds of uses. It formed the kind of comprehensive people-oriented planning effort, which has now been assumed in the management plans for land and sea protected areas. Enthusiasm for the SDA gradually dissipated as there was minimal continuity from the government.

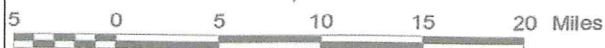
Land Tenure Southern Coastal Region



LEGEND

- WATER BODY
- PRIVATE LAND
- NATIONAL LAND
- NATIONAL PARK
- FOREST RESERVE
- RESIDENTIAL LOTS

Scale 1:400,000



Source: ESTAP / LIC

Punta Negra - Potential for the use of both terrestrial and coastal resources within a community having its own subregion

Punta Negra follows the logical pattern of underdevelopment that characterized Monkey River some years ago, resulting in being the smallest among the study communities. The sons and daughters of a once larger community have out-migrated in large numbers leaving a population of 21 in 1991 and 27 in 2001. It best exemplifies the picture where villagers have left but some are “keeping an eye” on their property in case tourism comes by increasing overnight their value. “Keeping an eye” unfortunately does not mean periodically clearing them. The village is heavily overgrown apart from the immediate beach area.

It is a Creole community. Historically, the earlier inhabitants included a few Garifuna families who intermarried with Creoles gradually losing their ethnic identity. Such inter-ethnic marriages have been common in coastal communities reflecting the inflow of people who might have been attracted by kin ties, wage labour, good agricultural lands, and fishing grounds. Monkey River, now a Creole community, also had Garifuna inhabitants earlier in its history.

While the economic mainstay of Monkey River was agriculture that of Punta Negra during its heyday in the early part of the last century was fishing and making coconut oil from the hundreds of trees found all over the village. At this time some of the original residents now live in Punta Gorda but still go to the drops in front of Punta Negra to catch fish. Unlike many, who have turned their backs permanently, they continue to retain their links to the home village.

The relative lack of residents is not a reason to exclude communities like Punta Negra from this study. Another reason is to document the thinking around development that impacts on the entire South Coastal region. Earlier we saw that the uninhabited and frontier nature of the subregion has provoked the need for greater vigilance, as inevitably it will become prime target for grandiose projects, that will demand even greater scrutiny. Such a plan had been proposed in the form of a tourism/landing facility for cruise ships for the neighbouring Punta Icacos area. In describing the project while doing the SDA report McGill added, “Maritime charts indicate that the promontory [at Punta Icacos] is closer to deep water than any other undeveloped site along the coast. The combination of such deep water access, proximity to the cayes and reef, an “unspoiled” coast, the ready availability of fresh water (the water in the lagoons lying immediately to the west of Punta Negra is potable), and, most importantly, cheap land, posed a very real possibility that the area could be subjected to development proposals that would drastically alter the character and value of the area.” (McGill 1994: 29).

This proposal contrasts with another coming from the *The Critical Habitats Survey* (BCES 1989) for the Punta Negra area. It “recommended [that] the Deep River Forest Reserve ‘should be planned within the framework of the multiple-use biosphere model’ partly because it would be the only example of forest reserve connecting the sea with the Maya Mountains hinterland, and partly for the protection of the Port Honduras cayes.” (McGill 1994: 29). There is also a turtle habitat in the Punta Negra-Punta Icacos area that needs protection (McGill 1994: 29). These two proposals underpin the big development *versus* the environmental protection sides of the debate that will become louder as the South Coast becomes more known.

Punta Gorda – A town using its coastal resources for fishery and transborder transportation

The next study community is Punta Gorda. It is the largest, being the capital town of the Toledo District. In studying it we could not focus on the holistic community as in the case of smaller villages like Monkey River and Punta Negra. Rather we subdivided our informants into stakeholders who would have vested interests in segments of the coastal resources. They included fishers, tour guides, merchants, water taxi operators, and spiritual leaders among others listed in Appendix 2. The bulk of our information came from fisherfolks.

The one factor that Punta Gorda shares with the other coastal communities has been the changing social value attached to coastal resources. It is the more critical since the town is a nucleus of services that it provides to the outlying communities. The services include buying and selling goods, paying taxes, consulting with government officers, attending secondary school, and receiving medical attention. At this time there are 41 outlying villages of which only two are coastal, the remaining being inland Maya villages. Up to the 1970 the numbers of villages was far less. Afterwards they have mushroomed and now use road networks for transportation as against relying on dories along the rivers and the coast. The increasing numbers of inland communities has skewed the orientation of town residents away from the coast. The trend has deepened in the past two decades with larger numbers of the inland residents themselves moving to settle permanently within the town. To a large extent the socio-economy of Punta Gorda is reflected in the surrounding communities with which it is sharing ever more services.

Among the townsfolk there has also been a change in the actual use of coastal resources. Catching scale fish remains the primary use. The fishers sell them at the town market or the beach as they arrive. The re-newed Rio Grande Fishermen's Co-operative, surprisingly did well in the sale of lobster and conch in the 2000-2001 season - its very first - indicating that these are products with great potential in the area of Punta Gorda (see Table 2). In terms of cash proceeds the water taxi business does more than fishery. There are two water taxi owners, with others doing it on a part time bases. They ferry passengers, mainly tourists to and from neighbouring port towns in Guatemala. Another emerging business also captured by water taxi operators is ferrying tourists to sites on the cayes as well as fly-fishing.

Merchants are an important set of stakeholders. They sell goods and exchange currency to travelers between Belize and Guatemala. Many of them are retailers buying goods to trade in Guatemala and *vice versa*.

There is another set of stakeholders who currently make up a small group but will no doubt increase with time. They are tour operators. At this time the bulk of their business is in directing persons to inland communities and attractions accessible by road.

A set of Punta Gorda stakeholders were unusual. It was a group involved in Garifuna spirituality, which provided a spiritualist dimension in the use of coastal resources.

The subtle changes taking place in Punta Gorda were best captured in a discussion with some fishermen. They said that they had heard about tourists coming to town but had not seen them.

some fishermen. They said that they had heard about tourists coming to town but had not seen them. On the other hand, they see water taxis carrying several people daily across to and from Guatemala. Besides, they are selling fish at a better price, when they can catch them. They continue to see more future for themselves in scalefish, whereas tourism still remains elusive.

Barranco – A community witnessing the demise in the use of its coastal and terrestrial resources

The fifth community is the village of Barranco, which is located twelve miles by sea south of Punta Gorda. It is the first Belizean community one sees on coming north from Guatemala. Among the study communities its coastal geography is unique in not having cayes offshore. There is no tradition in the use of cayes for camping during fishing and transportation.

Barranco shares the closest similarity to Monkey River. It was previously a prosperous community also during the banana period for the first forty years of the last century. With the decline went large numbers of inhabitants in search of wage labour in other parts of Belize and further beyond. Among the residents there is a strong consciousness of the past era of greatness almost as a way of apologizing for the current depopulation, the large numbers of abandoned and overgrown house lots, and the overall depressed conditions. The difference with Monkey River is that Barranco has not had any opportunities for fishery and tourism that have become the mainstay of that village economy. On the other hand, the traditionally fertile fishing drops in front of the village have been over fished by Guatemalans almost to the point of complete stock depletion. There are no popular tourist destinations as Placencia has become to Monkey River. In the end, the renewed spirit of optimism for community re-generation that one finds in Monkey River is absent in Barranco.

There has always been a symbiotic relationship between Barranco and Punta Gorda based on sharing kinship and Garifuna cultural ties. Many of the former residents have now moved to Punta Gorda. A road that was finally completed in 1998, ending Barranco's only accessibility by sea, is helping to forge closer ties with Punta Gorda. An example of this is the sharing by people from both communities in ancestral rituals, that are being held among extended kinfolk every year.

Graphically, Barranco demonstrates the stage when a community – rather what remains of it – no longer can reap the coastal and terrestrial resources, although there are historical evidences showing that up to two decades ago the conditions had not reached this level. Table 1 shows that the population has been declining since 1980. The *caveat* of not overlooking the traditional and historical in the haste to spotlight the current resonates strongly in this community.

Table 1
Population of Study and Buffer Communities
1980, 1991, and 2001 Censuses

Study Communities	2001	1991	1980
Barranco	183	184	229
Punta Gorda	4329	3458	2396
Punta Negra	27	21	55
Monkey River	170	186	191
Placencia	501	367	334
Buffer Communities Toledo District			
Midway	107		
Conejo Creek	122	138	
Sundaywood	194	119	
Crique Sarco, Toledo	250	215	184
Toledo Shrimp Farm	4		
Buffer Communities Stann Creek District			
Mango Creek & Independence	2929	1969	1474
Seine Bight	830	544	465
Maya Beach	45	13	
Hopkins	1027	808	749
Mango Walk	58		
Nova Shrimp Farm	18		
Aquamar Shrimp Farm	43		

Blank cells indicate that a community may have had only a few residents during a given year. For more information on population movements see ESTAP 2000.

The Cayes – Port Honduras and the Sapodilla Range

Information about the significance of the Port Honduras Cayes became clear after we started the field visits. We learned that there were about ten people who are intermittent residents, mainly fishers using them as camping grounds. As a result, we did not include them in our study. As in the case of mainland communities that we have reviewed, historical significance of the cayes overshadows the present. For generations they were the homesteads of families who relied on fishing and trading with the mainland. Again, the other trait they share with mainland communities is confusion on land titles that have become convoluted over time arising in disputes. In the mean time others, including arriving Guatemalans, are squatting with intention of acquiring ownership.

The eminently more attractive natural endowment of the cayes in the Sapodilla Range mitigates such lapses in ownership. They are bigger and have beaches that attract hundreds of persons during holidays mainly from Guatemala. Again the very small size of the resident population excluded them from the scope of this study.

It is fitting that the description of these cayes ends the narrative on our study communities. They reinforce the picture that we have seen recurring in the South Coast of abandonment in the past, miniscule population at the present, but a great deal of potential for the future.

Shared Commonalities

The brief community-specific descriptions were meant to spotlight some diagnostic traits in the use and non-use of coastal resources. We close with some commonalities that cut across all the five communities and mask over the local characteristics that one meets in traveling from one community to another.

There is extensive cross-culturalism that demonstrates itself in various ways. There are separate communities of Creole, Garifuna, and other peoples but within each group there has been extensive interethnic mixing. There are remarkable overlaps in their beliefs and practices on fishing but not in traditional spirituality, which is specific to one set of people, namely the Garifuna. Sociopolitically, there is a strong historical sense of being Southerners together, who are not really understood by others, especially the political authorities in Belmopan, the capital city. For this reason, the South invariably votes for their own representatives, who even when they are members of the ruling political party embody a spirit of defiance.

Particularly south of Placencia there is great concern that demography is against them. They note not only that their numbers are dwindling but that others are closing in on them. It becomes evident in Table 1 that while the coastal communities are losing population, the Maya Q'eqchi buffer communities in the Toledo District are increasing.

The culture of artisanal fishing prevails throughout Southern Belize. To the fishers the hand line, cast net, the outboard motor with its quirks, the license they have to pay to the government, the behaviour of fish at the drops, dealing with their customers, and contending with the new focus on marine protected areas – all of these are the matter of day to day life. The folk knowledge that they accumulate about the biology of fish, oceanography, and meteorology are widespread and impressive. A survey by Heyman and Hyatt (1995) reveals, for example, much information from fishers about the spawning times and locations of several fish in southern waters.

Shared kinship is another characteristic. People from Placencia claim to have relatives in Punta Gorda, Punta Negra, and Monkey River, while the same applies between Punta Gorda and Barranco. Visits for social events are common among them.

Indeed, the regular fishers make up a relatively small number of less than 250 mostly men, who are increasingly mobile through their outboard motors within a large expanse of sea. During the grouper and mutton snapper season they will converge at the same grounds. They end up knowing much about each other. For example, Barranco men fish not only offshore Punta Gorda but in earlier years had gone as far north as Placencia. Men from Placencia, Punta Negra, and Monkey River fish the same drops. There are no community territorial prerogatives that exist in the sea.

While they openly accept Belizean fishers, they view Northern and Central Belizeans with some jealousy. They do not like that they are coming in larger numbers and with sophisticated equipment. They especially complain about the use of shrimp trawlers, which they regard as destructive. Not only are they catching a large amount they are also dumping the offal in the sea attracting sharks which in turn repel fish normally caught for domestic and commercial purposes.

For the Guatemalans and Hondurans they have great contempt. They decry the destructiveness through the rampant use of nets and their poaching especially during the night. Accounts in Monkey River spoke of immigrant Central American banana workers during the weekend setting up trammels in the rivers and ruthlessly killing terrestrial game animals. However, on migrating to reside permanently in Belize and adopting the culture of the South Coast, including fishing habits, they become accepted as members of the community.

Even as the fish supply is decreasing they are aware that it is occurring when economic benefits from fishing have never been better, resulting in improved opportunities for themselves and their families. They recount the earlier days when fishing was more a subsistence activity with very little cash accruing to their fathers. It is these improved economic conditions that the fishers are seeing as prime motivation for the management of coastal resources. They do demand, however, that they be consulted on plans for their waters and livelihood. Furthermore, they do not want a repeat of what they regard the disproportionate amount of development that the government has provided to the South but mostly for inland agriculture and eco-tourism to the loss of the coastal communities.

