

**PDPFP**

**2010-2015**

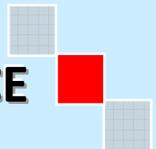


# **Provincial Development & Physical Framework Plan PDPFP 2010-2015**

**VOLUME I**

**MAIN PLAN DOCUMENT**

**BOHOL PROVINCE**





# MESSAGE



## NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY

### Region 7

The Provincial Development and Physical Framework Plan (PDPFP) puts together into one planning document the traditionally separate Provincial Physical Framework Plan (PDPFP) and the Provincial Development Plan (PDP). It contains the long-term vision, goals, objectives, strategies, programs, projects and activities of the province, taking into account both spatial and sectoral factors. The PDPFP serves not only as the roadmap of provincial development in the medium-term, it also links the development thrusts of the province to regional and national priorities.

Pursuant to Section 114 of the Local Government Code, the National Economic and Development Authority (NEDA) is tasked to integrate the approved development plans of provinces in the Regional Development Plan and the Medium-Term Philippine Development Plan. Under the project, Strengthening of Provincial and Local Planning and Expenditure Management (PLPEM) Phase 2, the NEDA Regional Office in Central Visayas provided technical assistance to the provinces in the region, including Bohol, in the formulation of their PDPFPs. The collaboration between NEDA and the provinces in the formulation of the PDPFP ensured the consistency of plans from the national, regional down to the provincial level.

The Provincial Government of Bohol must be congratulated for successfully completing its PDPFP for 2010-2015. At our end, the NEDA Regional Office assures the Province of Bohol of our continued support in all its development efforts.

The completion of the PDPFP marks the beginning of a bigger task ahead which is the implementation of the Programs, Activities and Projects (PAPs) in order to realize the goals and objectives set in the plan. I therefore, encourage all the stakeholders in Bohol to support the implementation of the PDPFP.

A handwritten signature in black ink, appearing to read "Marlene C. P. Rodriguez".

MARLENE CA. P. RODRIGUEZ  
Regional Director



Republic of the Philippines

**PROVINCE OF BOHOL**  
*City of Tagbilaran*

**OFFICE OF THE GOVERNOR**

**M E S S A G E**



The Provincial Development and Physical Framework Plan (PDPFP) 2010-2015 of the Provincial Government of Bohol is a landmark planning document for this administration. As Chief Executive of the Province of Bohol, and as an advocate of good, sustainable, stakeholder-driven and participatory planning in local governance, I am well aware that I am bequeathing this plan to the succeeding administration.

In a joint session of the Provincial Development Council, Provincial Peace and Order Council and *Sangguniang Panlalawigan* earlier this year, the Provincial Government approved the PDPFP. We place a great premium on participatory, stakeholder-driven planning, and we are proud to have crafted an overarching development framework that recognizes the need for sustained poverty reduction paired with local economic development strategies, carefully balanced with sustainable development and environmental management principles, all summed up in our sustainable development call, "***Green Bohol!***"

Together with the other elected leaders of the Provincial Government, I am proud to endorse this PDPFP to the next administration, in the hope that Bohol's next set of leaders will work together for the greater good of the province, and to build on our accomplishments, as we have similarly done with the accomplishments of previous administrations.

Our beautiful province has come a long way. From being a humble, unknown island in the Visayas, Bohol has proudly taken its place as a prominent, visible and laudable province in the areas of eco-cultural tourism, agriculture, and overall local governance. It is my hope that the next set of leaders will spur the province to reach even greater heights.

*Ug sa kanunay, Mabubi ang Bohol!*

April 12, 2010.

  
**ERICO B. AUMENTADO**  
Governor



Republic of the Philippines  
**PROVINCE OF BOHOL**  
*City of Tagbilaran*  
**OFFICE OF THE GOVERNOR**

## **M E S S A G E**



In the first quarter of this year, a cross-sectional assembly of representatives of virtually all Boholano stakeholders, in a joint session of the Provincial Development Council, Provincial Peace and Order Council and *Sangguniang Panlalawigan*, approved the Provincial Development and Physical Framework Plan (PDPFP) 2010-2015 of the Provincial Government of Bohol.

As Vice Governor of the Provincial Government and Chair of the SP, I am equally proud, together with the Honorable Governor, of this landmark planning document, one that has been produced after a truly participatory process. The PDPFP, among its objectives, defines the overall development framework for the province, as enshrined in its Vision, Mission and Goals (which have been updated for this new planning period), translates that aforementioned vision into practical strategies that can be implemented, and provides a spatial/physical representation of the plan components.

The updated Vision reads: *"Bohol is a prime eco-cultural and agri-tourism destination and a strong agri-based green economy with an empowered and self-reliant people who are God-loving, law-abiding, proud of their cultural heritage and committed to the growth and protection of the environment."* It is an update that I find reasonable and necessary, given the reality that Bohol, while remaining an essentially agricultural province, also has to deal with small landholdings, which makes the need to adopt sustainable agricultural practices (i.e., a green economy) even more urgent.

As we at the SP continue to pursue our goal to improve the plight of every Boholano through pro-poor and sustainable development legislation, we are heartened by the promise for further economic development of the province, as evidenced by the rich potential unveiled in this PDPFP.

April 12, 2010.

  
**JULIUS CAESAR F. HERRERA**  
Vice Governor



Republic of the Philippines

**PROVINCE OF BOHOL**

*City of Tagbilaran*

**PROVINCIAL PLANNING & DEVELOPMENT OFFICE**



**M E S S A G E**

Setting forth on our journey to craft the Provincial Development and Physical Framework Plan (PDPFP) 2010-2015 of the Province of Bohol was quite daunting, at the beginning. This was an entirely new plan – a union of the previously separate Medium-Term Development Plan (MTDP) and Provincial Physical Framework Plan (PPFP), with a thoroughly modified format and a new spatial planning methodology.

Year after year, one planning cycle after another, we at the PPDO are faced with the task of setting, guiding and reviewing the development directions of the Province of Bohol. That in itself is already an important responsibility. The new challenge that was the PDPFP planning process made it doubly intimidating.

Thankfully, however, we did not face this task alone. Over the course of more than a decade now in the Province of Bohol, we have relied on the cooperation, collaboration and partnership of our stakeholders – the Provincial Government departments and satellite offices, our partner National Government Agencies and Non-Government Organizations, the Academe, the Business Sector, People's Organizations and Civil Society in general, and all such sectors were represented in our PDPFP Technical Working Groups.

The PDPFP planning process was the quintessential example of this multi-stakeholder collaboration and partnership at work, and it was a thoroughly fulfilling experience. With the assistance of many of Bohol's "beautiful minds", selfless stakeholders who have nothing but Bohol's sustainable development as their ultimate vision, we were able to craft a PDPFP that we believe in, one that we feel passionately about.

This is the plan that we will implement for the next six years of local governance and development, together with all our stakeholders in the Boholano community. And that is the greater challenge: to see this plan implemented, our deliverables accomplished. We pledge to be right there with our stakeholders, at every step of the way.

April 12, 2010.

**JOHN TITUS J. VISTAL**

Provincial Planning & Development Coordinator

# ACKNOWLEDGEMENTS

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This Provincial Development and Physical Framework Plan  
of the Province of Bohol  
is the product of hours, days, and weeks put together  
of Boholano stakeholders.

It is, in the truest sense, a collaborative labor of love  
of Boholanos and the people who love Bohol.

Gratitude, appreciation and credit, therefore,  
are due to the countless people who have participated in  
and contributed to the long, participatory planning process  
that has produced this landmark plan.

Gov. Erico B. Aumentado,  
Vice Gov. Julius Caesar F. Herrera,  
the Honorable Members of the Sangguniang Panlalawigan,  
and the Department Heads of the Provincial Government,  
have all championed the crafting of this plan.

The collective efforts of the Sectoral Technical Working Groups (STWGs) led by the STWG Chairpersons,

Kag. Cesar Tomas M. Lopez, Social Development STWG

Mr. Alex V. Relova, Economic Development STWG

Mr. Renato Villaber, Environment Management STWG

Mr. Romeo S. Teruel, Development Administration STWG

Engr. Emigdio Acierto, Infrastructure Development STWG

and the full membership of the Provincial Development Full Council,  
including the Honorable Mayors of the lone City and 47 Municipalities of the Province,  
Heads of National Government Agencies (NGAs), Non-Government Organizations,  
People's Organizations and sectoral representatives,  
as well as representatives from the Academe, Business Sector,  
Religious Sector, and many, many others,  
have given this plan a tangible existence.

The small but visionary grouping of beautiful minds – also known as the “Saturday group”,  
people whose experience, vision and wisdom helped to steer  
the planning process in the right direction,  
also deserve our thanks:

Rosalinda Paredes, Nestor Pestelos, May Blanco, Michael Cañares, Liza Quirog, Nestor Canda,  
Romeo Teruel, May Limbaga, Peter Ross Retutal, Emilia Roslinda, Marietta Gasatan, Ma. Fe Dominise,  
and so many others whose advice and guidance  
have given us the best possible development and  
physical framework plan to steer Bohol's development  
for the next six years.

Many, many, many thanks, from the bottom of our hearts!



## *Preface*

---

This Provincial Development and Physical Framework Plan (PDPFP) of the Province of Bohol for CY 2010-2015, mandated under Joint Memorandum Circular 01-2007 of the four oversight agencies of the national government, is drawn up with the technical guidance from the National Economic Development Authority (NEDA), particularly through its Guidelines on Provincial/Local Planning and Expenditure Management (PLPEM), an endeavor assisted by the Asian Development Bank (ADB).

The preparation of this plan, an undertaking that is markedly of a more spatial character than previous Medium-Term Development Plans, has also made good use of assistance in spatial planning techniques from the AusAID-funded Local Governance Development Programme (LGDP), as well as GIS mapping skills made possible by the assistance of the Philippines-Australia Human Resource Development Facility (PAHRDF) and other ODA-assisted programs.

The PDPFP unifies the actions of all sectors of operation of the Provincial Government while aligning it with the development thrusts at the regional and national levels for the period from 2010 to 2015 through which Bohol's programs, projects, and activities will be undertaken within the given timeframe, fitted to the province's vision wherein development efforts are organized and streamlined, unnecessary replication of programs and projects are eliminated, investment in compatible industries encouraged, maximized results from government input, and entrepreneurial activity stimulated and economic distribution as means of job generation pursued and the incidence of extreme poverty reduced.

It prescribes the programs, projects and activities that will be undertaken within the given timeframe, fitted to the province's vision. It aims to organize and streamline development efforts, eliminate unnecessary replication of programs and projects, encourage investment in compatible industries, maximize results from government input, and stimulate entrepreneurial activity and pursue economic distribution as means of job generation and reducing the incidence of extreme poverty.

This plan comes out of a process that has been informed and shaped by contemporary global realities, such as the recent global financial and economic downturn, the phenomenon of climate change/global warming, the now-undeniable importance of disaster risk management, the aforementioned global priority towards reducing extreme poverty, the current discourse on mainstreaming gender and development, and many other current topics.



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*Acronyms*  
PDPFP 2010-2015

Acronyms	Title	Acronyms	Title
ALS	Alternative Learning System	DepEd	Department of Education
ADB	Asian Development Bank	DRR	Disaster Risk Reduction
A & D	Alienable and Disposable	DCC	Disaster Coordinating Council
BAMP	Bohol Agriculture Master Plan	DPWH	Department of Public Works and Highways
BEMO	Bohol Environment Mgt Office	DSWD	Department of Social Welfare and Development
BISU	Bohol Island State University		
BIWSSMP	Bohol Integrated Water Supply System Master Plan	EIA	Environmental Impact Assessment
BLCI	Bohol Light Company Incorporated	ECC	Environmental Compliance Certificate
BOEX	Bohol Outdoors Explorer Club, Inc.	EMB	Environmental Management Bureau
BLECS	Bohol Law Enforcement Communication System	ESWM	Ecological Solid Waste Management
		FP	Family planning
BOHECO	Bohol Electric Cooperative	GAD	Gender and Development
BFP	Bureau of Fire Protection	GDI	Gender-related Development Index
BAS	Bureau of Agricultural Statistics	HDI	Human Development Index
BSWM	Bureau of Soil and Water Mgt	HH	Households
BWUI	Bohol Water Utilities Incorporated	HLURB	Housing Land Use Regulatory Board
CAAP	Civil Aviation Authority of the Philippines	HPI	Human Poverty Index
		IMR	Infant Mortality Rate
CARP	Comprehensive Agrarian Reform Program	IPs	Indigenous Peoples
CBFMA	Community-based Forest Management Agreement	ICLEI	International Council for Local Environmental Initiatives
		IPCC	Inter-governmental Panel for Climate Change
CBR	Crude Birth Rate	LC	Land Classification
CENRO	Community Environment and Natural Resources Office	LGU	Local Government Unit
		LPRAP	Local Poverty Reduction Action Plan
CCA	Climate Change Adaptation	LMB	Land Management Bureau
CEO	City Engineers Office	LTO	Land Transportation Office
CHED	Commission on Higher Education	LWUA	Local Water Utilities Administration
CIP	Communal Irrigation Project	MPA	Marine Protected Areas
CIS	Communal Irrigation System	MDC	Municipal Development Council
CLUP	Comprehensive Land Use Plan	MDG	Millennium Development Goals
CPR	Contraceptive Prevalence Rate	MHU	Municipal Health Unit
CRM	Coastal Resource Management	MMR	Maternal Mortality Rate
CLUP	Comprehensive Land Use Plan	MFARMC	Municipal Fisheries and Aquatic Resource Management Council
CRMP	Coastal Resource Management Plan	MPDO	Municipal Planning and Dev't Office
DA	Department of Agriculture		
DAR	Department of Agrarian Reform	MGB	Mines and Geosciences Bureau
DOT	Department of Tourism	NEDA	National Economic Development Authority
DOH	Department of Health		
DRM	Disaster Risk Management	NGCP	National Grid Corporation of the Philippines
DENR	Department of Environment and Natural Resources		

Acronyms	Title	Acronyms	Title
NGA	National Government Agency	SAR	Search & Rescue Unit
NGO	Non Government Organization	SB	Sangguniang Bayan
NIA	National Irrigation Administration	SIPC	Southern Island Power Corporation
NIPAS	National Integrated Protected Areas System	SP	Sangguniang Panlalawigan
		SWECO	Swedish Consultants
NPAAD	Network of Protected Area for Agricultural Development	SWM	Solid Waste Management
		TELOF	Telecommunication Office
NSCB	National Statistical Coordination Board	TWG	Technical Working Group
NSCB-WB	National Statistical Coordination Board-World Bank	TESDA	Technical Education and Skills Development Authority
NSO	National Statistics Office	TVET	Technical-Vocational Education and Training
OPSWD	Office of the Provincial Social Welfare and Development	VAWC	Violence Against Women and Children
PACBRMA	Protected Area Community-based Resource Management Agreement		
PDC	Provincial Development Council		
PDIP	Provincial Development Investment Program		
PDMS	Poverty Database and Monitoring System		
PDPFP	Provincial Development and Physical Framework Plan		
PEO	Provincial Engineers Office		
PGBh	Provincial Government of Bohol		
PNRC	Philippine National Red Cross		
PRMF	Provincial Road Management Facility		
PPA	Philippine Ports Authority		
PRNDP	Provincial Road Network Development Program		
PTC	Provincial Training Centers		
PLPEM	Provincial/Local Planning and Expenditure Management		
PHO	Provincial Health Office		
PLDT	Philippine Long Distance Telephone		
PPDO	Provincial Planning and Development Office		
PPC	Philippine Postal Corporation		
RCDG	Reinforced Concrete Deck Girder		
SAFDZ	Strategic Agriculture and Fisheries Development Zone		

## A. INTRODUCTION

Bohol is one of the island provinces of the Philippines, the 10th largest island of the archipelago. It is one of four provinces of Region VII or the Central Visayas Region. It is roughly oval in shape and predominantly hilly and rolling with narrow coastal plains. It is a First Class-A province as classified by the Department of Finance. Bohol has 47 municipalities and one component city that serves as the provincial capital and primary gateway of Bohol. The municipalities are grouped into three congressional districts with a total of 1,109 barangays. In the 2007 census of population, a total of 1.23 million Boholanos resided in the province.

Bohol is the homeland of the 4<sup>th</sup> President of the Republic of the Philippines and President of the 1972 Constitutional Convention, Pres. Carlos P. Garcia.



### 1. Historical Background of Bohol Province

#### 1.1 Origin/History<sup>1</sup>

Bohol first came into the attention of Western chroniclers in 1521 when Pigafetta, chronicler of the ill-fated Magellan expedition, reported the burning of the ship *Concepcion* off the coast of Maribojoc.

But it was only in March of 1565 when the Spaniards, this time under the command of Miguel Lopez de Legaspi, landed and stayed for over a month in Bohol, even making the famous Blood Compact with local chieftain, Sikatuna.



Formal hispanization of the island, however, started much later, in 1596, when the island of Bohol became part of the *encomienda* of Doña Catalina de Bolanos. It was this lady who requested for two Jesuit missionaries to start the process of Christianizing the natives. Because of the dearth of missionaries and Spanish settlers alike, Spanish presence in Bohol was minimal for the next two hundred years, consisting mainly of religious missionaries and a few tribute collectors. Two main local revolts – that of Tamblot in 1621 and Dagohoy in 1744, as well as the notorious piratical raids of the time, reduced Bohol to a colonial backwater. This persisted until after the end of the Dagohoy rebellion in 1829 when peace finally reigned in the island.

It was during the Spanish era that Bohol was politically a part of Cebu and was called a *residencia*. It became a separate politico-military province on July 22, 1854

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<sup>1</sup> Text prepared by Mr. Marianito Jose Luspo



together with the island of Siquijor. It was also during this regime that several big stone churches were built which still stand today attesting to Bohol's colonization and Christianization.

With the coming of peaceful times in Bohol, the Spanish colonial government started setting up civil and political infrastructures in the island. By 1854, Bohol was deemed ready to stand on its own feet and so by royal decree, it was declared a province separate from Cebu, with Tagbilaran as its capital. Many things improved in Bohol during this period; however, these all came to a head with the sale of the entire colony to the United States of America in December of 1898.

In the interregnum, from 1899 to 1900 when American occupation troops finally landed in the island, Bohol was ruled by Boholanos themselves in the political set-up called "Gobierno de Canton de Bohol." The illustrious Don Bernabe Reyes from Dauis served as its elected president. This heady experience in self-government lasted until March of 1900 when the coming of the Americans put an end to it. Although the Boholanos received their new masters in peace, they were actually resentful over the loss of their independence. Six months after, Boholanos rose in open rebellion against the Americans which resulted in the death of so many people and the destruction by fire of almost all its towns. The Boholano rebellion lasted until December 23, 1901. Don Aniceto Clarin of Loay was appointed governor of Bohol by the American colonial administration.

If the Americans destroyed much of Bohol during the rebellion, they also poured all their resources into the island upon cessation of hostilities. The result was the construction of roads, bridges, schools and other public buildings that soon became the pride and hallmark of the American colonial period. Growth and development in Bohol was further enhanced through the initiative of one person – Senator Jose Arsenio Clarin, the son of Don Aniceto who rose to become Speaker *Pro-Tempore* of the Philippine legislature during the Commonwealth period. Using his influence, he caused many infrastructure projects to be raised in the island, even causing the development of the interior parts of Bohol through the homestead project in the 1920's and 30's. New roads were also opened all over the island and new modes of transportation were introduced.

The optimistic mood that typified the 20's and 30's in Bohol soon dissipated with the arrival of the 1940's when, more than ever, the people of Bohol became aware of war clouds looming over the archipelago. In 1941, Japan bombed Pearl Harbor and soon invaded the Philippines. In March of 1942, Japanese Imperial troops landed in Bohol and occupied the island under a regime of terror and oppression for the next three years. The rapacity and cruelty of the occupiers were only put to check by the stiff resistance of the local guerillas who were entrenched in their



mountain hide-outs. Finally, in May of 1945, the newly arrived Americans successfully drove away the last of the Japanese occupiers.

Under the Philippine Republic, Bohol's fortune started to wane once more. In the early 50's, thousands of Boholanos joined the exodus to the Mindanao homestead areas opened by the government as a way of defusing the HUK insurgency wars earlier in the decade. Although local prestige soared as a result of the elevation of Vice-President Carlos P. Garcia to the presidency as a result of the death of Ramon Magsaysay in 1957, this did not result in large-scale development projects in his home island. When Garcia finally stepped down from power in 1961, Bohol remained about the same backwater it found itself in by the end of the World War. The dismal economic face of Bohol further resulted in more outward migration by Boholanos. Even its best minds studied outside the province and worked far away from home.

In 1995, things started to lighten when the fast-craft ferries were introduced in Bohol, revolutionizing travel and transforming the island as a reachable tourism destination. Suddenly, Boholanos started to realize the decades of neglect by the national government had actually resulted in something good, for in the near absence of economic movements in the island, Bohol had actually preserved not just the lush biodiversity in its environment, it has also resulted in the preservation of structures that are now deemed part of a fabulous heritage that could be packaged to consist the core of an irresistible eco-cultural offering for local and foreign tourists.

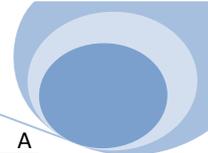
Today, Bohol is still considered one of the most attractive eco-tourism destinations in the entire country.

## **1.2 Year Province was founded**

Bohol was made a province by virtue of Republic Act 2711<sup>2</sup> on 10 March 1917 including 48 other local government units. In 1879, Bohol was composed only of 34 municipalities having a population of 253,103. Today, Bohol has a population of more than 1.2 million, comprising 47 municipalities and a city serving as its capital, grouped into three congressional districts.

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<sup>2</sup> Act No. 2711, popularly known as the *Revised Administrative Code* (1917), established most of the modern-day provinces of the Philippines: the province of Camarines was split into Camarines Norte and Camarines Sur and the province of Bohol was created.



### 1.3 Etymology

The name Bohol was supposedly derived from the word *Bo-ol*. Bohol's people are said to be descendants of the last group of inhabitants of the country called "*pintados*", meaning the tattooed ones<sup>3</sup>. Before the Spaniards came in 1521, it is believed that Boholanos already had a culture of their own as evidenced by artifacts dug in Tagbilaran City, in Daus and Panglao towns. Excavations in ancient burial grounds on the mainland have unearthed T'ang Dynasty porcelain, Sung and Ming vases and other artifacts of considerable age which attest to Bohol's early contact with travelers/traders from China and other southeast Asian civilizations. Local cotton, called *lumpot*, was most desired by these traders as material for winter clothing. This formed the basis of a lucrative trade item to be bartered for Chinese porcelains.

## 2. Plan Objectives and Context

The Provincial Development and Physical Framework Plan (PDPFP) is a proactive planning tool which unifies the actions of all sectors of operation of the Provincial Government while aligning it with the development thrusts at the regional and national levels for the period 2010 to 2015. The PDPFP is the primary technical guide to the development of the province. The plan's specific objectives are to:

- Define the overall development framework for the province, as enshrined in its Vision, Mission, Goals and Strategies (VMGS);
- Provide the analytical basis for understanding existing conditions and identifying key development issues, goals, objectives and targets of the province;
- Translate the vision into strategies that can be implemented to attain the goals, objectives and targets;
- Identify programs and projects consistent with the strategies and which serve as inputs to the Provincial Development Investment Program (PDIP); and
- Provide a spatial/physical representation of the aforementioned plan components, where possible.

The PDPFP 2010-2015, like the MTDP before it, provides the blueprint for development in the next six years for the Province of Bohol. It is the key link in the network of plans covering the national, regional, provincial and city/municipal levels. However, unlike the MTDP, it is more spatial/visual in character, and seeks to pinpoint indicative physical locations of proposed programs and projects, as far as is possible.

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<sup>3</sup> Putong, C., Bohol & Its People, July 1965



### 3. Plan Coverage

#### 3.1. Historical Coverage

This PDPFP covers the period 2010-2015, and has been purposely drawn up to coincide with the next two terms of the Bohol Provincial Government (PGBh) administration, as well as the next term of the national leadership. This should make the process of plan implementation more practical and convenient.

#### 3.2. Geographical Coverage

This plan covers the entire province of Bohol, its mainland and surrounding islands. For planning purposes, the Province is subdivided into five BIAD or Bohol Integrated Area Development clusters with BIAD 1 composed of 15 municipalities, BIAD 2 with 9 municipalities and BIADs 3, 4 and 5 with 8 municipalities each, as listed below (Map 1). The bases for the clustering were practical considerations such as geographic proximity to each other and shared natural and agricultural resource base. Development within these clusters

is encouraged through inter-municipal partnership and collaboration.

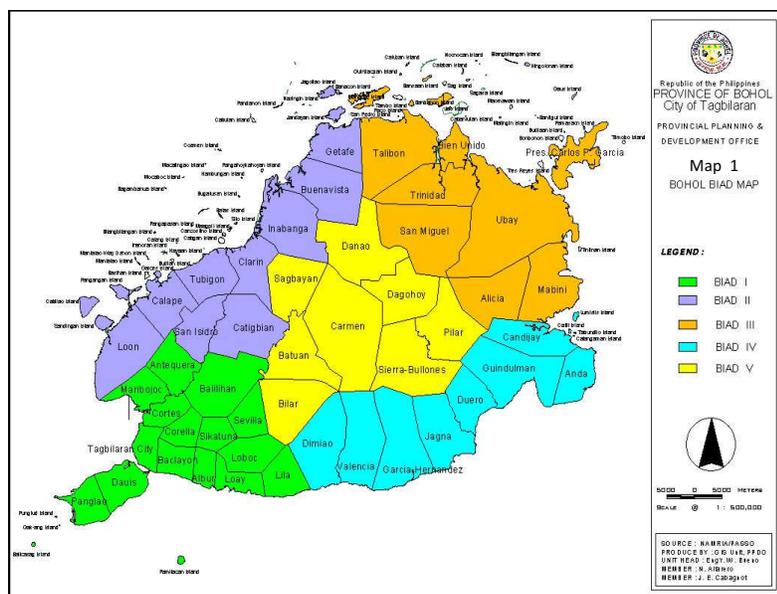
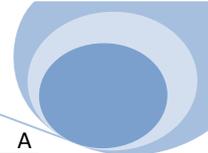


Table 1. BIAD Town Components

BIAD 1	BIAD 2	BIAD 3	BIAD 4	BIAD 5
1. Alburquerque	1. Buenavista	1. Alicia	1. Anda	1. Batuan
2. Antequera	2. Calape	2. Bien Unido	2. Candijay	2. Bilar
3. Baclayan	3. Catigbian	3. Mabini	3. Dimiao	3. Carmen
4. Balilihan	4. Clarin	4. Pres. Garcia	4. Duero	4. Dagohoy
5. Corella	5. Jetafe	5. San Miguel	5. Garcia-Hernandez	5. Danao
6. Cortes	6. Inabanga	6. Talibon	6.. Guindulman	6. Pilar
7. Dauis	7. Loon	7. Trinidad	7. Jagna	7. Sagbayan
8. Lila	8. San Isidro	8. Ubay	8. Valencia	8. Sierra Bullones
9. Loay	9. Tubigon			
10. Loboc				



### 3.3. Sectoral Coverage

As indicated in the PLPEM guidelines issued by NEDA/ADB, these are the core elements of the plan, with their corresponding sectors:

Table 2. Core Elements & Sectors Of The Plan

Core Element	Sector
Population	Population
Economic Activity	Agriculture, fisheries, forestry, trade, industry, services, tourism
Physical Resources	Environment, natural resources, transport
Income/Access to Services	Health, education, housing, social welfare, public works, energy, security, other services and facilities (especially for vulnerable groups)
Land Use	Physical integration of all sectors

The outline of this main document hews to the above sectors where possible. The latter sections setting forth the definition of development issues, goals, objectives, etc., however, are categorized according to the five development sectors of Environment Management, Social Development, Economic Development, Infrastructure Development, and Development Administration. This provides a more direct link between the output of the STWGs and the identified development issues, goals and so on that are translated to its spatial dimension.

## 4. Outline of the Plan

The rest of this plan follows this basic order:

1. Planning Environment  
*Descriptions and analyses of the social, economic, and physical environment of the province that serve as basis for identifying development challenges and issues and subsequent courses of action (strategies, plans, programs, and activities).*
2. Development Issues/Problems  
*Multi-sectoral and sectoral issues and challenges in the province to be addressed*
3. Overall Development Framework  
*The overarching development and land use policy framework of the province and opportunities facing and accompanying the task of accomplishing the identified development goals, objectives and targets.*
4. Spatial Strategies, Plans, Policies, Programs and Activities  
*Specific strategies, plans, policies, programs and activities to address development issues and accomplish objectives.*



## 5 Plan Preparation Process

Once again, Bohol has proven to be a champion for “building alliances”, this time, with the formulation of the PDPFP through a participatory process enjoining all representatives from the development sectors in the province. This PDPFP has been drawn up over a long, participatory, multi-stakeholder planning process through the Sectoral Technical Working Groups (STWGs) composed of government and various sectors of society, appointed by the Governor through Executive Order 09, S.2009<sup>4</sup>. The STWGs composed of the departmental offices of the Provincial Government, Sangguniang Panlalawigan members, national agencies in the province, non-government organizations as well as business and private sector representatives were enjoined to put together a “framework for action” that intends to provoke initiative towards a direction for future spatial development of Bohol.

The planning preparation process of the PDPFP included the following steps:

Process	Expected Output	Timelines
<b>Phase 1. Getting Started</b> <ul style="list-style-type: none"> <li>Organizing, orientation and mobilizing the Planning Team</li> <li>Planning Scenarios (Status of MTDP 2004-2009 Implementation)</li> </ul>	Planning Team organized/ oriented Orientation of STWGs Existing MTDP Assessed	Feb-March 2009 March 24, 2009
<b>Phase 2. Profiling</b> <ul style="list-style-type: none"> <li>Data gaps, trending and potentials that can be utilized</li> <li>Maps preparation</li> </ul>	<ul style="list-style-type: none"> <li>SEP/ Ecological Profile Drafted</li> <li>Maps prepared</li> <li>Data gaps/ trend analyzed</li> </ul>	April-May 2009
<b>Phase 3. PDPFP Formulation</b> <ul style="list-style-type: none"> <li>Series of STWG meetings               <ul style="list-style-type: none"> <li>Revisiting Provincial VMG &amp; Setting the Sector VMG</li> <li>Investment Programs (PPAs ID)</li> </ul> </li> <li>Stakeholders consultation</li> </ul>	VMG Drafted 6-years objectives, targets, strategies, PPAs identified Devt. concerns considered; Sector/ Sub-sector Objectives, Targets & Strategies	June-July 2009
<b>Phase 4. Drafting of the PDPFP</b> <ul style="list-style-type: none"> <li>PDPFP write-up by sector &amp; Finalization of maps</li> <li>Presentation/Validation of Sector Situationer &amp; Development Framework</li> </ul>	PDPF Plan formulated Generated/ integrated suggestions, comments Plenary Assembly of STWGs (8/28/09) Integrated Spatial Plan Validation Session (9/23/09)	Aug 2009-Jan 2010 Feb-10
<b>Phase 5. Finalization/ Approval</b> <ul style="list-style-type: none"> <li>Plan Review by NEDA</li> <li>PDPFP Finalization</li> <li>Presentation/ Approval by the PDC</li> </ul>	Revision based on NEDA comments PDPFP approved by PDC, PPOC and SP (Feb. 2, 2010)	Dec. 2009 - February 2010

<sup>4</sup> See Annex 3



## **B BOHOL'S DEVELOPMENT VISION**

By the year 2015 and beyond, Bohol aims to become the "... prime eco-cultural and agri-tourism destination and a strong agri-based green economy with an empowered and self-reliant people who are God-loving, law-abiding, proud of their cultural heritage and committed to the growth and protection of the environment." It intends to achieve this through its twin strategies of eco-cultural tourism development and agro-industrialization.

This vision of the province will be used in all subsequent long-term and medium-term plans of Bohol Province unless changed or modified.

### **Mission:**

To continuously enhance its social, economic, cultural, political and environmental resources through effective collaboration of stakeholders for increased global competitiveness.

**Sustainable Development Call: GREEN BOHOL!**



## 2 Population and Settlements

### 2.1 Population: Regional and National Context

Final results of the latest Census of Population (POPCEN 2007) conducted by the National Statistics Office (NSO) in 2007 placed the Philippine population at 88,574,614 persons as of August 1, 2007 with the Central Visayas Region (Region 7) accounting for 7 percent of the nation's total population. Bohol, one of the provinces of Region 7, contributed 1.4 percent of the country's total population in 2007. It is the 3<sup>rd</sup> most populated province in Region 7, slightly lower than Negros Oriental (Table 3). Bohol accounted for one-fifth of the 6.4 million population of Central Visayas.

Table 3. Total Population & Annual Population Growth Rates by Province and Highly Urbanized Cities in Region 7: Census of 1995, 2000 & 2007

Region/Province/ Highly Urbanized City	Total Population				Annual Population Growth Rate (%)		
	1-Aug-07	Share of Pop (2007)	1-May-00	1-Sep-95	2000- 2007	1995- 2000	1995- 2007
Philippines	88,574,614		76,506,928	68,616,536	2.04	2.36	2.16
Region VII	6,398,628	100.00%	5,701,064	4,594,124	1.59	2.18	2.81
<b>Bohol</b>	<b>1,230,110</b>	19.22%	<b>1,139,130</b>	<b>994,440</b>	<b>1.06</b>	<b>2.95</b>	<b>1.8</b>
Cebu	2,439,005	38.12%	2,160,569	1,890,357	1.68	2.9	2.16
Cebu City	798,809	12.48%	718,821	662,299	1.46	1.77	1.58
Lapu-Lapu City	292,530	4.57%	217,019	173,744	4.2	4.88	4.47
Mandaue City	318,575	4.98%	259,728	194,745	2.86	6.36	4.21
Negros Oriental	1,231,904	19.25%	1,130,088	1,025,247	1.2	2.11	1.55
Siquijor	87,695	1.37%	81,598	73,756	1.0	2.19	1.46

Source: National Statistics Office

All provinces comprising Region 7 had decreasing annual population growth rates (APGR) but increasing population density from 1995 to 2007. Cebu Province, having the three (3) highly urbanized cities of the region, has the highest APGR and population density while Siquijor Province has lower APGR among the provinces but slightly higher population density than Negros Oriental (Table 4). Bohol's APGR for the period 2000-2007 is slower than Cebu and Negros Oriental but faster than Siquijor Province. Bohol's ranking, in terms of population growth rate, slid down to 3<sup>rd</sup> after posting the highest population

growth rate for the period 1995-2000 in the region. The population density of Bohol at 299 persons per km<sup>2</sup> is the next biggest among the provinces of Central Visayas, after Cebu Province. Its population density increase of 8 percent since 2000 is also among the highest in Region 7, second to Negros Oriental.

