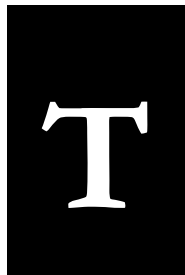


Chapter 1

INTRODUCTION

LOCATION



The province of Bohol is 1 of 4 provinces comprising the Central Visayas, a group of islands located in the center of the Philippine archipelago. Lying approximately 30 km away from Cebu City, Bohol belongs to Region VII, 1 of the 14 geopolitical subdivisions of the Philippine government. The island lies between Southern Leyte to the northeast, Cebu to the west and northwest and Mindanao to the south. The northern coast is bounded by the Camotes Sea, while the southern and western coasts are bounded by the Mindanao Sea and Bohol Strait, respectively.

With a total land area of 411,746 ha, Bohol is the tenth largest island in the country (PPDO 1993a). Unlike the other islands in the region, Bohol is generally flat in topography. Level to moderately-rolling land accounts for 47 percent of the total land area. With a population of 1,159,680 (NSO 1995), Bohol consists of 1 city (Tagbilaran, the capital) and 47 municipalities. Eighteen of the municipalities are upland, while the remaining 30 (including Tagbilaran) are coastal. There are 349 coastal barangays with a total coastline of approximately 642 km. About 6,427 km² of municipal waters surround the province and its 72 smaller islands (water/land ratio: 2.8) (Courtney and Traub 1999) (see Figure 1.1). There is, therefore, 2.8 times more sea than land for the province to manage.

This profile covers 7 of the northwestern municipalities. Moving northwards from Tagbilaran City, these profile areas are: Loon (a project expansion site), Calape, Tubigon, Clarin, Inabanga, Buenavista and Getafe (another expansion site). The outer edge of the profile area is approximately 20 km from the capital. These 7 municipalities have a total population of 197,463 (NSO 1995) and a total land area of 60,499.5 ha.

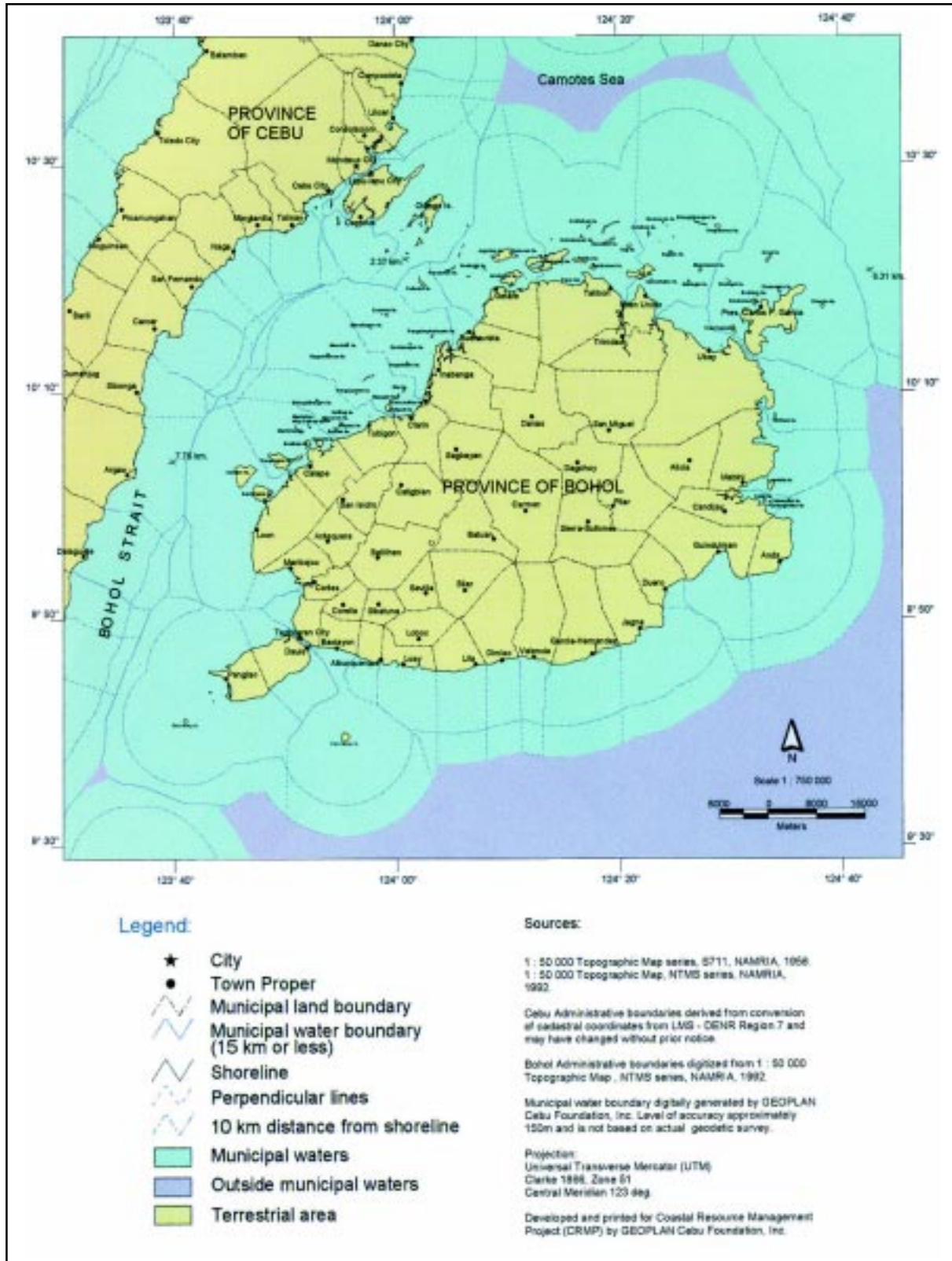


Figure 1.1. Municipal water boundaries of Bohol (unofficial map).