Finally, a word on the underdeveloped South vs. the rest of the country. Notwithstanding the encouraging and timely international, regional, and national thrust on the coastal zone, the South coast needs its own well-articulated focus. As the frontier between Guatemala, Honduras, and Belize there are several illegal activities taking place with minimal protective security forthcoming from the Belizean authorities. Secondly, the rapid industrialization and urbanization need careful monitoring and harmonization, if they are to coincide with the corresponding increase in tourism. The South, however, does not have the time depth with the resultant experience and institutional support that is taken for granted in Northern Belize. In the South only the Placencia Producers Co-operative Society Ltd. provides organizational support to community members going back for forty years. Finally, the open spaces lend themselves to large-scale projects, which can be attractive to a government strapped for foreign exchange and yet will be more difficult to monitor in the long run. In short, the poorer, frontier conditions and wide-open spaces in the South, which are its primary attractions, could also turn out to be its worst enemy, if some regional plan is not worked out.

CHAPTER 3

THE CURRENT USE OF COASTAL RESOURCES

Introduction

In this chapter we describe the use of coastal resources by residents in the study communities for the period when we did the fieldwork from February 2000 to March 2001. To get a comparative perspective we extend the time period in some cases to 1980. We start with an overview of commercialization as the prime moving factor in the current use. We continue with details for the study communities using a qualitative perspective in the lack of quantitative data that we would have liked to use. We conclude with a discussion of statements by informants on constraints that are affecting their productivity.

Overview

Increasing commercialization with subsequent re-adjustments in the socio-economic behaviour of community residents marked the use of coastal resources between 1980 and 2000. We limit our description to the activities of the small person being aware that it was not unaffected by major strides in the economic ventures of others – be they multinational owners of resorts, shrimp farms, or banana plantations – operating within the subregion. We also necessarily extend the use of resources from the coast to the adjoining hinterland, given that both form the economic domain within communities.

Cash inflow has been the primary cause of the current bifurcation into the economically progressive northern tip of the study subregion as against the economically depressed south. It took place with the transition from fishery as the sole mainstay in Placencia to a combination of fishery and tourism, either one on its own being fairly lucrative. The re-adjustment that the fishers underwent included outfitting their boats as they transformed them from haulers of lobster to become comfortable awning-shaded carriers of tourists. It also meant acquiring new roles as operators or guides for tours on land and sea. For a comparative experience on the transition of fishers to tourism in another part of Belize, namely San Pedro Ambergris, see Auil and Kotch (1993).

Further south the transition was of a different nature. In some communities with a sizeable market, such as Punta Gorda, selling scale fish for the local market remained a prime income earner for about thirty fishermen. The cash proceeds are far less than for lobster, the primary product in Placencia. While the latter was sold to the Placencia Co-op for \$15.00 per pound during the 2000/2001 season, fish only fetched a maximum of \$2.50 per pound. Simultaneously, smaller communities, notably Barranco, were going through the last historical stage of demitting from reliance on land as their primary income earner. However, they were experiencing severe difficulties in becoming reliant solely on the sea – a situation that contrasted markedly with that of Placencia.

The Placencia – Monkey River Area

Everybody in Placencia fishes at some time or the other. In the late afternoon women together with their young children go to the foot of the pier to catch one or two snappers to fry for supper. Young boys pull out their small dories to do so on Saturdays mainly for fun. On Sundays and holidays older couples do a little boating among the cayes and may catch a few on the way. It is not surprising that the primary means of livelihood has been fishing.

For lobster, the main cash “crop”, they use traps. They are weighted with cement bottom to anchor more securely among the rocks and not drift in the heavy currents. They are marked with buoys and the owner hauls them every three or four days. The time when it is best to catch them is during the first two to four weeks at the beginning of the open season after June 15. For the rest of the eight months the amount will fluctuate. The worst times are after heavy tropical storms, which occur during the hurricane season from July to November. The strong wave action can scatter traps over long distances and destroy them.

One person or family group can have over a hundred traps set to maximize their opportunities. Another way of harvesting is by free diving and catching each one with a hook. This hunting technique depends on knowing the lobster migratory patterns while the more popular use of traps allows for the foraging movements of the lobsters.

Through a combination of catching methods a person or family group can harvest a considerable amount. In the 1995-96 season the highest production for a Co-op (abbreviation for Co-operative) member was 533 kilograms followed by the next at 353 kilograms (Placencia Producers Co-operative Society Ltd. Annual General Meeting Report 1996: 6). Table 2 contains figures for the annual production of the Placencia Co-op from the 1995-6 to the 1999-2000 seasons. Production figures for the much bigger Belize City-based National Fishermen Producers Co-operative Society provide some comparison so also those for the newly formed Rio Grande Co-operative based in Punta Gorda. In 1999 the Placencia Co-op had 37 full time producing members, 36 part time, and 35 non-producing. The roster of productive members has been increasing steadily from 1996. The Co-operative is the marketing agency that deals in fishery in Placencia. It is part of a long-term policy of the government that Belizean co-operatives dominate the fishery industry, thereby closing the door for predatory foreigners. For more information on the history of this policy see Brown and Pomeroy (1999: 1-22) and Gordon (1981).

Table 2

**Production By Year By Species
By Co-operative In Kilograms**

Year	Species	Co-operative		
		Northern	Placencia	Rio Grande
2000-2001	Lobster			7824
1999-2000		253, 276	38, 476	
1998-1999		206, 094	27, 119	
1997-1998		223, 296	28, 771	
1996-1997		181, 084	7, 962	
1995-1996		180, 178	15, 227	
	Conch			
2000-2001				9948
1999-2000		183, 079	9912	
1998-1999		265, 848	13, 789	
1997-1998		336, 711	20, 478	
1996-1997		201, 454	20, 478	
1995-1996		160, 549	17, 922	

Table 3

**Hotel Occupancy Rate Jan-Dec, 2000
Some Prime Tourist Destinations, Belize**

Destination	Percentage
San Pedro	53
Belize District	52
Placencia	43
Offshore Cayes	37
Dangriga	36
Caye Caulker	34
Orange Walk	32
Cayo	31
Corozal	19
Punta Gorda	12

Next to lobster, conch is the main income earner in the Placencia fishery. The production figures are in Table 2. In 1996 the highest production for a Co-operative member was 1370 kilograms with the next at 811 kilograms. To catch them one free dives and hooks each one. As in the case of lobster an intimate knowledge of movements and locations is a prerequisite for good catches.

There are two other fishery products that are no longer being bought in large quantities by the Co-operative for export. They are shrimp and scale fish (both whole and fillet). Up to 1996 the C-operative sold almost \$59,000 worth of whole fish, almost \$3,000 worth of fillet, and \$15,500 shrimp. By the end of the 1998-99 season these corresponding figures were almost \$3,400, \$23,000, and \$5,400 (Placencia Producers Cooperative Society Ltd. 34th Annual General Meeting Report). The increased amount of fillet was sold at the local village market.

In a discussion with one of the Co-operative officers on the reason for the decline for both scale fish and shrimp for export, he confirmed that the problem rested with their small storage capacity, which limited them to deal in commodities that fetch the higher market price. They were buying scale fish only to sell on the local market to meet demands from the hotels. He admitted that should they have more space they would revert to buying them as they are marketable both locally as well as for export. He added that the Co-op itself is being affected by the attractive tourist alternative as its members increasingly have a choice with what cash-earning activity they should engage. This imposed limitation brought about an effective decrease in the catch of scale fish.

The Placencia folk are reaping other coastal resources. They include processing and selling seaweed. It was in Belize City that we heard from a major beverage processor that he was purchasing as much as 32 kilograms on a weekly basis. On investigating this during a subsequent trip there was some reluctance among the villagers to provide more information. We later learned that there would seem to be a fear that the harvesting contravened regulations for marine protection. Checks with the authorities revealed that it was not the case. This was only one of the times we found out that the fishers needed more information on what is being legally protected, especially with the increase of marine protected areas within their vicinity.

If seaweed harvesting is a potential alternative for coastal resource use so also are others. They include fly-fishing and game fishing. Our informants added that they needed more training and gear in these areas to feel more comfortable about them. They agreed that they are certainly good money making alternatives, especially east of the reef.

The burgeoning onset of tourism has been felt within the past decade in Placencia more than at any other time. We could not get quantitative figures that could substantiate the consensus of opinion about the great increase during the past five years. We were, however, able to get the occupancy rate figures from the Belize Tourism Board (BTB) for the January to December 2000 period. They are shown in Table 3. They indicate that Placencia reported the third highest occupancy rate next to San Pedro and the Belize District. Most tourists are satisfied with sightseeing and snorkeling. Fewer are doing scuba diving in the deep a short distance from the Reef.

We identified three sets of tourism stakeholders dominated by the small man and woman – the tour guide, tour operator, and the guesthouse owner. The tour guides take tourists for sightseeing

and snorkeling among the several cayes offshore. They have their own boats with the equipment required including life vests, water, and ice container. Even more they know the sites very well and how to safeguard an enjoyable trip that invariably becomes memorable to their guests. On the way they give information about the sea, shoals, the flora and fauna. To become proficient in the information they have to take classes and pass their examination as part of the official certification for licensed tour guide. In 2000 there were 76 licensed tour guides in Placencia. By way of comparison San Pedro had 233, and the whole of the Toledo District, whose tourism is slowly emerging had only 65. These figures are from the Belize Tourism Industry Association.

Some tour guides may free lance by awaiting whomever comes along by the beach. Others, however, work together with tour operators. These are persons who solicit and book tours. They do so by advertizing on chalkboards at strategic spots where tourists congregate. They also communicate directly with guesthouses and resorts. Some are going further beyond by advertizing on the internet. The tour operators form partnership using the ubiquitous kin ties that underlie all networking in Placencia. Women are essential partners in these networks as well as doing the actual work of booking and direct communication with clients.

Guesthouses provide accommodation to visitors. They may be located on the lower flat of the home of a fisher turned tour operator or in an adjoining house in the yard. The wife of the homeowner may run the guesthouse with a daughter or grandson. They may hire a cleaner, probably someone from one of the several surrounding villages or a recent arrival from Honduras. The guesthouse is the one form of undertaking dominated by the womenfolk either in their management or as workers.

Another part of the service that Placencia men and women provide is running small diners or fast food outlets. Men or women are the owners/chief cook and provide jobs to helpers. The diners and guesthouses contrast with the more expensive resorts that offer accommodation and food. A few are available in the village but most are in the outskirts north of the village. This type of division of services by affordability ensures that the small man and woman receive some of the tourist dollar. The impression is that it does circulate to the extent that owners of guesthouses complain that they cannot get younger Placencia women to work and, at times, all the non-villagers are all employed.

Throughout the growth of the fishery and tourism industries in Placencia there remains an organic link that ties them to the knowledge base of the villagers. They have been at the forefront of the transitions taking place so far. One example is the growth of the recent tourist fad of whale shark watching around the Silk Cayes near the Reef. These are large fish that are as big as whales measuring up to eleven meters and move in groups of up to thirteen. They come to feed during the seasonal spawning of mutton snapper, one of the several species that spawn in the area of the Reef in Southern Belize. They dive over 27 meters to catch their feed providing spectacular view to scuba divers. The villagers took note of this phenomenon and realized that it could be added to the repertory of tourist attractions for the village. Brian Young from the village takes credit for studying on his own the movements of the whale sharks and linked it to the spawning activity. He has been subsequently fine-tuning how to manage the tour potential so that it remains sustainable and unobtrusive to the animals. The government has been taking note and working along with the villagers. As a first step it has placed the main area under protection. For a study on whale sharks see (Heyman et al. 2000).

Whale shark viewing pinpoints the localized, tradition-bound, and community-based nature of the exploitation of coastal resources. There is a nearby village that has been impacted by the growth in Placencia. It is Monkey River. The Monkey River fishers have benefited from the Placencia Co-operative, to which they sell their fish. Besides, the village has been added as prime tourist attraction to visitors to Placencia. Those selecting this option are treated to an exciting boat trip through winding mangrove patches to the village. They can visit the village or proceed upstream the Monkey River for a boat safari, which features sightseeing a variety of wild plants and animals including birds, crocodiles, and howler monkeys. There is an understanding that the Placencia tour guides defer to their Monkey River counterparts to lead the tours.

Punta Gorda, Barranco, and Punta Negra.

The trend of commercialization took different twists and turns in the southern subregion of the study area than in the northern. It certainly was not a unilinear pattern, as we have just seen, of a growing economy, increasing population, and more intensive articulation within the national and international economy. Land – more than coastal resources – prevailed in the economic domain of communities further south.

Our analysis starts with the village of Barranco. The early 1980's saw the efforts of the villagers to intensify the use of fishery as a substitute to the agricultural cash-cropping effort that had gradually died about a decade earlier with rice production (Palacio 1982). They intensified what had been a partial income earner some years earlier. It was the corning of fish to sell in the nearby Guatemala town of Puerto Barrios during the Lenten season. The trade had become so prosperous that buyers from Guatemala had come in their boats to buy fish from the villagers. With the Guatemala currency then having the same value as the United States dollar, the returns were highly significant within the village economy, although it took place for only four months from January to April.