Table 4. Population Density & Doubling Time: Region 7

Region/ Province	Population Density (persons per km <sup>2</sup> )				Population Doubling Time (APGR = 2007-00)
	1995	2000	2007	% Inc/Dec	
Philippines	229	255	295	16%	34
Central Visayas	305	381	428	12%	44
<b>Bohol</b>	<b>242</b>	<b>276</b>	<b>299</b>	<b>8%</b>	<b>65</b>
Cebu	394	496	508	2%	42
Negros Oriental	190	209	228	9%	58
Siquijor	215	238	255	7%	70

Among the 12 cities of Region 7, Tagbilaran City ranked 9<sup>th</sup> in terms of population size with a total population of 92,297 during the census in 2007 (Figure 1).

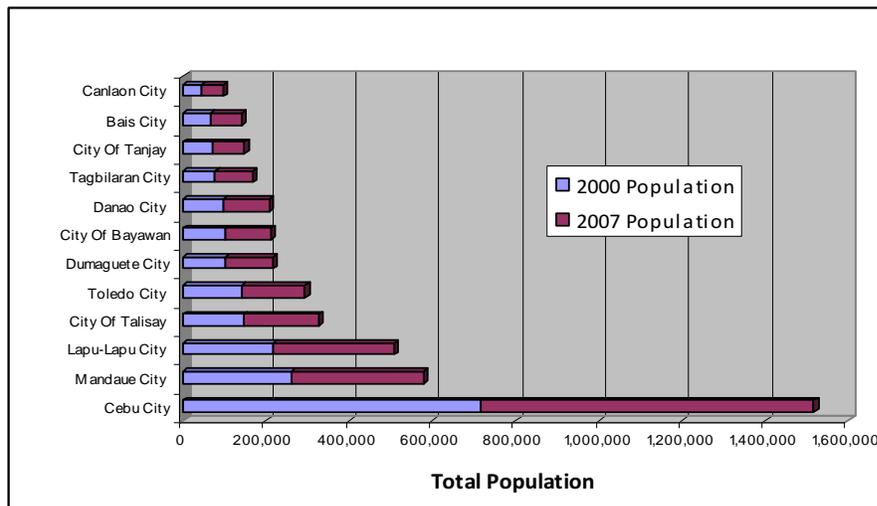


Figure 1 Population Distribution of Cities in Region 7

It will take 65 years for the population of Bohol to double while all other provinces and cities of Region 7, except for Siquijor Province, will double their population size in less number of years.

## 2.2 Size and Spatial Distribution of Population in Bohol Province

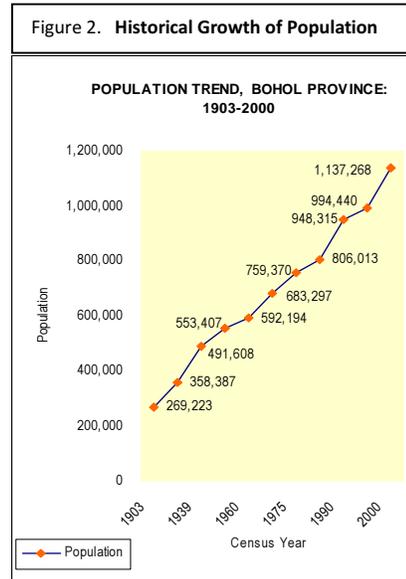
### 2.2.1 Population Size and Growth (Map 3)

In the population census in 2007, Bohol Province has a population of 1,230,110. From only 592 thousand residents in 1960, the population had almost doubled after 47 years (Figure 2). Bohol’s population increased by 90,980 persons or larger by 8.0 percent compared to the census count of 1,139,130 persons in May 2000.<sup>1</sup>

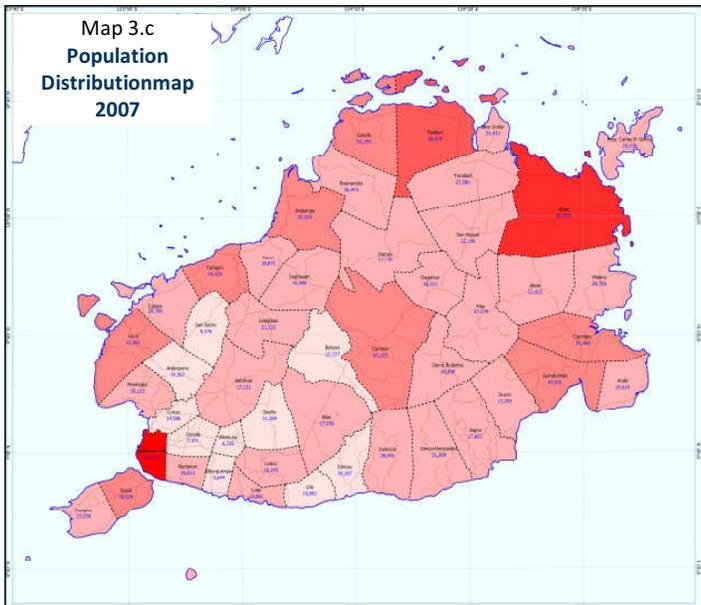
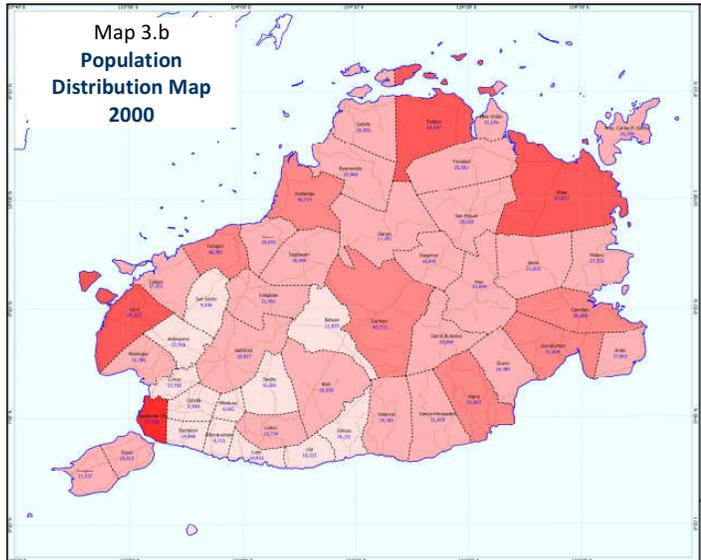
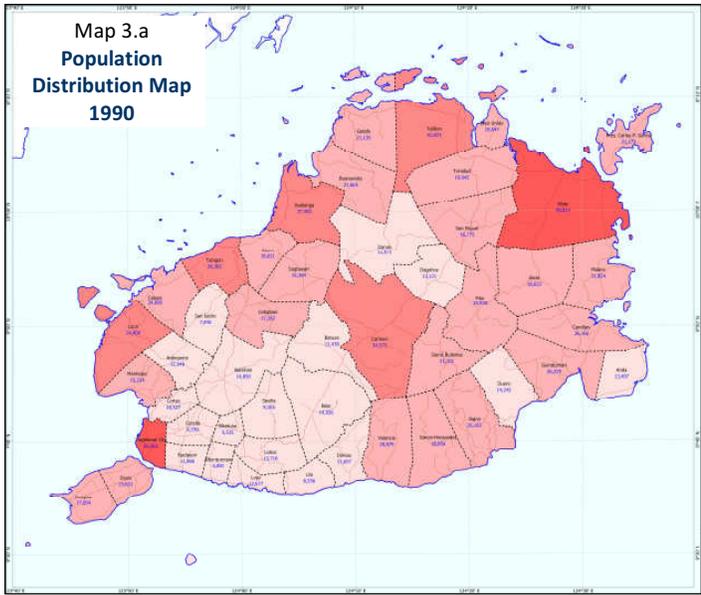
Between 2000-2007, Bohol’s population was increasing at a slower pace at 1.06% compared to the APGR of 2.95% between 1995-2000. This is among the lowest in the region for that period (regional average is 1.59%), lower than the country’s comparable growth rate of 2.04%. In 2007, the Rate of Natural Increase (RNI) was calculated at 13 persons per 1,000 population compared to 16 persons per 1,000 population in 2000. Meaning, its population was growing at 13% through natural increase in 2007.

Tagbilaran City, Bohol’s capital and only city, is the largest and fastest-growing urban center in the province which accounted for 7.5 percent of the provincial population in 2007. The top ten municipalities of Bohol with the largest settlements accounted for about 40 percent of provincial population. The towns of Corella and Sikatuna had the smallest population size accounting only for a total of 1.0 percent of Bohol’s population. There are four (4) areas in Bohol that will take less than 18 years to double its population. Tagbilaran City will take 10 years to double its population, Ubay 13 years while Talibon and Loon towns 15 and 18 years, respectively.

The number of households likewise increased by 13.6 percent from 213,215 in 2000 to 242,307 in 2007. Average household size was 5.1 persons in 2007, lower than the average household size of 5.3 persons in 2000.



<sup>1</sup> See Annex 1 for population distribution across censuses by city/municipality



Republic of the Philippines  
PROVINCE OF BOHOL  
City of Tagbilaran

**PROVINCIAL PLANNING &  
DEVELOPMENT OFFICE**

Map 3.0  
**Population Distribution  
Maps  
1990, 2000 & 2007**  
**Bohol Province**

**LEGEND**

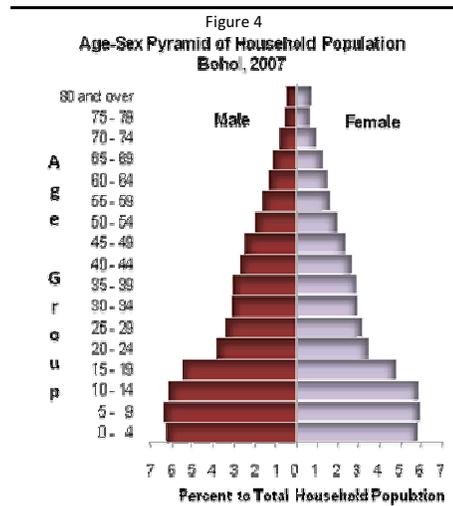
- Coastline
  - National Road
  - Provincial Road
  - Municipal Boundary
  - Talibon Name of Municipality
  - 41,873 Population
- Population Distribution**  
*Census Year 1990*
- Less than 15,000
  - 15,000 to 30,000
  - 30,000 to 45,000
  - 45,000 to 60,000
  - 60,000 to 80,000
  - Over 80,000



Given its current growth rate, the population of Bohol is expected to grow to 1,349,704 by the end of the plan period (2015). This translates into an additional 119,594 persons starting from year 2008 or an average of 13,288 persons every year assuming current APGR remains.

**2.2.2 Age and Sex Composition**

Bohol’s population is predominantly young with most of its population belonging to the younger age groups (Figure 4). In 2007, the median age of the household population of the province was 22 years, which means that half of the household population were below 22 years old. This is higher when compared to median age of 21 years in 2000. It is, however, noteworthy to point out that the number of elderly population (aged 65 and older) in the province has increased significantly from about 34 thousand in 1970 to more than 77 thousand in 2000, adding about 1.5 thousand elderly people annually. In 2007, the elderly population accounted for 13% of total population of Bohol (156 thousand). About 26% of households in Bohol in 2000 is headed by an elderly, mostly males. Elderly women living alone comprised about 2% of elderly female heads, much higher than those of elderly men. About 12 out of 100 elderly males were heads of households with less than 5 members.



Children in the ages 5 to 9 years comprised the largest age group in Bohol, posting 12.4 percent of the total household population, followed closely by age groups 0 to 4 years and 10 to 14 years with 12.1 percent each. Approximately 48 percent of the total population of Bohol in 2007 were of reproductive age (15-49 years old). About 49 percent of them are females mostly in the 15 to 19 years age group (10.26 percent).

The population in the “Economically” Productive Ages (15 to 64 years old) represented more than half (56.6 percent) of the household population or the working-age population (15 to 64 years) in 2007. About 36.6 percent were young dependents (under 15 years) while 6.8 percent were elderly dependents (65 years and over). There were more elderly females than males in Bohol. The overall dependency ratio in 2007 was 76.6, up from 72.6 in 2000. This means that for every 100 persons in the working-age population in 2007, there were 77 dependents (65 young and 12 old dependents).

About 57 percent of the household population of Bohol were of voting age (18 years old and over) as of 2007. The size of the voting-age population of Bohol in 2007 was 697,175 while the voting-age population recorded in 2000 was 656,867 or 57.7 percent

of the household population. There were more male voters than females as they comprised 50.2 percent of the total voting population in 2007.

Males outnumbered the females in Bohol in 2007 with a Sex Ratio of 103 males for every 100 females. In the 2000 Census, the Sex Ratio was lower at 101.6 males for every 100 females. Males dominate the age groups 0-44 years in both censuses.

## **2.3 Spatial Distribution**

### **2.3.1 Percentage of Population by Geographic Classification**

The total population in the coastal area of Bohol comprises 42 percent of its provincial population in 2007 compared to 28 percent in 1990. Of the total coastal population, 12 percent of the province's populace were residing in the island barangays of Bohol (Table 4, Annex 1).

### **2.3.2 Population Density**

Bohol's population density of 299 persons per sq. km. in 2007 is the second highest in the region. This is 7% higher than in 2000. As shown in Map 5 below, most of the densely populated areas in the province are found along the coast, concentrated along the north to northeastern part. The LGU with highest population density is Tagbilaran City at 3,015 persons per km<sup>2</sup> in 2007, followed by the municipalities of Daus, Tubigon, Bien Unido and Baclayon while the town of Balilihan has the lowest at 114 persons per km<sup>2</sup> in 2007. Aside from Tagbilaran City, the town of Daus had the largest increase among the LGUs of Bohol in terms of population density between 2000 and 2007 (Table 5, Annex 1).

Increases in density in 2007 are particularly noticeable around the neighboring municipalities of Tagbilaran City. Most dense settlements in 1990 and 2000 remained the same among the top 4 areas (Tagbilaran City, Daus, Tubigon and Bien Unido). But in 2007, Bien Unido was replaced by Baclayon as the 4<sup>th</sup> most densely populated town in Bohol. As shown in Table 5 (Annex 1), increases in density are notable in Baclayon (17%), Daus (28%), Alburquerque (10%), Corella (19%) and Maribojoc (7%). Such trend suggests the city's influence has extended to include these neighboring municipalities. By the end of the planning period in 2015, Bohol's population density will be 328 persons per km<sup>2</sup>.

Per HLURB standards, Bohol is still categorized as a low-density area.



### 3 Physical Resources

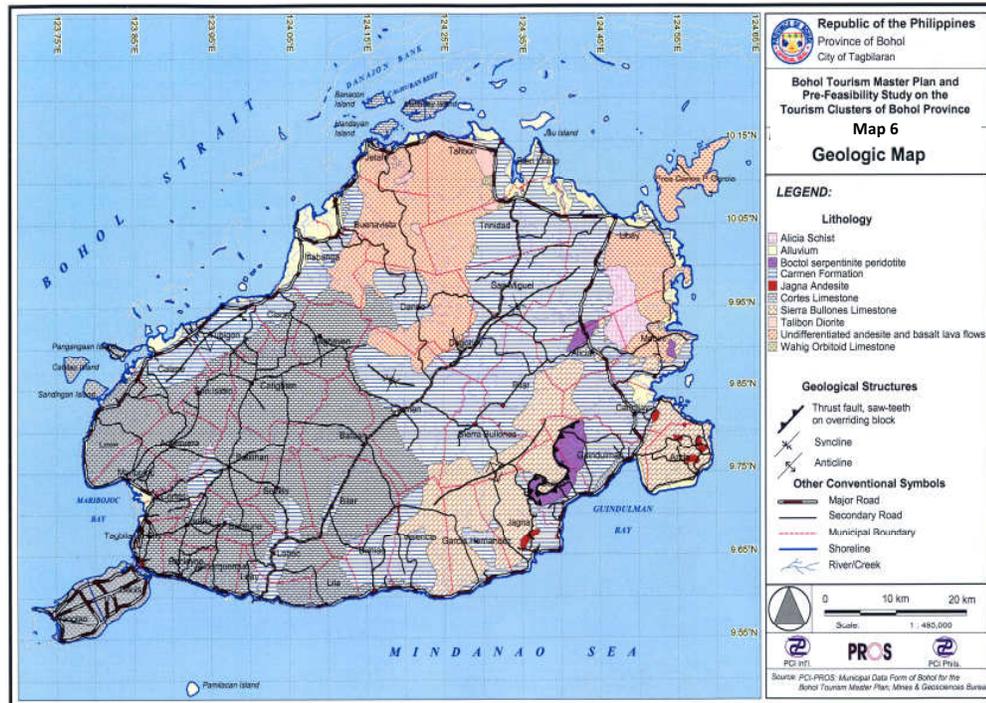
Bohol is endowed with a rich biodiversity and natural resources that plays an essential role in guiding its future development for agriculture, industry, tourism, settlements, culture and infrastructure in both the medium and long-term time frame. It has a high diversity of flora and fauna found in the different ecosystems of the island such as its forests, reefs, farmlands, in zones along creeks and rivers, caves and marine areas. The quality of life in any given area is extremely dependent on the vibrant condition of these ecosystems and biological resources.

#### 3.1 General Land and Water Characteristics and Resources

Bohol has a total land area of 411,726 hectares with 654 kilometers of coastline and 6,245 square kilometers of municipal waters covering its major islands and islets (Table 10, Annex 1).<sup>2</sup> The province is within four major resource boundaries, i.e., upland/forestry, lowland/agriculture, coastal/marine and water boundaries.

##### 3.1.1 Main Geological Features of Bohol<sup>3</sup>

The island province of Bohol is predominantly a sedimentary island. It developed from the magmatic, tectonic mechanism that resulted from the underthrusting of the southwest Philippine Plate east of Samar and Surigao<sup>4</sup>. Ongoing erosion, transport and sedimentation continue to accumulate marine and terrestrial deposits in the Bohol basin.



<sup>2</sup> Natural Resource Database, 2001

<sup>3</sup> Technical Report 2, Geology, Soil and Land Resources Appraisal and Training Project (Philippines), Bureau of Soils-UNDP 1980.

Bohol is composed of 12 rock formations that exhibit different landforms<sup>5</sup>. The oldest rock formation belongs to the Basement Complex particularly found at the eastern flank of the island. Because of the sub-crustal movements like faulting, seven (7) different geomorphologic landforms were produced, namely, the Anda Peninsula, Loon Peninsula, Northwestern Area, Central-Northern Sedimentary Area, Eastern Volcanic, Limestone-Haycock Hills and Central Volcanic (Map 6).

The major part of Bohol Island occupies the southeastern portion of the Visayas sea basin. The basement rocks underlying Bohol are composed of metamorphic and ultramatic rocks. These types of rocks are found in the eastern part of the province, which roughly defines a north-northeast alignment. In the southwest is an ophiolite-metamorphic belt with a similar trend that extends from Zamboanga to Sulu Islands. The pre-tertiary diorite plutons in Bohol are believed to be representatives of a southeast facing arc system related to inactive northeast trending trench, a segment of which is defined by the associated ultramatic-metamorphic rock assemblages in the province.

### 3.1.2 Topography and Slope<sup>6</sup>

#### Topography Range

Bohol's terrain is variable from nearly flat at the plains to low rolling, moderate to very steep sloping with 5 to 50 meters high cliffs in the Sierra-Bullones limestone formation. The more rugged terrain is found in the southern part of the province although the Ubay volcanic rocks and Boctol serpentinite in the north and northeast are of moderate and rugged slopes in most of their outcrop areas. The central valley is almost rolling to moderately steep.

There are several mountain ranges found in Bohol. Two sets of them are found in the northeastern side of the mainland and located between the municipalities of Alicia and Ubay that generally trend to the north and south directions with a maximum elevation of about 404 meters above sea level. The northern end of the these mountain ranges is drained by the Lomangog River while the southern part by the east-flowing San Pascual River which empties into the Cogtong Bay. Farther east are two other mountain ranges, the Mt. Tanawan and Mt. Candungao with 460 and 500 meters elevation, respectively. Both are prominent landmarks rising as they do several meters above the surrounding landscape. From Mt. Tanawan going southwestward, it declines gradually in height until it finally joins southwestwardly

<sup>4</sup> Calomarde, R.I. and Ariate, E.Z. 1982, Geology and Mineral Resources of Bohol, Geological Investigation Series 82-1, Bureau of Mines and Geo-Sciences, Region 7, Cebu City

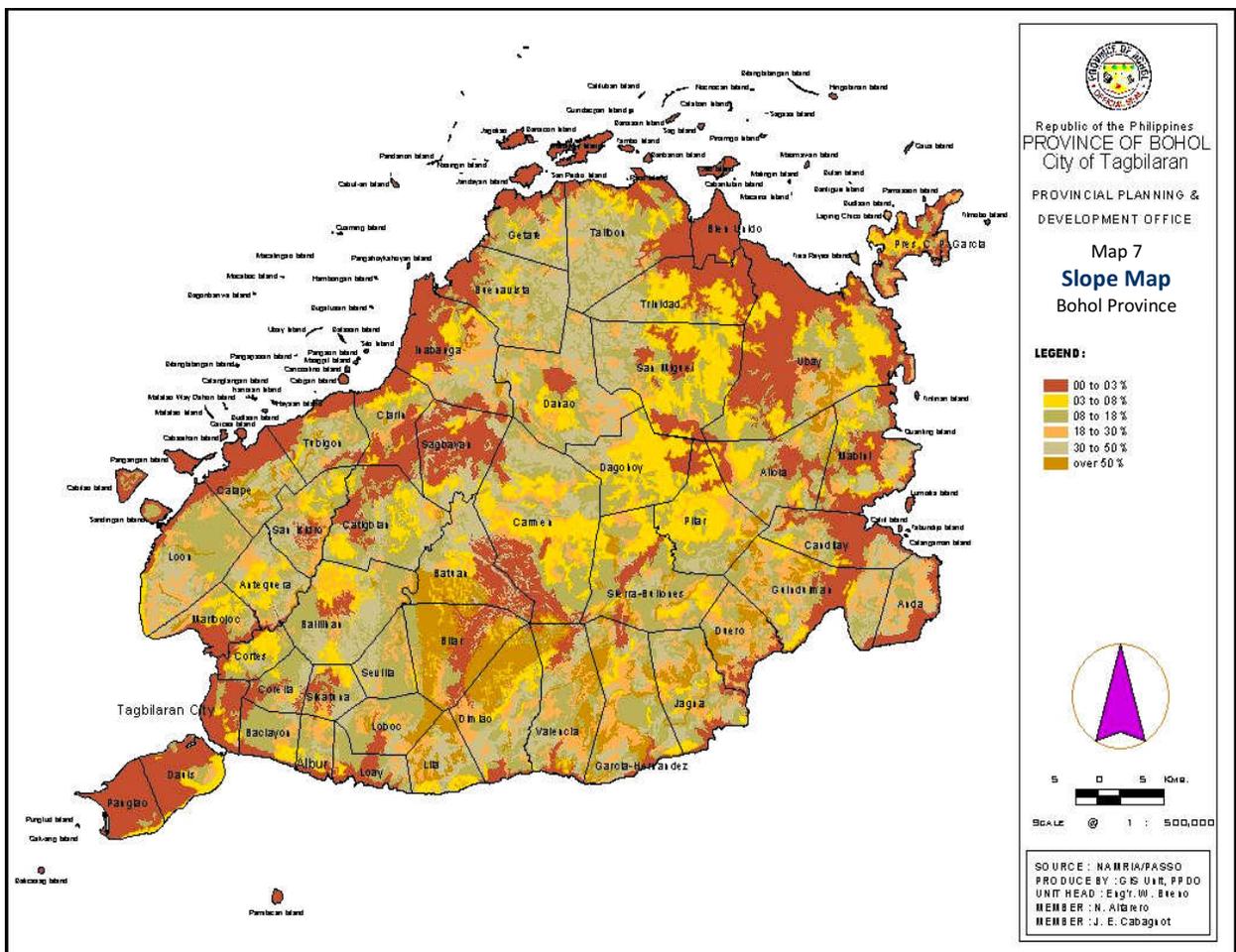
<sup>5</sup> ARCO, R.C. 1957, Geological Reconnaissance and Mineral Resources of Bohol Province, Philippine Bureau of Mines, Manila, unpublished.

<sup>6</sup> Bureau of Soils and Water Management, DA, Region 7, Cebu City

the foothills of Calape. The main range of hills extending from Calape joins to the southwestwardly trending mountain range from the interior, runs south and out to Loon Peninsula terminating in Punta Cruz, Maribojoc. The Sierra Bullones Range follows roughly the trend of the south coast. The highest point of this range and in the entire province is Mt. Mayana in Jagna town with a height of 827 meters above sea level.

**Slope Range<sup>7</sup>**

The province has six slope ranges from level to very steep. Level to nearly level sloping areas are mainly located along the coast and in the outer islands. The steep slopes are prevalent in the mountainous area, covered mainly by carbonate rocks (Wahig Limestone), volcanic extrusive and magmatic rocks (Ubay Volcanics and Jagna Andesite). *Map 7* and *Table 5* show the slope categories and the corresponding area covered in hectares.

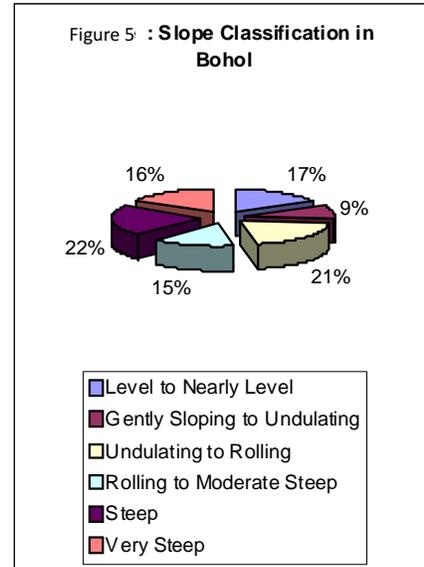


<sup>7</sup> Philippine Land and Soil Management Atlas for Central Visayas

Table 5. Slope Classification, Bohol Province

Slope Category	Classification	Area Covered (Has)	% Distribution
0 - 3 %	Level to nearly level	71,289.00	17.31%
3 - 8 %	Gently sloping to undulating	37,519.00	9.11%
8 - 18 %	Undulating to rolling	84,902.00	20.63%
18 - 30 %	Rolling to moderately steep	62,473.00	15.17%
30 - 50 %	Steep hills& mountains	89,507.00	21.75%
50 % >	Very Steep hills	6,040.00	16.04%
<b>Total</b>		<b>411,726</b>	<b>100%</b>

Source: BSWM, DA Region 7, 1992



### 3.1.3 Soil Types<sup>8</sup>

According to the Bureau of Soils and Water Management (BSWM Region 7, Cebu) there are 22 different types of soil that can be found in Bohol, which differ mainly in physical, chemical and morphological characteristics (Table 11-Annex 1).

The soil depth is relatively thin ranging from a minimum depth of 24 centimeters to a maximum of 30 centimeters. Most of the hills and ridges have meager to no soil cover due to fairly rapid surface drainage over most of the province’s land. Clay soils with fine textures are predominant throughout the island province. The dominant soil type is Ubay Clay found in the northeastern part of Bohol constituting 19.34 percent or 79,644 hectares of the total land area of Bohol (Table 6).

The soil derived from all rock types are generally clay and silty with sandy soil limited in some parts to the coastal area. Soils on steep to very steep side slopes (18-50%) are clay loam to clay. Gently sloping to undulating (3-8%) is clay while the narrow alluvial valleys are silty clay to clay. The soils in the province are predominantly brown having moderate to high inherent fertility (Map 8).

<sup>8</sup> Bureau of Soils and Water Management, Department of Agriculture 1992, Region 7, Cebu City

Planning Environment

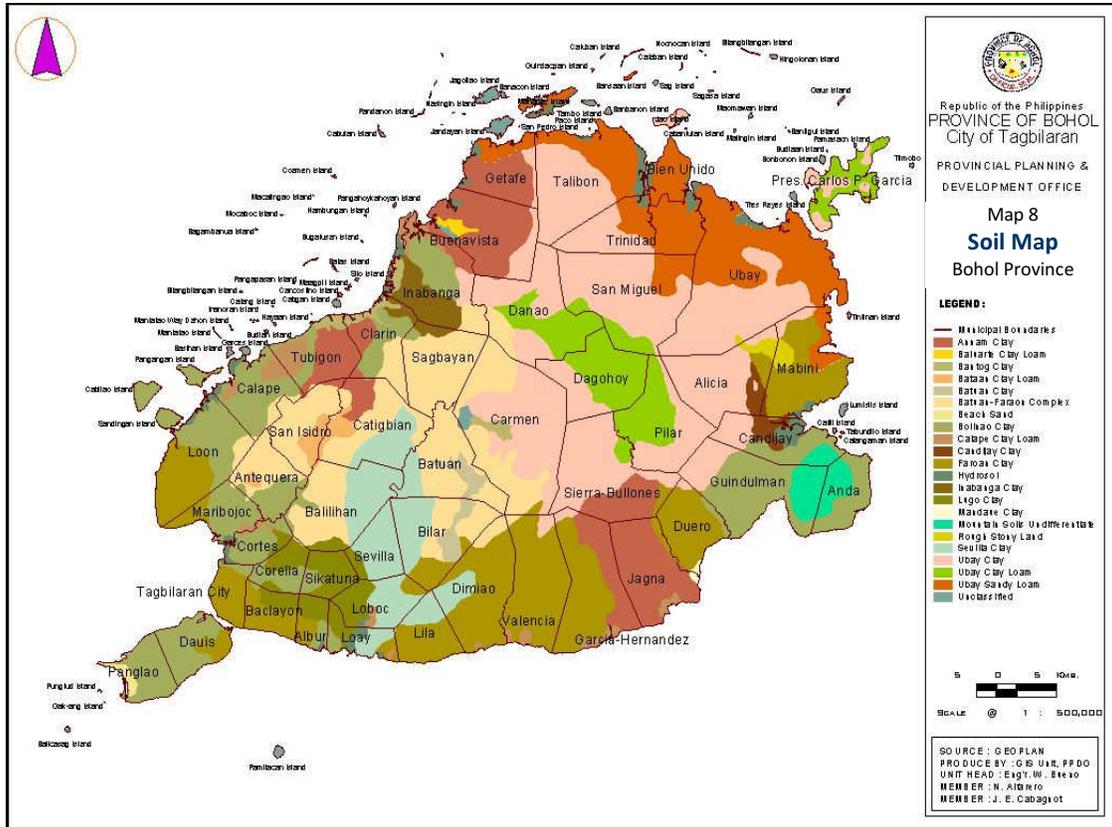


Table 6. Type Of Soils In The Province Of Bohol

Soil Types	Area Covered (Hectares)	Percentage
Ubay Clay	79,644	19.34%
Faraon Clay	59,536	13.73%
Bolinao Clay	55,871	13.56%
Batuan-Faraon Clay	47,763	11.60%
Annam Clay	37,140	9.02%
Ubay Sandy Loam	62,414	15.16%
Sevilla Clay	23,906	5.81%
Lugo Clay	11,713	2.84%
Hydrosol	6,372	1.55%
Calape Clay	5,237	1.27%
Batuan Clay	2,705	0.65%
Batuan Clay Loam	2,395	0.58%
Bantog Clay	1,834	0.44%
Rough Stony Clay	1,490	0.36%
Candijay Clay	1,307	0.32%
Inabanga Clay	407	0.09%
Baluarte Clay Loam	401	0.10%
Beach Sand	531	0.13%
Mandaue Clay Loam	138	0.03%
Undifferentiated	5,833	1.42%
Unsurveyed areas (islets)	8,089	1.96%
<b>Total</b>	<b>411,726</b>	<b>100%</b>

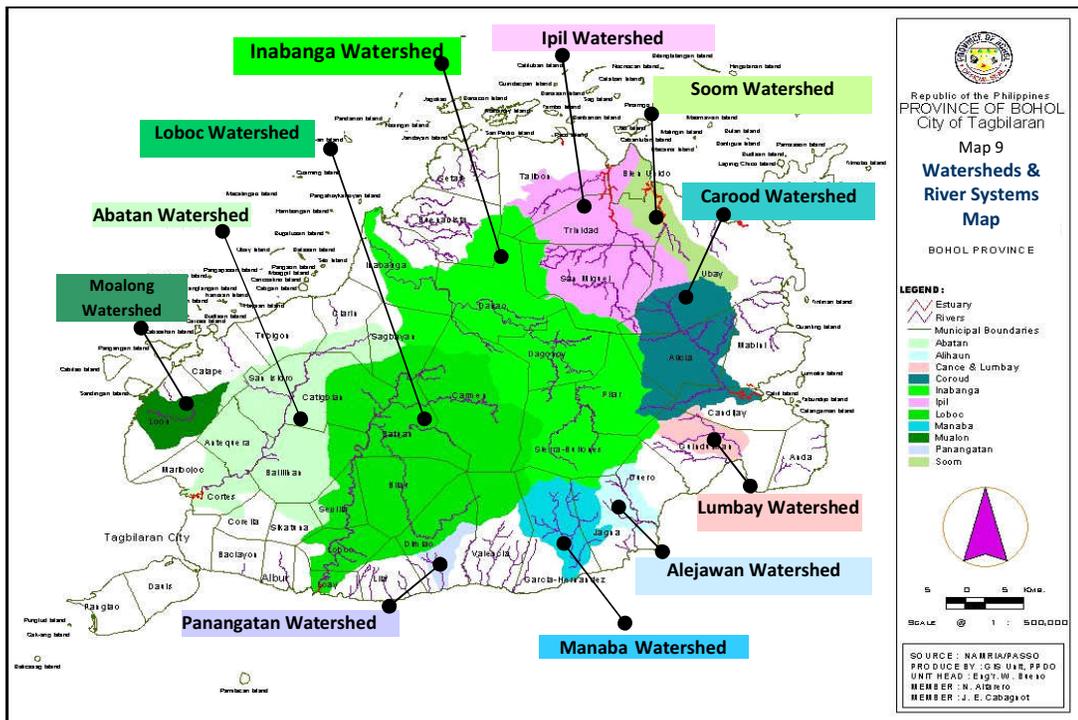
Source: BSWM Region 7 (Area was obtained using the planimeter)

### 3.1.4 Land and Water Resources

Bohol's water supply system for domestic, agricultural and industrial uses is mainly based on 2,224 springs, 59 rivers and 200 creeks. There are 22 rivers basins/watersheds that are valuable sources of water for drinking and irrigation (Map 9). Surface water from rivers and streams in these basins are impounded and distributed for irrigation, electric generation, industrial use as well as for domestic use. Rainwater is also a good source of water in the province with an average rainfall varying from 1,331 mm/yr along the coastal areas to 2,006 mm/yr in the mountainous part of Bohol. At present, the quality of water in the province's catchments and streams is poor and will continue to deteriorate as human development activities increase. These water resources needs to be managed in order to meet the growing demand for domestic, agricultural, industrial, recreational and commercial uses as well as prevent public health hazards associated with increasing incidence of water contamination and pollution from negligent human activities.