This coastal environmental profile is focused on the coastline (and coastal communities) of these municipalities. The coastline in question is approximately 85 km long, stretching from the southernmost boundary of Barangay Song-on in Loon to Tulang Point in Getafe.

AREA GEOGRAPHY

The profile area has 6 natural zones: upland (hills and mountains); lowland (plains); mangrove; beach and exposed coast; shallow nearshore (intertidal flats, seagrass and algal beds, coral reefs) and open water.

The profile area falls within 3 major watershed areas and has 1 major riverine system. The Mualong and Abatan watersheds touch Calape, while Tubigon and Clarin fall within the Abatan watershed area. The Iwahig-Inabanga watershed contains Inabanga and Buenavista, along with the Inabanga river system. The total area of drainage coverage is approximately 1,330 km² (PPDO 1993a).

The northern boundary of the profile area is fringed by the only double barrier reef in the Philippines and the entire area is bounded by mangroves and seagrass beds. This barrier reef, known as the Danajon Bank, has inner and outer reefs and lies about 7 km off the northern coast of the mainland. It consists of small flat and low-lying islands, with reef widths averaging from 100 to 200 m.

Within the profile areas, there are also 4,196 ha of mangroves, and approximately 555 ha of seagrass beds at depths ranging from 0 to 3 m (SUMML 1997). The ebb current runs in a southwesterly direction.

SOCIOECONOMIC BACKGROUND

Agriculture and fisheries drive the economy of Bohol in general, and the profile area in particular. Roughly 55 percent of the households in the area derive their income as farmers, farm workers or fishermen. The major fishing grounds in the profile area are the Bohol Strait (between Cebu and Bohol), Olango Channel and Danajon Bank. In addition, Calape Bay is a rich fishing ground for demersal species, especially siganids (rabbitfishes).

The 1990 National Statistics Office (NSO) Census showed that 88 percent of the households in the area earned below the regional poverty line of 30,000 pesos per year (as determined by the National Economic and Development Authority (NEDA)). The distribution of income was as follows:

Percentage of Population

32
26
14
16

Annual Income

(pesos/year)

< 10,000
10 - 15,000
15 - 19,000
20 - 30,000

US\$1 = P20 in 1990

Typically, those people involved in fishing and fisheries-related activities earn below PhP 48,000 per year, with about half earning an average monthly income of PhP 1,830. This means that many, if not most, fisherfolk are currently living below the poverty line and cannot meet most minimum social and economic needs, such as adequate food, shelter or health care.

SUMMARY OF ISSUES

Bohol has many of the problems and conditions along its northwestern coast that are salient to key coastal issues in the Philippines. The northwestern coastline contains declining fish stocks, critical coastal habitats, variable beaches and water quality, and dwindling coastal forests and upland areas. The resources and ecosystem along the coastline are, in some cases, in relatively good condition, while some areas are being degraded and others are in danger of destruction.

The area along the northwestern coast is biologically diverse, and there exist linkages between coastal issues and upland agriculture, forestry and mining (i.e., siltation and run-off).

Problems that have been identified in the profile area are caused by, and perpetuate, the poverty of the coastal communities. Five major categories of issues which require immediate management attention are:

- Poverty-driven overfishing by local resource users, compounded by the presence of fisherfolk from outside the profile area;
- Destructive fishing techniques;
- Pollution due to improper waste disposal from expanding urban areas and industrial infrastructure development;
- Run-off and siltation from upland areas due to inappropriate land management techniques; and
- A lack of coordinated planning and enforcement, and weaknesses in institutional capacities.

OBJECTIVES

Coastal resource management (CRM) is the process of planning, implementing and monitoring beneficial and sustainable uses of coastal resources through participation, collaboration and sound decision-making. This is reached by involving the entire affected community, including resource users, local and national government, nongovernment organizations (NGOs) and the private sector. The aim is to promote an integrated coastal management (ICM) approach along the northwestern coastline of Bohol that focuses on sustainability in coastal resource use and minimizes the direct impacts on coastal resources from fishing, aquaculture and tourism.

Communities and local government units (LGUs) will collaborate in the development of integrated management plans for area resources. Community groups and LGUs will be the main participants and beneficiaries of pilot projects and the process as a whole. This coastal environmental profile is an initial step in identifying management issues to be addressed in municipal and area-wide plans, and ongoing projects implemented by local communities and government. It contains a broad perspective on the physical, biological and socioeconomic characteristics, the institutional and legal framework, and the issues and opportunities for management. It also provides an information base for monitoring changes in the area, conducting education programs and planning appropriate activities.

The objectives of this profile are to:

- Identify major resource management issues to be addressed by LGUs and communities;
- Identify constraints, opportunities and objectives for management and development of coastal resources associated with profile areas;
- Summarize and assess information on ecosystem and resources, social and economic conditions, and legal and institutional regimes for management;
- Provide a source of information for communities, government, planners, researchers and others involved in the planning and education process;
- Synthesize mapped information which will constitute a visual database for spatial analysis;
- Compile baseline information for monitoring and assessing trends in environmental changes; and
- Provide a source of information for Environmental Impact Assessments (EIAs) of development projects in the profile area.

Information for this profile was collected from secondary sources such as reports, maps, government files and photographs. Primary sources include short-term site surveys, interviews with local resource users, LGUs and community discussions; as well as the participatory coastal resource assessment (PCRA) conducted in the area in 1997 and 1998.

SCOPE

This coastal environmental profile covers an area comprised of 7 municipalities along the northwestern coastline of Bohol. It describes the overall social, cultural, political, legal, economic, agricultural and environmental aspects of the profile area that will have bearing on an integrated management approach to the coastal resources of concern.