By the late 1980's the devaluation in the Guatemalan currency and a weakening demand for corned fish meant that the fishers had to look to another market. It was the neighbouring Belizean town of Punta Gorda. At that time the lessened enforcement of the government-imposed price control on the sale of fish (Moberg 1991: 16-25) meant that it was more possible for the commodity to fetch a price closer to its true market value. Palacio's data from the 1979-1980 period showed that a fisherman could earn up to \$70.00 to \$90.00 per day on Wednesday and Saturday, the two market days at Punta Gorda. It was the highest income earner for the dozen or so able-bodied men. An external source, namely remittances, was the primary source of total village cash income at that time. Furthermore, it was probably the first time in the village history that the sea had become the primary source of local cash revenue for the larger part of the year, as against agricultural production.

Unfortunately this trend did not survive to the end of the 1980's. The men were not earning enough to buy outboard motors and fishing gear; and if they could buy them, they could not maintain them. But they had to go further out to catch as the supply closer to the shore was being depleted by the Guatemalans, who kept coming closer into Belizean territorial waters with their fine-meshed gill nets. Not having the propelling equipment and not being able to keep up the competition with the by

far more numerous, illegal foreign intruders, the younger fishers did what best they could to provide for themselves and their families. They voted with their feet and joined the steady outflow from the community (see the census numbers in Table 1). With fewer people there was a smaller market for the fishermen.

The upshot of all of this is the situation that we encountered in the village during October, 2000. There was only one fisherman, who went out regularly. Three others went out irregularly. They were older men less able to endure the hardship of paddling their small dories. Yet none had an outboard motor and instead used sail or paddled. At times fishermen from nearby communities – probably Guatemalan – would come to sell fish, which still remains a main part of the village diet. On the day when we did our fishing drops survey, there were over ten Guatemalans in their boats fishing with their nets in full view of the village in Belizean territorial waters. Our guide, himself from the village, remarked, “If I would have told you so, you wouldn’t have believed it. It has been the case for decades leaving us with no more fish. There are species that I had caught as a younger man, which I have not seen for years now. What can we do?”

Barranco is a microcosm of the conditions taking over in the extreme Southern Coast of Belize. There were persons, who – when the land-based economy crashed – wanted to make the sea their main income earner. But they could not overcome the problems of the external market for corned fish, the government regulations on price control, the Guatemalan incursions into their waters, and ultimately the lessened demand from fewer people within the community. Similar problems affected the people of Punta Negra but without the extremely pernicious effect of the Guatemalan takeover of their waters. Again, the demise of their land-based economy led them to intensify the use of their marine resources. Ultimately, with the outflow of villagers, some of the fishers from the village migrated to Punta Gorda, from where they now go to fish the drops in front of their home village. But they are now Punta Gorda residents and may keep another home in Punta Negra. In the 2001 census Punta Negra’s population was 27, in 1991 it had 21, and in 1980 55 (see Table 1).

As the largest place in the study area, Punta Gorda and its market draws far more people, including scores more who come on market days from the inland villages. With about thirty regular fishers going out about three times a week, fishery is the most popular coastal resource use. It received some impetus from the newly founded Rio Grande Fishing Co-operative, which started buying lobster and conch in the 2000-2001 season from ten members (see Table 2).

There are more people involved in fishing but they certainly do not make as much income as the water taxi owners, who ply between Punta Gorda and the neighbouring port towns in Guatemala. There are two persons running them, which transport Belizeans and Central Americans as well as a growing number of tourists. One owner admitted that the business had done fairly well enabling him to increase his fleet from one to four boats within six years. The operators are also running boats on demand to offshore cayes, mainly in the Sapodilla Range, the southern most tip of the Reef. They are seeing a slowly growing number of persons interested in these trips. A few sportspersons are also “discovering” the tremendous potential for sports fishing in the Port Honduras area within the vicinity of Punta Gorda.

The greatest advance in fishing in Punta Gorda from 1980 has been the use of the outboard motor and the availability of ice to intensify artisanal fishing. They go mainly to drops located in a semi-circular arc – where the furthest distance is less than six kilometers – in front of the town on trips taking a few hours during the day (see Fig. 6). Many men catch bait, which are mainly sprat and mullet using cast nets before going into deeper waters to fish. Individuals eventually settle to work in drops with which they have built familiarity over the years. Throughout the year one can catch snapper, grunt, jacks, and mackerel. During certain seasons some will bite more than others.

There is a need to elaborate on the Rio Grande Fishermen Co-operative insofar as it fore-shadows a renewed community-based use of the coastal resources. During the last twenty years there have been at least two other attempts at forming fishing co-operatives in Punta Gorda that failed. This one, however, would seem to be on a promisingly sound footing. The first season production has been exhilarating. Part of the reason is that by and large the men are from this area and had been working in these waters but selling their catch to other co-operatives. Familiarity aside, it is plain that this area has much potential judging from the fertility and the larger size of individual lobsters and conchs, compared to other parts of the country. The Placencia Co-op officers are concerned about the potentially adverse effects that the new co-operative may have on their production. As a result, they will enter into dialogue to harmonize the practices and purchases of the two organizations.

There is another use of the coastal resource with external market implications that is noticeable in Punta Gorda. During one of our field trips we saw a live-aboard tour boat that was making a stop on its way to Rio Dulce in neighbouring Guatemala. During the day that the passengers were in the town there were inland tours for the Maya villages planned for them. One of the local tour operators mentioned that he had been trying to encourage local artistes to prepare performances and displays that could be revenue earning. But it had been to no avail. The idea proposed by the tour operator would be for the visitors to sample the cultural characteristics of the townsfolk as much as it is possible to do so in the inland communities. It is a case of working toward a potential taking advantage of a market that arrives *via* the coast. The opportunity awaits the community leaders among the townsfolk.

Observations

I conclude this chapter with observations we made from our interviews on issues that are essential in comprehending community-based coastal resource management, given the developments currently taking place in Southern Belize.

The Market. It is plain that the Placencia Co-operative is experiencing some strain under the overall limitations of community-based organizations to respond expeditiously to market forces. One is the need to re-think their current position on not purchasing scale fish in larger quantities. Our information from sources in Belize City reveals that there is a shortage of scale fish for the local Belize market. So, Placencia could do with substantially increasing its production, which it could as it had done in the past. It is plain, however, that the Co-operative members are having difficulties in straddling successfully both its fishery together with the pull from the tourist industry. The question,

therefore, is – does the Co-operative allow a potential market to go unheeded or does it aggressively purchase even from non-members. Already, it is doing so even from non-Belizeans, who are in the country legally. What else can the Co-operative do in view of the inevitable increase in demand in the future for fish products and tourism services?

Another problem is closer to the tourism business and the welfare of the Placencia people themselves. The same kind of straddling efforts that the Co-operative is having to do extends to the larger community in the extent of the tourism pie that it can continue to have. Already some foreign-owned larger resorts are bypassing the local tour operators in organizing their own tours to satisfy their clients. How much of this will take place resulting in more local persons being squeezed out of the business that they have so far successfully nurtured? What kind of lobby effort should they adopt to limit such a possibility?

Governance. We have seen the onset of non-Belizean fishers contributing to the lessening of fishery in Barranco. There and in other communities we heard repeatedly of politicians and public officers colluding to grant residence permits and fishing licenses to non-Belizeans without the proper documentation. If such corruption is taking place, how can it be investigated and eventually rooted out for the ultimate benefit of protecting the nation's natural resources and the welfare of its small man and woman?

Natural Resource Definition. The basic difference between Placencia and the communities further south is that the former has always been unequivocal about the coastal resource being its primary source of livelihood. While further south the communities used both land and sea with more bias on the former as income generation than the latter. It brings up the question of the cultural definition of natural resource and its use. This in turns predetermines the extent to which communities will take advantage of given opportunities for exploitation.

Ethic of frugality. This is another cultural imperative that addresses social values on natural resources. In Punta Gorda there seemed to be currently a homeostasis where the fishermen are doing what they can and do not have to do more. They explain that they are using just enough of their gas, gear, skill, and time to produce enough to get by and why should they produce more when there is no market. They further add that this way they are not taking from the sea more of what they do not need. It is the ethic of frugality, according to them, that has always underlined their relations with the sea and its resources. But where does this fit within the wave of commercialization that has overtaken the study communities within the past three decades?

These issues relate to the larger scope of this study on community-based coastal resource management, which we elaborated in the first chapter. We will return to them in the last chapter.

The Wet Drops

We could not end this chapter without a word about cocaine presence, especially in the area of the Placencia Peninsula and further north. There are periodic reports of seizures by the police in the mass media. We also heard of various amounts in casual discussion among villagers. They used the term "wet drops" for the caches of the drug floating in the sea or washed on the beach. On the other hand, our informants did not discuss these finds with us. Attempts to get information from the police stationed in the communities were unsuccessful. The closest one informant said was that there are cayes closer to the Reef, where contraband trading takes place including cocaine, marijuana, guns, and illegal aliens. He added that some villagers had become wealthy from the trade.

The significance of drugs and other illegal trade is in increasing the cash flow among our communities adding to inflation in its value. It also brings residents into another form of commercial globalization, albeit as part of an illegal network stretching from South to North America. Besides, it adds to the stock of pleasures usually associated with resort areas, which leave residual effects among the resident citizens. There were reports of drug abuse among youth in all our communities, no doubt associated with its increasing availability.

CHAPTER 4

PAST USE OF COASTAL RESOURCES

Introduction

The time period that we are using as benchmark for the past is the 1930's and 1940's. It is as far back as some of our older informants' memory went in our efforts at oral history. The year 1960 – give and take a few before and afterwards – was the next marker partly because of the widespread impact of the 1961 Hurricane Hattie on Southern Belize. Furthermore, waves associated with the current era of modernization in the country started around the same time, in keeping with the onset of constitutional self-government in 1965. We start with the question what gave rise to commercialization in the use of coastal resources, that we discussed in the last chapter. We proceed with a description of traditional fishing habits around the 1930's. Finally, we focus on what is probably the cornerstone of traditional fishing in Southern Belize - the location, identification, and use of fishing drops.

Prime Movers of Fish Commercialization

The simple answer to the question what gave rise to commercialization after the 1960's in the use of coastal resources in Southern communities is supply and demand. The equation becomes more complex on examining who were involved in the supply, the methods they used both in terms of transportation as well as harvesting; and the crucial role of the fishing co-operatives in providing grassroots ownership to marketing. The question who were active in the demand is beyond the scope of this study. The one point we make here is that it came mainly from outside the community, and, more especially, from outside Belize.

Producing more fish to sell outside the community had always been a commercial activity for fishers. It was the case as far back as the latter half of the nineteenth century when there were several agricultural plantations and timber works operating in the Toledo and Stann Creek Districts. They became ready markets for fresh and corned fish. Other places that needed fish were the Belize City and Dangriga markets as well as logging camps located along the Belize and New Rivers. Among our study communities Placencia was closest to the areas of demand. Its fishers with their families became early suppliers.

As the plantation and timber works opened and closed in the boom-and-bust cycles that characterized industries exploiting primary resources in the late nineteenth century and early twentieth century, the trading of fish was similarly affected. When the money supply declined, fishers resorted to bartering fish for ground foods (yams, cassava, cocoa, and other tubers). We got reports of this taking place between fishers in Placencia and farmers in Seine Bight and similarly between Punta Gorda and the smaller neighbouring village of Cattle Landing. It was in the early 1950's that the germ of modern day commercialization took root in Placencia. The trigger was the demand for

shark meat in the rising population of the neighbouring Guatemalan town of Punta Barrios, especially during the Lenten season. It started a cycle of several forces, the evolution of which we now see in the successful fish industry at Placencia.

To catch shark one used nets set in the meeting of deeper waters with the shallows, where they feed. One could also use long lines with dozens of hooks anchored to drums. The flesh was cleaned and bleached with sodium and then dried in the sun to heighten its white colour. The whiter the flesh the more it fetched in price, which was twenty-five cents for half a kilogram. It was the highest price paid for fish at that time. Other fish that were used for the colour of their flesh were snook and grouper.

There was another part of the shark that commanded a good price in Guatemala and Belize. It was shark oil. It was made by boiling the liver, skimming the fat, and then drying it in the sun. It sold at fifty cents for .95 liter, again a good price considering the amount that could be made from a few sharks. The oil was reputed to provide relief for arthritis and chest colds. Other by-products sold as souvenirs included jaws and bones.

Before proceeding it is necessary to provide a brief flashback on earlier traditions of trading in fish products off the coast of Belize. It goes back to the period of buccaneers. There are maps that show that pirates based in Jamaica in the seventeenth century trafficked the waters of Southern Belize and made use of sea products as early as 1780 (Craig 1966: 35-39). Craig (1966: 35) and Finamore (1994) argue that buccaneers and not pirates were the first to establish a base along the coast of Belize, where they smoked, dried, and salted turtle and manatee meat to trade with passing privateers and logwood cutters. During slavery there were groups that concentrated on fishing not only for the local supply but also for export to the London market. The prime targets were turtle and manatee that were harpooned and processed for export. According to Bolland (1977:47) turtlers were included as a category of occupation in the 1790 census of non-slaves in the settlement. They made up 71 of the total number of 287 persons or 25 per cent. Going back in the archaeological period the Maya used some Port Honduras cayes as processing sites for salt, that was traded inland. There is additional evidence of wide ranging trading of several artifacts between the coast all along Belize and inland into Guatemala (see McKillop and Healey eds. 1989). The main point here is that repeatedly coastal dwellers have used the unique wealth of their resources to exchange with others. And that colonial Belize owed its initial existence to its fishery as primary coastal resource.