#### Surface Freshwater, Groundwater Resources and Bohol's Watersheds<sup>9</sup>

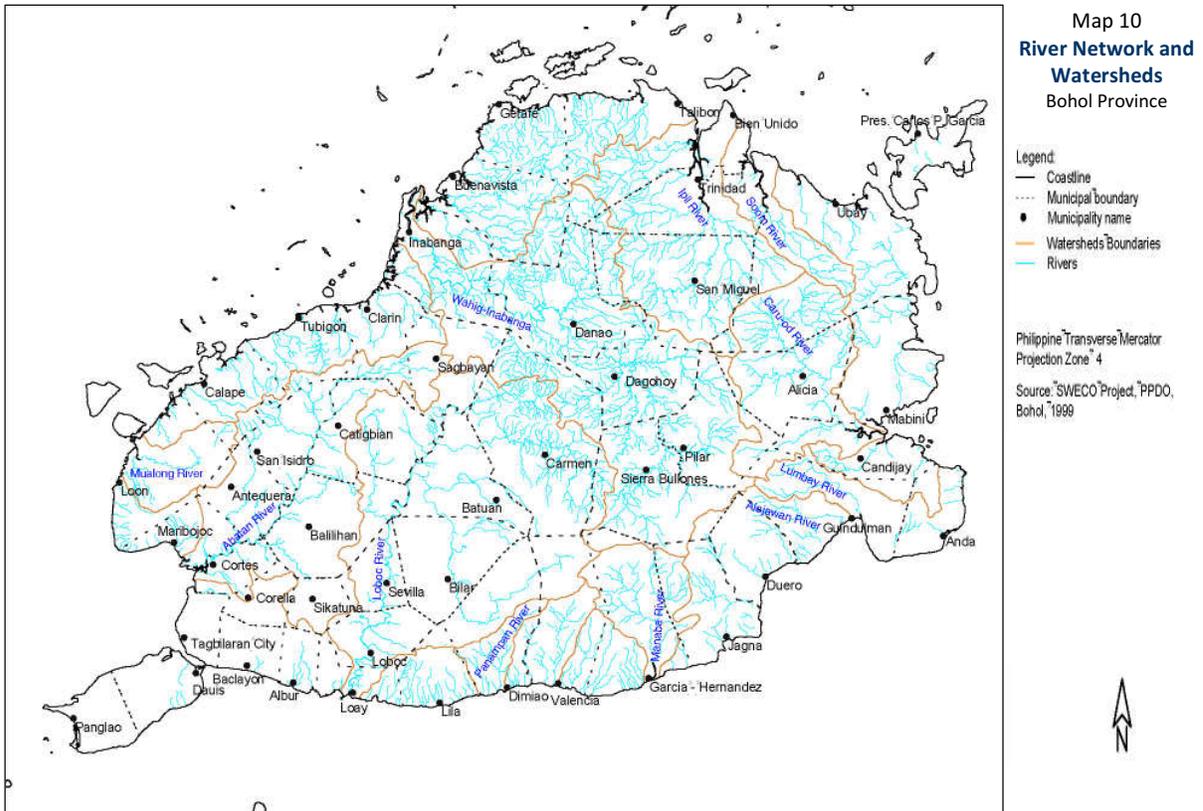
Surface water in Bohol feeds its watersheds. There are 3 major watersheds in the province that have been declared as protected areas under the NIPAS. The largest reserve is the Wahig-Inabanga Watershed (PP No 468, amended to PP No. 223) covering 16 municipalities with an aggregated area of 14,000 hectares. The second, and first to be proclaimed as a watershed forest reserve in Bohol, is the Loboc Watershed (PP No. 450) with an area of 10,450 hectares, part of which is inside the Rajah Sikatuna Protected Landscape (PP No. 127 as amended April 2000). The third is the Duero Watershed (PP No. 881) that covers an area of 3,620 hectares. The map below shows the location of these watersheds.



<sup>9</sup> PENRO-DENR

Source: DENR and ESSC 2005

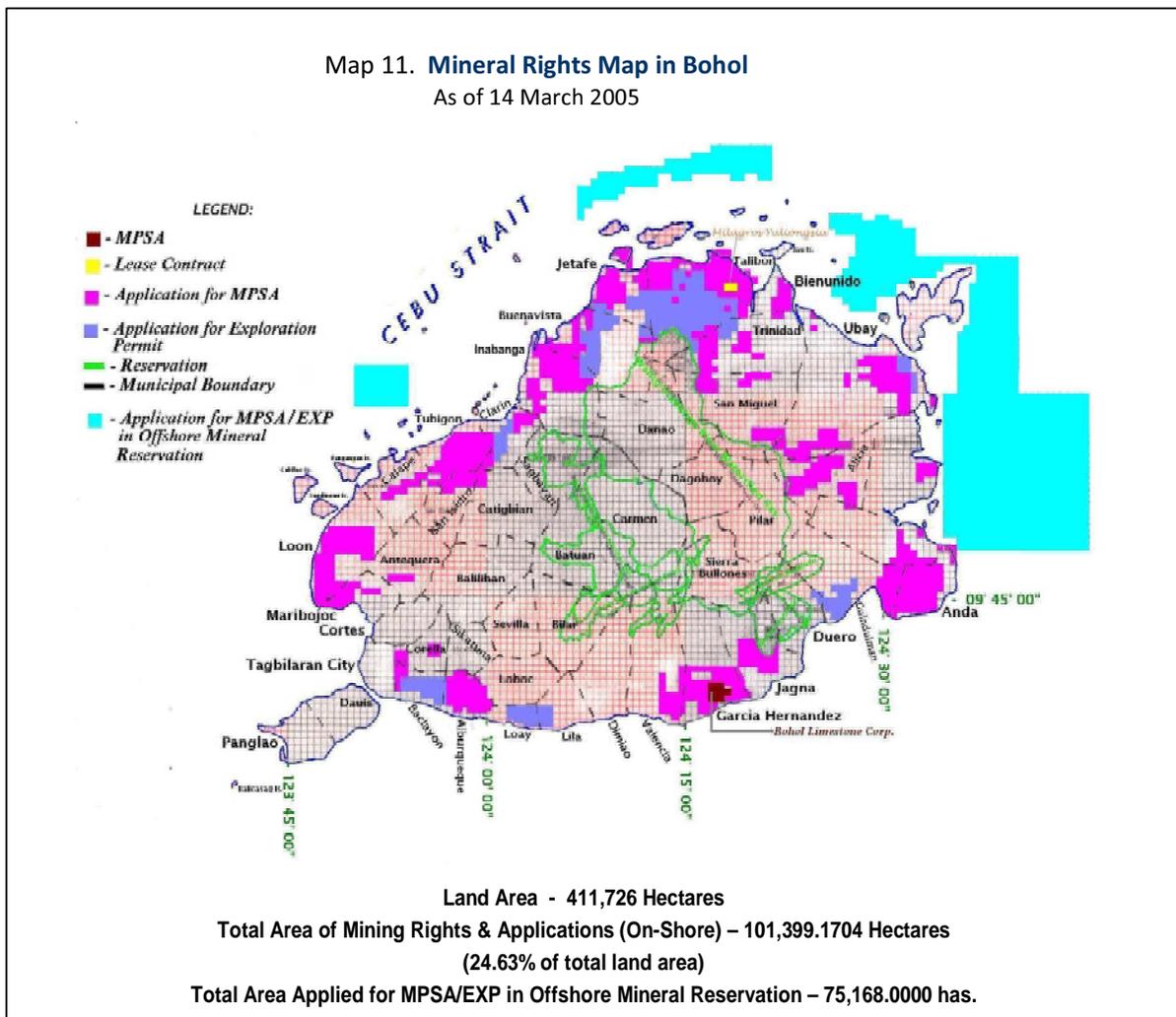
The rivers and river estuaries in Bohol (Map 10) are the other sources of surface water commonly serving as harbors and navigation routes, areas for aquaculture development (Inabanga River), fishing and sand quarrying (Abatan River) and recreation and tourism (Cambuhat River in Buenavista and the Loboc River in Loboc and Loay towns). They also provide water for irrigation (Malinao Dam on the Wahig River that feeds the Bohol Irrigation Project-Stage I) as well as domestic and industrial uses such as power supply (Loboc River Hydro-power Plant and mini hydro-power plants in Sevilla and Balilihan municipalities).



Groundwater resources are the major source of drinking water in Bohol. Data on surface and groundwater are scarce in the province. The survey of wells conducted by SWECO in 1999 revealed that the water for drinking do not satisfy the water quality standards for safety and potability. An estimated 5000 wells have water quality problems caused by higher salinity content, excessive amounts of iron and manganese and bacteriological pollution. Water for home consumption is often prone to contamination due to inadequate sanitation practices and characteristics in limestone inherent substrate (karst). It is important to enforce strict water production areas for drinking water purposes and establish buffer zones to protect the same from activities that will harm them.

### 3.1.5 Mineral Resources of Bohol

According to the Mines and Geo-Sciences Bureau of the DENR, Bohol has large deposits of metals and minerals such as limestones, manganese, silica, dolomite, gold, deorite, chromite, rock phosphate, guano (organic fertilizers) and pebbles. There are 124 mineral quarry operators (small-scale) in the province with Environmental Compliance Certificates (ECCs) issued by DENR (Map 11). These certify that based on the presentations of the proponents, as reviewed and validated, the projects will not cause a significant negative impact to the environment and that the operators or proponents have complied with all the requirements of the Environmental Impact Statement (EIS). The monitoring system for the EIS is still very weak. Consequently, very little has been done with rehabilitation of abandoned mining areas. The map below shows the areas with Mining Rights in the Province of Bohol.

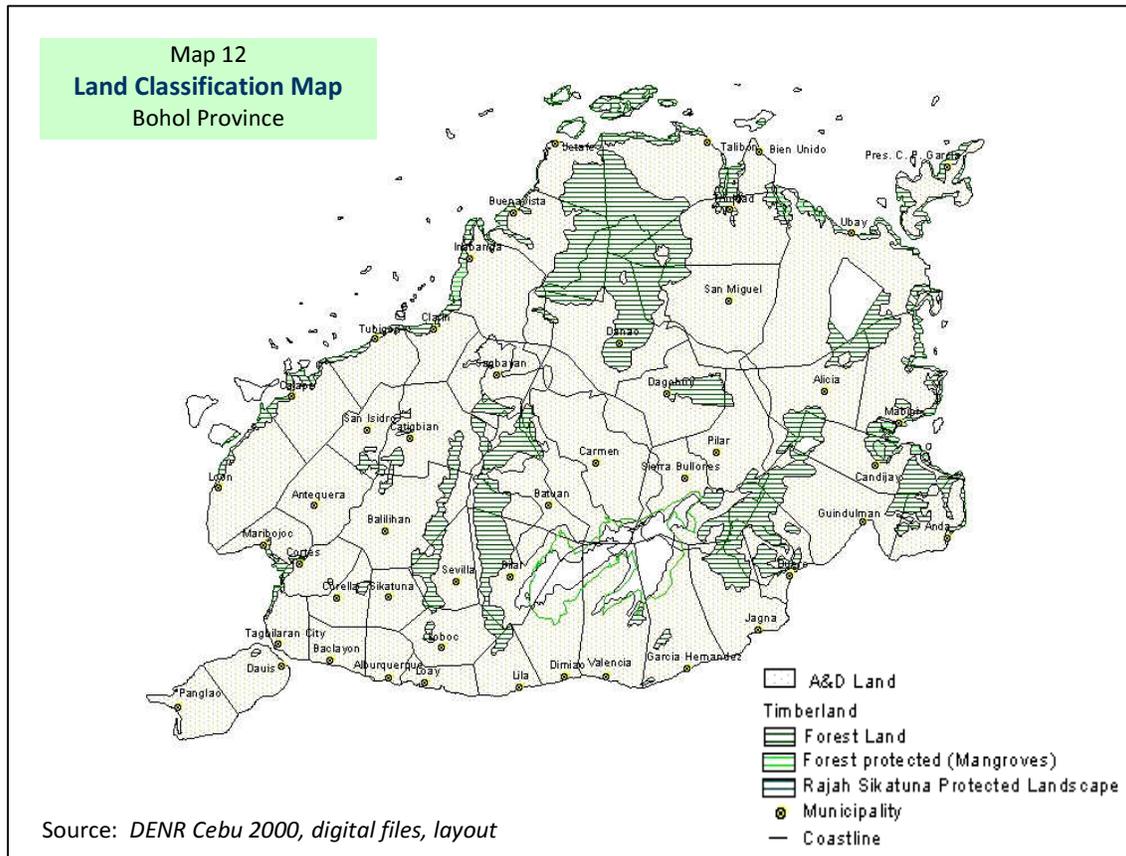


### 3.2 Land Use Potentials and Constraints

#### 3.2.1 Land Classification<sup>10</sup> (Map 12)

The total land area of Bohol Province is approximately 411,726 hectares representing 43% of the region’s land area and 1.4% of the total land area of the Philippines (Table 12-Annex 1). About 75% are classified as alienable and disposable (A & D) land. The total area devoted to agricultural use is 273,950 hectares or 45 percent of the total land area of the province. Of the total agricultural area, 50 percent or 156,944 hectares is utilized for the planting of major crops such as rice, corn, coconut and rootcrops. The estimated land area as potential irrigable areas in the province is 40,800 hectares. The existing irrigable and non-irrigable rice lands are classified as priority focus for agricultural production.

Bohol’s public forestland or timberland occupies an area of about 101,271 hectares or roughly 25 % of its total land area. Almost 15% or 75,766 hectares of the province’s land area is under protection through NIPAS System and are classified as environmentally constrained and critical areas.



<sup>10</sup> Department of Environment and Natural Resources (DENR), 2000

### Pedo – ecological Zones and Land Management Units<sup>11</sup>

The pedo-ecological zones in Bohol are classified as warm uplands, warm-cool uplands, warm-cool hillylands, cool hillylands and miscellaneous. Miscellaneous areas include built-up areas, beach sands, open pits and mining. Based on the detailed Land Management Unit Map of the Bureau of Soils and Water Management (BSWM), the distribution in Bohol is as follows:

Table 7. **Pedo-Ecological Zones In Bohol**

Pedo-ecological Zone	Characteristics	Area (has)
Warm lowland	Elevation < 100 m Slope < 8 % Average temp. > 25°	94,130
Warm cool upland	Elevation 100m-500 m Slope < 18 % Average annual temp. 22, 5 - 25°	141,295
Warm cool hillyland	Elevation 100m-500m Slope > 18 %	154,015
Cool highland	Elevation > 500m Slope < 18%	13,289
Miscellaneous	Built-up areas, beach sands, major rivers, mining	8,997
<b>Total</b>		<b>411,726</b>

Source: BSWM-Land Management Unit Map 1:250,000

### 3.2.2 Land to Person Ratio

The land to person ratio in Bohol is estimated to decline as the land comes under increasing population stress (*Table 8*). The province's land to person ratio in 2007 was 0.252 persons per hectare. It is projected to decrease from 0.252 persons per hectare in 2007 to an estimated 0.230 hectares per person by 2015 as shown in the table below. This has reduced the average farm size (0.6 ha/family)<sup>12</sup> below the prescribed economic size of 1-3 hectares per family.

Table 8. **Land To Person Ratio: Bohol Province 2007, 2010- 2015**

Year	2007	Yearly Projection 2010-2015					
		2010	2011	2012	2013	2014	2015
Total Population (million)	1.230	1.275	1.289	1.304	1.319	1.334	1.350
Total A & D (in million has)	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Ratio/hectare/ person	0.252	0.243	0.240	0.238	0.235	0.232	0.230

*Projected Population 2010-2015 is computed based on 1.06% growth rate of Bohol*

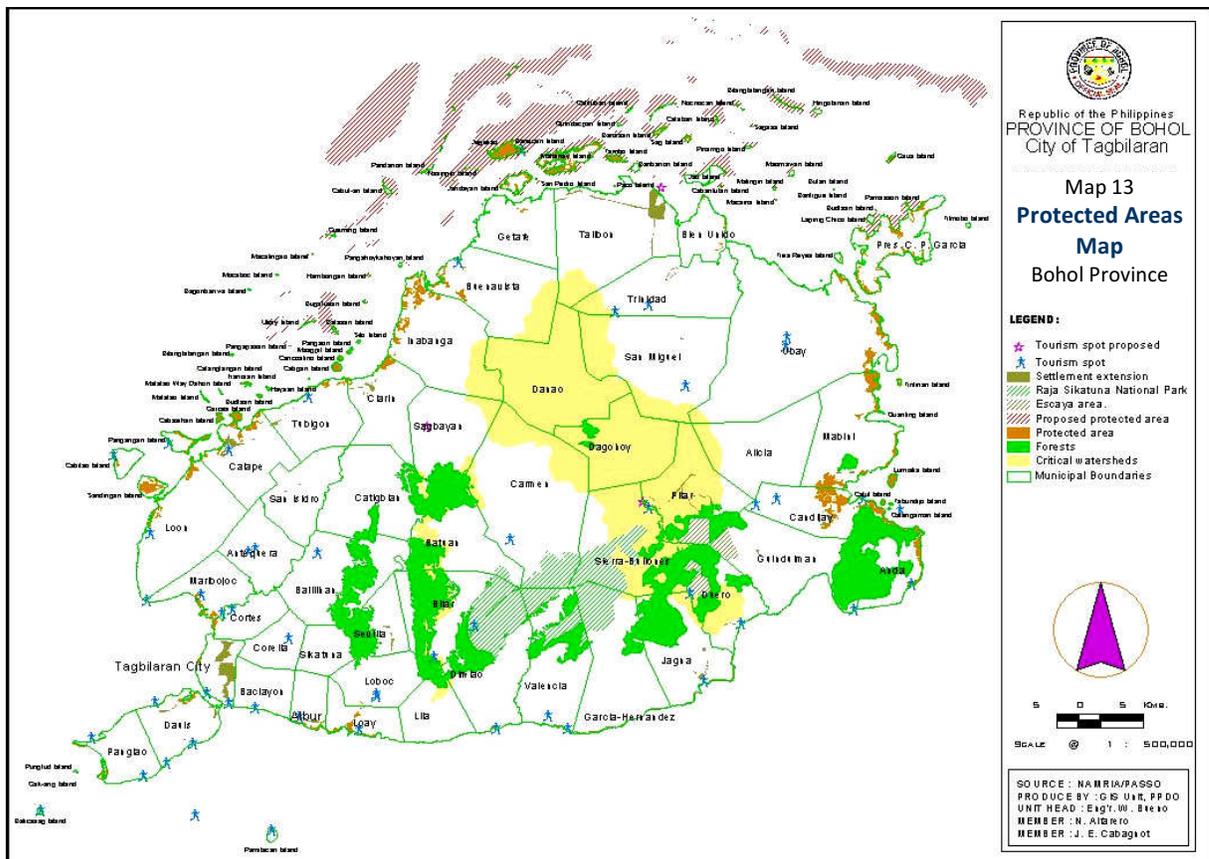
<sup>11</sup> Pedo-ecological Zones of Bohol, Bureau of Soils and Water Management, Land Management Unit Map

<sup>12</sup> Office of the Provincial Agriculturist October 2006

### 3.2.3 Protection Areas

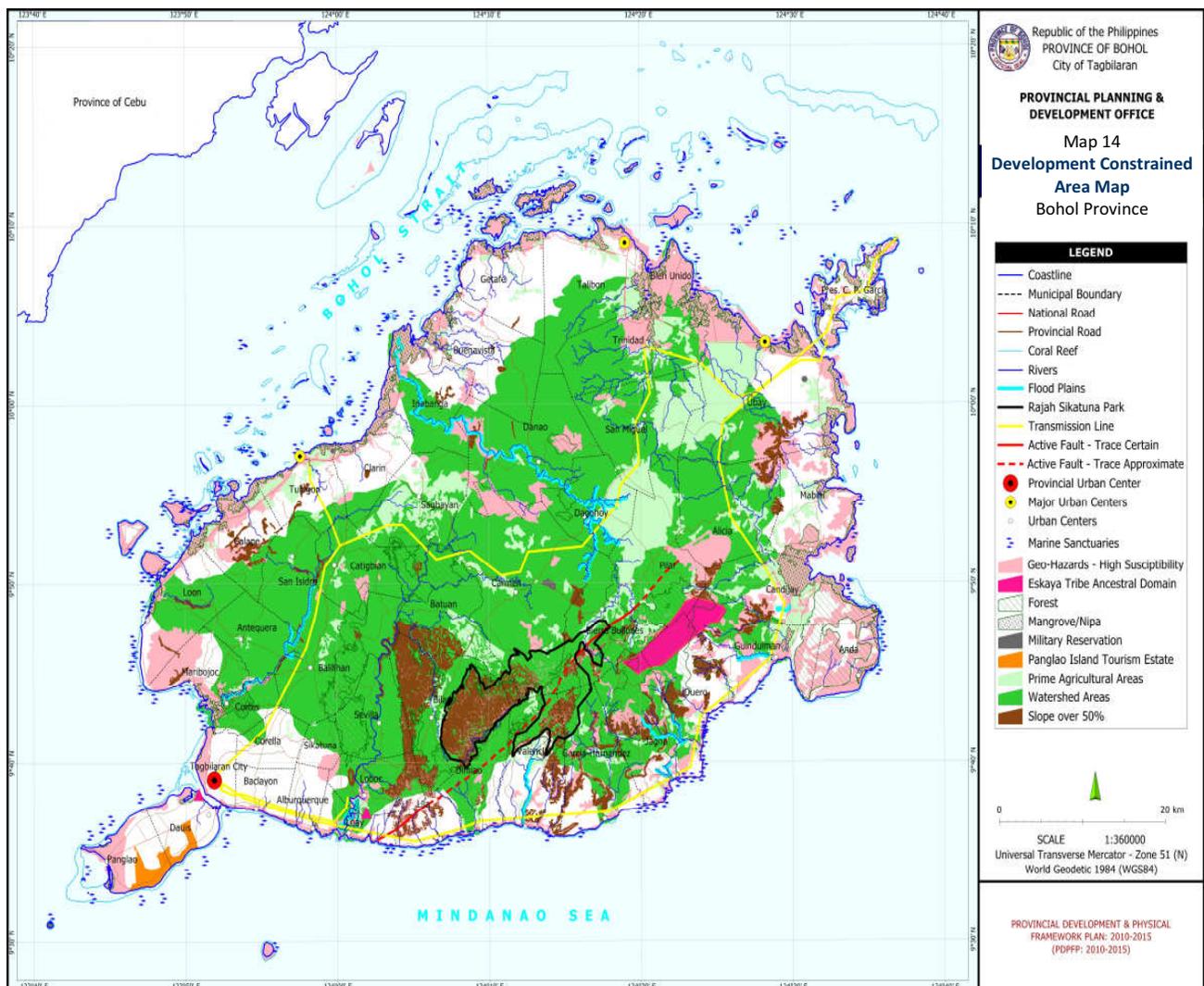
The total area classified as timberland or forestland in Bohol is 101,401 hectares or 25 percent of the total land area of the province. Out of this area, more than one-half are protected areas with only 17% covered with forests. The rest are grass and shrub lands. Bohol has a larger coverage of woodland (10.69%) compared to Cebu and some other provinces in the region. Wetland constitutes 4.92%, which includes mangrove, nipa, beach sands and fishponds while built-up areas comprise 10.22% of Bohol's area (*Bohol Ecological Profile, DENR 1992*). Based on a standard of 40% forest cover to total land area to maintain an ecological sound environment, the province is currently rated as critically below that standard.

The latest data shows that Bohol has a total of 75,766 hectares under protection as initial component of the National Integrated Protected Area System (NIPAS Act or RA 7586) as environmentally constrained and environmentally critical areas (*see Table13-Annex 1*). Protection purposes are for the conservation of biological diversity (flora and fauna) and natural heritage areas, conservation of forest cover, as well as provision for livelihood opportunities, water conservation and sustainable development for those living in and around the areas. All development within these areas shall follow the provision embodied in the NIPAS Law.



### 3.2.4 Environmental Constraints/Constrained Areas

Population growth and economic activities have created pressures on Bohol's environment and natural resources. High demand for physical infrastructure like roads, water systems and power, settlement areas as well as greater demand for goods and services are expected to add pressure on its environment that are looked upon as major necessities for the province's development but often create environmental stress. Such developments in the province need to pro-actively integrate a mechanism to prevent adverse impact on the critical resources and exposure of people and property to danger. Environmentally constrained areas are prone to natural hazards, severe erosion or more specifically, hydrological and geological produced changes. The NIPAS Law does not cover these areas. However, they should be subject to restrictions in land uses in order to prevent the occurrences of accidents that endanger lives and properties. Shown in the map below are the development constrained areas in the province of Bohol.



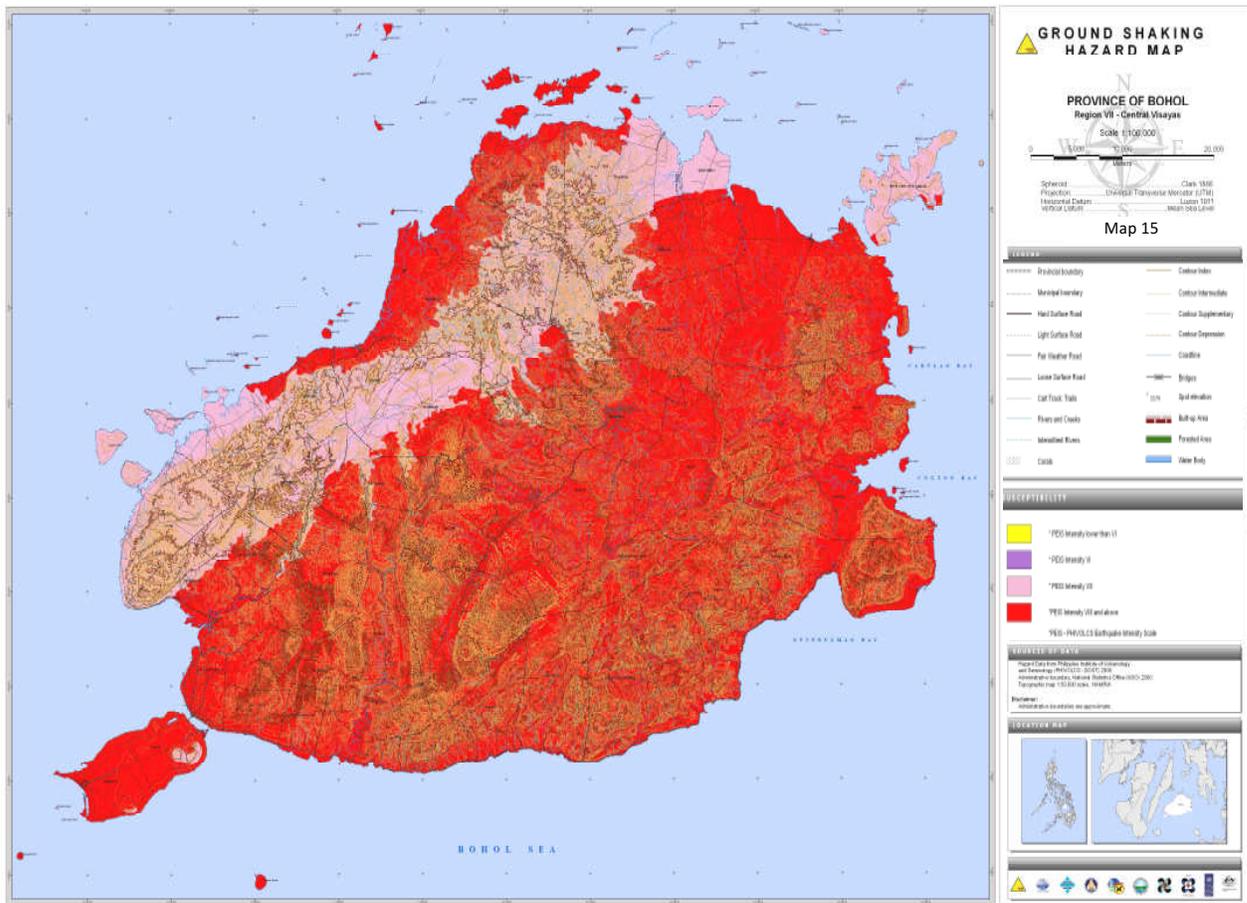
### 3.2.5 Areas Prone to Natural Hazards

#### *Tectonics<sup>13</sup> and Other Natural Hazards*

Minor and major fault lines are evident on the island as shown by terraced encarpments occurring in its southern and central parts. The terraced escarpments in the Ilihan Formation as well as the graben at the Anda Peninsula are manifestations of these faults. Steep escarpments notably in Loon, Tagbilaran and in Anda Peninsula further prove vertical upliftment caused by tectonics.

Earthquakes have been felt in Bohol but only an average of one perceptible shock is reported each year. Major faults usually trend towards the northeast. Three earthquakes with a magnitude above 4 of the Richter Scale (highest was 4.7 ms which occurred in June) were reported in 1998 in the province of Bohol.

The maps below show areas prone to other natural hazards (Ground Shaking, Earthquake-induced Landslide, Ground Rapture Hazard, Liquification, Rain-induced Landslide, Storm-surge and Tsunami Hazard Maps) in Bohol.



<sup>13</sup> Philippine Institute of Volcanology and Seismology (PHILVOCS)



**EARTHQUAKE - INDUCED LANDSLIDE HAZARD MAP**

**PROVINCE OF BOHOL**  
Region VII - Central Visayas

Scale: 1:100,000

Spheroid: Clark 1866  
Projection: Universal Transverse Mercator (UTM)  
Horizontal Datum: Luzon 1911  
Vertical Datum: Mean Sea Level

**Map 16**

**LEGEND**

Political boundary	Contour line
Municipal boundary	Contour Interval
Hard Surface Road	Contour Depression
Light Surface Road	Contour
High Weather Road	Bridge
Lowest Surface Road	Spot elevation
Coast Track Trails	Water body
Rivers and Creeks	
Intermittent Rivers	
Coast	

**SUSCEPTIBILITY**

- High Susceptibility
- Medium Susceptibility
- Low Susceptibility
- Not Susceptible
- Possible landslides/epidemiological zone

**EXPLANATION**

Participation and analysis based on topographic map, geological map, and satellite imagery. The map is intended for use as a reference only. It is not intended for use as a basis for any legal or administrative action. The map is not intended to be used as a basis for any legal or administrative action. The map is not intended to be used as a basis for any legal or administrative action.

**SOURCES OF DATA**

Map Data from Philippine Institute of Volcanology and Seismology (PHIVOLCS) (2011)  
Administrative boundary from National Office (NOC) (2010)  
Topographic map from National Office (NOC) (2010)

**LOCATION MAP**



**GROUND RUPTURE HAZARD MAP**

**PROVINCE OF BOHOL**  
Region VII - Central Visayas

Scale: 1:100,000

Spheroid: Clark 1866  
Projection: Universal Transverse Mercator (UTM)  
Horizontal Datum: Luzon 1911  
Vertical Datum: Mean Sea Level

**Map 17**

**LEGEND**

Political boundary	Contour line
Municipal boundary	Contour Interval
Hard Surface Road	Contour Depression
Light Surface Road	Contour
High Weather Road	Bridge
Lowest Surface Road	Spot elevation
Coast Track Trails	Water body
Rivers and Creeks	
Intermittent Rivers	
Coast	

**ACTIVE FAULTS LEGEND**

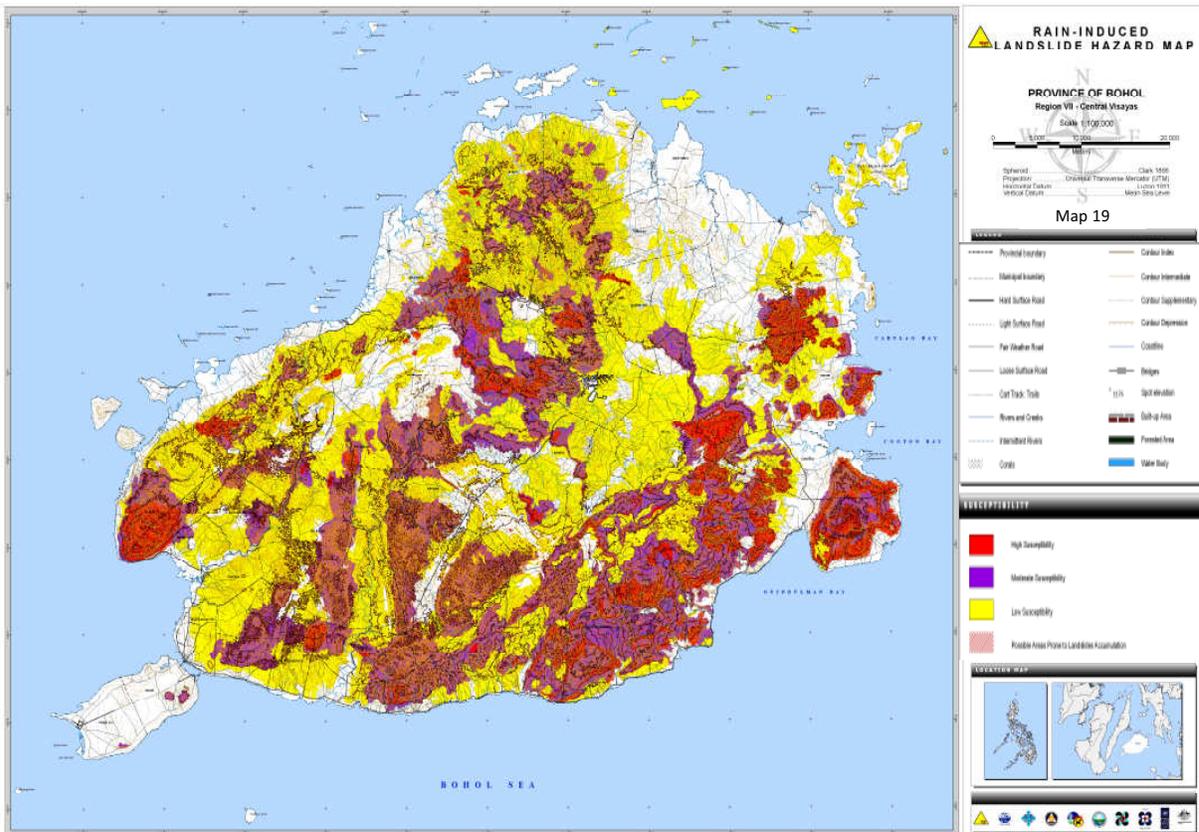
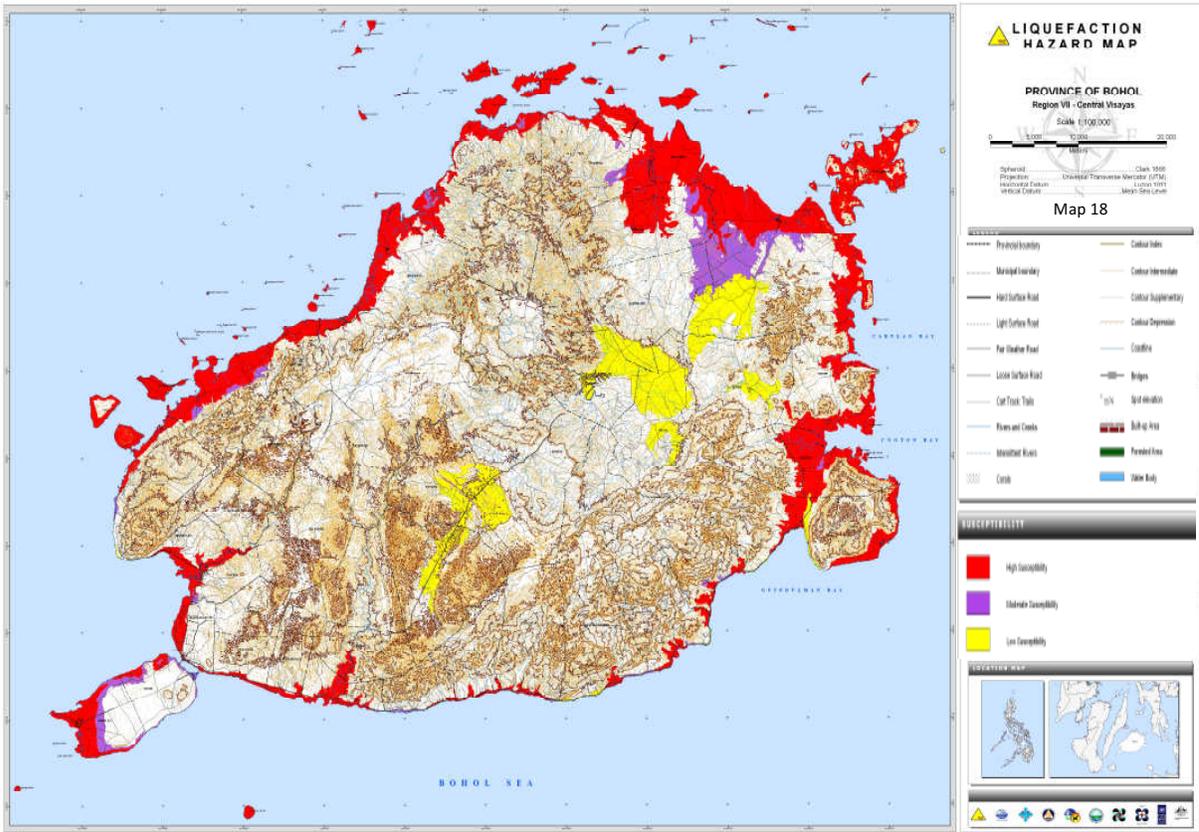
- Active fault, Solid line - trace certain
- Active fault, Dashed line - trace approximate
- Hazards include fault trace zone

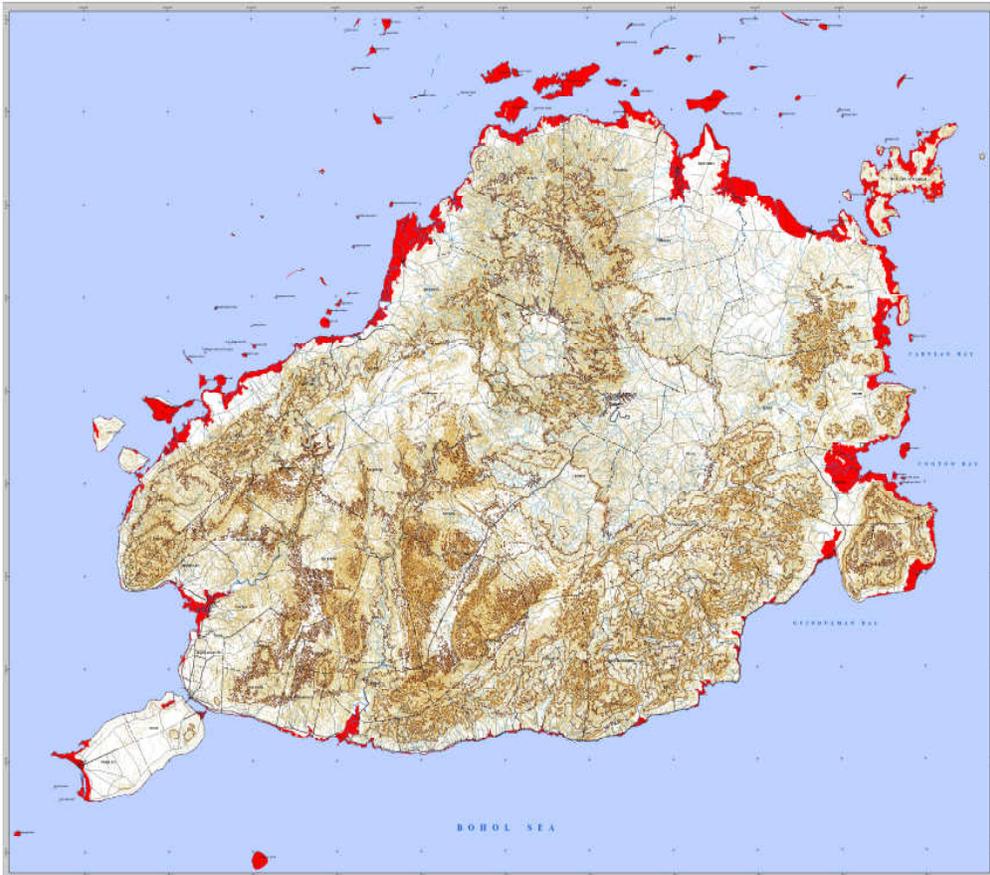
**SOURCES OF DATA**

Map Data from Philippine Institute of Volcanology and Seismology (PHIVOLCS) (2011)  
Administrative boundary from National Office (NOC) (2010)  
Topographic map from National Office (NOC) (2010)

**LOCATION MAP**

Planning Environment





**TSUNAMI HAZARD MAP**

PROVINCE OF BOHOL  
Region VII - Central Visayas  
Scale: 1:100,000

Spheroid: Clarke 1858  
Projection: Universal Transverse Mercator (UTM)  
Horizontal Datum: Luzon 1911  
Vertical Datum: Mean Sea Level

**Map 20**

Province boundary	Coastal strip
Regional boundary	Coastal intertidal
High National Road	Coastal Supratidal
Light National Road	Coastal Depression
Fast National Road	Coastline
Lower National Road	Wedges
Canal	Sea level
Water and Drainage	Subsidence
Intermittent Waters	Recessed Area
Coast	Wave Run-Up

**LEGEND**

**Tsunami Hazard Area**

**DESCRIPTION**

The hazard hazard map was generated using available historic programs, techniques and before data, and topographic and bathymetric maps.

**Limitations of the Map**

The hazard hazard map is based on topographical conditions of the map area. It does not reflect the hazard that could be generated by the beach erosion.

Topographic-related information is not available for the hazard area not covered by this map.

Significant changes in elevation along the coast in the future could affect the hazard hazard and may need further assessment.

**SOURCE OF DATA**

Map Data: Philippine National Geographic Institute (NGI)  
 National Geographic Institute (NGI) 2008  
 National Geographic Institute (NGI) 2008  
 Topographic Map: 1:50,000 scale, 1980s

**Disclaimer:**

Information on this map is for general use only.

**LOCATION MAP**



**STORM SURGE HAZARD MAP**

PROVINCE OF BOHOL  
Region VII - Central Visayas  
Scale: 1:100,000

Spheroid: Clarke 1858  
Projection: Universal Transverse Mercator (UTM)  
Horizontal Datum: Luzon 1911  
Vertical Datum: Mean Sea Level

**Map 21**

Province boundary	Coastal strip
Regional boundary	Coastal intertidal
High National Road	Coastal Supratidal
Light National Road	Coastal Depression
Fast National Road	Coastline
Lower National Road	Wedges
Canal	Sea level
Water and Drainage	Subsidence
Intermittent Waters	Recessed Area
Coast	Wave Run-Up

**LEGEND**

**Storm Surge Hazard Area**

**DESCRIPTION**

The hazard hazard map was generated using available historic programs, techniques and before data, and topographic and bathymetric maps.

**Limitations of the Map**

The hazard hazard map is based on topographical conditions of the map area. It does not reflect the hazard that could be generated by the beach erosion.

Topographic-related information is not available for the hazard area not covered by this map.

Significant changes in elevation along the coast in the future could affect the hazard hazard and may need further assessment.

**SOURCE OF DATA**

Map Data: Philippine National Geographic Institute (NGI)  
 National Geographic Institute (NGI) 2008  
 National Geographic Institute (NGI) 2008  
 Topographic Map: 1:50,000 scale, 1980s

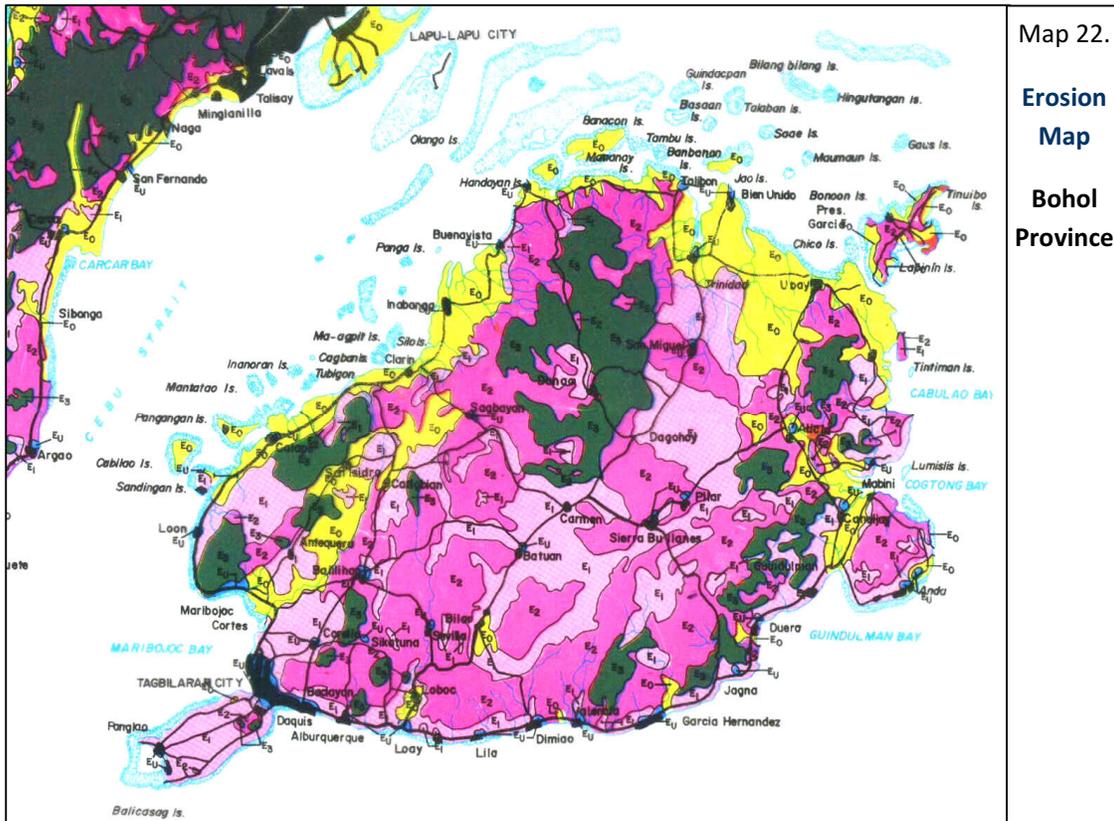
**Disclaimer:**

Information on this map is for general use only.

**LOCATION MAP**

**Soil Eroded Areas**

Soil erosion in Bohol frequently occurs in areas that have been farmed or at construction sites. Most of the accelerated removal of soil is man-made. According to the BSWM report, more than 66 % of the soils in the province are affected by erosion at different degrees (slightly, moderate and severe) and less than 31 % of the island show no apparent erosion (*Map 20 and Table 9*)<sup>14</sup>. Eight out of the eleven (11) watersheds<sup>15</sup> in Bohol are experiencing 26 to 38 percent soil erosion rates.<sup>16</sup> These sites are now at a critical stage with an annual soil erosion rate of ten cubic meters per hectare.



Map 22.  
**Erosion Map**  
**Bohol Province**

Table 9. Status Of Soil Erosion And Area Coverage, Bohol Province

MAPPING SYMBOL	Level of Soil Erosion	Coverage (in %)
E <sub>0</sub>	No apparent erosion	30.75
E <sub>1</sub>	Slightly eroded	39.09
E <sub>2</sub>	Moderate eroded	9.88
E <sub>3</sub>	Severely eroded	17.69
E <sub>U</sub>	Unclassified	2.59

Source: Geographic ATLAS of Bohol 1999

<sup>14</sup> Geographic Atlas of Bohol, 1999, calculated by GEOPLAN Foundation

<sup>15</sup> Soil and Water Conservation Foundation (SWCF 2002)

<sup>16</sup> Bureau of Soil and Water Management (BSWM) Region 7

### 3.2.6 Disaster Risks

Environmental risk exists if an area is exposed to certain levels of danger because of its location, surrounding features or proximity to certain objects or activities such as the effects of natural phenomena like hurricanes, earthquakes, volcanoes, landslides, flooding and tsunami which expose the lives and properties of people to undue harm with profound effect to ecological systems. Inappropriate development also leads to greater disaster risks. The poor location of settlements, economic activities and infrastructures, inappropriate use of resources and rapid urban growth exert pressure resulting to further degradation to the environment and spawn more vulnerable communities. In the event of calamities due to natural hazards, vulnerable communities may not be able to cope and hence, will result in a disaster which will eventually lead to risk accumulation and bigger losses when disaster occurs in the area.

Bohol, being an island province, is vulnerable to natural disasters, e.g. drought, storm surges, tsunami, flooding, earthquake, tropical cyclones and landslide. As such, the province has been incurring significant economic and environmental damages from natural and man-made disasters estimated at an average annual direct damage at ₱14.0 million reaching a total damage of almost ₱ 69 million from 2004-2008 (*Table 27-Annex 1*). Notable calamities that hit the province include earthquakes, flashfloods in Clarin, Tubigon, Loon and Calape; land slides in Balilihan, Loboc, Alicia, Cortes, Jagna, Sierra Bullones; severe rains in Getafe and typhoons “Frank” and “Lando” that left significant damage to Bohol’s agricultural assets. Man-made calamities were also recorded during the period ranging from fire incidents, diarrhea outbreak and sea mishaps. From 2006-2008, there were a total of 110 earthquakes, of which only 23% were perceptible and felt by the people in the affected location. Most of the quakes (77%) were not perceptible.

The Provincial Government of Bohol has created the Provincial Disaster Coordinating Council (PDCC) to prepare, promote and coordinate measures to protect human lives and property during these unforeseen events. Coordination among offices headed by the Governor is very vital on the event of disasters with support from 62 government offices and private establishments. Communication and warning mechanisms are already in-place through PAG-ASA, Philippine National Police, Bohol Law Enforcement Communication System (BLECS), radio stations, information and warnings that reach people in real time. The evacuation system is arranged with the Department of Education and other government offices where schools and other public buildings are utilized as evacuation centers. *Table 28-Annex 1* presents the existing facilities and services in the province thru its Provincial, City and Municipal Disaster Coordinating Councils.

### 3.3 Climate<sup>17</sup>

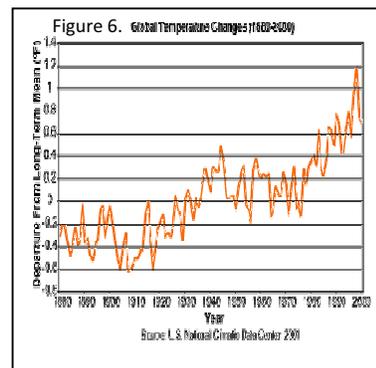
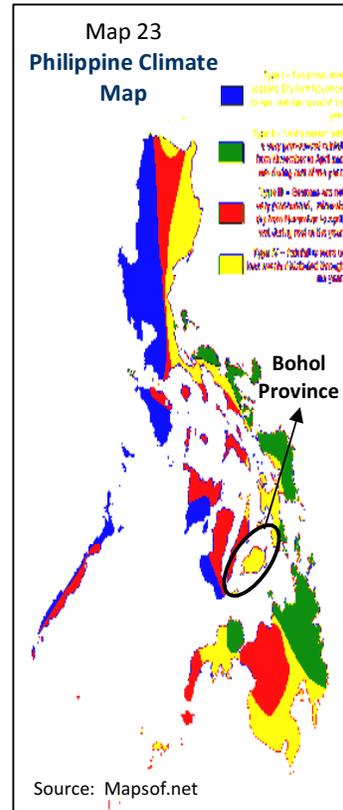
Based on the distribution of rainfall during the year, Bohol's climate, as classified by PAG-ASA belongs to Corona's 4<sup>th</sup> Type, characterized by rainfall more or less evenly distributed throughout the year. The rainfall varies from about 1,200 mm/yr around the coast to slightly more than 2,200 mm/yr in the mountainous areas of the province. Based on the climatological records of the Tagbilaran City weather station, the province has an annual average of 161 rainy days. The average rainfall has illustrated a declining trend of 250 mm over a period of 35 years of about 7mm a year due likely to climatic change in the Southeast Asian Region. Intensification of the southwest monsoon usually occurs during the months of July to October. The coastal area of the province is warm in contrast with the interior part, which is colder especially during the night. Mean temperature is at 27.40 degrees centigrade. Prevailing wind direction is towards northeast with an average speed of 2 miles, per record obtained from PAG-ASA.

Bohol is not included in the so-called typhoon belt of the country, as typhoons rarely pass the province. Those passing below or above the island contribute to the greater volume of precipitation. The frequency of typhoon passage is 0 to 10% from an average of 20 typhoons passing over the Philippines per year.<sup>18</sup>

#### Climate Change

The effects of climate change are now being felt in Bohol. Impact of this change has affected Bohol's forest, its biodiversity, water, agricultural and fishery resources and even cultural assets with wide-range adverse impact on human health and loss of life. The ten (10) warmest years on record in the world all occurred in the years 1880 to 2000 (Figure 6). Temperature changes are known to affect the transmission of infectious diseases like malaria, dengue and respiratory tract infections. Rising incidence of morbidity cases from these infectious diseases, particularly respiratory

tract infections has been recorded in Bohol with pneumonia a leading cause of illness in the province affecting 10% of Bohol's population in 2008, mostly children. Bohol is among the areas in the Philippines threatened by drastic effects of global warming. It is ranked 9<sup>th</sup> among top 20 provinces vulnerable to a one (1) meter sea level rise.<sup>19</sup>



<sup>17</sup> PAG-ASA Report and Bureau of Soil and Water Management

<sup>18</sup> DENR-BSWM 1991 Preliminary Climatic Classification of 15 selected Provinces in the Philippines

<sup>19</sup> Source: Climate Hotspot, Climate Change Impacts in the Philippines conducted by Greenpeace Southeast Asia, Climate and Energy Campaign, 2007

## 4 Economy

### 4.1 Economy and Priority Industries

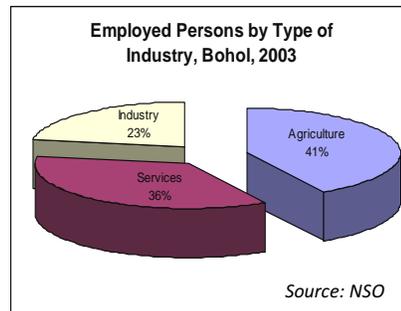
The economy of Bohol is largely agri-based with the services sector (especially tourism) fast catching up. While its economy is predominantly agricultural, home-based industries, mostly of the micro and cottage types, play a vital role in the local economy. Tourism is another industry that is increasingly gaining influence in the province's economy with Bohol growing to be a favorite destination of both domestic and foreign tourists. The tourism industry has become a major element for the economic growth of Bohol. Tourism investors and service providers have seen the industry's promising conditions and its potentials for further development.

The agriculture sector continues to account for a greater portion of the provincial employment. The province's labor force in terms of type of industry is dominated by agriculture at 41.77%, with services a close 2<sup>nd</sup> at 35.70% and industry at 23% (Table 10 and Figure 7).

Table 10. Specialization: Employed Persons by Type of Industry from Primary Occupation, 2003 (NSO)

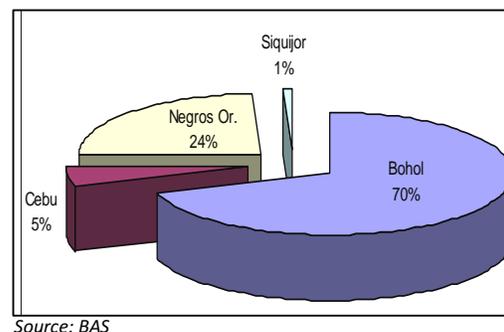
	Type of Industry			TOTAL
	Agriculture	Industry	Services	
Region VII	33.07%	22.00%	44.88%	100.00%
<b>Bohol</b>	<b>41.77%</b>	<b>22.53%</b>	<b>35.70%</b>	<b>100.00%</b>
Cebu	23.78%	26.59%	49.63%	100.00%
Negros Oriental	51.12%	8.68%	40.45%	100.00%
Siquijor	51.61%	9.68%	35.48%	100.00%

Figure 7. Bohol Shares of Employed Persons by Type of Industry



In the regional context, Bohol's dominance in agriculture is evident in its share of agricultural production of major commodities in the region. Bohol has provided a substantial share for palay production. Referring to Figure 8, BAS 2008 figures show that Bohol produced 70% of Region VII's total palay production. Looking into this production scenario, the region's food requirement for rice is largely

Figure 8. Central Visayas Rice Production, 2008



dependent on the province, with Bohol producing more than half of the region's total rice production. The so-called upland crops (camote, cassava and yam) are identified as

major rootcrops that have some economic importance to the region's agro-industrial sector. Camote and cassava are considered major food crops and are used as substitutes to the staple food (rice and corn). Among the four provinces in Central Visayas, Bohol has the highest average production of upland crops. In terms of total fish production in the region, Bohol ranks second to Cebu. Bohol is number one in the region in terms of production of tilapia and milkfish with Bohol contributing 41%, Negros Oriental 39%, Cebu 19% and Siquijor with 21%. For seaweeds production, the province is producing 95% of the entire region's total seaweeds production. For livestock and poultry, highest production was noted in Cebu with the province of Bohol a close second.

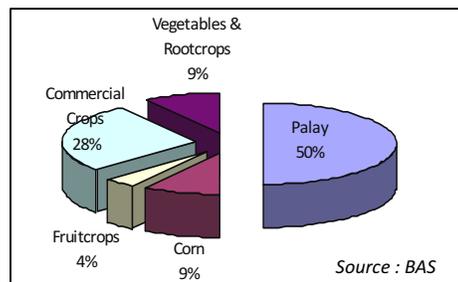
## 4.2 Economic Base Industries

### 4.2.1 Agriculture

Bohol's agriculture sector remains to be the major source of employment and livelihood in the province. National Statistics Office (NSO) data shows that approximately 42% of the province's population, majority of whom are residing in the rural area of the province, is dependent or working in agriculture.

The total land devoted for agricultural use is 273,950 hectares, approximately 66% of the total land area of the province.<sup>20</sup> Area planted and harvested with major crops only accounted for 151,944 or about 55% of the total area devoted for agriculture. A total of 76,063 hectares of land are devoted to palay of which 31,323 hectares are irrigated and 44,740 hectares are rainfed. Major rice producing municipalities in terms of land area planted are: Ubay, Trinidad, Pilar, Dagohoy, Alicia, San Miguel and Carmen.

Figure 9. Percentage Distribution of Area Harvested of Major Crops, Bohol, 2008



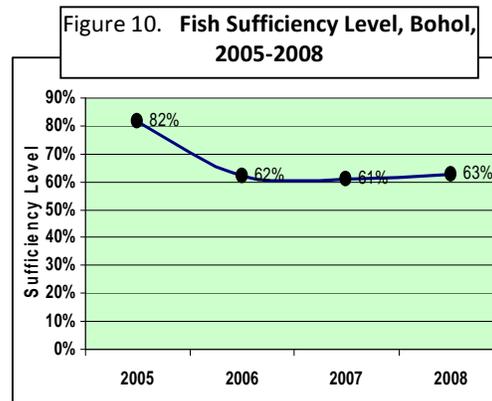
Major rice producing municipalities in terms of land area planted are: Ubay, Trinidad, Pilar, Dagohoy, Alicia, San Miguel and Carmen.

Agricultural activities in Bohol are focused on the cultivation of food crops such as palay, corn, coconut, fruits (mango, banana, watermelon, calamansi, papaya and pineapple), vegetables and rootcrops with rice the major staple food in the province, raising of livestock and in fisheries.

<sup>20</sup> Bohol Agricultural Master Plan (BAMP), 2005



Fishing is the second source of income and livelihood in the province where 33% of its population is directly dependent on it. Although the province is rich in marine resources, its fish production cannot meet the requirement of its population (Figure 10). There is declining fish catch in Bohol resulting to a sufficiency level of only 63%.



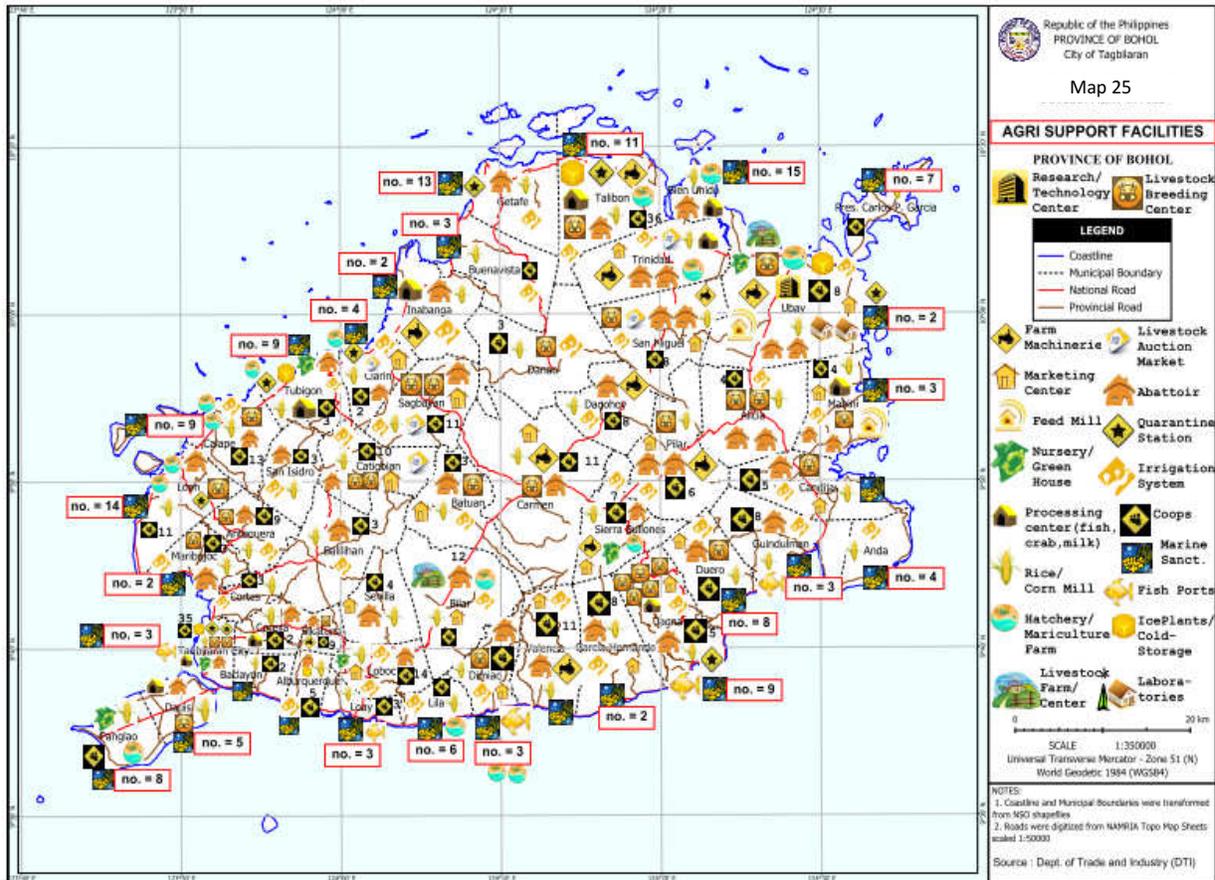
Bohol's aquaculture production in 2008, on the other hand, has posted an increase in output with a combined total of 110,789 metric tons, marking an increase of 7.4% from the 2005 level. Bohol has an area of approximately 8,000 hectares suitable for seaweeds farming (BAMP, 2006). As of 2008, about 2,768 hectares are actually producing, while 5,000 hectares are potential areas for expansion. The province has an average yield of 38 metric tons of seaweeds per hectare.

Based on the Bureau of Agricultural Statistics Food Consumption Survey (BAS-FCS), Bohol has a deficit in the following food commodities, e.g., corn, vegetables and fish and a surplus in the production of rice, fruits, rootcrops and livestock, i.e., carabeef, beef, pork, chevon and chicken as shown in Table 11.

Table 11. Food Situation of Major Food Commodities, Bohol, 2006 – 2008

COMMODITY	PRODUCTION, (in m.t.)			CONSUMPTION (in m.t.)			SURPLUS/DEFICIT (in m.t.)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Rice	90,443	90,857	121,581	103,457	104,904	106,059	(13,014)	(14,047)	15,522
Corn	6,247	8,232	7,055	10,603	10,751	10,870	(4,356)	(2,519)	(3,815)
Vegetables	6,493	6,457	8,031	26,980	27,358	27,659	(20,487)	(20,901)	(19,628)
Fruits	51,124	50,005	50,655	35,448	35,944	36,340	15,676	14,061	14,315
Root Crops	102,650	113,978	108,360	22,528	22,843	23,095	80,122	91,135	85,265
Fish	21,299	21,255	22,036	34,247	34,726	35,109	(12,948)	(13,471)	(13,073)
Carabeef	1,970	1,954	2,153	752	763	771	1,218	1,191	1,382
Beef	4,781	5,652	5,135	4,222	4,281	4,328	559	1,371	807
Pork	30,711	36,665	34,046	8,516	8,635	8,730	22,195	28,030	25,316
Chevon	317	464	472	36	37	37	281	427	435
Chicken	5,629	9,762	8,900	5,556	5,634	5,696	73	4,128	3,204
Egg									
- Chicken	3,335	3,945	3,888	3,154	3,198	3,234	181	747	654
- Duck	19	42	50	121	123	124	(102)	(81)	(74)

Map 25 shows the type and location of major agri-support facilities in the province.