As the market for shark grew, there was a need to improve on the kinds of boats to bring the merchandise to market. The sellers went to Puerto Barrios to sell when the boats of the merchants were not coming for pick-ups. Shipwrights in Placencia and Monkey River built bigger and more seaworthy boats for the long trips over deep seas to Guatemala and Honduras. Skills in building the bigger boats were found among the Garifuna and Creole coastal dwellers. Both used smaller boats to do offshore fishing but resorted to the bigger ones to transport passengers and cargo between Belize, Guatemala, and Honduras. The smaller and bigger boats used sail.

The next major wave of radicalizing methods of transportation came with the introduction of the smack from Cuba in 1911 (Craig 1966: 56). However, for its sheer impact on all aspects of fishing, the arrival of the outboard motor in the 1950's needs special mention. It demanded a re-

shaped type of craft but it solved the problem of the reliance on wind and muscle for propulsion for the smaller man. Closely associated with this was the onset of ice, gill nets, and lobster traps. They came in rapid succession and became closely identified with the rise of the primary target for commercialization in the 1960's, namely lobster. Conch, which had always been in greater abundance and easier to catch than lobster, also gradually increased in price but could never compete in price to lobster. At that time the market demand no longer came from Guatemala but the increasingly wealthy middle class of post-war United States. For more information see Gordon (1981).

While the methods of transportation, harvesting, and storage accommodated ever larger supplies, the co-operative gradually predominated as the medium for marketing. The first cooperative in the study area was the Placencia Co-operative. It started in 1962. Further below we will elaborate on the organization of the co-operative as a community-based structure. We mention here that several informants said that generally the co-operatives might have also contributed to over-fishing in the long term. The reports are that they were among the early introducers of the gill nets in Southern waters. In two cases members, who had gone for training in Canada, came back bringing gill nets. Furthermore, even as the co-operatives have specialized in marketing, our informants added that they should have taken rigorous steps to manage the fishery product.

Whatever the ambivalence of some informants, we need to see the co-operative as part of a long line of progressive innovations that go back to the nineteenth century method of corning fish that had not been consumed and taking it to sell wherever there was demand in neighbouring towns, logging camps, and plantations. A brief word on the management of the coastal resource use, as the phenomenal progression took place. The government intervention in management consolidated after 1960 no doubt to keep up with the pace of commercialization. One of the main offshoots was the setting up of closed seasons for lobster and conch, among other species. By and large the fishers have heeded these regulations as well as the buying public. But the large supply of an apparently inexhaustible stock, given the rather late entry into a lucrative market, has dominated the attention of the fishers more than the need to be proactive in their management practices. Before the latter phase of massive commercialization there had been a more prevailing resource management ethic. We now explore it within the context of traditional fishing methods in the study communities.

Traditional Fishing Methods

The setting for the above discussion has been mainly Placencia after 1960. Our brief foray into traditional methods takes us further south to an earlier period between 1930 and 1960. Even now tradition still gives way to excessive commercialization for fishers in Punta Gorda and Barranco. They spoke at length about what conditions had been from their experiences or what they had heard from their elders. A few still have one foot in the world of folklore, proverbs, and myths and another firmly rooted in the world of quick cash sales.

In contrasting conditions between then and now most mentioned the much wider accessibility of fish during earlier times and the greater variety of species. We hear in Placencia of men going out short distance from the beach in their street shoes to pick up conch easily selecting which ones they wanted for dinner. The fish were so plentiful in Punta Gorda that one could use silk grass as bait. Men, women, and children could catch not only scale fish but also different kinds of crabs and

shellfish on the beach, nearby shoals, and sandbars. Children dug for small clams with their feet on the sandy beach and took them home to boil for a meal. Fish at that time was truly a diversified community resource crosscutting age and gender.

Going out short distances to fish – when necessary – could be done easily in small fishing dories by men, women or children. Men knew how to carve their own dories selecting the woods they wanted for a given dory; they also did the finishing and repair as needed. Hauling the unfinished dory from the bush was a community effort in which men, women, and children participated. It had its own type of songs among the Garifuna. The dory was left near the home of the owner to do the finishing. Small sails were also sown to use with dories. Only three or four men in all of the study communities now do dory carving – a tremendous decline from what had been a skill mastered by most men. However, there are still a hardy few fishers who rely on their dories with paddle and sail as their fathers, grandfathers, and great grandfathers had done.

A description of methods of harvesting revealed practices that one now reads only in early ethnohistorical texts. We were surprised to learn that they were still being done within the lifetime of sixty-year old informants. In rivers there were two that have vanished from use. A few men placed a kind of vine upstream that mixed in the water stunning the fish, which were collected by others downstream. One could also build a small platform in the river near the mouth where the water is brackish. Craig describes a similar method called *ramas* used in Cay Caulker during his visit in 1965 (1966: 79). One sinks it for six months or longer while barnacles grow on it. Fish then come to feed on them and are snared by a net. The information about these two methods came from a Garifuna informant. The name of the former in Garifuna is *gunami* and the latter *wamaredu*. Other snares were used in earlier times, including traps – also called fish pots – made from palmetto in which one places materials to attract the fish. The name in Garifuna is *maciwa*.

The most popular method then and now is hand line. Earlier they were made from steel wire or cotton and not nylon as the case now. The nylon lines started being used in the 1950's. They made for more efficient means of catching fish. Firstly, they came in various weights so that the fisher could alternate his lines depending on what he expected to catch. Besides, he could put three and more hooks on one line, something he could not do earlier. Finally, the nylon lines were cheaper and more plentiful – qualities that made it easier for more men to catch more fish.

Other ways to catch fish were free diving for lobster and conch and harpooning for bigger species like tarpon and jewfish.

Nets came in a wide variety of forms. There was the cast net used to catch shrimps and small fish – sprat, mullet, and sardine – used for bait. There was the beach seine. It was handled by at least six men, each with a specific function. It could be very large measuring over 60 meters long and 15 meters wide. Its main characteristic was a sack into which fish are forced. The seine was helpful for species found closer to the beach like snook. There is still being used the turtle net. It is set in deeper water with one side being anchored and the other floating. Attached to it are several small wooden turtles that serve as snare to attract the bigger natural ones.

The beach seines and cast nets are set to capture their prey at the moment. The turtle net is left for a few days and catches a bigger prey that could satisfy substantial parts of the community at any one time. As a result, it was not used too often. In short the use of these nets was more in keeping with sustainability.

It has not been the case with the trammel and gill nets. There was some confusion among informants on differences between one and the other. There would seem to be consensus that the gill nets are normally larger and the trammel smaller with smaller mesh. The trammel is also used in the estuaries of rivers and creeks. Both catch fish with their floating action in the waves acting as snares. The fish are then stuck in the mesh until they are released. Apparently the gill net was introduced into Southern waters from Guatemala in the 1960's. Subsequently they were brought from other countries as far away as Canada. In describing them our informants emphasized their destructiveness on the fish supply. This attitude no doubt results from publicity against the use of these snares forthcoming from the government and NGO's, such as TIDE. There are national laws against their use near the Reef and other designated spots.

There were two kinds of group fishing. The use of the seine was group effort *par excellence* within a tradition that has always been an individualistic effort and dominated by men. Women and children went on shellfish gathering trips. But they were not at the scale as the use of beach seine in terms of providing substantial supply for home use and sale. The size of the dory was too small to accommodate more than two persons at any one time. Besides, if more than two went, they would each be individually doing the same thing, namely using hand line. The need to go out in groups and to spend longer than one day came after the onset of commercialization. Bigger boats became available together with methods of preserving fish – first in wells within the boat or tugging a smaller boat with holes where fish were kept and later through the use of ice. These boats were also able to go to fishing grounds a longer distance from the shore and reaching closer to the Reef.

Notwithstanding the wide variety of methods available to the traditional fisher, his efforts were guided more by luck than his own deliberate planning and dexterity. The term "luck" was most often associated with fishing than other economic activities in rural communities. It was incumbent on the fisher to limit the possibilities of bad luck so he could be successful on any day. Limiting bad luck meant, among other things, maintaining respect for Mother Nature. It further meant being aware of the interrelatedness of humankind with the workings of nature that limits him to take only what he needs at any one time. It was the basis of the ethic of conservation that underlined social behaviour in traditional rural communities. This becomes clearer as we follow a fisherman performing his daily routine. Most of the following information comes from Garifuna informants. Their aboriginal and African roots make them especially respectful to deeply held tradition.

Even before the actual fishing takes place, there are certain prescriptions that the fisherman has to follow to minimize his bad luck. Some of these have to do with his dory, the vessel that carries him fishing and with which he establishes a close working relationship. Women are prohibited from working on the dory – its carving, finishing, and repair. It is a man's world! The irony here is that the dory is female in Garifuna grammar and names applied to it are all the names of women. While working on it in its unfinished state he burns incense and says prayers aimed at protecting it and

making it always productive during its endeavours in the sea. Similarly, women are not allowed to touch the fishing gear. Should such transgression take place, the man should tie a piece of his wife's skirt to the hand line as an antidote.

While preparing the evening before he goes out, the fisherman becomes solicitous about the weather that will prevail the following day. He wants to know whether it will rain, at what time the winds will change direction, and at what time the tide will start coming in (which is the best time to fish). The skills of the seasoned man in looking at the clouds at dusk to be able to predict all of these features with incredible accuracy for the following day are indeed remarkable. Of course, he would have verified the moon movements. When the moon is growing and especially close to full moon and a few days afterwards are the best times. In the early morning the last thing he does before leaving home is to look up into the sky one more time to re-confirm his readings of the weather from the previous day. On leaving his house, the fisherman should not return even if he remembers something that is important. He should call on someone to bring it to him. Going back will give him bad luck.

Some men prefer to fish in the night because fish bite more than during the day. It was one of the transitions brought about by commercialization in the village of Barranco, when men fished to sell in the Punta Gorda market in the 1970's. Instead of leaving at dawn as they had always done they left home at 10 o'clock in the night to catch bait; returned home to eat at midnight; and then left to go to the deeper waters to fish. With the darkness they have greater difficulty to locate the rocks for fishing. They throw out the anchor and drag it to see if there is some tension; if it is so, it is a sign that it is caught up in the rocks.

Those who fish later – starting at daybreak – have the advantage to see things around them. Pelicans are helpful to identify where bait can be found. They hover around the spots where sprats and other smaller fish congregate. One goes there, throws a cast net and after a few throws has enough to proceed to the fishing grounds. But some fish make better bait than others. Some are very rank in odour. The men cut them into tiny pieces and throw them into the sea to scent it. Shrimps also make good bait. Near Barranco and Punta Gorda there are spots where one can catch them.

Knowledge of the location of the fishing grounds is indispensable to catching a good amount fairly quickly. But also indispensable is knowledge of the foraging habits of fish, especially the seasons during which they are spawning and appear in greater numbers. In the area from Monkey River to Seine Bight June to December is a time when one catches a wide variety of fish, mainly snapper, grunt, jack, and mackerel. The period November to February is the time for snapper and grouper, while April to June is the time for mutton snapper in Placencia. November to January is the time for mullet and drummer in Barranco. They appear especially after the waters have been stirred by the frequent northerly storms that occur at that time of the year.

During most times different types of fish are available. The species, however, occupy different levels in the sea and will bite according to the tide. For example, jacks remain near the bottom in high tide but come up during the low tide. Besides, some prefer to stay close to the seagrass beds while others prefer the rocks. In the former case, one finds different kinds of snappers while in the latter there are grunt and jewfish. It is also important for the fisherman to be observant of other

indicators that may appear from time to time. When the man-o'-war bird hovers it is a sign that jacks are plentiful. On the other hand, wherever there are dolphins, it is a place to avoid because there will be no fish. Dolphins do indicate from which direction the wind will blow. It is the direction from which the dolphin flaps its tail.

There are certain do's and don'ts that the fisherman should abide by. One's first catch for the day is special. One should scrape a few of its scales into the sea to guarantee catching more. Smaller fish should be put back into the sea so they could be feed for the bigger ones. One should not contaminate the waters by throwing back dead fish. It scares the fish away. Some men went further in their explanation saying that they attract sharks, which in turn chase away the fish normally caught. They add that this is the irreversible damage that trawlers are creating in the area of Placencia. In dumping the rejects back into the sea they are creating a vacuum for sharks and other predators.

While at sea the fisherman can be given signs that he may want to note. Manatees and dolphins are usually aggressive to him during his pregnancy. If he has doubts about a pregnancy, the female manatee may jump up in front of him exposing her breasts. On the other hand, if the manatee is only flirting around his dory, it is a sign that his wife is also flirting behind his back. The manatee remains an important part of the fisherman's lore. If your hearing is particularly good, you will be complemented, "Your hearing is as good as the manatee's."