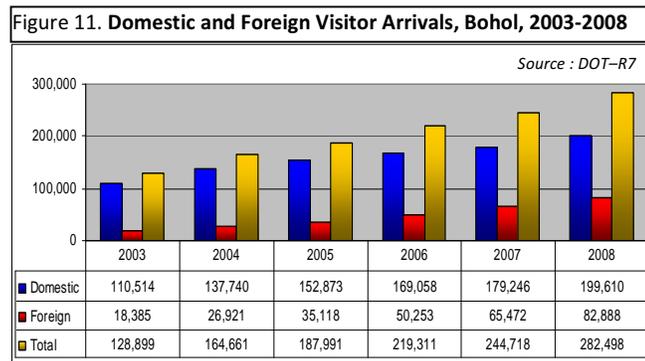


Bohol’s agricultural development is anchored on sound environmental principles which serve as the foundation and guiding mechanism for sustainable growth and development. This takes primary consideration on the need to produce more food for the growing population and market demands while simultaneously addressing the protection and management of the environment. To maximize and fully utilize the province’s agricultural potentials, key production areas of major commodities are identified as basis for agriculture development for the propagation, raising and development of high value crops, livestock and fisheries based on soil and geographical suitability, land classes/uses, proximity to support facilities, and other environmental consideration (*Table 29-Annex 1*). These production areas, if properly utilized and sustainably developed, will push Bohol’s agriculture production to satisfy domestic requirements as well as provide for export commodity demands. Land consolidation and production integration can also be facilitated to achieve economies of scale and expansion of market reach.

### 4.2.2 Tourism

The tourism industry has become a major element for the economic growth in Bohol. It has grown and developed significantly over the past 5 years. The current trend and the clear potential for its steady growth is seen as the number of tourist arrivals soars high and investments for tourism development continue to pour in the island province. The Department of Tourism (DOT) R-7 reported that visitor arrivals in Bohol registered a steady increase from 2003 to 2008, as shown in Figure 11.

Excluding day trippers who come to Bohol for a day tour, DOT RO-VII reported a total of 282,498 arrivals in 2008, marking a 15% increase from 2007.<sup>21</sup> This latest figure is far greater than the 2003 visitor arrivals of



only 128,899, registering 119% increase in a span of 6 years or an average yearly increase of 20%. In 2008, DOT reported that foreign tourists contributed 29% of the total tourist arrivals in the province, higher than the 23% and 27% share in 2006 and 2007, respectively. Domestic tourists still accounted for a larger share (71%) of total number of tourists coming to Bohol.

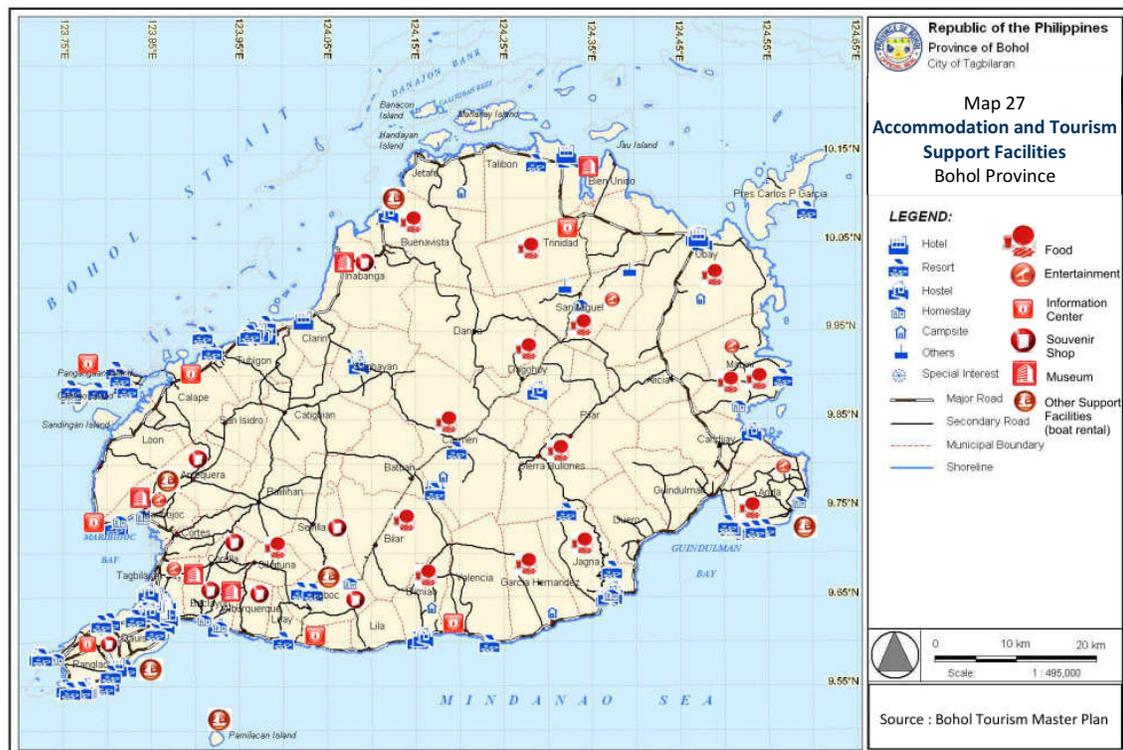
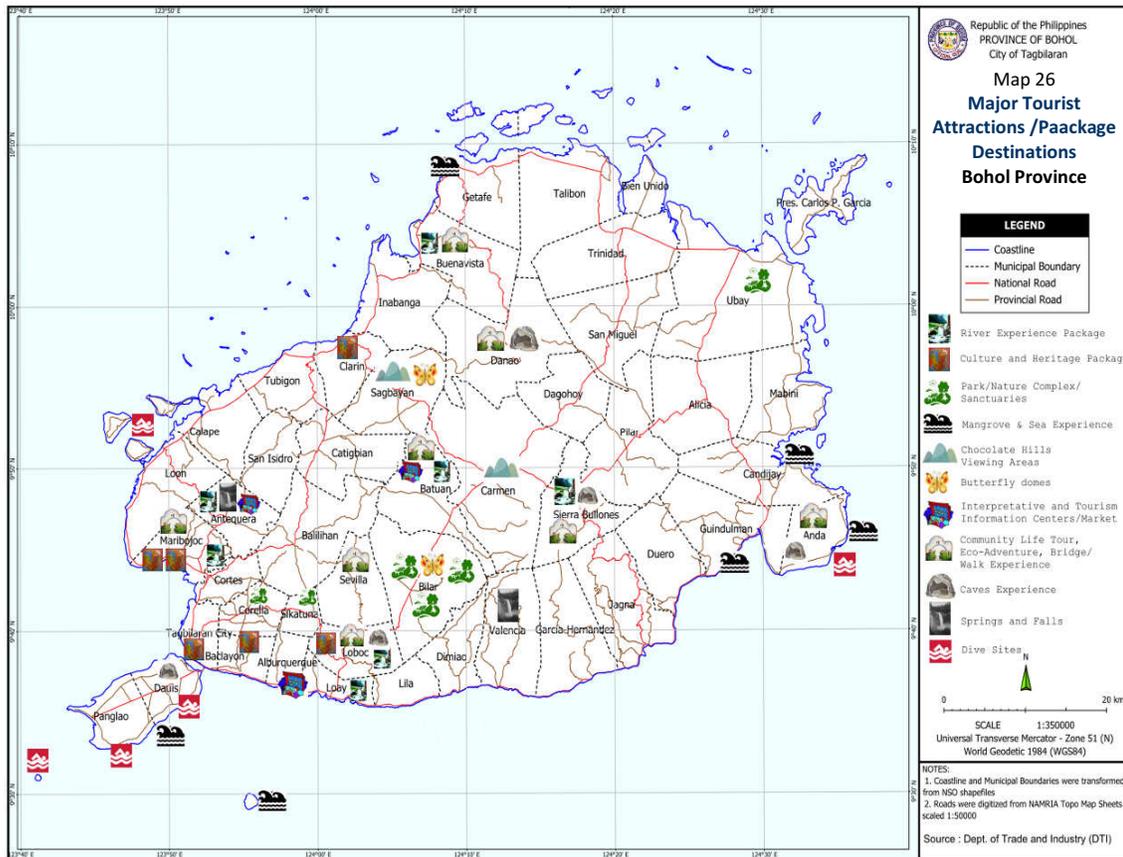
Bohol’s tourism assets are not limited to its famous Chocolate Hills, its pristine white beaches with white coral sand, and the number of dive sites with magnificent array of marine life, which are considered among the best in the world. The province’s exotic appeal is a rich complementation of its natural wonders like its geographic formations and the presence of exotic flora and fauna (1,312 floral and fauna species including the famous Philippine Tarsier, considered as the smallest primate in the world) and manmade, historical and heritage structures like the centuries-old stone churches and edifices considered as outstanding architectural works in the country. *Map 26* presents the major tourist attractions and packaged destinations of the province.

#### Tourism Support Facilities and Services

Bohol has 201 accommodation establishments ranging from resorts to hotels, to pension houses, apartelles, inns and training/convention centers providing a

<sup>21</sup> Tourist count from DOT-accredited tourism facilities in Bohol

total of 3,093 rooms by the end of 2009, mostly concentrated in Panglao Island and Tagbilaran City. **Map 27** shows the accommodation and tourism-support facilities scattered all over the province.



Tourist arrivals in Bohol are projected to increase in the coming years with an expected higher demand for accommodation facilities. Table 12 shows the projected tourist arrivals and room demand of the province from 2010 to 2015. For the planning period, it is estimated that approximately 8 thousand rooms are required by 2015 for the projected 2 million tourist arrivals in Bohol. With current existing available rooms, additional 5 thousand rooms will be needed by 2015. Jobs generated from tourism is projected to employ 17 thousand persons of which 53% will be indirectly benefitted.<sup>22</sup>

**Table 12. Projected Tourist Arrivals and Room Demand, Bohol, 2010-2015**

Year	Projected Tourists*	Daily Room Requirement**	Current Supply***	Surplus/ Shortage
2010	816,730	3,005	3,093	88
2011	980,077	3,606	3,093	-513
2012	1,176,092	4,327	3,093	-1,234
2013	1,411,310	5,912	3,093	-2,819
2014	1,693,572	6,231	3,093	-3,138
2015	2,032,287	7,477	3,093	-4,384

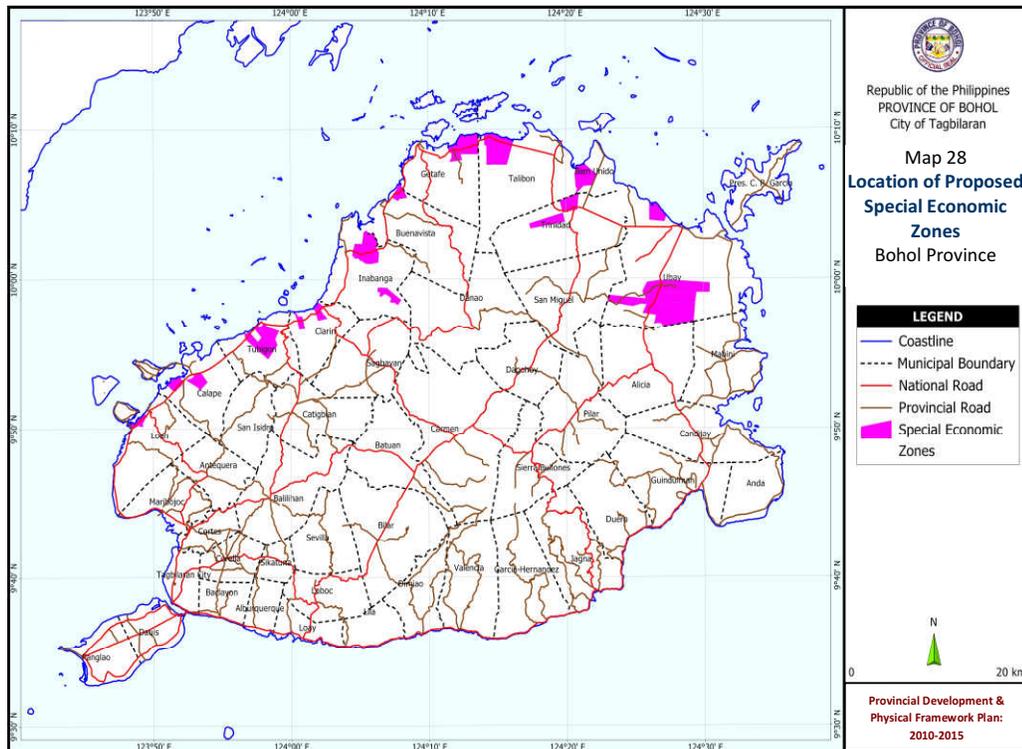
Note : \* Tourist arrivals projected to increase by 20% per year  
 \*\* Rooms required is based on Bohol Tourism Master Plan (BTMP) assumptions  
 \*\*\* Bohol Tourism Office (BTO) data

### 4.3 Potentials for Contributing to Local Economic Growth

#### Special Economic Zone/ Industrial Estates Development

The establishment of special economic/industrial zones in the province is seen as vital in the generation and promotion of investments. The province has seen the establishment of special economic zones as critical to the generation of investments in light manufacturing and agro-industries. *Map 28* illustrates the proposed Special Economic Zone areas in the province.

<sup>22</sup> Indirect employment generated by the tourism industry averages 2 persons per hotel room. These include jobs created providing goods and services such as food and beverage suppliers, toiletries, housekeeping supplies, laundry services, printing and related services, car hire services, tour operators, souvenir shop suppliers, beauty shops and barbers, flower shop supplies and personnel. Direct employment in the hotel and accommodation industry averages 1.75 persons per room; includes administration staff, marketing, front desk, catering and kitchen, housekeeping, maintenance for grounds and buildings, and security. It also includes restaurants and banquet service staff on a full and part-time basis, entertainers, spa and sports management personnel.



Possible areas of investments are in light manufacturing and agro-industries that support primary production and processing. The northern part of Bohol, being near the industrial center of Cebu, is identified as the zone for industrial development in the province that can serve as an expansion area for the region's bullish urban and industrial growth. It spans from the municipalities of Clarin, Inabanga, Buenavista, Getafe, Talibon, Bien Unido, Trinidad to Ubay. The LGUs of Ubay and Talibon are identified as potential areas for proposed agro-industrial zones. In Ubay, Brgys. Achila, Lomangog, Bongbong, Gabi and San Pascual have been identified as suitable areas for development; while the proposed economic zone in Talibon includes the barangays of Bagacay, Tanghaligue and the expansion areas of Burgos and Tulang in Getafe. Both municipalities have included these proposed development sites in their respective Comprehensive Land Use Plan.

Along the northwestern portion, three initial industrial estate sites are identified in the municipalities of Loon, Calape and Tubigon. Preferred investments in these areas include roll-on-roll-off (ro-ro) port facility, plantations/agro-forestry, agri-based industries including processing and post-harvest, infrastructure and utilities, light manufacturing and agri-tourism.

Identified tourism zones proposed in the province include those in Panglao Island, the Anda Peninsula, the Ubay Agri-park and the Abatan River Development areas. Panglao Island is already identified as a tourism eco-zone under a Presidential Proclamation and will be the future site of the Panglao Bohol International Airport. The proposed “airport city” concept extends the development beyond the terminal, establishing hotel and entertainment facilities, a conference and exhibition complex, shopping center, office buildings and logistics and others.

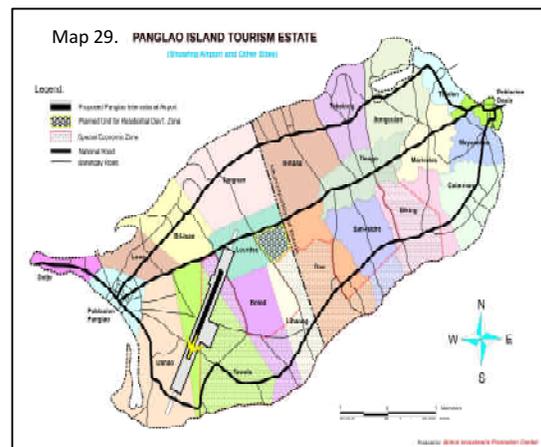
The province’s inflows are foreseen in the areas of tourism and agriculture which can serve as possible venues for future investments. The Bohol Investment Code establishes both fiscal and non-fiscal incentives to investors, and investment mechanisms that are investor-friendly. To provide a more conducive atmosphere for investments in Bohol, the Provincial Government set in motion the operation of a Bohol Business One-Stop Shop (BOSS) at the Bohol Investment Promotion Center where prospective investors and locators will have an easy access to business information, application and registration requirements. Special assistance services will also be extended in the eco-zones.

### Panglao Island Tourism Estate

Panglao Island Tourism Estate Project is one of the pilot tourism estates established in the Philippines as embodied in the Philippine Tourism Master Plan (*Map 29*). This tourism project covers a total land area of 2,000 hectares within the barangays of Libaong, Tawala, Bolod, Danao, San Isidro and Biking in Panglao Island.

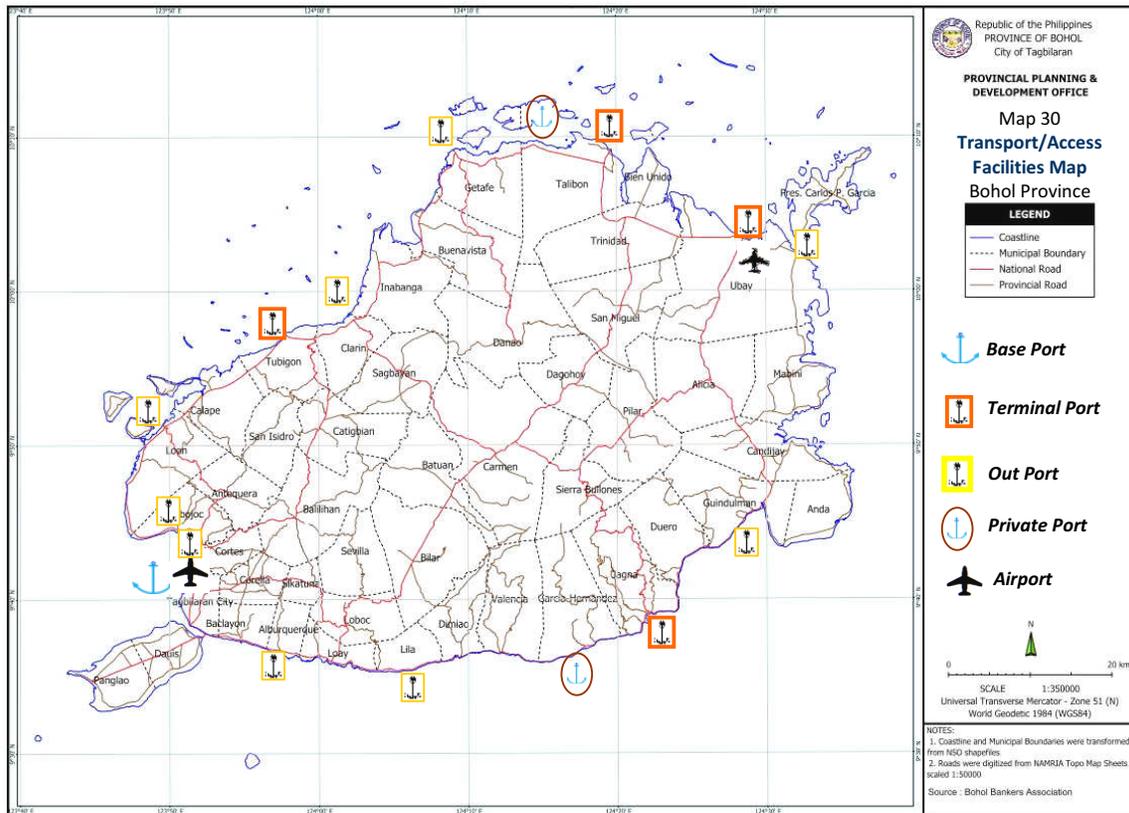
The tourism estate alone has an area of 120 hectares located in the southern part of Panglao Island with about 5-6 kilometers of white sand beach.

The whole tourism estate calls for the construction of integrated resort development and cluster-type residential villas which can accommodate around 7,000 tourists at a time, a retirement village, marina, sports and leisure facilities, restaurants and other tourism support facilities. Rural buffer (nature tourism zone), urban service area, agricultural, conservation and reforestation areas are also to be developed. The development of an international standard domestic airport to service large aircraft operations is a major component of the project.



### 5 Transportation, Access/Circulation

Accessibility to major destinations in Bohol has greatly improved with the continuing upgrading and development of roads and ports that link entry points, service and commercial centers in the province. Bohol’s transport network has increased as new roads connecting barangays/municipal/provincial roads and national highways and ports are being constructed and expanded. This development supports the clustering strategy of tourism destinations and encourages the establishment of agriculture and tourism-based facilities in other areas of the province.



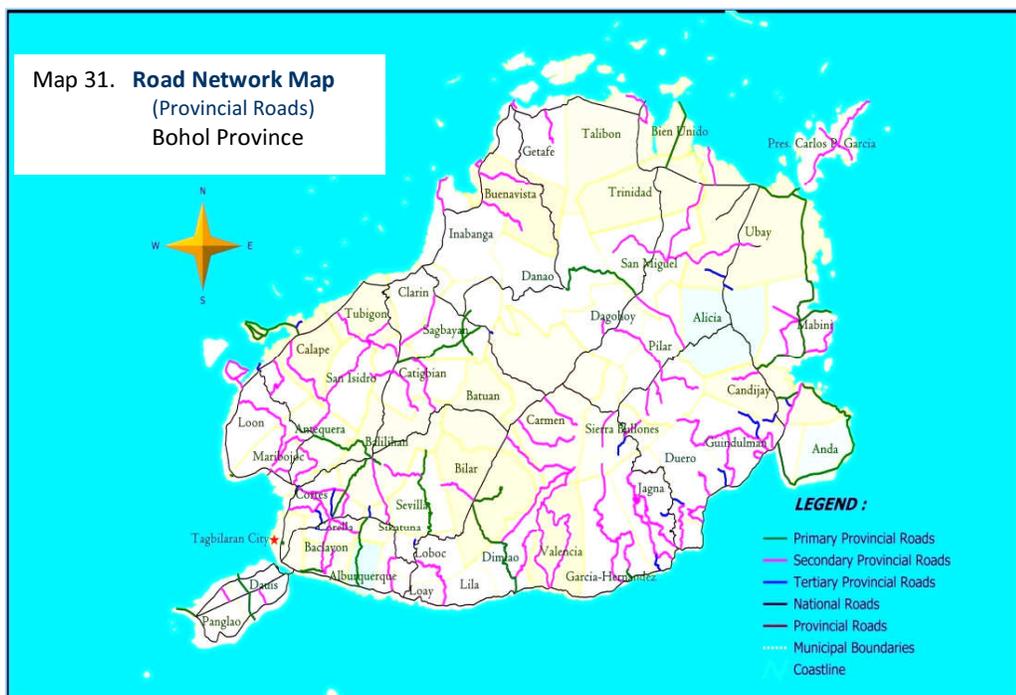
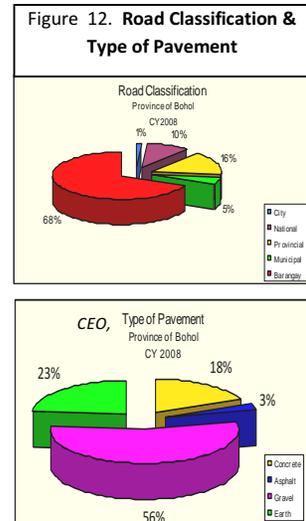
The transport network of Bohol consists of its road network, five major seaports in Bohol, a domestic airport in Tagbilaran City and a feeder airport in Ubay (Map 30). The seaports under the Philippine Ports Authority (PPA) comprised of a base port in Tagbilaran City and four (4) terminal ports located in the municipalities of Tubigon, Talibon, Ubay and Jagna while Catagbacan, Tapal and Getafe are sub-ports of the ports of Tubigon, Ubay and Talibon, respectively. Although the seaport of Tagbilaran is considered a major port of entry, it has a short berth length that can barely accommodate bigger ships like the Superferry and cargo vessels at one given time.

### 5.1 Internal Linkages

The major road network of the province consists of the circumferential road along the coastline and the interior road of the mainland that connects the interior municipalities. The island municipality of Pres. C. P. Garcia is crisscrossed by a network of inland roads with the major ones leading to the feeder ports that connect the municipality to mainland Bohol. These major distribution road networks of Bohol are expected to promote the eco-cultural tourism and agro-industrial development of the province.

The so-called nautical highways of Bohol connect municipalities to ports. Tourism highways are being upgraded to cater to the increasing number of road users and vehicles to major tourist destinations. With smoother roads and easy accessibility, traffic volume was noticeably higher in Bohol. The number of registered vehicles in the province increased by 14 percent in 2008 compared to year 2007 with trucks having the highest increases. Trucks in the province are usually utilized in the operation of businesses. This shows that the province has grown into a fast rising center for trade and commerce.

Bohol’s road network in Bohol has a total road length of 5,948 kilometers of which 10% is classified as national roads, 16% provincial roads (*Map 31, Table 15-Annex 1*), 1% city roads, 5% municipal and 68% barangay roads. Entire road network is composed of 3% asphalt, 18% concrete, 56% gravel and 23% earth (*Figure 12*).



The bridges within Bohol's road network has a total length of 8,869.88 linear meters of which 67% are concrete, 12% are steel, 0% are bailey and 11% are timber bridges. Of the total length, 20% or 1,839 linear meters are under the jurisdiction of the Provincial Government of Bohol.

Once the Bohol-Cebu Multi-access Friendship Bridge Project to be located in Getafe (Bohol) to Cordova (Cebu) will come to reality, it will link the two provinces and provide a platform for the development of land-based transport system. It will also serve as a conveyance in power transmission, water distribution and fiber optic communication system aside from providing an alternative, convenient and reliable land-based mode of transport between the two provinces. Its construction supports the Provincial Government's thrust of developing the northern corridor of the province as an industrial zone; develop the economic centers and establish human settlements and opens up new economic entry points to the province that will strengthen its tourism and agriculture industries.

As part of the Provincial Road Network Development Plan (PRNDP) of the province, some primary road sections of Bohol's road network managed by the Provincial Government will be rehabilitated through the AusAID-funded Provincial Road Management Facility (PRMF). The said facility seeks to increase economic growth and improve public access to infrastructure and services in the province. Included among its activities are the rehabilitation and maintenance of identified provincial roads, strengthening provincial administrative capacity including road planning and management, budgeting, financial management, and procurement, and contracting out of road works. This five-year program for the province has just started its operation last November 2009.

## 5.2 External Linkages

Maritime transport system will continue to be the main carriers of passenger and cargo, both incoming and outgoing, to and from Bohol. Major exit/entry points to Bohol are through its major airport and sea ports located in Tagbilaran City, Tubigon, Ubay, Jagna and Talibon. These are key infrastructures that link Bohol to Manila, other parts of the Visayas and Mindanao. The Tagbilaran Port is Bohol's gateway to Cebu, Dumaguete, Siquijor, Dapitan, Cagayan de Oro, Plaridel, Ozamis/Iligan and Manila while the ports of Talibon, and Tubigon serve conventional passenger-cargo vessels from/to Cebu City. The Ubay seaport is the gateway to Metro Manila as it serves regular trips of roll-on, roll-off (RORO) vessels coming from/going to Manila by land trip via Bato, Leyte and motor bancas from/to Maasin, Southern Leyte, and Bato, Leyte. Jagna sea port, together with Tagbilaran sea port, is Bohol's gateway to Mindanao and offers services that ply between Bohol to Cagayan de Oro City, Nasipit and Camiguin with RORO route. These ports serve both conventional passenger and cargo.

In 2008, shipcalls have increased by 8.3%. There are already nine (9) daily trips of fast seacrafts plying the Cebu-Tagbilaran route. Likewise, there is also a dramatic increase in air traffic in the province by 18% as a result of the growing number of incoming and outgoing flights in 2008. Flights to and from Manila in 2008 reached 1,760 carrying a total of 100,056

passengers to the province. Currently, there are five (5) flights to Tagbilaran from Manila daily.

At the moment, all of these ports need additional support facilities like transit sheds, passenger terminals, parking area and expansion of berthing areas. Upcoming is the construction of an International Cruise Ship Port by PPA at the Catagbacan Port in Loon, Bohol. This will give a big boost to Bohol economy, especially to the tourism industry, since the cruise industry is a fast-growing sector of global tourism.



**Airport**

Bohol has two airports, the Tagbilaran Secondary Airport and the Ubay Feeder Airport. The Ubay Airport caters to small aircrafts but has been recently closed to traffic due to inadequate runway facilities. Accordingly, the air transportation facility of the province has greatly improved with the services of three major airlines namely; the Philippine Airlines, Cebu Pacific and Zest Air. Access to Manila from Tagbilaran and vice versa is easy and convenient with the seven-flight daily schedule offered by the three airlines mentioned.

Upcoming is the proposed Panglao-Bohol International Airport Development Project which will develop a new airport facility on Panglao Is. (Map 29). That complies with domestic and international standards. It envisions opening up Central Visayas to more economic activities as well as enhancing the the tourism industry of Bohol as it serves as a gateway for major tourist destinations in Bohol from other parts of the country and abroad. The present airport will be transferred to this site once the Panglao Airport is operational. The area vacated is proposed to be converted into a Bohol Business Park. With its expected completion, the airport will boost further the tourism sector of Bohol, strengthening its position in the local and global tourism market.



This will also become the centerpiece of the Panglao Island Tourism Estate (PITE) that would catalyze further the socio-economic development of Bohol.

## 6 Income, Employment, Service Access, and Poverty

### 6.1 Employment/Unemployment

Bohol's working age population constitutes about 58 percent of the total population of the province. Between 2004 and 2008, the working age population expanded at an average of 2.1% annually.

Latest available data (April 2003, NSO) shows that Bohol's employment rate was 87 percent with visible under-employment rate of 5.2 percent of its 734 thousand labor force, up by 3 percent from 2000 rate. Visible under-employment for that same year has gone up by 2.4 percentage points compared to 2000 (*Table 13*). Most of those employed are male (63%) mostly working in the rural areas of Bohol with urban employment accounting only for 23 percent of employed persons. A bigger percentage of those employed are in the agriculture sector (42%) with 36 percent employed in the services sector. The industry sector accounts for 22 percent. Women workers are employed more in the Services Sector while the males are employed more in the Agriculture And Industry Sector (*Table 14*).

Table 13. **Employment Status Rates From 2000-2003**  
Bohol Province

Period	Employment Rate	Un-employment Rate	Visible Under-employment Rate	
2000 - Jan	91.3	8.7	2.5	
	Jul	92.5	7.5	3.0
	<b>Average</b>	<b>91.9</b>	<b>8.1</b>	<b>2.8</b>
2001 - Apr	86.2	13.8	5.3	
	Jul	91.8	8.2	2.6
	Oct	94.6	5.4	5.1
	<b>Average</b>	<b>93.2</b>	<b>6.8</b>	<b>3.9</b>
2002 - Jan	91.1	8.9	6.1	
	Jul	90.0	10.0	7.6
	Oct	91.4	8.6	7.4
	<b>Average</b>	<b>90.8</b>	<b>9.2</b>	<b>7.0</b>
2003 - Jan	92.6	7.4	5.2	
	Apr	87.0	13.0	5.2
	<b>Average</b>	<b>89.8</b>	<b>10.2</b>	<b>5.2</b>

Source: National Statistics Office

**Table 14. Employment by Economic Activity, 2006**  
Bohol Province

Employment by Economic Activity	Female	Male
Agriculture	24.3	57.6
Industry	12.4	14.8
Services	63.3	27.5
Contributing Family Workers (% of Total)	45.4	54.6

Source: Philippine Human Development Report 2008/2009

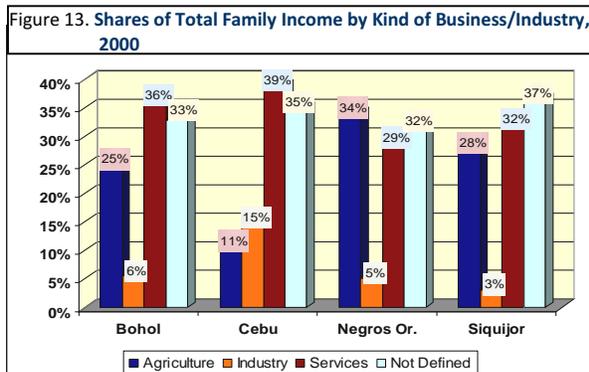
At the regional context, Bohol accounts for only 1/5 of the region’s total employed persons with agricultural employment in the province contributing 8 percent of the total employed persons in the region. Bohol’s dependence on agriculture, even in terms of employment, is very evident, although the services sector is fast catching up.

**6.2 Family Income**

Average income of a Boholano family is ₱77,291.00 (per capita income of ₱16,478) in year 2000, based on the latest available provincial disaggregation of the Family Income and Expenditure Survey (Figure 13). This is an increase of 36% from the 1997 level of ₱56,940.00. The average expenditure in 2000 for each Boholano family amounts to

₱66,907.00 (per capita expenditure of ₱14,364), denoting a 32% increase over the 1997 level of ₱50,754.00. In contrast, the average income of a Boholano family compared to the average annual expenditures in that same year is almost nearly equal with the average family income higher by 15% compared to the average family spending. This would mean that if this trend continues and with rising prices of commodities, time will come when families are inclined to spend below their means.

On the other hand, OFW remittances need to be studied more closely, especially in terms of how it can be maximized as an economic driver. Investments by Boholano OFWs could have multiplier effects towards increased employment and economic growth. Given the substantial portion of the amount represented by the “not defined” category, it’s possible that it might consist largely of OFW remittances. Recipient families might have lumped their income of this nature under that category.



### 6.3 Social Services

The Report on the 2006 Human Development Index (HDI) revealed that the Boholanos' quality of life has relatively improved compared to previous levels in 2000 to 2003 (Table 17).<sup>23</sup> An increase in provincial HDI of 4.43 percent sent Bohol moving closer to the perfect HDI of 1, from rank 41 in 2003 to rank 35 in 2006 as among the top gainers out of 77 provinces. Greater achievements were noted relative to life expectancy (8.68%) and education (11.82%) between 2003 and 2006 for Bohol Province.

Table 17. **Distribution of HDI Indices: 1997, 2000, 2003 & 2006**

Dimension (Index 1)	Gap Improvements / Decline <sup>24</sup> (2006 & 2003)	Year			
		2006	2003	2000	1997
<b>Human Development</b>	4.43%	0.569	0.549	0.531	0.502
<b>Life Expectancy</b>	8.68%	0.779	0.758	0.735	0.713
<b>Education</b>	11.82%	0.597	0.543	0.528	0.501
<b>Income</b>	-2.30%	0.332	0.347	0.331	0.293

Source of data: Philippine Human Development Report 2008/2009

Bohol has made several strides toward the attainment of the Millennium Development Goals (MDGs). Challenges, however remain. Data gathered shows that Bohol has achieved the targets on reducing poverty by half, improvements in reducing child mortality, incidence of tuberculosis and access to safe drinking water. The province, however, still faces challenges in closing the gaps for maternal health, access to sanitary toilets, income, reproductive health services, malnutrition and primary education.

<sup>23</sup> Human Development Index is a summary measure of human development in terms of achievements in three basic dimensions: longevity as measured by life expectancy, knowledge as measured by education, and, standard of living as measured by income.

<sup>24</sup> Gap improvements/decline indicates how far a province is from the perfect HDI of 1.0 (Gap Improvement= $(HDI_t - HDI_{t-1}) / (1 - HDI_{t-1})$ )

### 6.3.1 Health

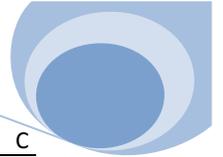
The health of Boholanos is generally improving along the years as shown by key health indicators (Table 16). Decreases are noted for Infant, Child and Maternal Mortality Rates (MMR) and incidence of malnutrition among newborns and pre-schoolers in 2008 compared to previous years. Through the years, the Infant Mortality Rate (IMR) and Child Mortality Rate (CMR) in Bohol, as well as in the country, have declined albeit at a very slow rate (Table 18). The leading causes of illness in Bohol are dominated by infectious diseases with hypertension as the only non-infectious in nature. Diarrhea is at the top along with respiratory diseases for many years now affecting 58 percent of sick people in Bohol in 2008 while 43 percent of the populace became ill from acute respiratory infections. Water-borne disease outbreaks, such as the *Shigella* outbreak in Loon last 2007, continue to pop up periodically across the province. Diarrhea continues to be a leading cause of morbidity in Bohol and infant mortality. Contaminated water supply is attributed to be the main cause for the disease. Water sampling done by the Provincial Health Office (PHO) Water Bacteriological Laboratory from 2004 to 2008 showed that 37% of water samples from Level 3 water sources, 89% of Level 2 water sources and 86% of Level I water sources were found to be non-potable or not safe for drinking.

Table 16. Key Development Health Indicators, Bohol Province: 2000, 2006-2008

Key Health Indicators	2000	2006	2007	2008
Crude Birth Rate (per 1,000 population):	20.73	18.45	18.17	18.3
Percent Male	10.58	52%	52%	53%
Percent Female	10.15	48%	48%	47%
Crude Death Rate (per 1,000 population):	4.04	4.34	4.94	4.79
Percent Male	56%	55%	58%	55%
Percent Female	44%	45%	42%	45%
Percent of Newborns with Low Birth Weight (< 2500 gms)	15%	3%	5%	4%
Infant Mortality Rate (per 1,000 livebirths)	11.14	9.3	14.15	8.98
Maternal Mortality Rate (per 100,000 livebirths)	0.55	0.51	0.51	0.29
Proportion of Children 0-5 Years Who Died	5%	4%	10%	7%
Prevalence of underweight Children	-	17%	14%	13%
> Pre-school Children	6%	10%	11%	9%
Percent Male	-	-	50.2%	49.7%
Percent Female	-	-	49.8%	50.3%
> School Children (6-10 years old)	14%	24%	16%	17%
Elementary/Pre-schoolers	-	-	17.43% (31,168)	17.87% (28,420)*
High School Students	-	-	12.57% (5,776)	12.63% (6,841)*
Percent of Immunized Children	81%	72%	69%	69%
Percent of Households with Access to Safe Water Supply	43%	83%	77%	75%
Percent of Households with Access to Sanitary Toilet Facility	70%	88%	89%	85%
Health Insurance Coverage (PhilHealth)	127,305 (CY 2005)	-	35%	38%

Source: Provincial Health Office (PHO)-Bohol

\* Excluding Tagbilaran City



Malnutrition, in both mothers and children, still exists in the province mainly because of lack of awareness of mothers on the importance of proper feeding, the non-availability of iron supplements and food commodities for supplemental feeding at the Rural Health Units, and the lack of sufficient food in the household due to poverty.

Crude Birth Rate (CBR) at 19 births per 1,000 population in 2008 has gone down compared to 21 births per 1,000 population in 2000. A total of 24,153 live births occurred in the province in 2008, 53 percent of them males. The Contraceptive Prevalence Rate (CPR) in Bohol, however, is still way below the performance standard set by government. Its utilization significantly decreased over the years which may be attributed to several factors notably the withdrawal of supply of these commodities by USAID and the minimal health budget allocated by LGUs for family planning (FP) commodities and activities. FP commodities are sold in Popshops located in 9 LGUs in Tagbilaran City, Ubay, Talibon, Carmen, Bien Unido, Dauis, Inabanga, Candijay and Catigbian and a Provincial Popshop in Tagbilaran City funded by UNFPA with a clinic that provides services to walk-in clients.

According to the Provincial Health Office (PHO) Report, only 5-10% of the total budget of majority of LGUs in Bohol is allocated to health.

**Government Health Workforce**

At the heart of each and every health system is its workforce. Although the overall provincial ratio of government health workers to population vis-à-vis standards are well within the local service planning standards, this is deceiving in terms of their spatial distribution (*Table 17*). In Bohol, most of the health workforce in the province are in the Poblaciones where most of the health/medical facilities are located. An increasing demand for these government health workers is noted specifically government physicians especially in the rural areas of Bohol.

**Table 17. Ratio of Government Workforce to Population: 2000 & 2008**  
Bohol Province

Key Health Indicators	Provincial Status		Local Health Services Standards
	2000	2008	
Govt. Workers to Population:		1:16,857	
Gov't Doctors -		<u>74</u>	1 Government Physician per 20,000 population/
Doctors in Gov't Hospitals		14	1 MHO per Municipality
Municipal Health Officers		52	
Others		9	
Public Health Nurse to Population Ratio	1:14,063	1:17,573	1 Public Health Nurse per 20,000 population
Rural Health Midwife to Population Ratio	1:3,245	1:3,342	1 Rural Health Midwife per 5,000 population

Government Dentist to Population Ratio			1 Government Dentist per 50,000 population
Rural Sanitary Inspector to Population Ratio			1 Rural Sanitary Inspector per 20,000 population
Barangay Health Worker to Number of Households			1 Barangay Health Worker per 20 households
Barangay Nutrition Scholar			1 Barangay Nutrition Scholar per Barangay
Health Educator			1 Health Educator per 50,000 population

Source: Provincial Health Office-Bohol

### Government Health Facilities

Access to health/medical services and facilities have also improved with additional health and birthing centers available in the rural areas of Bohol resulting to significant improvements in child deliveries in these facilities (from 17% deliveries to 46%) rather than in the home, while deliveries done by medical personnel likewise increased from 74% to 88%.

In Bohol, there are 32 hospitals (private and government-owned), 2 municipal-run infirmaries, 7 birthing homes, 115 birthing centers within RHUs/BHS, 58 Rural Health Units/Municipal Health Centers and 383 Barangay Health Stations in Bohol. As to the access to these health/medical facilities, much still needs to be done with only 11% of barangays having birthing facilities and only 36% of the barangays in Bohol with Barangay Health Stations with some segments of the population still limited by road network and transportation access. But these figures are marked improvements since 2000.

Hospitals are scattered throughout the province majority of them located in the capital city. While private hospitals are better equipped and better-supplied than the government hospitals, the limitation of patient's choice lies in their affordability. Many patients are constrained from seeking private services due to financial reasons preferring instead government medical facilities. Ten of the hospitals in Bohol are owned and operated by the Provincial Government, 3 are Municipal LGU-owned, while the Level III hospital and 1 Level I hospital are DOH-retained. The Level II province-owned hospitals serve as referral hospitals of the 5 inter-local health zones. These facilities meet only the minimum requirements for licensing and are not really equipped to maximize their operations and meet the needs of the community in all aspects (infrastructure, equipment, supplies and manpower). All, however, are PhilHealth-accredited.

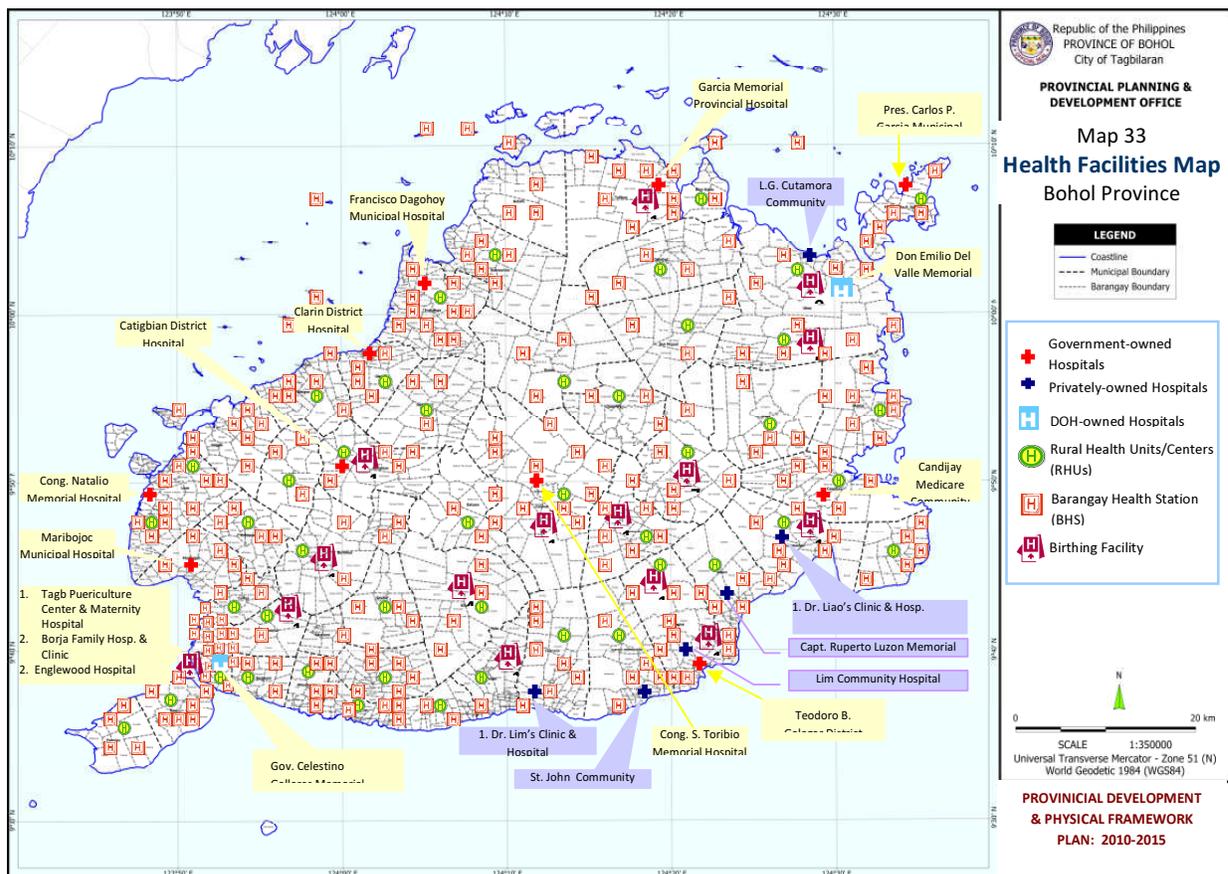
Planning Environment

Assurance on availability of quality low cost drugs is realized through the establishment of 122 drugstores, 140 Botica ng Barangay, 6 Botica ng Bayan (BFAD/PITC accredited) and 47 Health Plus Outlets where the rural folks can access affordable medicines.

Map 33 below shows the type and location of health facilities in Bohol.

**Population At Risk Of Getting Sick**

Assuming that 10 percent<sup>25</sup> of the population will get sick, a total of 135 thousand people will need health care services in Bohol within the planning period.



**Social Health Financing**

In the country, PhilHealth is the national health insurance agency providing Boholano access to social health insurance (Table 19). In Bohol, a total of 138,722 beneficiaries were enrolled in its Sponsored Program (a health insurance coverage to less privileged families) in 2008, constituting 50 percent of the total PhilHealth beneficiaries in Bohol in that year. Under the Overseas Workers Program (OWP) which covers all land-based overseas Filipino, a total of 10,938 Boholano overseas workers were covered by PhilHealth-OWP in 2008. The Provincial and

<sup>25</sup> Based on the percent share of the population who got sick in 2008

municipal governments in Bohol has been contributing counterpart funds to PhilHealth to give indigents/poor families in the province access to this social health insurance facility.

Table 20. **PhilHealth Beneficiaries by Type of Programs in 2008**  
Bohol Province

PhilHealth Programs	Beneficiaries
<b>Bohol</b>	<b>275,960</b>
Employed	78,680
Government	22,086
Private	56,594
Individually Paying Program	40,807
Overseas Workers (OFW) Program	10,938
Sponsored Program	138,722
Non-Paying Program (Lifetime Members)	6,813

Source: PhilHealth-Bohol

Indigent enrolment for social health insurance in Bohol is projected at 119,260 in 2010 requiring an investment of ₱71.87 million. By 2014, with a total projected indigent enrolment of 146,765, the investment requirement will reach ₱88.06 million.

### 6.3.2 Education

For basic education, about 69 percent of the school-going age population in Bohol was enrolled in the elementary while only 43 percent of this age group was in the secondary level in school year 2008-2009, as shown in *Table 19*. While school accessibility is high, Cohort Survival Rates are relatively low especially in the secondary level. In SY 2008-2009, for example, only about 76 percent of those who enter first grade complete their elementary education while only 62 percent of pupils complete secondary education in Bohol. Drop-out rates are higher in the secondary level at 6 percent, slightly higher compared to the previous school year. There were more male drop-outs than females in Bohol in both levels.

Table 19. **Key Education Indicators: SY 2007-08 & 2008-09**  
Bohol Province

Key Indicators	Provincial Status	
	2007-2008	2008-2009
<b>Basic Education Level</b>		
<b>Participation Rates</b>		
Elementary Level	67.49%	69.06%
Secondary Level	42.39%	43.44%
<b>Gross Enrolment Ratio</b>		
Elementary Level	82.17%	82.30%
Secondary Level	62.40%	63.57%
<b>Cohort Survival Rate</b>		
Elementary Level	75.88%	75.71%
Secondary Level	60.58%	61.54%

<b>Completion Rate</b>		
Elementary Level	72.45%	73.50%
Secondary Level	57.32%	58.01%
<b>Drop-out Rate</b>		
Elementary Level	2.55%	2.00%
Secondary Level	6.11%	6.25%
<b>Classroom-Pupil Ratio</b>		
Elementary Level	1:32	1:36
Secondary Level	1:55	1:59
<b>Technical-Vocational Education</b>		
<b>Enrolment:</b>		<b>7,452</b>
Male		4,181
Female		3,271
<b>Graduates:</b>		<b>6,644</b>
Male		3,597
Female		3,047
Percent (%) Graduates		89%
<b>Tertiary/Higher Education</b>		
<b>Enrolment:</b>	<b>35,337</b>	<b>35,184</b>
Male	16,850	15,523
Female	18,487	19,661
<b>Graduates:</b>		
Male	<b>5,557</b>	<b>7,100</b>
Female	2,630	3,039
Percent (%) Graduates	2,927	4,061

### Tracking the Millenium Development Goal (MDG) 2:

#### Achieve Universal Primary Education

As to the achievement of Goal 2 of the MDG, Bohol lagged in both indicators (8 and 9) with increasing number of children who are not in elementary and high schools as shown in the table below. At the current rate, the target of universal access to primary education is unlikely to be attained by 2015 in Bohol.

Table 20. **Status of the Millennium Development Goal for Education, Bohol Province**

<b>MDG Target 4: Achieve universal access to primary education by 2015.</b>						
<b>Indicator</b>	<b>Indicator</b>	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Indicator 8	Proportion of Children 6-12 years old who are not in elementary school	14%	13%	24%	20%	31%
Indicator 9	Proportion of Children 13-16 years old who are not in secondary school	42%	38%	64	51%	57%

### Literacy/Educational Attainment

Based on the latest FLEMM Survey of NSO, Bohol’s 2000 Literacy Rate declined compared to 1994. Simple Literacy Rate decreased from 96 percent to 92 percent in the same period. Likewise, a decline in the Functional Literacy Rate of Boholanos is noted from 85 percent to 82 percent. A higher literacy is noted among females than males. More than two-thirds of the household population 5 to 24 years old attended school during School Year 2007 to 2008. School attendance was higher among females (69.7 percent) than among males (66.6 percent) during the said school year. Compared in 2000 only 51.59 percent had attended/finished elementary education; one-fourth (24.11 percent), high school; and 12.04 percent with college education among the household population 5 years old and over in 2007.

### Education Facilities

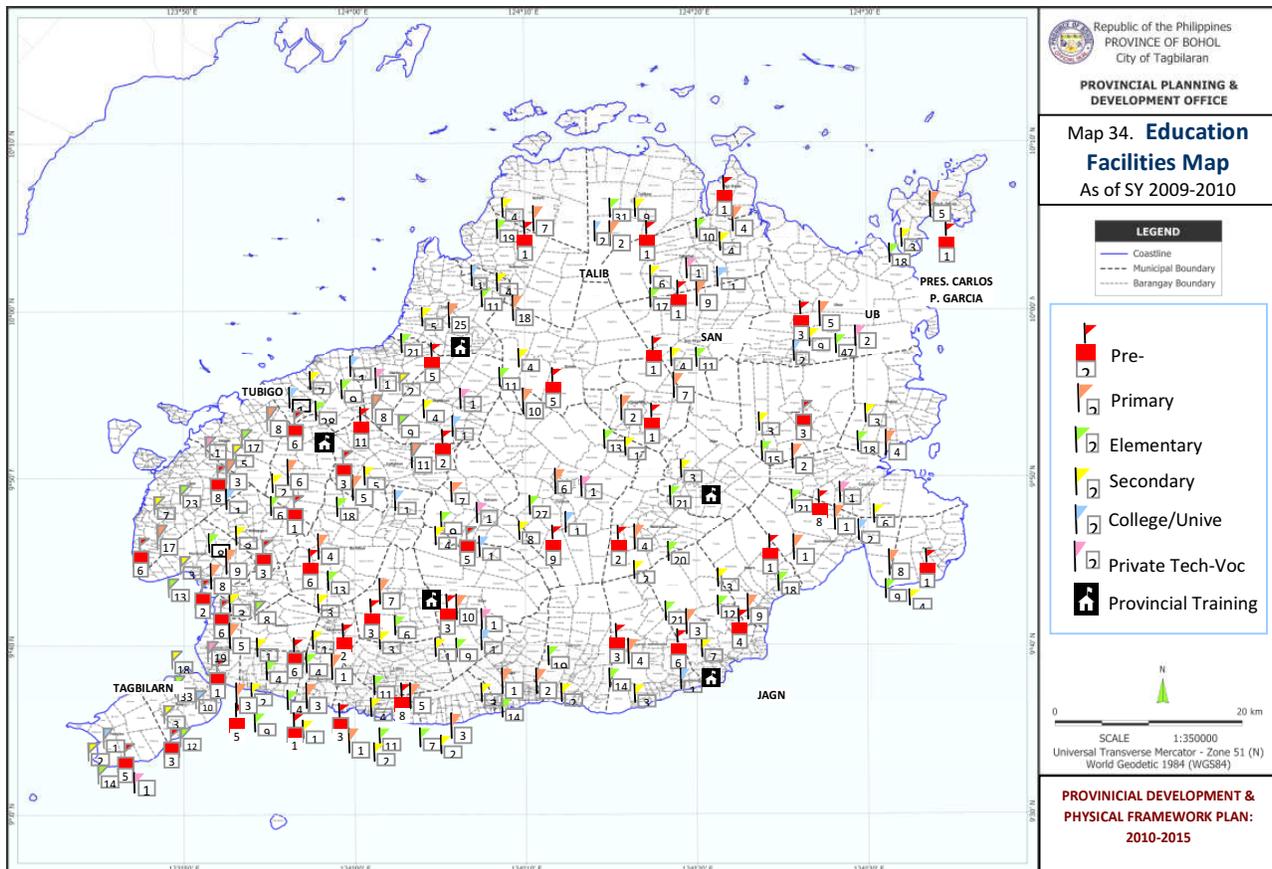
A number of schools provide education to the school-going age population of Bohol. For basic education, public schools provide more access to the population of the province with its 267 pre-schools, 988 primary/elementary schools and 192 secondary schools spread strategically all over Bohol (Table 1 Map 34). About 35 technical-vocational (tech-voc) schools provide skills trainings for pre-employment, skills upgrading, and productivity enhancement to interested individuals. Some schools offer tech-voc courses in the province in partnership with the government thru the Technical Education and Skills Development Authority (TESDA). TESDA has five (5) Provincial Training Centers (PTC) offering tech-voc courses in Bohol.

A total of 27 institutions provide higher education in Bohol - two (2) are universities of which one (1) is a state university (formerly CVSCAFT) with 5 campuses spread strategically in the province. There are still 197 barangays without schools in Bohol.

Table 21. Education Facilities: 2007-08 & 2008-09, Bohol Province

EDUCATION FACILITIES	Provincial Status	
	2007-2008	2008-2009
<b>Basic Education Level:</b>		
Pre-schools	<b><u>165</u></b>	<b><u>267</u></b>
Public	107	208
Private	58	59
Elementary Schools (including Primary Schools)	<b><u>987</u></b>	<b><u>988</u></b>
Public	941	941
Private	46	47
High Schools:	<b><u>181</u></b>	<b><u>192</u></b>
Public	122	131
Private	59	62

<b>Tech-Voc Schools</b>	<b><u>18</u></b>	<b><u>18</u></b>
Private Training Vocational Institutions	12	12
Provincial Training Centers - TESDA	6	6
<b>Higher Education Institutions</b>	<b><u>27</u></b>	<b><u>27</u></b>
Public	7	7
Private	20	20
<b>Total Number of Educational Facilities</b>	<b>1,378</b>	<b>1,492</b>
<b>School-less Barangays:</b>	<b><u>197</u></b>	<b><u>197</u></b>
1 <sup>st</sup> Congressional District	80	80
2 <sup>nd</sup> Congressional District	23	23
3 <sup>rd</sup> Congressional District	94	94



**Resource Requirements**

For the planning period 2010 to 2015, it is projected that about 10,229 classrooms will be needed for the basic education level of which 70% will be for the secondary level. This will entail a financial requirement amounting to Php 2.46 billion for the entire period. The bigger need for classrooms are for the public secondary schools which already have an unmet need of 1,249 classrooms in SY 2007-2009.



For this, the province needs to provide a total of 102 hectares to meet the minimum land requirement of DepEd for the projected number of classrooms. This excludes the area requirement for the proposed tertiary institution in the Pilar-Dagohoy-Sierra Bullones area.

### 6.3.3 Housing

In 2007, there were 241,193 occupied housing units in Bohol as reported by the National Statistics Office (NSO). This is 14.4 percent higher than the number of occupied housing units recorded in 2000. A ratio of one household per occupied housing unit was recorded in 2007. The same ratio was observed in 2000. Moreover, the number of persons per occupied housing unit was 5.1 persons in 2007, lower than the ratio of 5.4 persons per occupied housing unit in 2000.

Most of the housing units in Bohol have outer walls made of bamboo/sawali/cogon/nipa, and roofs made of galvanized iron/aluminum. Among the 241,193 occupied housing units, three out of 11 (27%) had outer walls made of bamboo/sawali/cogon/nipa while 78 percent had roofs made of galvanized iron/aluminum. These construction materials were also the most common materials used for outer walls and roofs in 2000.

The household population of Bohol in 2007 was 1,227,809 persons, an increase of 7.9 percent from 1,137,775 persons in 2000. The number of households, meanwhile, increased by 13.6 percent from 213,215 in 2000 to 242,307 in 2007. The average household size in 2007 was 5.1 persons, lower than the average household size of 5.3 persons in 2000.

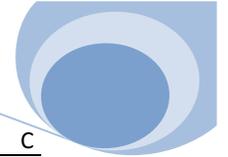
### Shelter Needs<sup>26</sup>

The increasing demand for housing in Bohol is indicated by existing housing backlogs and doubled-up occupancies. New Housing Units<sup>27</sup> or the total need for housing units is

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<sup>26</sup> The Plan uses year 2009 as base year with an estimated population of 1,256,326. The annual growth rate from year 2000 to 2007 is 1.06 percent. Population of Bohol Province based on the NSO population count year 2007 is 1,230,110. The base year is the year before the planning period. The plan period is divided into two. First planning period covers 2010 – 2012, second planning period cover 2013 – 2015, The planning period is set by the province to answer and meet the housing needs based on population growth and backlog.

<sup>27</sup> Basic data assumptions: 2007 Population = 1,230,110; Annual Population Growth Rate= 1.06%; Household Size= 5; Upgrading and Displaced units= 240; Homeless= 71; Ratio Double-up Households= 1.01



computed by summing up the housing backlog and the need for new units due to population growth. **Table 22** summarizes the shelter needs of Bohol Province.

**Table 22. Shelter Needs**  
Bohol Province

Major Indicators	Year	
	2000	2007
Household Population	1,137,775	1,227,809
Annual Population growth	2.92%	1.06%
Total Number of Households	213,215	242,307
Total Number of Dwelling/Occupied Units	210,747	241,193
Household Size	5.41	5.07
Upgrading and Displaced units		240
Homeless		71
Double-up Households		1.01
Housing Backlog	44,658	35,822
Doubled-up Households	2,512	1,114
Households with Makeshift Housing	547	412

Source: NSO

ITEM	Base Year	I Planning Period		II Planning Period
	2009	2010	2013	2015
<b>B. Population Projection</b>				
Population Growth rate <u>1.06</u> % / year	1,256,326	1,269,643	1,296,702	1,338,376
Households	251,265	253,929	259,340	267,675
Average HH size	5	5	5	5
Housing stock	204,571			
ITEM	Total	Annual	Program Period	
<b>C. New Units Due To Backlog</b>				
Upgrading and Displaced units	42,075	7,013	6 yrs	
Double-up Households	2,512	837	3 yrs	
Homeless	71	71	1 yr	
ITEM	NEW UNITS NEEDED			
	Planning Period			Total
	2010 - 2012	2013 - 2015		
<b>D. New Housing Units Needed</b>				
<b>Due To Population Growth:</b>				
Total		8,075	8,335	16,410
Annual		2,692	2,778	5,470
<b>Due To Population Growth and Backlog:</b>				
Total		30,022	29,374	59,396
Annual		10,007	9,791	19,798
Note: There is a discrepancy of 1 unit in the TOTAL figure due to rounding off; computation by HUDCC				

Bohol needs 59,396 new units in the next 6 years, due to population growth and housing backlog. Annual new housing need in year 2010-2015 is an average of 9,899 units of which 5,940 units belong to socialized housing development.

### **Land Requirements**

Simulation of Land Requirements is done to compute for land requirements in Bohol using 100 square meters total lot area per household for socialized housing and 150 square meters total lot area per household for economic/high end housing.

#### **Minimum Land Requirements**

For Socialized Housing:	356.38 Hectares for 35,638 Households
Economic/High-end Housing:	356.37 hectares for 23,758 Households
Requirements in 2010-2015(All Income Groups):	712 Hectares

### **Financial Requirement for Housing**

On the estimated 59,396 households that the Bohol Province needs to address for the next six years, the total financial requirement would be Php23.0 billion. This amount is based on the maximum cost of Php 400,000.00 for a house and lot package. For land acquisition and development, the total financial requirement is estimated to be Php17.0 million. The amount is based on the 60 percent (Php240,000.00) of socialized housing package which is Php 400,000.00.

There are two possible sources of funds to finance Bohol's socialized housing projects. One would be revenue from taxes. This includes the idle Land Tax under Section 236 of the Local Government Code. The other sources are reflows from repayments of LGU housing projects, reflows from take-outs with interim financing such as accessing Funds from National Government Programs and from other sources (proceeds from the sale of Alienable Public Lands within the defined boundary of the LGUs, proceeds from the sale of titled properties owned by the LGUs, proceeds from the implementation of the Socialized Housing Tax per Sec.43, R.A. 7279 and proceeds from the implementation of Socialized Housing Unit Participation of LGUs for developers housing credit in compliance to 20% balance housing).

As an industry, the potential investments in housing are substantial because of the magnitude of demand. For the period 2010-2015, the total housing need (backlog plus new household requirements) in Bohol is estimated to reach about 59,396 units at an annual average of new housing need of 9,899 units. Even if we assume that only 50% of affected households can afford such socialized housing (the national government estimate of the percentage of the population that do not have access to formal housing schemes is 40%), the resulting amount is still very significant.



### 6.3.4 Security

Bohol Province is generally peaceful notwithstanding the economic growth it has been experiencing and the increase of its population. Its peace and order situation has been maintained at generally low levels through the concerted efforts of various law enforcement agencies and the general public.

Insurgency-related incidents are considered isolated and not alarming with the continuous anti-insurgency campaign program and anti-poverty initiatives by the government. Currently, Bohol has no insurgency fronts, unlike several years back when the province was the seat of the Regional Command of the CPP-NPA. Efforts, however, are still being undertaken by government, as there are still about 245 barangays that are considered threatened by insurgents. While there is still military presence in the province, programs are more focused on building infrastructures, providing social services and livelihood and implementing an integrated territorial security system.

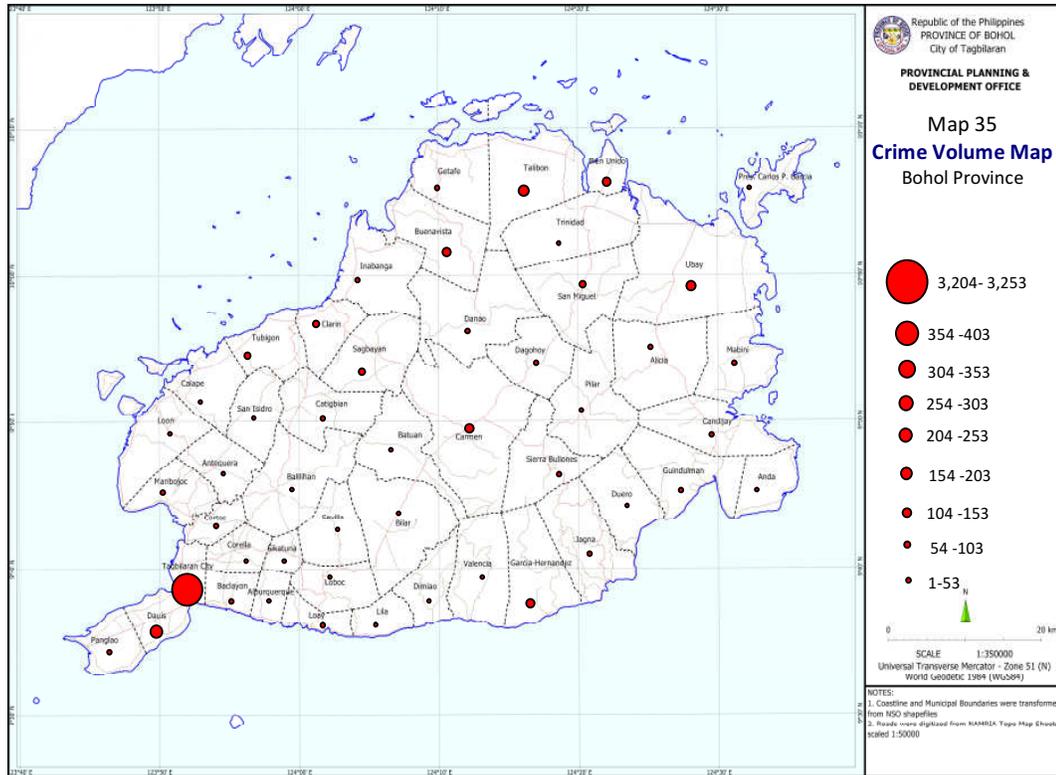
#### **Military Camps and Reservation Areas**

There are currently seven (7) military camps in Bohol occupied and used by the Arm Forces of the Philippines' Infantry Brigade, Engineering Battalion and Special Forces. These camps are located in the Municipalities of Carmen, Tubigon, Bilar, Balilihan, Danao and Pilar. Military reserved areas are also provided in the province for special military use. These areas are located in the Municipalities of Carmen, Tubigon, Panglao, Ubay and in the City of Tagbilaran.