The list of do's and don't's changes on arriving at the beach and getting ready to sell. Once the fisherman sells to a customer, she should not return it. That is one way of worsening his luck. He should be generous to the wife of an ailing fisherman or his widow. If he has been having a series of "bad luck days", he should give a few select fish to a poor, old woman, pleading with her to accept his gift. Such an act has been known to redound to the good luck of the fisherman.

This discussion has shown how much the catching of fish is traditionally integrated within the belief system of the community as much as it is an important economic activity.

The Fishing Drops

Truly the mark of the "real experienced fisherman" is the knowledge of the fishing grounds – where to catch what species. It comes only from trial and error and becoming familiar with a given area. Many men confided that their fathers did not teach them this information, although they would have known it. They started by observing the older men and gradually picking up bits and pieces on their own. The grounds, therefore, are a very significant part of one's self-acquired knowledge of coastal geography.

At first there is a need to clarify the use of terms as there seemed to be some confusion. The term "fishing banks" was rarely used. There was some understanding that it could refer to an extended area where fish are found plentifully. In Garifuna the term *bengie* (which literally translates as "bank") is used extensively to refer to distinct localized areas where men fished. The spots themselves were called with names like *Tiger Benk*, *Santa Ana Benk*, etc. But there was also distinction among the Garifuna of specific spots within the larger "banks", which some persons knew well.

Map Showing Fishing Drops Southern Belize

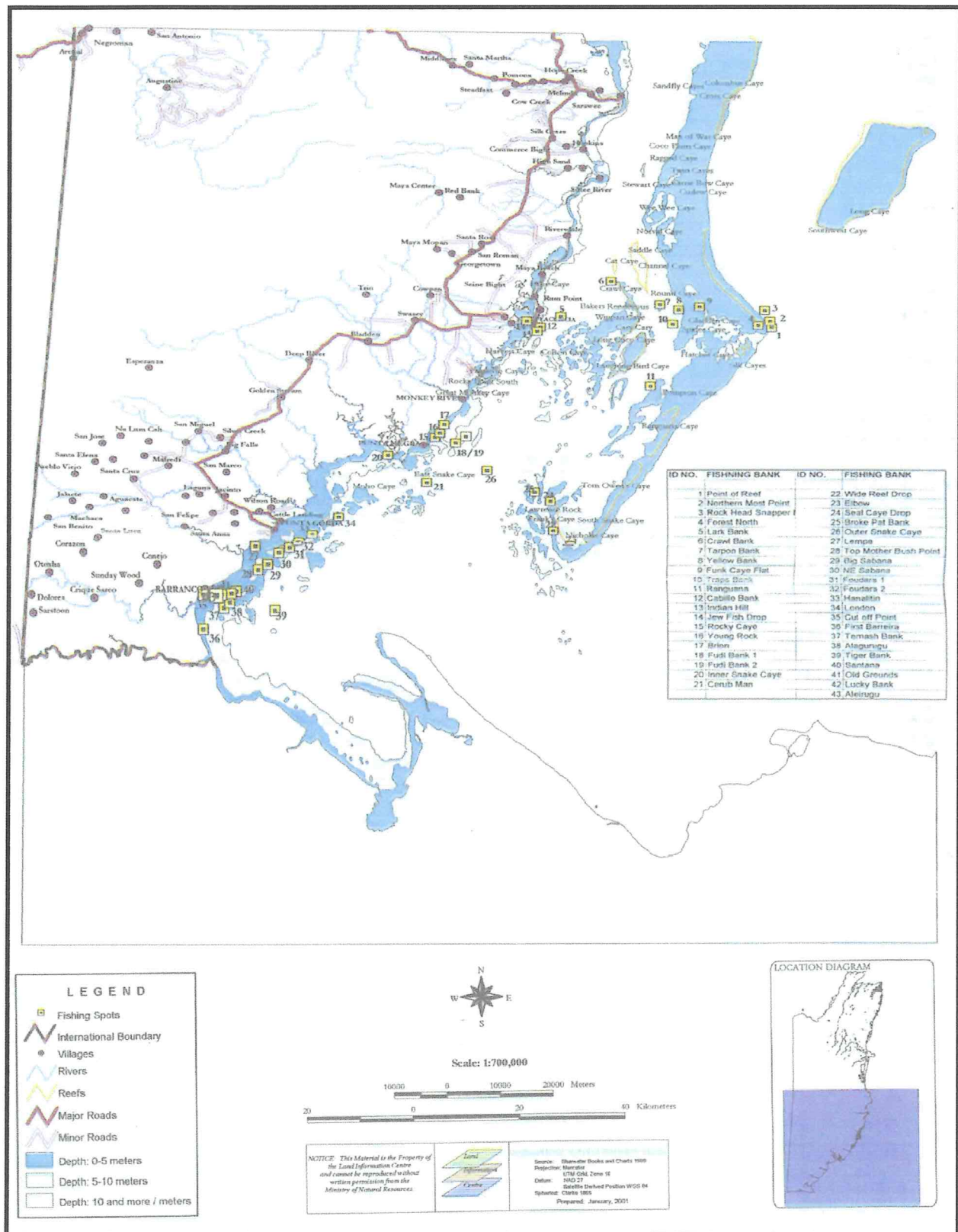


Fig. 7

These are called "drops" or "special grounds" in Creole. There was some understanding of the existence of extended banks. For example, informants in Placencia said that the western border of the Main or Inner Channel (see Fig. 6) was an extended bank stretching as far north as Robinson Point near Belize City. It would seem that fishing banks generally have not been studied in Belize from either the oceanographic or traditional knowledge perspective.

To throw some clarity on this confusion on terms and answer the simple question where do fishers fish, we went out with some local guides. They took us to spots which they described as rock patches that enclosed material where fish would gather to feed. They showed them to us when it was clear; told us that if it is murky, an experienced fisherman could feel the current that they generate or that one could hear them tingling by submerging a paddle in the sea and putting the tip to one's ear. Within these drops there may be specific locations, which certain persons have found to be unusually fertile. They describe them as holes or small caves within the rock formations, where fish hide and congregate in more numbers than at others. They become his own secrets or "special" spot. On the other hand, the larger area of the drops is public knowledge.

The drops need to be differentiated from locations where fish spawn and gather in large numbers seasonally. At such times they have large rows, which are a delicacy. The best known spawning location along the Southern Coast is for mutton snapper at the Silk Cayes. There is talk of other spawning areas for conch and scale fish also near the Barrier Reef. During the season scores of men from all parts of the country gather to fish at these spots. Finally, it was clear that the informants did not know much information about spawning – what actually takes place and what it means for the gathering of fish, their feeding habits, and their overall propagation. It is an area where scientific biological information needs to be made available to fishers.

The drops in which we were most interested were the ones where men did most of their fishing for the local market, especially south of Placencia. We did a survey of these drops with the help of the Belize Defence Force Maritime Wing. The aim was to locate them and place the coordinates on GPS, and afterwards enter them on a digital map to be saved as computer file. The results are shown in Fig. 7

We used as guides knowledgeable fishermen one each from the communities of Placencia, Punta Negra, Punta Gorda, and Barranco. All except one was over sixty years of age. The effort became significant as a marker of fishing tradition which is dying in most communities, with the exception of Placencia and Punta Negra. Younger men may know where to catch lobster and conch but not scale fish. Part of the difficulty of transferring the knowledge is the need to know how to identify the drops. Several natural features are used in the procedure of triangulation for each one. They may be a cut between two cayes, the peak of a set of hills on land, an Indian mound at another spot, paddling time from one point to another, and so on. Furthermore, one has to be aware of the time of the day as the glare of the sun can cast shadows distorting one's view.

All of these need undivided interest and much dedication. Furthermore, knowing the exact location was no doubt more important during earlier times when the only means of propelling were paddle and sail. With faster speed from the use of outboard motors one can travel further from one point to another with a greater feeling of not needing to know exactly the location of drops. Finally,

there is now the serious problem of attitude. A few younger men said that they did not think it was necessary to know the location of the drops. "Anywhere in the sea there is fish. The older men are only trying to make themselves important in talking about 'special grounds'".

A panoramic view of the drops in Fig. 7 shows that the vast majority are located very short distances from the shore. The ones that are not – such as Gladden Spit and the Sapodilla Range, are located short distance from cayes. On placing the drops on the appropriate maritime chart one observes that almost all are located on the edge between shallower and deeper waters. It substantiates descriptions we received from several informants that fish bite better where there is strong current.

There are few drops that we pinpointed south of Barranco, such as Cutoff Point and First Barreira, that were shrimp drops. They were by the estuaries of freshwater creeks. Especially between May and August they are particularly fertile. It coincides with the heavy runoff from rain showers at that time of the year. We also heard of shrimp grounds east of Placencia, where we saw two shrimp trawlers. But we did not get the location of the drops there.

We did not collect co-ordinates for drops located in the Rio Grande and other rivers, although we were informed that some are found up to a few miles upstream, where species usually associated with the sea are found, such as snapper and jack. We included two – Indian Hill and Jewfish Drop – located where the Placencia Lagoon meets the foot of the peninsula. We were told that there are more further within the lagoon. Traditionally the women used them more during the absence of men on wage labour.

We identified a total of 43 drops. On the map there are fourteen for Placencia from Point of Reef to Jewfish Drop. For Punta Negra there were twelve from Rocky Caye to Outer Snake Caye. For Punta Gorda they number eighteen from Lempa to London. The rest are for Barranco. Time was certainly a limiting factor for us. We only had one week to use the facilities graciously extended by the BDF. We spent two days in the Placencia area, one day each for Punta Negra, Punta Gorda, and Barranco. With longer time we would have been able to include the Monkey River area and others for the remaining study communities. Finally we would have been able to record more ethnographic information about the methods of location.

The names of the drops add much ethnohistoric information. In the Placencia area the names derive from the given spot on the Barrier Reef, such as Point of Reef found in the general Gladden Spit area; others from the names of the species most collected, such as Tarpon Bank, and Jewfish Drop; some from the names of adjoining cayes, such as Ranguana. In the Punta Negra area there is Cerob Man Drop. It was not sure whether this was in memory of the Garifuna people, who had been among the first settlers of Punta Negra. In the Punta Gorda and Barranco areas few have Garifuna names. Examples include *Hañalitin* (shallow) and *Aleirugu* (nurse shark). The identity for each drop reflected the people who first gave it the name.

CHAPTER 5

Pathways Toward Community Base Coastal Resource Management

Introduction

In this chapter we present some pathways toward community-based coastal resource management that we have identified in this study. We review some previous data but also include new information, especially under the topic of spirituality.

Community Base and Coastal Resource Base

The last two chapters have attempted to provide a realistic appraisal of the use of coastal resources during the current and past times within the study communities. It showed that generally there has been a progression in commercialization. While we may have been more passionate in describing past uses, it was certainly not our intention to romanticize the old while vilifying the new. Rather we were reflecting the strong ethnographic representation from many of our informants that they had experienced better times than what one sees around them currently. In short, it was one way of showing that communities consist of persons, who engage in economic activities while displaying their attitudes and beliefs.

These varying experiences add a new dimension to the discourse on communities and natural resources. We can now ask the question at what time do we stop talking about communities and stop talking about their use of natural resources. Or to put in other words – are there moments when a group of persons is no longer a community or when it can be said that they are hardly using the available natural resources.

These questions are not being brought forward only for academic purposes. To varying degrees Barranco, Monkey River, and Punta Negra today are not full communities. Rather they are part communities that are minimally using their coastal resources. Fortunately, we have shown earlier that historically it was not the case. The fact is that the binding qualities of territoriality shared among former natives of these communities together with their moral responsibility to engage in social exchange systems with those remaining there are probably the main forces holding these communities together (see Palacio 1991: 119-146). But to what extent can these attenuated bonds underwrite any renewed efforts at community-based resource use and management? We ask these questions deliberately because often experts in natural resource use do not ask them. Rather, they automatically assume that a community is a community. Besides, they blame the “community” when it does not do what they expect, not realizing that they had started with the wrong assumption at the very outset.

The question is no less essential in discussing coastal resource use. Again, it becomes a matter of definition within cultural terms. Dwellers in these communities no longer identify resources that had been commonplace to their parents. How can an economic value be re-placed on a resource so that

“potential users” can capitalize on them? What informal methods of public education can be mounted to achieve these objectives? These are all burning issues that need to be brought to the forefront by the leaders of intervention into community welfare.

Cultural Worldview

The thorny topic what constitutes a community leads to the equally difficult topic of worldview. Earlier we saw individual fishermen being influenced by belief systems originating from daily events while at sea. They were Garifuna. The topic of cultural values that spring from spirituality and guide behaviour in the use of coastal resources is also unique to the Garifuna. We include this topic to show that spirituality remains a significant component of orientation to coastal resources and to elicit comparative information from other parts of the Caribbean where this IDRC-CBCRM research programme is taking place.