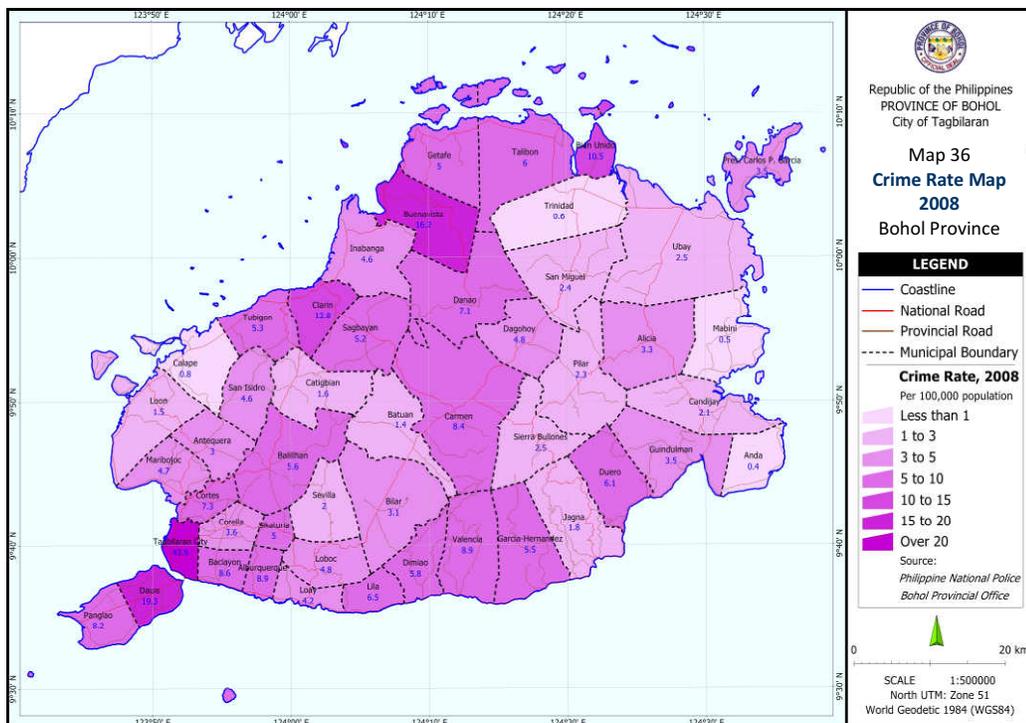
Crime incidence for years 2004 to 2008 show crime volume in Bohol has been generally decreasing. While crime volume has increased in 2005 by 44%, it has consistently posted a decreasing trend starting 2006 through 2008. It is worthy to note that the decrease in volume went to as high as 15%. It is also interesting that both Index and Non-index crimes decreased through the same period. This may be attributed to the intensified campaign of the law-enforcement agencies in Bohol, especially the Philippine National Police (PNP), to curve down criminality through crime prevention mechanism and increased police visibility which are strong deterrence against illegal elements of society. **Map 35** illustrates crime volume in 2008 while **Map 36** shows the crime rate in the city/ municipality in that same year.

As to the location of crime incidents, there seemed to be direct correlation between the occurrence of crime and population, wherein crime volume and rate are quite high in urbanized and highly populated areas. Other factors may also contribute to the occurrence of crime such as the economic activities of an area, the proximity and adequacy of protective services as well as the socio-cultural fabric of a locality.

Planning Environment



On the other hand, crime solution efficiency is seen to be erratic and fluctuating. Through the five-year period, index crime solution efficiency has risen to as high as 92% in 2006 and sloped down to a low 77% in 2008. It is therefore essential that law enforcement agencies heighten their investigative capacities through proper human resource training, equipment upgrading and intensified intelligence networking.



	2004	2005	2006	2007	2008	Total
<b>Index Crimes</b>						
Murder	52	45	63	49	74	283
Homicide	22	27	28	26	38	141
Physical Injuries	239	513	441	403	295	1,891
Rape	28	37	27	28	32	152
Robbery	111	109	131	163	224	738
Theft	188	321	207	217	202	1,803
<b>Non-Index Crimes</b>	571	688	611	599	400	2,869

*Source: Philippine National Police – Bohol Provincial Police Office*

A closer look at the Index Crimes would reveal that Physical Injuries accounted most of this type of crimes during the same five-year period. On the average, report on physical injuries was pegged at 43%. This is followed by theft at 26% and robbery at 17%. Serious crimes against persons like murder and rape accounted 7% and 4% respectively. Homicide, on the other hand posted 3%. It can further be observed that on a yearly basis, the individual index crimes are also fluctuating, with erratic yearly increases and decreases.

**Police Services**

The police force in Bohol is divided based on the areas of responsibilities and the nature of police operations. In 2008, there were a total of 1,201 police personnel in the province, 86% of which were assigned in the 47 municipalities while 6% were detailed at the Tagbilaran City Police Station (Figure 14). Meanwhile, the Bohol Provincial Police Office accounted 5% of the police force while the 701<sup>st</sup> Provincial Mobile Group represented 3%. Map 37 shows the location of Police Stations in the Province.

With the general standard police-population ratio of 1 policeman for every 1,000 population, it is clear that the province falls short from the required police force considering its estimated population of 1.247 million in 2008. The police is also confronted with the problem of meeting the authorized strength of 21 personnel and 4 officers for every police station.

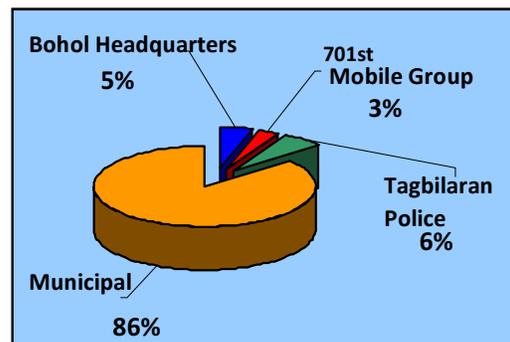
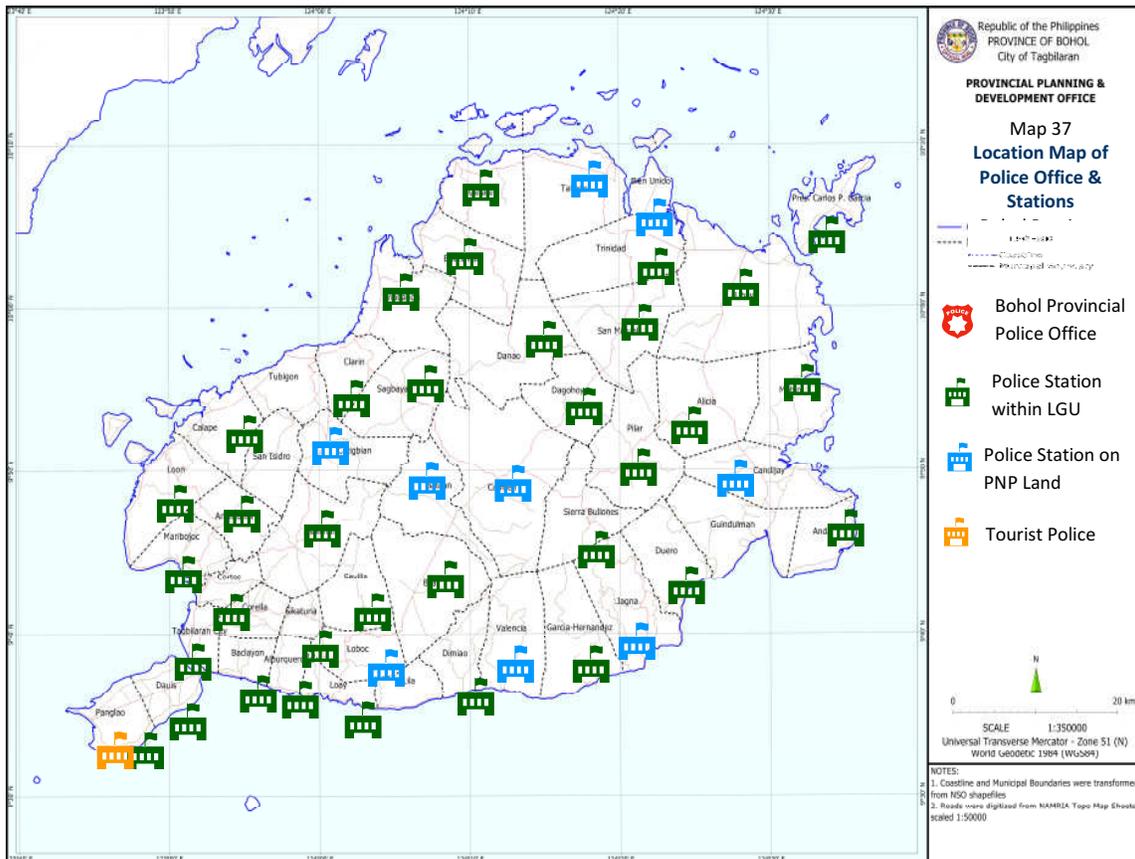


Figure 14: Police Force, Bohol Province



Meanwhile, the police and military services in Bohol still lack an Explosive and Ordnance Disposal (EOD) Unit to effectively deal with bomb threats. This is essential considering the growing economic activities, facilities build-up and influx of tourists in the province. A K-9 Unit also needs to be organized and supported to pre-empt and deter the entry and transport of explosives, drugs and other illegal paraphernalia in the province.

Furthermore, to intensify law enforcement operations, there is a need to acquire or improve police facilities such as communication equipment, mobility resources and police station land/buildings. Sea assets are also required to boost maritime operations for illegal fishing, smuggling, search and rescue and the protection of marine resources. Intelligence and information gathering also needs to be improved through appropriate funding support and maintenance of proper network channels. Continuing professional education and assistance for law enforcement personnel also need to be sustained. There is also a need to further improve cooperation and collaboration between law enforcement groups, local governments and civil society organizations in the fight against crime and other forms of illegal activities.

### Marine Safety Services and Facilities

Bohol's Philippine Coast Guard (PCG) has only one (1) station located in Tagbilaran City and four (4) detachments located in the Municipalities of Jagna, Ubay, Talibon and Tubigon. The PCG's 33 personnel have been active in promoting safety of life and property at sea as well as safeguarding marine environment and resource in the province. Its area of responsibilities also includes COP of Catagbacan, Loay, Loboc, Jetafe and Pres. CP. Garcia. The organization is also pushing for the enforcement of all applicable maritime laws. In times of disasters and natural calamities, the PCG is one of the forefront agencies that provides search and rescue operations.

Given Bohol's large coastal areas, the PCG requires additional facilities and equipment such as rubber boats and floating assets for search and rescue. Augmentation of personnel is also necessary. There is also a need for the completion and construction of Balicasag Station in Panglao and beacons in other identified areas in the Province.

### Detention and Rehabilitation Services

Bohol has now a total of five (5) District Jails operated and managed by the Bureau of Jail Management and Penology (BJMP), with the former Bohol Detention and Rehabilitation Center (BDRC) already being transferred from the Provincial Government's management. Two (2) of these district jails are located in Tagbilaran City, one (1) in the Municipality of Carmen, one (1) in Ubay and one (1) in the Municipality of Talibon (Map 35). Shown in Table 24 are the rehabilitation and detention services of Bohol.

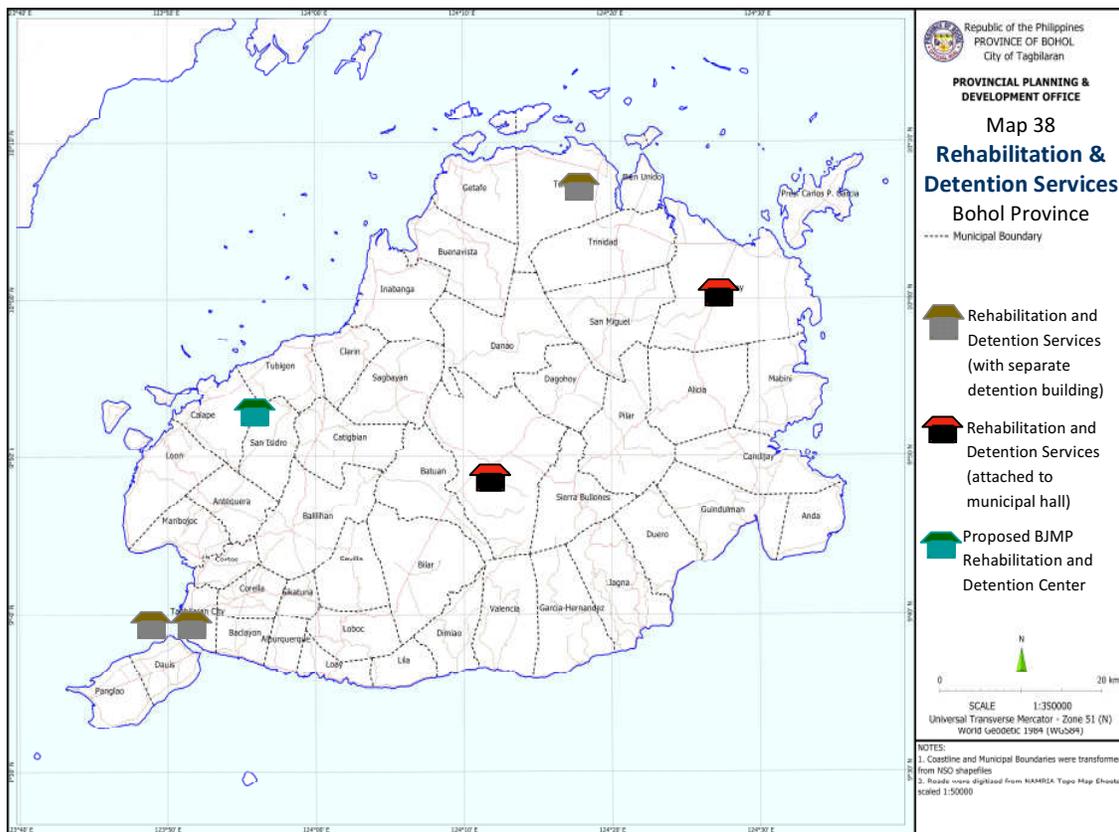
District Jails	No. of Personnel	No. of Cells	Total Cell Capacity (No. of Inmates)	Actual No. of Inmates
Bohol District Jail	95	27	400	326
Tagbilaran City Jail	18	11	100	128
Carmen District Jail	12	4	30	56
Ubay District Jail	10	4	40	68
Talibon District Jail	13	6	60	147
<b>TOTAL</b>	<b>148</b>	<b>52</b>	<b>630</b>	<b>725</b>

*Source: Bureau of Jail Management and Penology, July 2009*

Looking into the capacity of these district jails, it can be observed that there is already overcrowding in the cells of most of the jails. With the number of prisoners being detained in these detention centers, it is necessary that these jails be expanded to increase its holding capacities. Facilities also need to be improved, particularly the visiting areas, dining halls and individual cells. Considering the risks of operating a detention center, it is also recommended that these District Jails be located in an

appropriate building separate from other government offices. Currently, the jails in Ubay and Carmen are still attached and located at the Municipal Hall building. With the increasing number of prisoners due to continued arrests of suspected criminals, slow litigation of cases and the need for a more strategic location of jails in the province, it is therefore necessary to build and establish new detention centers in Bohol. One of the proposed sites is in the Municipality of Tubigon to address the detention needs in the northern part of the province.

Furthermore, there is also a need to capacitate the personnel of these district jails to ensure that the best security and professional rehabilitation services are provided. Equally important to this is the parallel upgrading of equipment such as service vehicles, firearms and other required equipment.



**Firefighting Services**

Currently, there are 15 fire stations in the province, located in Tagbilaran City and in the municipalities of Panglao, Loay, Loon, Balilihan, Calape, Bilar, Valencia, Jagna, Carmen, Ubay, Talibon, Inabanga, Clarin and, Tubigon. There are also several sub-stations located in Tagbilaran City. For the past 5 years (2004-2008), a total of 322 fire incidents have

been recorded in the province with an estimated P117 Million cost of damage. Year 2004 had the most number of fires with 79 incidents costing P26.5 Million, while year 2005 had the least number of fires with 42 incidents costing P17.8 Million.

**Judicial and Legal Services**

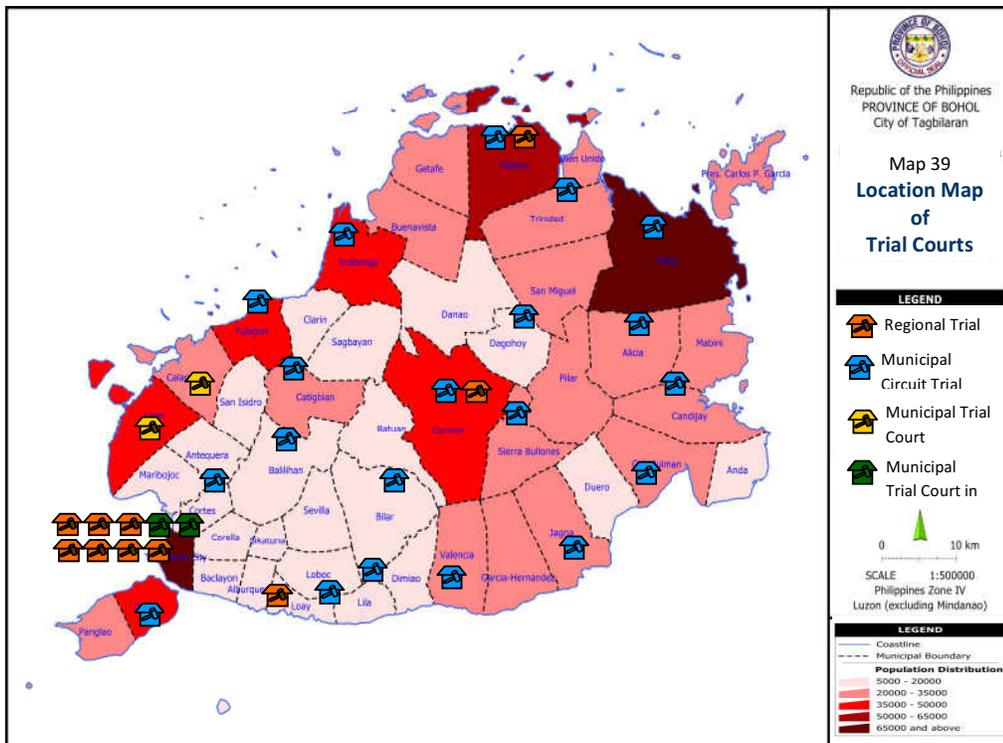
Bohol currently has a total of 34 courts that are located in various parts of the province. There are ten (10) Regional Trial Courts (RTCs), seven of which are located in Tagbilaran City and three (3) are located in the Municipalities of

Table 25: Inventory of Courts, Province of Bohol	
Regional Trial Court	10
Municipal Circuit Trial Court	20
Municipal Trial Court	2
Municipal Trial Court in Cities	2

Source: Provincial Prosecutor's Office, 2009

Loay, Carmen and Talibon (Table 25). There are also 20 Municipal Circuit Trial Courts (MCTC) located in various municipalities with multiple areas of jurisdiction. On the other hand, there are two (2) Municipal Trial Courts that are based in the Municipalities of Loon and Calape. Two (2) Municipal Trial Courts in Cities (MTCC) are located in Tagbilaran City (Map 39).

On the other hand, legal assistance and services have been provided to indigents through the Pubic Attorney's Office (PAO). The PAO represents indigents in judicial and quasi-judicial cases as well as non-judicial services such as mediation, conciliation, counseling and legal outreach program. The Office also provides legal assistance thru custodial interrogation and inquest investigation, jail visitation, information dissemination campaign thru legal counseling to improve legal literacy.



### 6.3.5 Governance

#### Public Finance

##### Income and Revenues

The Provincial Government of Bohol and all its local government units are all pursuing for stable and sufficient revenues which are imperative to support development programs and local government operations. These revenues, which come from locally-generated and nationally-shared sources, are the life-blood of the local government unit's workforce, physical and non-physical assets and for the provision of public services.

For the Bohol Provincial Government, revenues have been increasing for the past years. Over the five-year period from 2004-2008, the Provincial Government's revenues rose from ₱588 Million to ₱883 Million, posting an increase of 46% or an average yearly exponential increase of 9.9%.

Based on the table below, the revenues of the Provincial Government are significantly dependent on the Internal Revenue Allotment (IRA), with revenues from local sources just sharing about 12 to 16%. Locally-raised revenues come from real property taxes, business fees and licenses, services and other operations, and other taxes.

Table 26. **Revenue Sources, Bohol Provincial Government, 2004-2008**

Income Classification	2004		2005		2006	
<b>Local Revenues</b>	<b>104,168,648.42</b>	<b>16%</b>	<b>101,398,337.26</b>	<b>15%</b>	<b>95,011,072.36</b>	<b>12%</b>
Real Property Tax	12,489,502.89	2%	12,948,161.88	2%	13,884,738.09	2%
Other Taxes	5,331,483.37	1%	8,160,991.32	1%	6,565,866.69	1%
Business Fees and Licenses	15,898,189.43	2%	18,264,374.35	3%	15,046,249.31	2%
Services and Other Operations	13,058,600.72	2%	12,024,809.71	2%	12,874,218.27	2%
All Other Revenues/ Surplus*	57,390,872.01	9%	50,000,000.00	7%	46,640,000.00	6%
<b>Internal Revenue Allotment</b>	<b>541,284,364.00</b>	<b>84%</b>	<b>583,152,900.00</b>	<b>85%</b>	<b>684,216,747.40</b>	<b>88%</b>
<b>Total</b>	<b>645,453,012.42</b>	<b>100%</b>	<b>684,551,237.26</b>	<b>100%</b>	<b>779,227,819.76</b>	<b>100%</b>
* Refers to the Beginning Balance that is utilized from Annual Surplus of the previous year.						
Source: Provincial Budget Office						

Income Classification	2007		2008	
<b>Local Revenues</b>	<b>93,872,434.74</b>	<b>12%</b>	<b>116,165,534.28</b>	<b>12%</b>
Real Property Tax	13,453,772.18	2%	17,384,492.66	2%
Other Taxes	5,006,209.78	1%	4,584,196.89	0%
Business Fees and Licenses	13,679,575.30	2%	17,075,929.72	2%
Services and Other Operations	17,472,321.48	2%	17,944,078.01	2%
All Other Revenues/ Surplus *	44,260,556.00	6%	59,176,837.00	6%
<b>Internal Revenue Allotment</b>	<b>700,498,056.00</b>	<b>88%</b>	<b>826,553,857.66</b>	<b>88%</b>
<b>TOTAL</b>	<b>794,370,490.74</b>	<b>100%</b>	<b>942,719,391.94</b>	<b>100%</b>
* Refers to the Beginning Balance that is utilized from Annual Surplus of the previous year. Source: Provincial Budget Office				

The Internal Revenue Allotment (IRA) basically provides the major share of the total Provincial Government financial resources. For the five-year period, IRA averaged 86% of the annual government revenue flows. However, it can be observed that the IRA shared as high as 88% in years 2006, 2007 and 2008. This situation, indeed, shows the high dependency of the Provincial Government's operation on the IRA. There is, therefore, a need to build and expand the revenue base of the Province, especially on locally-raised incomes

Looking at the macro level, total yearly revenues of the Provincial Government have been increasing for the past 5 years. All sources being considered, revenues increased by 6% and 14% for the period 2004 to 2005 and 2005 to 2006, respectively. However, in 2007, the Provincial Government revenues only increased by a mere 2% from its 2006 levels. In 2008, fund resources significantly increased by 37%, attributed to the government's ₱147.0 Million borrowing to fund priority initiatives. A closer look into the estimated and actual itemized local revenues would reveal that the Provincial Government falls short in meeting its revenue targets. As shown in the *Figure 15*, expected local revenue levels have not been met for the past years. This situation raises the issue on the reliability and attainability of the revenue estimates, as well as the efforts made to meet these revenue estimates. While the overall revenues have generally been met, this is mainly due to the higher IRA share of Bohol Province.

The level of locally-generated revenues significantly affects the expenditure characteristics and cash back-up of the Provincial Government. Not attaining the expected local revenues would further deepen the province’s dependence from the IRA.

Expenditure Patterns

The Bohol Provincial Government’s expenditures over the five year-period 2004 to 2008 have been generally on the upwards trend, signifying the increasing financial requirements for its operation. As shown in the table below, expenditures have been increasing yearly by an average of 4% for the past five years.

Table 29. **Actual Expenditures, Bohol Provincial Government, 2004-2008** (in Million ₱)

Expenditure	2004	2005	2006	2007	2008
Personal Services	305.73	298.93	322.61	314.39	333.28
MOOE	108.35	107.11	169.12	178.06	206.44
Capital Outlay	77.06	28.82	11.38	11.10	27.56
20% Dev’t. Fund	100.17	82.41	97.90	120.02	102.68
Calamity Fund					0.32
Non-Office Exp.	41.06	47.33	54.77	53.77	68.52
<b>TOTAL</b>	<b>632.37</b>	<b>564.61</b>	<b>655.78</b>	<b>677.33</b>	<b>738.80</b>

Source: Provincial Budget Office

Of the total expenditures, Personal Services averaged at 48%, which is slightly above the Department of Budget and Management (DBM) imposed 45% limit. On the other hand, the Maintenance and Other Operating Expenses (MOOE) accounts the second highest expenditure levels at 24%. The implementation of development programs and projects under the 20% Development Fund accounted 15% for the five-year period.

For the 20% Development Fund expenditures, it can be observed that levels have stayed within 14 to 18% share of the total Provincial Government spending. Its trend is somehow erratic with intermittent upwards and downward trend within the 5 year period. Furthermore, considering the 14 to 18% share in total expenditures, it would show that the development fund has not been fully utilized for the implementation of programs and projects. It can be observed that some

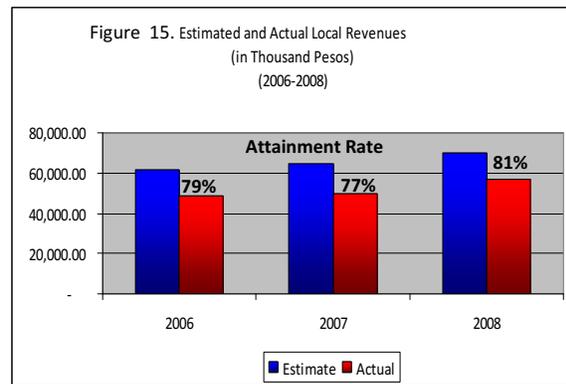


Figure : Estimated and Actual Local Revenues, Bohol

projects remained continuing for two years, thus not fully using up the appropriation for the current year.

#### Provincial Government's Economic Enterprises

The Provincial Government is operating a number of economic enterprises that provide revenue flows to its coffers. Taking advantage of its facilities and real properties, the Provincial Government has been raising revenues from the operation of the Provincial Capitol Commercial Spaces, the Bohol Cultural Center and Sports Complex and other sports center. The Province also shares in the revenues derived from the operation of the Chocolate Hills Complex in partnership with the LGU of Carmen. Rentals from its heavy equipment are also being collected from LGUs and private entities that use these equipments for road development projects. Furthermore, operations of the 10 devolved hospitals also provided revenue flows to the Province.

The government, however, still has high potential to develop and operate other income-generating initiatives with its available real properties, facilities and human resources. It is in this context that there is a need to establish a stand-alone office within the Provincial Government that will focus on studying the development, management and operation of viable economic enterprises. This is necessary to ensure the eventual attainment of the goal of the Provincial Government to raise the level of internally-generated revenues and reduce its IRA-dependency.

#### Provincial and Municipal Income Classification

Bohol Province maintains its first class status in terms of income classification, with its level of revenues both from external and internal sources. On the other hand, City/ Municipal Government have shown improvements in their income classes. There were 19 municipalities, representing 40% of the total number of municipalities that were classified as 5<sup>th</sup> class municipalities. This significantly improved in 2008 wherein there were only 12 municipalities or 25% that remained at the said income class. 7 of the municipalities have improved and risen to the higher 4<sup>th</sup> income classification. Related to this, there were 22 4<sup>th</sup> class municipalities in year 2005. This also improved to 24 owing to the 7 municipalities that improved from the 5<sup>th</sup> class as well as the further improvement of 5 municipalities that moved to the higher 3<sup>rd</sup> class level. Three towns (Talibon, Tubigon and Ubay) are classified as 1<sup>st</sup> Class municipalities.



## 6.4 Utility/Infrastructure Services

### 6.4.1 Water and Sanitation

As of 2008, about 75% of the households in Bohol have access to safe water sources which are either provided by Level I, II or III facilities while the remaining 25% rely on unsafe water sources.<sup>28</sup> Incidence of water-borne diseases in Bohol is prevalent for the past years with diarrhea/gastroenteritis being one of the top leading causes of morbidity and mortality among its population. The prevailing high rate of these diseases in Bohol is a result of poor quality of drinking water in majority of the areas in the province especially in its component inhabited islands/islets. This is mainly due to contaminated (particularly from human waste matter) groundwater supply, the major source of drinking water in the province. Per records obtained from the Provincial Health Office, about 15% of households in Bohol were still without sanitary toilet facilities in 2008. Despite the presence of DOH-accredited water laboratories in the province, available drinking water in Bohol is largely untreated. Proper water treatment and purification is not regularly practiced in most of the municipalities.

About 523 barangays of the 1,109 barangays in Bohol have Level III water systems that are being managed by the LGU's Water Districts or Water Cooperatives (*Table 16-Annex 1*). The estimated population served by these Level III facilities is about 98 thousand households. These figures represent roughly 40% of the households in Bohol in 2008. There are 90 water service providers for Level III systems in the province under different kinds of ownership while Level II systems are serviced by 96 water providers operating in 26 municipalities in the province (*Table 18-Annex 1*). Majority of them are utilizing spring sources (69 systems), while the remaining systems are using deep well sources. There are two water districts in Bohol located in Clarin and Talibon (*Table 17-Annex 1*). Level I facilities (point source) are common in the rural barangays of Bohol. Majority of the point source facilities are publicly owned. These include different types of wells equipped with hand-pumps, developed springs and covered/improved dug wells.

There are two municipal water systems utilizing surface water sources in Bohol, namely Dagohoy (Mas-ing Creek) and Ubay (Calanggaman Catchment Area) but both are experiencing water quality problems due to inadequate treatment process. The municipalities in the southwestern part of the province like Garcia-Hernandez, Valencia and Lila have abundant spring sources while municipalities in

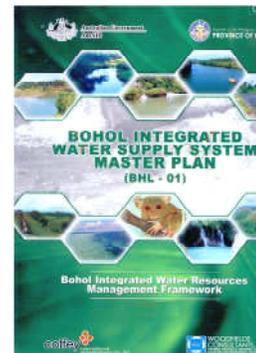
<sup>28</sup> Provincial Health Office 2008 Annual Report

the north such as Getafe, Buenavista, Trinidad and San Miguel have very scarce water resource.

The average consumption in Bohol varies from 60 lpcd in rural municipalities to 200 lpcd in the city of Tagbilaran. The water rates vary from a low of ₱15.00 for the first 10 cum to a high of ₱ 70 for the first 3 cum.

### The Bohol Integrated Water Supply System Master Plan (BIWSSMP)

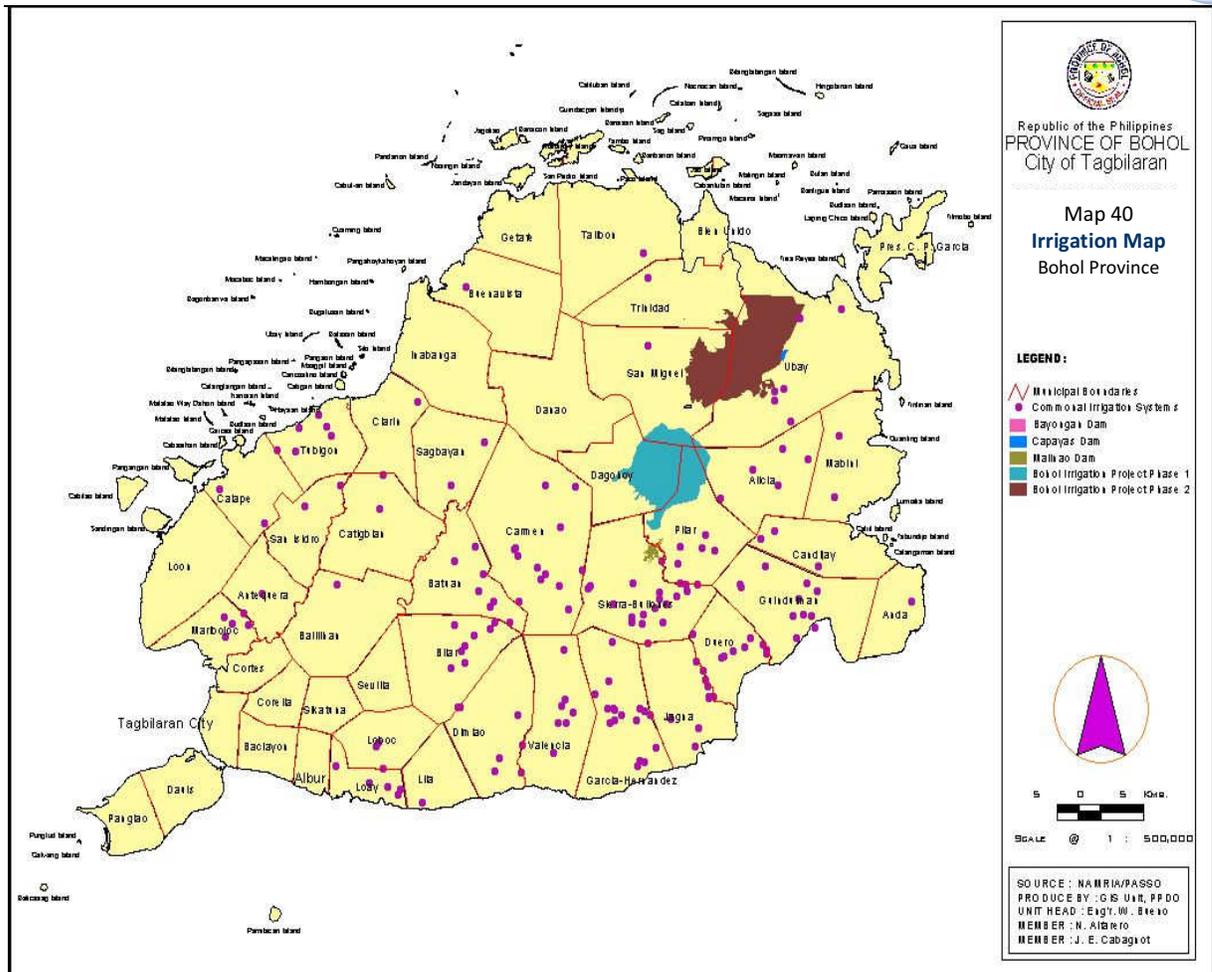
To guide the development of water resources in Bohol, the Bohol Integrated Water Supply System Master Plan (BIWSSMP) was conceived for safe domestic, commercial and industrial use of water resources of the province. The Plan's ultimate goal is to protect Bohol's water resources while providing for the needs of the economy, community and environment. Results of the study showed that by the year 2035, water demand from 5 municipalities (Panglao, Loon, Talibon, Tubigon and Ubay) and Tagbilaran City is



projected to account for 45% of total projected water demand of the province. The capacity of the current sources estimated at 45,408 cumd cannot sustain the projected demand. By 2010, projected average daily demand is 106,064 cumd against estimated available supply of 45,408 cumd prompting the need to identify additional potential sources for future requirements. At this rate, only 62% of Bohol's population is served. By 2015, the total water demand will reach almost twice as much as in 2010. The projected water demand of population up to year 2035 is presented in *Table 19 of Annex 1*.