The Garifuna pay homage to the sea (*barana*) and earth (*mua*) as primary givers of life. It is, therefore, necessary to periodically give offering to the spirits of both as gratitude and as supplication for more blessings. In the case of the spirit of the sea, one should periodically take food, a candle with some overproof rum as libation to the spirit of the sea, while beseeching the spirit to accept them as humble offerings.

In Garifuna theology heaven, called *seiri*, is located a long distance beyond the horizon across the sea. It is not surprising that when spirits come to participate in the ancestral ceremony of placation, the *dügü*, they have to cross the sea on returning to earth. Songs during the *dügü* recount the spirits’ travails in crossing the sea. At times those in trance would roll up their pants, indicating that they are just arriving from a sea journey.

A primary component of the *dügü* is for men and women (*adugahatinyu*) to go for seafood that will be ritually fed to the spirits. Among these food items there are special delicacies like *goosa* (hairy crabs), *gawamu* (sea turtle), and *guiwa* (wilk). They are usually caught in the vicinity of the Snake Cayes near Punta Gorda. Most Belizean Garifuna communities have cayes where this type of fishing is done. The *adugahatinyu* accomplish another purpose while they are at sea. It is to serve as messengers and beacon to some spirits, who may need guidance to find the location of the *dügü*. They would have been invited to the feast but might not know where it is or might have gotten lost on the way. On returning to the temple the *adugahatinyu* will be accompanied by these spirits.

Palacio had an interview with the captain of the boat who usually accompanies the *adugahatinyu* in Punta Gorda. He recounted how the spirits take control of the trip directing him where to go to catch needed items. He also performs rituals intermittently to ensure a successful trip. Pivotal to the success of the trip is for the party to pay close attention to his instructions and to have complete dedication to the spirits of the ancestors.

The arrival of the *adugahatinyu* bringing the ritual seafood officially marks the beginning of the *dügü*. There are special songs of welcome to the arrivals in which the names of delicacies are repeated.

Finally at the end of the *dügü* some of the food is ritually replaced into the sea as offering to its spirit. The rest is buried on land again as offering to the spirit of the earth.

These are only a few indicators of the significance of the sea for the Garifuna during the *dügü*, the most important celebration of their spirituality. We asked questions from other peoples about similar belief systems but they did not know of any. There are other maritime rituals found among the Garifuna. One takes place at the first anniversary after the death of a loved one. During that year women mourners (*ameisarutinye*) would have been wearing black coloured clothing. At the occasion of the first anniversary they will discard that colour for brighter colours. But it has to be done according to ritual prescriptions. Early in the morning at dawn they wade into the sea together with a chaperone (*ebenene*). While there they perform rituals that coincide with the out flowing waves. They also submerge themselves into the sea several times. Then they return home.

In the doorway they remove the black coloured clothing, step on it, and then put on fresh clothes. It marks the end of their mourning within which they had been proscribed from doing many things. The symbolism here is of the sea washing away the close affinity that the mourners have with the deceased relative. Secondly, there is reference to going into the sea and under it to pass from the world of the dead to the world of the living.

Co-operatives

Having climbed to the heights of spirituality it is necessary to return to the material base of community based coastal resource use. In this case the focus is on co-operatives as a tool for fish marketing in the study communities. We include in the following discussion the function of the co-operative not only in marketing but also as a vital community organization. Finally, we refer to the efforts of an older co-operative to jump-start the new Rio Grande Fishermen's Co-operative in Punta Gorda.

The primary purpose of the co-operative is to take care of all aspects of the marketing of items. It includes purchasing, processing for export, and taking care of the necessary bookkeeping and inventory. There are committees made up of elected members that supervise various functions, while the staff does the day-to-day work. As a result, ordinary members get a chance to be involved in detail decision-making on matters that are usually reserved for businesspersons in small communities. Consequently, they get hands-on schooling in capital, credit/interest, savings, and marketing within their collective enterprise. Many have subsequently used the education to launch themselves into business. Besides, the experience prepares them for other ventures that they may want to undertake. Most importantly they acquire familiarity with persons and institutions in the world of finance like banks, insurance companies, and high level public officers that normally exclude the grassroots in their scope of operation.

The unfolding liberating influence of self-education in money matters is exhilarating. The Placencia Co-operative has twice had serious management problems with office staff being suspected of financial mishandling. One of the leaders explained proudly how he stepped in just in time to go over

the books and put things right. "I didn't go to high school", he said, "but my experience as officer together with my common sense led me to the wrong things they were doing. I was able to help our co-op get back to its feet."

Receiving the second payment is a main reason why members and non-members sell to the co-operative. It is the balance in cash after all expenses have been paid and is given as dividends to all those who sold to the co-operative. The size of the second payment becomes the glue that holds persons to the co-op. But there are several qualities that it bestows to its collective membership. One is the building of confidence in each member and among themselves as a group. It translates into village pride in achievement. Another is the participation of the co-operative as a corporate villager in the welfare of the community. For example, the Placencia Co-operative has been investing in the village pre-school during the past two years.

An added bonus comes from fishing co-operatives joining together nationally to become a voice through the Belize Fishing Co-operative Association (BCFA). It sponsors training workshops and is a major lobbying group on behalf of its members. It also encourages member co-operatives to engage in joint ventures. Under such an agreement the Belize City based National Fishermen Producers Co-operative Society (National) agreed with (Placencia) to undertake its processing. Placencia was released from a heavy financial burden that had become unbearable for its relatively small production, while National increased its own output and economic scale of operation.

It was under a similar strategic cooperation that National started working with the fledgling Rio Grande Fishermen's Co-operative of Punta Gorda in the second half of 2000. National agreed to provide technical and financial assistance and in return they would process and export the lobster and conch forthcoming from Rio Grande. The agreement entailed that a seasoned staff member of National stay in Punta Gorda for weeks to train the new staff in their duties of purchasing and processing. He oversaw how the financial assistance was being disbursed. All of this took place even before the new co-operative was registered.

The Ministry of Fisheries was aware of the agreement between the two organizations and applauded it as an example of the civil society taking the initiative in grassroots economic production. It helped with a small grant. The government assists co-operatives with technical supervision, especially in auditing their books. The new Rio Grande Co-operative has also been a beneficiary of this good will.

With particular reference to an aim of this study, namely to see what is being done in the management of fishery as coastal resource, the co-operatives have been following the trend in the country. Through the BFCA they are investing in aquaculture to decrease the harvesting pressure on the open-sea species they have always harvested. It is the latest of other efforts that they have mounted to safeguard commodities on which they have relied for at least fifty years.

Co-management

The fourth pathway toward community-based coastal resource management taking place in Southern Belize is co-management. It is a buzzword that is used very much but with little understanding what it entails and how it could be implemented within various settings. We have already seen that in principle it has a long history in marine protected areas in Belize going back to the 1969 BAS agreement with the government to manage Half-moon Caye. In the following discussion we review some elements that seem to underlie the practice of co-management in Southern Belize. It leads to a spotlight on TIDE as an NGO involved in co-management and a brief critique of what is currently taking place.

At first we go over some points that are pertinent in the previous pathways toward community-based coastal resource management. In the first section of this chapter we argued on the need to understand what makes a community and what defines the use of coastal resources. In the second we saw elements that provide the aesthetic and esoteric – namely the “soul” – to coastal resource use. In the third we saw how marketing has become a vested rallying point for community ownership. In a way, all of these are essential ingredients for successful community-based coastal resource management, insofar as they are testimony to people’s ownership of their resources and their exploitation. But neither the movement toward co-management nor the NGO’s involved in it have taken time to study these points and see how they could utilize them, given that they are taking place within their own backyard. It points to the fact that co-management as a vision and principle has not been indigenized within the experience of the people of the South. This is a major difficulty in its implementation.

Both political parties in government have been unequivocal in their support for co-management toward protected areas. The following are guiding principles as seen in the case of two marine protected areas in the South. The government comes to an agreement with an NGO that it will be a primary agent in the management of a given area. It means assuming control of the regulations on zoning, the behaviour of the users, and generally contributing to the overall well-being. To empower the NGO’s for these tasks they may be allowed to import items duty free and police certain areas. The NGO appoints a broad based advisory committee to assist in formulating policy on the management of the area. The committee formulates a management plan that goes through phases of being fine-tuned with the involvement of various parties. Finally, the government signs a memorandum of understanding with the NGO spelling out the duties and obligations of itself and the NGO. After this the formal co-management regime should proceed.

There are two marine protected areas in the study area with incipient co-management structures. They are the Port Honduras Marine Reserve (PHMR) officially declared in January 2000 and for which TIDE has the co-management responsibility. The other is the Sapodilla Cayes Marine Reserve (SCMR) declared in 1996. Toledo Association for Sustainable Tourism and Empowerment (TASTE) hopes to have the co-management responsibility for SCMR. Neither TASTE nor TIDE has signed an MOU for their respective reserves, although both expect to do so. Of the two the SCMR is more circumscribed in space, being made up of a few nearby atolls. The SCMR has the additional importance of being on the borderline with Guatemala, while Honduras also has territorial

claims on it. Of the three countries Belize has the most vested interest with full jurisdiction in it as national territory. However, currently Guatemalan citizens are part owners of some of the lands. The PHMR is larger and concentrates in distinct areas (see Sullivan 1996). Fig. 1 has a delineation of both protected areas.

There are three other areas that are deserving of formal co-management regimes. One is Laughing Bird Caye in front of Placencia. Another is Little Monkey Caye in front of Monkey River gazetted as a bird sanctuary in 1977, where great egrets, magnificent frigates, and other waders nest (Zisman 1996: 13). A third is the Silk Cayes, which were declared a marine protected area in 2001.

TIDE has a longer history in its preparation for co-management than TASTE. We review some of its achievements since its re-birth from the Belize Centre for Environmental Studies in 1997. They are:

- Integrating fishers from Monkey River, Punta Negra, Punta Gorda, and residents of the Port Honduras Cayes into consultations to elicit their reaction to the concept of the PHMR.
- Promoting the concept with the government
- Undergoing intense negotiations with local political leaders – town and village councils as well as elected members of the National Assembly.
- Continuing its primary conservation thrust with special focus on the manatee.
- Promoting tourism as an alternative to traditional fishing methods.
- Mounting a campaign against gillnets and trammels as deleterious methods of fishing.
- Generating interest in the management of Payne's Creek National Park and acquiring its co-management (see Fig.1 for its location)
- Hosting several students, scholars, interns, and volunteers with interest in conservation on both land and sea.
- Assisting in research efforts with the help of The Nature Conservancy and other conservation groups.

All of the above achievements became integrated into TIDE's main undertaking – to get the PHMR officially declared and to eventually co-manage it. It deserves much credit for having accomplished so much within less than five years. Its primary strength has been in bridging gaps between the government and foreign agencies, on the one hand, and between the government and the grassroots, on the other. Where it needs considerable work is in strengthening its expertise in public education and generating a strong public image within its constituent communities. We found out that many local persons do not understand what it is doing and how they could become involved in its various programmes. Should it not deal with these pressing challenges, its relative success in conducting consultations, training, and neutralizing capricious local politicians will be lost. At the end TIDE needs to know the technical skills in transforming habits, a primary ingredient in communities where the local people have been taken advantage of for too long. In short, the duties of NGO's like TIDE have become more complicated as their functions and responsibilities increase. Their almost certain acquisition of co-management for marine protected areas is a major challenge. And their success in undertaking it will make them stronger partners of the small person in development.

The story of NGO involvement in co-management is an urgent topic that needs pressing study. The lessons need documentation, since their role will inevitably grow as part of public policy. The same could be said for all the pathways for community base coastal resource management that we have highlighted in this chapter.

CHAPTER 6

SUMMARY AND CONCLUSION

The summary part of this chapter gives an overview of the background and the problem definition of this study as well as the data gathering, and the results of past and current methods of coastal resource management. Under the conclusion we identify lessons learned with some concrete applications for the well being of coastal communities.

By way of generating an overview on the state of the Belize coast we refer to two observations by non-Belizeans. One is a student of the geography of fishing. He is Alan K. Craig and in 1968 singled out Belize within a distance from the tip of Yucatan to Panama as the only country that was carrying its own fishery seriously enough to export without relying on foreign investors. He was referring to the spiny lobster industry (1969: 252-263).

While this observation was laudatory about Belize's indigenous fishery, the other observation was equally so about the natural beauty of the coast. Julius Wilsensky had sailed the local seas for the first time, spending more time south of Belize City. According to him he and his colleagues "flipped" over Belize. "What was so good about Belize? Caribbean dry season, sunshine weather dependable easterly trade winds. Sheltered cruising in a sound lying between the world's second largest barrier reef and the mainland, giving you marvelous sailing conditions – all that wind and no waves... Absolutely sensational diving, snorkeling, and fishing on those reefs or inshore." (Wilsensky ed. 1996: 6).

By and large Belizeans would react with *déjà vu* to these two highly complementary descriptions. The reason is the trend that public policy has taken toward the coast during the past fifty years, for the most part minimizing its importance in favour of the hinterland and only two decades ago including it within the need to widen the revenue base in economic development. Two decades is too short a time to generate a deep appreciation for a subregion, especially one that is grossly under populated and continues to lose inhabitants.

During the 1960's the government was busy promoting agriculture as the panacea that would pave the way of the colony into independence and beyond. The coastal and riverine subregions, which had been the targets of the colonial forestry economy from the 17th century, lost their appeal with the shift to the vast hinterland for the production of sugar, citrus, and banana. It had not been until the 1980's that the coastal area re-gained some of its former glamour through fishery, tourism, and aquaculture. It has been doing so in leaps and bounds up to the time of this study in 2000 and 2001. More Belizeans are now re-learning the endowment of the coast, especially as it has received the enthusiastic endorsement of foreigners and is now a prime source of foreign exchange.

Indeed, the northern part of the study region, the area of Placencia and Monkey River, is playing a vital role in the new policy of national economic development far greater relative to its small size. Almost half of the producing shrimp farms in the country are located there; Placencia continues to produce lobster and conch in substantial quantities – 21,774.6 kilograms in 1999/2000

and 18,408.6 kilograms in 1998/1999. During the January to December 2000 period Placencia was the third highest in the country for hotel occupancy rate. The banana industry, which contributed 16 per cent to national export revenue in the 1999-2000 year, is located a short distance away. Furthermore, there are still large areas south of Placencia including scores of islets that are uninhabited and remain frontier territory for development. It is no understatement to predict that Southern Belize will in the near future proceed into what could be one of the most spectacular development frenzies to take place in the history of the country.

The problem definition for our IDRC-CBCRM study is simple. It asks how to ensure within the ongoing wave of development that has started in the South Coast:

- That it achieve a degree of sustainability not usually associated with the history of natural resource exploitation in Belize from logwood, to mahogany, to chicle, to agriculture, and to fisheries;
- That the local communities benefit. Again this is not normally the case in the previous cases of development especially in the South, which saw large scale export agro-industries from 1850 for the next century; and has remained impoverished for the past fifty years.
- That the bountiful resources – on both land and water – remain under proper stewardship so that their exploitation mitigates whatever degradation would take place; and
- That cultural traditions and values not be hastily dumped within the haste of modernization.

To unravel these questions we reviewed how communities have managed their coastal resources in the past and how they are doing so in the current period. We used a multidisciplinary methodology that included current ethnography and oral history. These methods demanded spending relatively long periods in the field and gaining an intimate knowledge of the communities and their various problems. It led to a third method of study that we used. It entailed engaging the communities in their own self-identification within the complexities of development. We will discuss this method further below.

We limited the past to the period from 1930 to 1960. In analysing the extent of community management that took place during that period we found out that it was guided by an abundance of natural resources, a wide variety of methods of exploitation, a deep cognitive foundation within the physical environment, and a wholistic belief system. All of these attributes together gave a systemic balance where humankind and coastal resources interlocked within a close fit. Apart from Placencia, land was the natural resource that received most attention throughout most of the last century. Furthermore, the cycle of colonial boom-and-bust industries meant that entire communities had no choice but to re-locate where they were needed as manpower. The use of the coastal resource, therefore, remained confined to the subsistence community economy – a last resort to the other two cash economies, engaging in wage labour and selling the produce of the land.

Next to transportation, which took place extensively but mostly on sailing boats from Honduras to Guatemala, to Belize, the catching of scale fish was the primary coastal pre-occupation before 1960. There was a great deal to be had a short distance from the beach. Furthermore, there were more species and several methods of harvesting, thereby ensuring a rich variety of taste for the community and respect for biodiversity. Acquiring the knowledge of these methods was a shared

rite of passage among men in the community; so also the location of several fishing drops, not to mention the migratory and foraging habits of fish.

Overshadowing what humans did with the resources was a belief system that had two levels. One was based on folk ecology and the other had a more cosmological anchoring. Within this system, spirituality prescribed that the earth and sea each had its own spirits that need to be placated. Besides, the sea had significance as pathway to the world of ancestral spirits. Reverence for the sea was built into ritual behaviour at given public celebrations.

During the current period, which lasted from 1980 to 2001, the previously integrated structure into which management was embedded no longer existed. Everything became more complicated and required an awareness of different subsystems operating at the same time. Firstly, scale fish no longer was the premium product; rather it was shellfish – lobster, conch, and shrimp. Additionally tourism has become a major competitor for the attention of the fishers and their families. Tourism covers several activities. They include snorkeling, sightseeing, fly-fishing, scuba diving, and game fishing. Management now entails decision making at several points – whether the fisher goes fishing or do tour operating; whether the marketing co-operative should buy lobster or scale-fish; whether the resort owner should have his own tour guide or pass his guests to an independent tour guide. Besides, central government has taken a more predominant role in regulating coastal exploitation, the co-management of marine protected areas being an example. National NGO's and recently formed local NGO's are becoming pivotal partners in exploitation and conservation. Finally external agencies are not only providing funds but also establishing local offices within the subregion.

Probably, the most precarious balancing act at this time with the greatest impact on the small man and woman is between two equally lucrative economic systems – tourism and fishing. Tourism would seem to have the edge in terms of income. However, there is the possibility that the small person is losing more of the tourist dollar as the resort owners constrict their business for the economy of scale. There is, therefore, an urgent need for him/her to constantly upgrade in training and equipment, and to use local and technical knowledge to generate more attractions for the tourist, over which he/she has more control. Another way of saying this is that he/she will have to generate more value-added benefits to what is already being done.

It is easy to contrast favourably the older with the current in the relative simplicity of the management system that prevailed. We avoid the temptation but we highlight some earlier attributes that are worthy of emulation. One is the depth of folk knowledge of resources, which needs to be aggressively integrated into the modern day formal education system. Another is the multiplicity of methods of harvesting, which redounded to the benefits of bio-diversity. Another is the aesthetic quality that was embedded into the belief system. It provides topics available for those interested in folklore, poetry, creative writing, and dramatic presentations. It could also be a rich method of infusing Belizean content and culture into the tourism product. Another is the wholistic integration of spirituality into the economic system providing a way of having questions answered within degrees of certainty.

By underlining an evolutionary perspective between past and current management systems, the study has indicated some of the problems of change within management systems that need to be addressed. One case is the fish marketing co-operative, which served its members well. But it cannot do so in the transition to tourism. What is needed is a parallel community-based structure with a strong entrepreneurial bias directed toward the tourism product. NGO's and the government will have to assist in the initial conceptualization and implementation of such structure. The management systems now being put in place for marine protected areas provide a way to combine resources in this regard.

This brings up the limited capability of NGO's to service community groups operating within coastal communities, especially in the South. NGO's do not realize that the South has had many experiences with unsuccessful community-based activities and that it could become both a cause and effect of failures in future ventures, unless the NGO's adopt more sustained and technical ways of working along with the communities, starting with their own indigenous origins.

An example of what to do and how comes from one of the field methods that we used during the study. It was to engage in dialectical interchange whereby community members saw more clearly what was needed to transform their behaviour. We were only able to attempt this level of interaction after making several visits to some of the communities during which we gained their trust. The main objective was to help them transform their behaviour having analysed what were the problems, the successes they had achieved, and how to convert problems into challenges. It became part of our own university tasks of adult and continuing education, while focusing on concrete issues. Unfortunately, we could not see the procedures through to their completion for lack of project time. But we discerned that the potential of follow up was there. None of the NGO's working in the South has tried this kind of intensive intervention method partly because they do not have the level of expertise to apply it.

Our final comment on this method is that it introduces another level of multidisciplinary for us. Working with rural communities has been a very active area in the field of community development training, especially since 1980. Over time it has developed into a discipline with its own theoretical framework, implementation, literature, and journals. In short, multidisciplinary for community-based activities should be seen not only in the biases of natural and social sciences, as defined in the project document for this study but also in the subdivisions taking place within each umbrella discipline. It is one way of saying that we may be getting closer to appreciating the myriad development problems of our client groups in rural communities, now that the debate between social and natural sciences may no longer be that prevalent.

In regard to lessons learned from this study, we finally extend the discussion from the NGO's to the government in not knowing how to respond to the development needs of coastal community groups. By continuing to deny communities their right to form their own governance systems and to pay for them, the highly centralized governance systems are obstructing the formation of functional community-based structures.

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Appendix 1

Field Instruments

Dr. Joseph O. Palacio's Instruments

Smaller Communities

The following are the smaller communities – Barranco, Monkey River, and Punta Negra. Selected leaders will be asked the following open-ended questions.

1. To what extent is this a community?
2. To what extent is the coastal area significant as main distinguishing characteristic of this community?
3. What groupings within the community rely on the coastal area for their economic maintenance – at the level of the household, extended kin group, work groups, etc.?
4. What connections does this community retain with neighbouring communities in the area of coastal resource?
5. To what extent does the Village Council rely on the use of the coastal resources?
6. To what extent is the coastal resource a main attractive force for others to come to this community?
7. To what extent is the Government of Belize and others promoting coastal resource management in this community?
8. To what extent are NGO's promoting coastal resource management in this community?

Bigger Communities

The bigger communities are Placencia and Punta Gorda. Unlike the smaller communities where community leaders will be the main informants, in the bigger communities stakeholders will be the informants. The following is a list of potential stakeholders – fishers, water taxi operators, Belize Tourism Industry members, tour guides, real estate sellers and buyers, contractors who rely on sand and gravel from the beach; the shaman and others involved in traditional ancestral and healing ceremonies; the artistic community – painters, poets, singers, etc. who rely on the beach for their inspiration; homeowners who retain property on the seafront; people who use the beach for waste disposal, swimmers and others who use the coastal area for sports and physical exercise.

Appropriate sets of stakeholders will be selected in each of the two communities and will be asked the following questions:

1. What does coastal resource management mean to you and your group and how do they see themselves as actors in this process?
2. What component of the coastal area is selected for what attention – the sea, area closer to the beach, the beach, area between the wetlands and dryland?
3. What are the various government departments doing in coastal resource management?
4. What are the NGO's doing in this regard?

International Development Research Centre
Community-Based Coastal Resources Management in the Caribbean
Work plan prepared by Joe Iyo Friday, February 04, 2000

- Traditional fishing methods, techniques, and equipment vs. foreign methods, techniques, and equipment – which was more selective and conservation friendly.
- Types of fishes fished and methods, techniques, and equipment used before 1931 hurricane and hurricane Hattie.
- Fishing grounds most and least used in the distant past, i.e., before 1931 hurricane and hurricane Hattie.
- Determine the impact of hurricane Hattie on fishing – impact on fishing grounds.
- Gender roles in the fishing industry before and after Hattie – catching methods, techniques, equipment and fishing grounds used by specific gender.
- Determine average catch – or take home on a fishing expedition – how long a fishing trip took – Group vs. individual fishing – which was most or least popular; why it was most or least popular; and grounds that were most or least favored by either of the two groups. Determine average quantity of fish caught, time it took to catch such a quantity, and number of fisher-folks per group involved on such fishing trips.
- Types of fishes most or least popular with either of the two groups and fishing grounds preferred or frequented.
- Methods, techniques and equipment preferred by group or individual fisher-folks and why.
- To determine conservation methods by evaluating seasons preferred by either group or individual fisher-folks and why; and markets available and quantity of demand.
- Methods, techniques, and equipment used in preserving fishes. How this affected quantity and frequency of fishing by either group or individual fisher-folks. Traditional vs. modern methods, techniques, and equipment used in preservation, and their impact on fishing.
- Determine status of fisher-folks in society then and now – number of full-time and part-time fisher-folks then and now.
- Determine the impact of fishermen cooperatives on fishing – determine impact on conservation methods – determine impact on traditional fishing grounds; on types of fishes that were most popular; on quantities caught on one trip then and now.
- Determine government intervention – laws on conservation then and now. Which was/is more effective.

- Determine number of fishing village then and now – were there more fishing villages then than now.
- Deep sea vs. shoreline fishing – which was/is most or least popular and why.
- Determine whether or not population increase has impacted fishing and how.
- Determine how methods of preservation – traditional vs. modern affected fishing.
- Determine main fishing communities and suppliers of fish and types peculiar to fishing grounds – whether this has changed over time.
- Determine issues of over-fishing in the distant past (calculate generations backwards) and in the present.
- Determine issues of poaching in the distant past and in the present.
- Determine the culprits of over-fishing and poaching in the distant past and in the present.
- Identify the fishing grounds around you today.

Appendix 2

List of Informants

Belize City

Joseph Bradley
Alan Burn
Meg Craig
Dr. Vincent Gillett
Robert Mariano
Beverley Wade

Belmopan

Betty Talbert
Sylvan Roberts

Barranco

Candido Arzu ♦
Nathaniel Cayetano ♦
Crispulo Chimilio ♥
Albert Nolberto ♦
Bings Nolberto ♦
Ruben Palacio
Carlson Tuttle
Ray Valencio
Victor Witty ♦
Abraham Zuniga ♦
Clotildo Zuniga

Dangriga
Lillian Leslie
John Mariano
Austin Rodriguez
Frank Rodriguez

Georgetown

Mr. Zuniga, Village Council Chairman

Hopkins

Valentina Flores

Monkey River

Godwin Coleman

Placencia

Cleveland Berry
Elton Eiley
Wilmar Godfrey
Edlin Leslie
Omar Leslie
Charles Westby
Brian Young

Punta Gorda

Dimas Arzu
Earl Arzu
Darius Avila
Matthew Avila
Clifford Bowden
Leonardo Chavarria
Roberto Echeverria
Philip Gabriel
Lindsay Garbutt
David Glen
Victor Jacobs, Jr
Victor Jacobs, Sr.
T. Lino
Wil Maheia
Tony Martinez
Francisco Montenegro
Stanley Nicholas
Jack Nightingale
Alfonso Palacio (Paul Nabor)
Dr. Ludwig Palacio
Bobby Polonio
Anna Ramirez
Julio Requena, Sr
Leonore Requena
Martin Reyes
Peter Sanchez
Bill Usher

Punta Negra

Ray Jacobs

Seine Bight

Austin Aranda
Matthew Martinez
Thomas Maximo
Dora Williams

- ◆ Interview done in 1979
- ◆ Interview done in 1979
- ♥ Interview done in Belize City October 2000
- ◆ Interview done in 1979
- ◆ Interview done in 1979
- ◆ Interview done 1979
- ◆ Interview done 1979

Appendix 3

REGIONAL INITIATIVES WITH BELIZE

Introduction

Belize is situated in a unique geographic position where it can stand to benefit politically as a bastion for peace in the Caribbean Basin. It borders the countries of Guatemala, Mexico and shares common resources with Honduras. Of the four countries, Belize is the only one that can claim to be bilingual, English and Spanish, the latter being the language spoken in the other countries.

Recently the doctrine of Democracy and Sustainable Development has been widely accepted as a new paradigm. It has been shown that many of the excesses and mistakes made in the use of our natural resources could have been avoided if the local population, the traditional users of natural resources, the scientists, the developers and the government had followed stricter and more forward looking conservation practices as far as the environment is concerned.

In the Western Hemisphere, the Mesoamerican Caribbean Reef System has been a focal point for protection under the terms of CCAD. It was selected by the World Wildlife Fund (WWF) as one of the ecologically distinct areas on the globe that harbors one of the greatest concentrations of biodiverse ecosystems. The Reef eco-region is associated with marine/coastal habitats of the Caribbean coast of Mexico, Belize, Guatemala, and Northern Honduras. The Alliance for Sustainable Development (ALIDES) and the Agreements of Tuxtla I and II, principles and terms of cooperation between Mexico and Central America were established. The signing of the Tulum Agreement by Mexico, Belize, Guatemala and Honduras in 1977 further emphasized the need to coordinate protection of the Mesoamerican Caribbean Reef System against gross extractive human activities. Two geographic transboundary areas were identified as priority. One was the Gulf of Honduras region and the other the Mexico and Belize area including the Bay of Chetumal, Banco Chinchorro, Xcalak, Bacalar Chico and Hol Chan.

It was within this framework that the Gulf of Honduras and the common coastal resources of Mexico and Belize were identified as critical sub-regions that required special attention for proper management.

Within the short period of its existence, the Alliance received some international recognition.

- It was represented at the Seminar on Biodiversity and Protection of the Manatee.
- It participated and were represented at the Regional Workshop on Fisheries Management in the Mesoamerican Barrier Reef System
- It was represented and participated in OAS Committee meetings on Public Participation Initiatives in Kingston, Roatan and Lima, Peru.
- TRIGOH was the proud recipient of the Paul Getty Award of \$50,000.00 in 1999

The Alliance has made a great effort to include both the government and private sector in its forums, with more emphasis on the public sector. Officials from fisheries, environment, forestry and coastal resources are invited to every regular meeting. The history has been one of poor-attendance, however over the past year Belize has been well represented. In fact, the Belize Ministry of Agriculture, Fisheries and Cooperatives has officially named a representative. A draft constitutional amendment is being prepared by TRIGOH to allow non-voting membership to these government officials. There is no doubt that the Alliance stands to benefit from the contribution of the officials from the standpoint of information sharing and in having a positive influence on their decisions taking full advantage for lobbying purposes. This has been proven especially in the legal regulations legal regulations and the declaration of reserves and protected areas within the Gulf. Here Belize has taken the lead over the other two countries in declaring reserves and protected areas. TRIGOH has not been as successful in its lobbying efforts with the government of Guatemala and Honduras for the declaration of the Sarstoon Temash the designated areas of Sarstoon-Temash and Punta Manabique in the Gulf respectively as protected.

The Draft Amendment to the Constitution also provide for the participation of the private sector in TRIGOH meetings. However much work still needs to be done to bring this about. Some progress has been made in the area of crisis management planning in the event of an oil spill in the Bahia de Amatique. FUNDAECO, a member of the Alliance is a strong advocate on the planning team. On 7th September 2000 the first oil spill simulation exercise was staged.

In retrospect the lack of proper resource planning, education and management has drastically reduced the fish population in the Gulf particularly in the Honduras and Guatemala area. One negative result is that fishermen from Guatemala continue to illegally fish in the waters of Belize, consequently causing trans-boundary problems.

Even within a country resistance to TRIGOH mission was shown when, for example, two officials of a member NGO were murdered in Guatemala.

There is further need for private sector involvement due to an increase of tourism activities in the Gulf. Bad conservation practices and the lack of sustainable development policies have led to environmental degradation. In order to address this matter TRIGOH is in the process of forming a Tourism Commission, which will aggressively seek the involvement and cooperation of the private sector.

The Alliance is faced with one serious problem in its goal toward the integration and harmonization of economic practices in the Region. For this to be achieved, legislative adjustments by individual territories will need to be made in the interest of the Region as a whole. Despite the Conventions and Agreements and ratified by respective countries, the crux of the matters entail the enactment of legislation to follow through. The member countries, in varying degrees, have not done so well. For example, in 1997, a meeting of top-level technocrats from all three countries was held with the view of reviewing legal gaps for integration and harmonization. The initiative is still being pursued at different levels, with no firm results to date.

The areas that the Alliance has yet to address in a serious manner are:

1. The issue of the participation of all stakeholders without any discrimination
2. A respect of the values and traditional knowledge of the diverse ethnic groups and indigenous peoples

The Alliance became very aware of this when this issue was raised at its last meeting in Livingston when there was no member of the community present. They had not been invited. As a consequence resolutions were passed at the meeting to actively address these shortcomings. At two previous meetings that were held in the Garifuna Village of Tornabe, Honduras, the community was neither involved for the same reason. The OAS Public Participation Project focused on established organizations and institutions and not on the community at large. In the campaign against the killing of manatees, the Alliance used posters, flyers, and the media and encouraged punitive measures with no socioeconomic investigation and studies for identifying "root causes". Of course certain activities have been done for small stakeholders. In Belize tour guides were trained in sport fishing and kayaking. A publication entitled *The Voice of the Fisherman* was put out in English and Spanish. And for now for quite some time a proposal for developing a La Ruta Garifuna has been on the agenda.

To date, TRIGOH has focused strongly on fund raising, and understandably so. The member organizations must meet salaries and overheads. However, the need for project funds may jeopardize certain traditional values held by members in complying with a project's objectives. Within the Organization there are "grassroots" individual members who have been alienated from their roots,

which is regrettable from the fact that they would be the most competent to communicate and address this weakness in the Alliance.

Thus far, the Alliance is achieving its objective of better fostering understanding among people within the Region. The interaction has brought home clearly to members the value in good human relations despite political differences. As a case in point, when there was political friction between Guatemala and Belize recently, the Belize members refused to attend a meeting in Guatemala during the period. In response, the other members used the situation as a test of conviction to the stated spirit of the Alliance. Such a reaction was not in the spirit of the Alliance. TRIGOH has been described as a Peace Initiative in the Caribbean Basin.

The Belize-Mexico Alliance for the Management of Common Coastal Resources (BEMAMCCOR)

At a Mesoamerican Reef System (SAM) Workshop in San Pedro Sula, Honduras, in 1999, a group of participants from Belize and Mexico first discussed the formation of a Mexico-Belize Alliance. After five organizational meetings, the Alliance was officially formed in May 2000 with its inaugural meeting in Chetumal, Mexico. The TRIGOH model was used in the development of BEMAMCCOR.

Membership of BEMAMCCOR is limited to registered non-government organizations and institutions in both countries. Government agencies and the private sector are allowed to participate but only as observers. The founding members are the following:

Mexico

1. Amigos de Sian Ka'an
2. Amigos de Manati A.C.
3. El Colegio de la Frontera Sur (ECOSUR)
4. El Colegio de Biologos del Sistema Tecnologica A.C.
5. Universidad de Quintana Roo (UQROO)

Belize

1. Green Reef
2. San Pedro Tour Guide Association
3. Belize Coastal Zone Management Authority and Institute
4. Belize Institute of Environmental Law and Policy
5. Hol Chan Marine Reserve
6. Bacalar Chico National Park and Marine Reserve

The project area of BEMAMCCOR is bounded on the northwest by the Majaual/Chetumal Road to Chinchoro, on the south by Caye Caulker, and on the east by the respective maritime territorial boundaries and west by the furthest inland limit of saltwater influence including the habitats such as coastal lagoons, mangroves and lowland riparian forests.

The Belize-Mexico Alliance for the Management of Common Coastal Resources (BEMAMCCOR) is a forum for consultation, coordination, and resolution of mutual problems of Belize and Mexico in their efforts to manage of their common coastal and marine resources.

The goals of BEMAMCCOR are from their Mission Statement:

“ To contribute to the conservation and sustainable management of the shared coastal and marine resources of Belize and Mexico and involving the different sectors of the society with the purpose of improving the quality of life and maintaining the biodiversity of the Region”

The stated objectives of BEMAMCCOR are:

1. To develop and implement activities and specific projects, including research projects, addressing environmental problems,
2. To assess and analyze the socio-environmental situation in order to generate action strategies and plans,
3. To promote and support development of sustainable economic alternatives that are compatible with the conservation of the natural resources,
4. To establish and operate an information network for the region,
5. To develop strategies for fundraising and technical assistance and,
6. To promote the harmonization of national policies and regulations as they affect coastal and marine resources of the Region.

At the organizational meetings members expressed some serious concerns that they would like the Alliance to address. These are contained in an information document at the official inauguration. Among these concerns are:

- The contamination of the Rio Hondo and Chetumal Bay zone
- The lack of standards in the area of tourism development on the coastal region;
- Over-fishing in the Region
- The non-existence of shared plans between the two countries for the preservation of endangered species in the Region
- Problem of land tenure
- The lack of an environmental “friendliness”

Although the Alliance is just over four months old it has succeeded in procuring funds for an activity. A workshop is planned for the members in October with the following objectives:

Objectives

- Enhance the capacity of the Alliance to work as a team through:
 - Understanding each institution, their *individual* goals, strengths and weaknesses and expectations of the Alliance'
 - Identifying the *collective* strengths, weaknesses, opportunities and threats of the Alliance as a whole;
 - Engaging in coalition-building exercises for the Alliance members; and
 - Developing a common body of knowledge and awareness about available planning models and 'best practices' for successful inter-organizational teams.
- Initiate action planning to further the objectives stated in the Alliance Charter by:
 - Identifying and prioritizing focus areas for the Alliance for each objective stated in the Charter;
 - Developing action strategies in the short-term (one year) and medium-term (three years);
 - Outlining a long-term planning structure and process for the Alliance

The main economic activities within this region are: Tourism, which is the most important. Fishing is carried out in Banco de Chinchorro and on a small scale Xcalak Village community. Large-scale agricultural development and sugar factories are found along the Rio Hondo. Unlike the Gulf of Honduras the people generally enjoy a higher standard of living. Most of the inhabitants are Mestizos. The city of Chetumal is highly commercialized and is a popular shopping center for Belizeans.

The community of Xcalak offers good possibilities for community development. A population of only 285 persons that are dedicated to fishing and tourism. The socioeconomic activities of Xcalak are highly dependent on its terrestrial and marine ecosystems, which, if properly managed can guarantee economic benefits to the community both in the short and long term.

One of the greatest challenges to the Alliance initiative will be the inevitable clash with tourism developers. Mexico has an ambitious tourism development plan for the coastal area around Tulum, El Corredor Turistico Costa Maya", resulting in high priority on land use. The two most populated islands in the Belize sector, San Pedro and Caye Caulker, have a strong tourism industry. Even before the official forming of the Alliance an environmental violation in the Region by Mexico authorities was reported. In San Pedro, Ambergris, Green Reef experienced a confrontation with Government authorities in trying to stop a housing development on a wetland area of the island

Conclusion

These two regions situated within the Mesoamerican Caribbean Reef System were identified and selected for their great biodiversity. The net outcome from these initiatives cannot be quantified in numerical terms. But, in examining the relationships amongst the members of TRIGOH there is definitely a better understanding demonstrated and a common desire to work for a more sustainable future. Even among the government officials involved suspicions and mistrust has changed to confidence and open dialogue. The ripple effects of this can go a far way in resolving possible conflicts between member countries.

As far as the larger sector of stakeholders is concerned, there is need for greater focus on drawing them in. Socioeconomic matters are not included in the TRIGOH agenda and this needs to be introduced. People affected by the Alliance do not feel a part of the initiative. This has resulted in a serious gap in the broad effectiveness of the programs. The Alliance is yet to exploit its potential for forming a bridge between nations, which are divided only by political barriers.

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