#### 6.4.1.2 Irrigation and other Agricultural Support Facilities

Bohol province has a potential irrigable area of 40,800 hectares. At present, the status of irrigation development is 53% (*Map 40, Table 20-Annex 1*). This includes the three (3) national irrigation systems namely, Bohol Irrigation System (Malinao and Bayongan Dam), Capayas Irrigation System and some 287 communal irrigation systems scattered in the different municipalities. There is still much to be desired to fully meet the need of the irrigation sector in the province to make Bohol the food basket of Central Visayas Region.



Other agriculture support facilities include the *Bohol Experiment Station (BES)* in Gabi, Ubay now Central Experiment Station (CES), which has enough rice production areas on new rice varieties, from Registered to Certified Seed production to cater the needed seed requirements of growers and some farmers in the province. CES is also producing seedlings on fruit trees and ornamentals as planting materials. Plant tissue laboratory for banana and ubi is also operating in CES for the supply of tissue cultured banana and ubi. Another facility is the Bohol Agricultural Promotion Center (BAPC) is a research facility of DA that conducts researches on different varieties of rice that are suitable to the province.

**6.4.2 Power**

All electric utilities in the province gets its power from the National Power Corporation which is being supplied by the Leyte Geothermal Plant through the Bohol-Leyte interconnection, the Southern Island Power Corporation (formerly the Bohol Diesel Power Plant) in Dampas, Tagbilaran City, the Santa Clara Corporation (formerly Loboc Hydro-electric Plant) at Brgy. Tontonan, Loboc, the 5.0 megawatts

(MW) Janopol Hydro-electric Plant (JHEP) in Janopol, Balilihan and the 2.5 MW BOHECO I-Sevilla Mini-Hydro Corp. (BSMHC). The combined installed capacity in the province is 110.7 MW with a dependable capacity of 106.2 MW against the maximum demand of 48.0 MW or a net reserve of 58.2 MW as shown in Table 28.

Table 28. **Power Generating Capacity and Capability (Dependable) Profile**  
Province of Bohol  
As of December 31, 2008

Power Plants	Installed Capacity (MW)	Dependable Capacity (MW)
Bohol Diesel Power Plant (BDPP)	22	17.5
Santa Clara Corp. (Formerly LHEP)	1.2	1.2
Janopol Hydroelectric Plant (JHEP)	5.0	5.0
BOHECO I - Sevilla Mini-Hydro Corporation (BSMHC)	2.5	2.5
<b>TOTAL CAPABILITY, Bohol Plants</b>	<b>30.7</b>	<b>26.2</b>
Leyte Bohol Interconnection	80	80.0
<b>TOTAL</b>	<b>110.7</b>	<b>106.2</b>
<b>FORECASTED DEMAND</b>	<b>-</b>	<b>48.0</b>
<b>NET RESERVE</b>	<b>-</b>	<b>58.2</b>

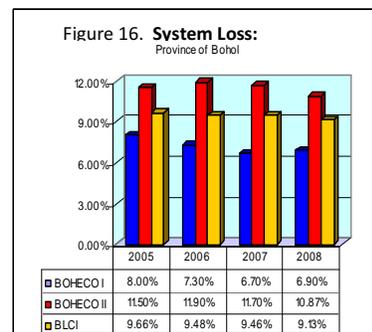
Source: NPC

Franchise power distributors in Bohol that directly buys from the NPC are the Provincial Public Utilities Department (PPUD) now Bohol Light Company Inc. (BLCI) serving the City of Tagbilaran, the Bohol Electric Cooperative I (BOHECO-I) which serves the northeastern part of the province, and the Bohol Electric Cooperative II (BOHECO-II) which distributes power to the northern towns of the province. The power markets of Bohol Province are mainly commercial and residential. The province generally is an 80% residential consumer, especially those served by BOHECO I and II. The only industrial customer in the province is the Philippine Mining and Industrial Corporation located at Garcia-Hernandez Municipality.

All municipalities are already provided with electricity with 100% of all barangays also energized as covered by BLCI, BOHECO I and II. BOHECO I and II and the BLCI which have an average system loss of 9.38% per year of which 7.22% for BOHECO I, 11.49% for BOHECO II and 9.43% for BLCI (Figure 16).

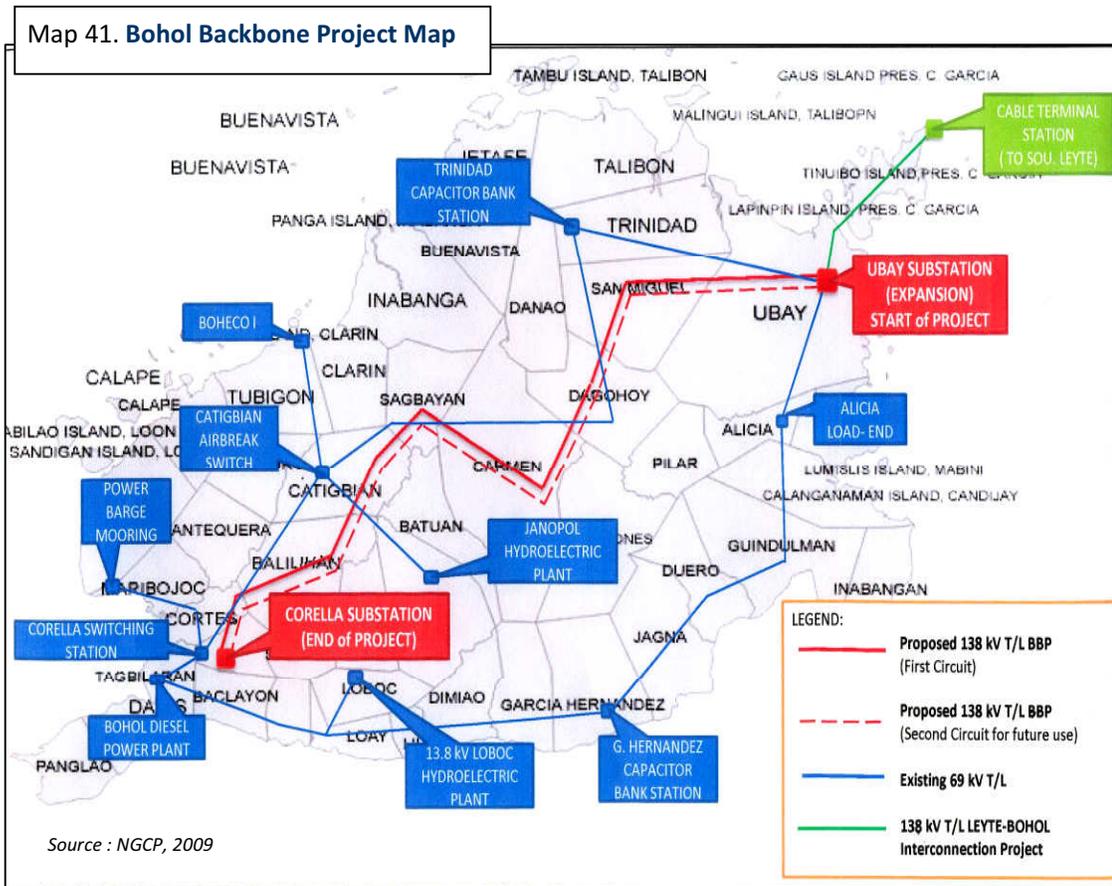
All electric utilities in the province are targeting to lower system losses in order to become financially viable. Generally, a reduction of system loss depends on kilowatt-hour sales being produced.

The power rate in Bohol ranges between ₱6.63 to ₱8.33 per Kwhr. Comparing this with the other provinces like VECO, PECO and PROSIELCO, Bohol's



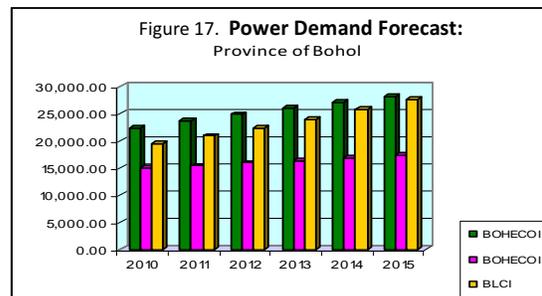
power rates are somewhat low. Now and then, Bohol experiences brownouts, especially when faults occur in the transmission lines on the Leyte side,

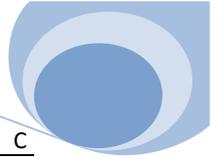
To improve the reliability and efficiency of power transmission in the entire island of Bohol, the Bohol Backbone Transmission Project is currently being implemented (Map 41). It involves the installation/construction of a total of 95.0 kilometers of 138 KV overhead transmission line and construction of a new substation in Corella and expansion of the Ubay Substation.



**Demand and Energy Forecast**

Shown in Figure 17 is the demand forecast of the different major power franchise distributors of the province from 2010 to year 2015. Of the three major power distributors here, BOHECO I and BLCI had been observed to forecast 25.6% and 41% increase in demand starting 2010 until year 2015 respectively.





### 6.4.3 Communications Development

Recent developments in modern communications have kept the Boholano community abreast with technology, helping propel Bohol's economy. This modern communication system provides Bohol with greater accessibility both for local and international linkages. This is made possible by three (3) service providers namely PLDT/SMART, Cruztelco and Globelines. Access to telecommunication can also be made easily in the towns through the 31 public calling stations. CRUZTELCO concentrates their telephone services in Tagbilaran City, Jagna and Tubigon. PLDT has a total of 21 stations in the entire province spread in all municipalities in Bohol. PLDT and CRUZTELCO also provide payphones capable of international direct dialing. The Digital Telephone Exchange, funded by DOTC, operates in the municipalities of Tubigon, Talibon and Ubay.

Upcoming is the Fiber Optic Network projects in Bohol that will be Bohol's entry to the information technology (IT) highway that will stabilize telecommunications in Bohol. PLDT's domestic fiber optic network upgrading, which commenced in 2009, will make Tagbilaran City a destination for business processing outsourcing which will expand Bohol's call center opportunities. This project will form the 'fiber in the loop' system of PLDT with its submarine fiber optic cable connection to Cebu and Cagayan de Oro that will link Bohol to PLDT's domestic fiber optic network. The Fiber Optic Network Project under Globe Telecom Cable Network Project from Duero town through Tagbilaran City and northward all the way to Inabanga town is currently on-going while that in Panglao Island going to Dumaguete City is still on negotiation.

Aside from the telephone service, Bohol has three (3) telegraph companies operating in the province. The government operates one and private companies operate the other two. These two private telegraph providers are Radio Communication of the Philippines Incorporated (RCPI) and Philippine Telephone and Telegraph (PT&T) which is located in Tagbilaran City. With the availability of facsimile machines and the internet, the patronage of telegram services has correspondingly decreased.

*Table 29* shows the existing telecommunication facilities in Bohol in 2008.

Table 29  
**Existing Communication Facilities: CY 2008**  
 Province of Bohol

Existing Communication Facilities	Number of Facilities	Remarks
<b>1. Public Calling Office (33)</b>		
a. PLDT	21	
b. Globelines	5	
c. Cruztelco	4	
d. Liberty	3	
e. Others:		
<b>2. Cell sites: (151)</b>		
a. Smart	59	
b. Globelines	69	
c. Sun Cellular	23	
<b>3. Telegraph Services</b>	3	PLDT, RCPI, PT & T
<b>4. Internet Cafe</b>	159	
<b>5. Cable TV</b>	9	
<b>6. Broadcast Media</b>	5	DYRD, DYTR, DYXT, DYZD (Ubay) & DYJP (Jagna Community Radio)
<b>7. Print Media</b>	5 (Local Newspapers)	Bohol Chronicle, Bohol Times, Capitol, Bohol Standard, Sunday Post
<b>8. Messengerial Services</b>	5	LBC, Aboitiz, Air 21, JRS, DHL
<b>9. Others:</b>		
1. Bohol Law Enforcement Communication System(BLECS)	All municipalities covered	

Source: LGU(MPDC/ME), PPDO, NTC

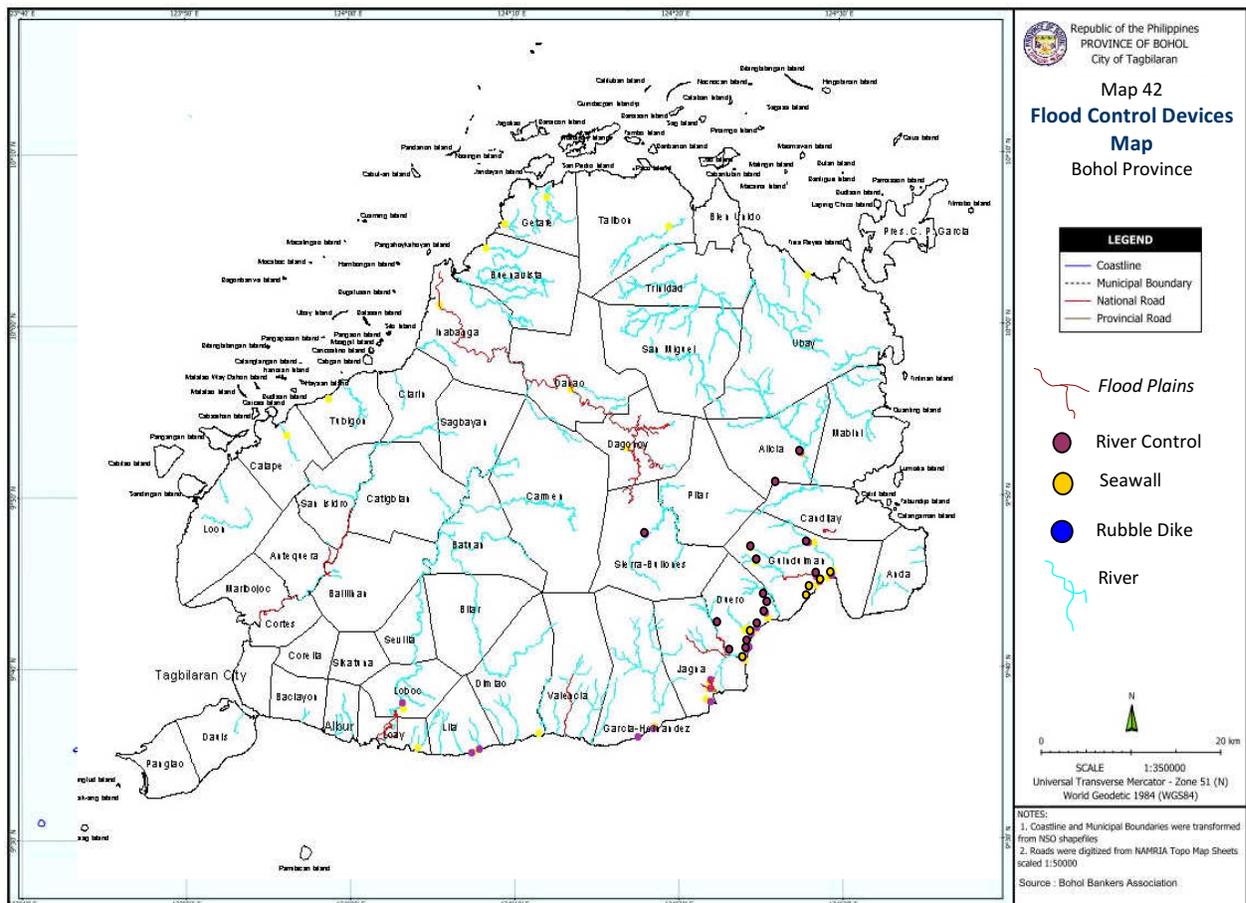
#### 6.4.4 Drainage/Flood Control

Flood control and drainage structure facilities are needed to protect roads and bridges as well as the lives, crops and properties of the populace from damage caused by floods. Environmental factors such as soil type, slope, rainfall intensity and tidal fluctuations of bodies of water affect the degree of flooding hazards. Flooding generally occurs in areas that are level or nearly level with 0-3 percent slopes. As the slope becomes steeper, the susceptibility of flooding decreases. On the other hand, the greater the amount of rainfall, the higher it would be the susceptibility to flooding since there will be more surface water level of the sea, lake and among others that will affect the coastal areas. Only 17.31 percent or

71,289 hectares of the total land area of Bohol is prone to flooding while 82.69 percent has no flooding hazard. Flooding in the interior part of Bohol is frequently a cause of human exploitation activities such as deforestation, infrastructure damage, inadequate drainage systems and settlements in flood prone areas and in buffer zones.

Drainage has become a perennial problem especially in the streets of Tagbilaran City. The absence or inefficient drainage system has been the cause of damage to streets where proper drainage is wanting. The city's central business district has the highest incidence of flooding due to the concentration of commercial areas and rapid construction of more structures. The overcrowding of commercial and residential buildings in the area has practically sealed off the characteristic porous ground, thus preventing the storm water to seep-in and instead, accumulate in the ground surface which causes flooding. Undersized drainage pipes that are mostly clogged with plastics and silt block the free flow of storm water aggravating flooding.

The installation of flood control devices and drainage structure facilities need to be in place in Bohol so as to protect and lessen the damages that would affect lives, crops and properties caused by floods. *Map 42* shows the location and type of flood control devices in Bohol.



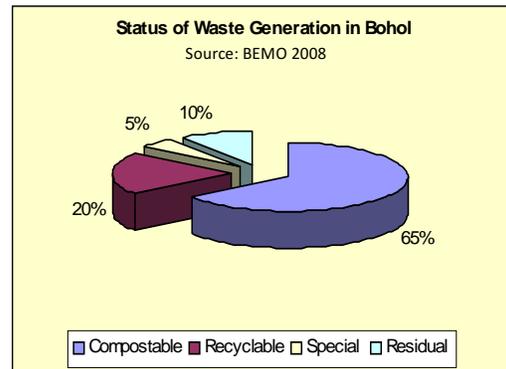
#### 6.4.5 Solid/ Liquid Waste and Sewage Management

One of the most serious problems that confront the country and even in Bohol is pollution due to improper handling and disposal of both solid and liquid wastes. This problem occurs not only in the urban areas where population is high and human activities are continuous and intense but it is widely felt in the rural areas as well as a consequence of development. Despite this alarming situation, current initiatives to address aggravating waste problems have been instituted by the Provincial Government through its Bohol Environment Management Office (BEMO) and being address by the Bohol Environment Code. The present waste profile warrants a more comprehensive and integrated approach to solve the problem for both liquid and solid wastes.

#### Solid and Liquid Wastes <sup>29</sup>

In 2008, about 600 thousand kilograms per day (or an estimated 0.5 kilograms per capita per day) of solid waste were generated daily in Bohol. Roughly, 60% of these solid wastes are collected and transported to existing dumpsites. The major type of solid wastes in the province are food wastes, garden wastes, plastics, paper, cardboard and wood materials. Of these waste materials, 65 percent are compostable, 20 percent are recyclable, 5% are special waste like toxic and hazardous wastes generated from hospitals, funeral parlors, households (aerosols) and effluents from industries and 10% are considered the residual waste that cannot be used for other purpose and have to be carefully disposed of by local government units (Figure 18).

Figure 18: Waste Profile in Bohol



Tagbilaran City and a few municipalities in Bohol have already their own dumping sites. However, only a few sites had practiced waste segregation, composting and recycling. In some LGUs, waste management, specifically in the final disposal system, are not yet done due to unavailability of suitable land areas and the high cost of establishing and maintaining a sanitary landfill. Open dumping, burning and throwing anywhere and dumping in rivers and seas are most widely practiced in disposing garbage. Existing collection systems and waste management treatment is inadequate and the people are not properly aware and educated as to the consequences of improper disposal.

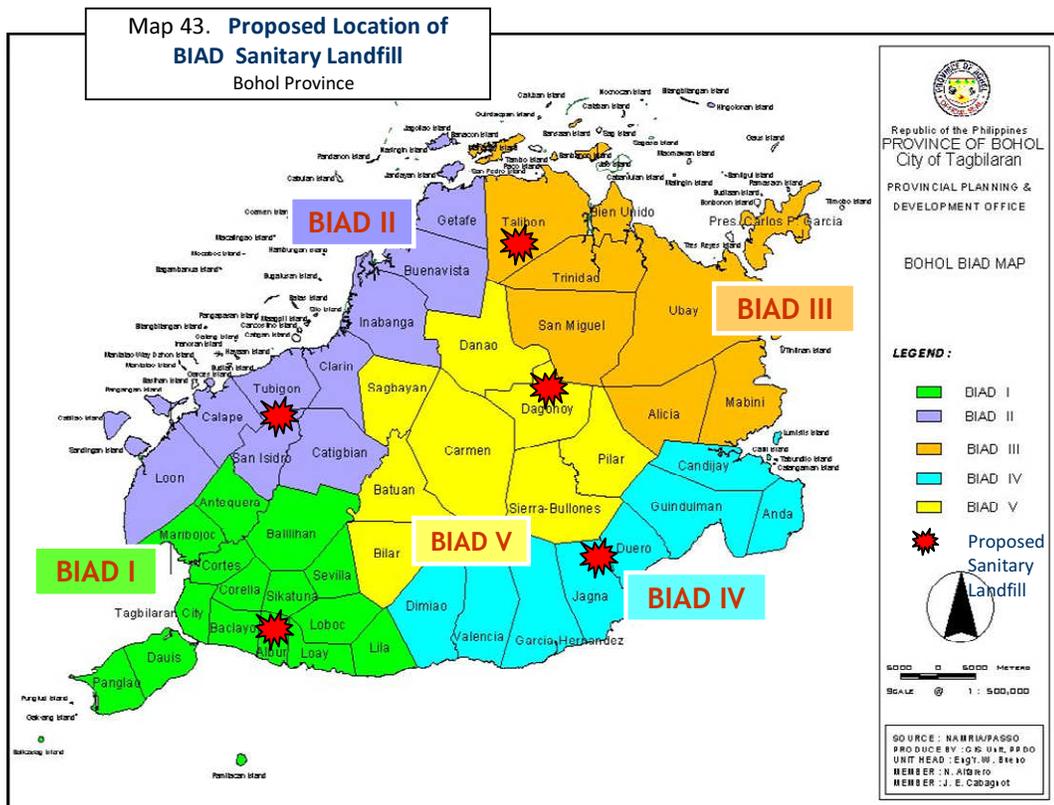
Denser squatter settlements found in the urban area centers along the easements of rivers, waterways and coastal shorelines have contributed to the clogging of waterways, further aggravating the problem of solid waste disposal, public safety,

<sup>29</sup> Bohol Environment Management Office 2008 & ECOGOV and CDM FS Report by Ex Corporation 2006

health, and drainage while creating a potential for flooding from blocked waterways. The lack of sewage system is one of the major problems in the City of Tagbilaran and other urban areas in Bohol.

To manage the increasing volume of wastes, the province had proposed five (5) clusters of municipalities for the establishment of engineered sanitary landfills at one per BIAD. The IAD clustering will generate some advantages like economies of scale from pooling of resources, more effective environmental management, stronger lobbying for ODA, NGA, NGO and private support, sound policy reform as a result of inter-LGU exchange and cooperation and enhance planning, revenue and investment generation. Potential sites identified by DENR and subject to geological assessment are located in the municipalities of Cortes, Alburquerque, Tubigon, Balilihan, Dimiao, Dagohoy, Carmen or Sierra Bullones, Guindulman, Pilar, Talibon and San Miguel. The combined sites have a total area of 59 hectares. This is 21 hectares more than the estimated minimum of 38 hectares needed for the province to satisfy landfill requirements.

The concept of clustering is applicable to local government units in the establishment of common disposal facilities in order to share the required financial resources and manpower for their development. Some municipalities have already identified other sites for landfill in their Comprehensive Land Use Plans. These sites can be used temporarily until the implementation of the clustered engineered landfill system (Map 43). The BIAD clusters for sanitary landfill are proposed in Alburquerque (BIAD 1), Tubigon (BIAD II), Talibon (BIAD III), Jagna or Duero (BIAD IV) and Dagohoy (BIAD V).



## **Liquid Waste**

Water pollution is alarming everywhere especially in the urbanizing cities and municipalities. Steadily increasing levels of economic activities and population growth in urban and rural areas lead to an increase in the volume of liquid wastes and adverse impact on the health of the population and Bohol's fragile ecosystems. Sources of water contamination basically come from domestic, agricultural and industrial wastes. These would include the contaminated water and sewage from residential and institutional areas, leachate from solid waste dumps, industrial effluent and storm water.

The province has 894 manufacturing establishments of micro, small, medium and large-scale industries (DTI Tagbilaran 2007). However, the management of these establishments with regard to liquid waste treatment is not properly followed, monitored and implemented. Even in the construction of subdivisions in the province, sewage systems are not implemented as required by law. Household sewers and liquid waste from hospitals and funeral homes are directly drained to the ground and shorelines causing pollution and contamination of underground and coastal waters.

There is neither a centralized drainage system nor sewerage system in the province of Bohol, even in the City of Tagbilaran. Compounding this problem is the non-supervision and monitoring in the construction of septic tanks; hence, many septic vaults have been improperly designed which has resulted in fecal contamination of water resources and degradation of aquifer water. Big industrial establishments in the province have their own sewage treatment but the operation of these plants are problematic. They prefer to dispose of their liquid wastes in drains that contaminate water quality. Once contaminated, water treatment is difficult and very expensive.

A more coordinated institutional effort is needed to manage the wastes of Bohol and maintain the standards and quality of water in the province. It is imperative to adopt a comprehensive and integrated approach both to solid and liquid waste management.

## **6.5 Other Services and Facilities**

### **6.5.1 Welfare Services**

In Bohol, the vulnerable groups include women in especially difficult circumstances, children in need of social protection, disadvantaged/out of school youths, persons with disabilities, older/elderly persons, rebel returnees, indigenous peoples and upland settlers, dysfunctional families, victims of disasters and calamities, and persons adversely affected by socioeconomic risks and shocks.

Cases of violence against women and children (VAWC) as well as trafficking of persons, especially of girls and women and a number of youth offenders as reported by the Department of Social Welfare and Development (DSWD) in Bohol. According to the Office of the Provincial Social Welfare and Development (OPSWD), from 2005-2008, there were 51 reported cases of VAWC who are presently at the Bohol Crisis Intervention Center. Worst, more cases were reported of abused children within the same period at 119 in Bohol, 59 cases of which are already filed in court.

The 2000 census by NSO documented about 17 thousand persons to be suffering from various forms of disabilities in Bohol with visual and hearing impairment as the leading types of disability in the province. From 2005 to 2008, the number of disabled persons in Bohol as reported by the Office of the Provincial Social Welfare & Development (OPSWD) includes increasing numbers of hearing and visually impaired, orthropodically handicap, mental impairment, children with autism and multiple disabilities. *Table 30* shows the number and type of disability prevalent in Bohol.

Table 30. **Number of Differently-abled Persons by Type of Disability: 2005-2008**  
Bohol Province

Differently-abled	2005	2006	2007	2008	Total
Hearing Impaired	1,247	85	268	1,054	2,654
Visually Impaired	2,003	6	30	604	2,643
Mental Impairment	2,720	41	65	42	2,868
Children with Autism		5	9	11	25
Multiple Disabilities	2,933			281	3,214
Orthropodically Handicap	2,878			633	3,511
<b>Total</b>	<b>11,781</b>	<b>137</b>	<b>372</b>	<b>2,625</b>	<b>14,915</b>

Source: Office of the Provincial Social Welfare & Development (OPSWD)

### Social Welfare Facilities

To note, a number of social welfare facilities are found in Bohol, both government and privately-run, namely:

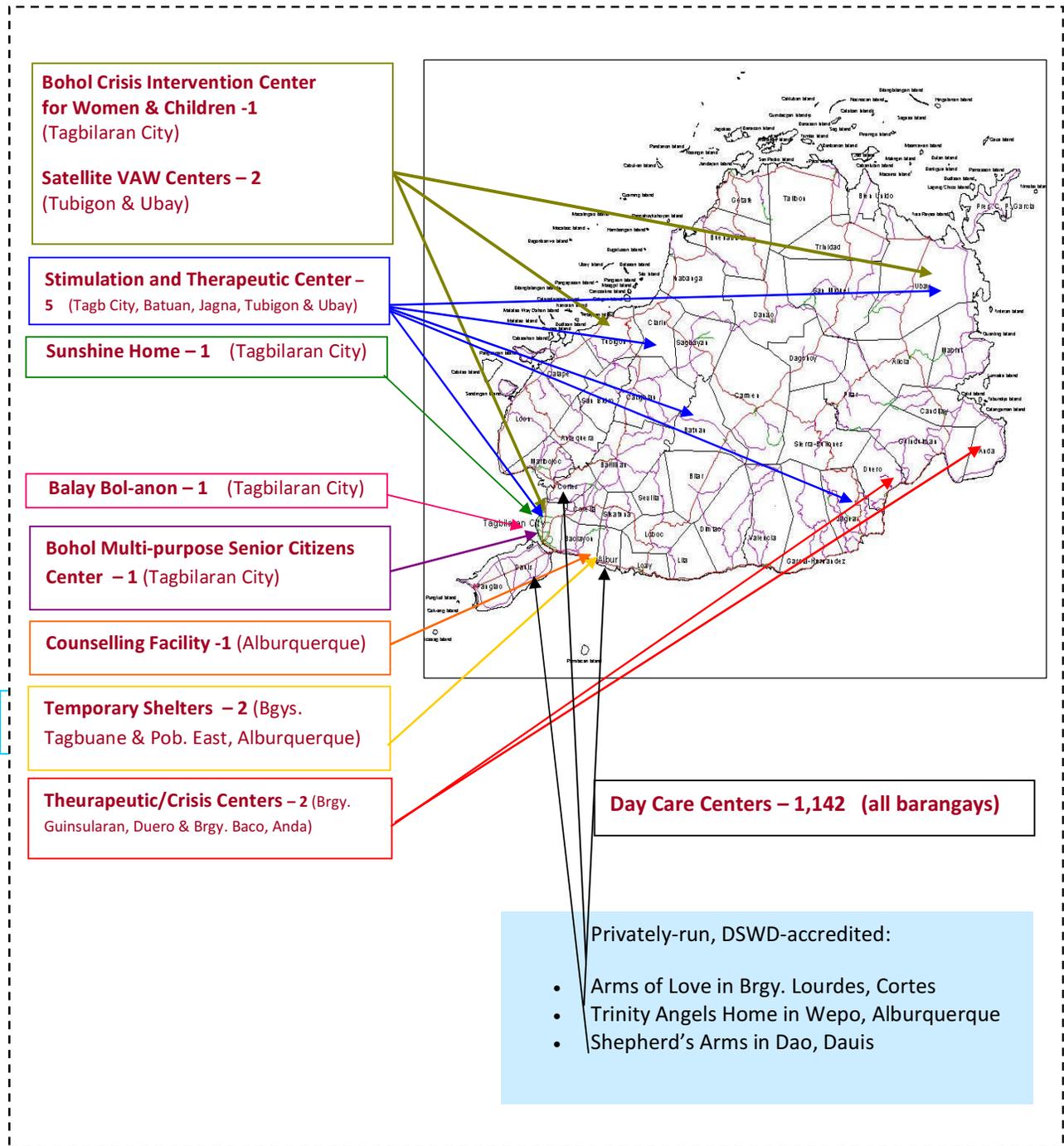
a. Government-run Facilities:

- Bohol Crisis Intervention Center for Women and Children in Tagbilaran City and 2 Satellite VAW Centers located in Tubigon and Ubay providing residential care to abused women and children
- 5 Stimulation and Therapeutic Centers found in Tagbilaran City, Batuan, Jagna, Tubigon and Ubay providing rehabilitation services and non-formal training to poor children with different disabilities

- Sunshine Home in Tagbilaran City providing residential care to abandoned, neglected and orphaned children sponsored by the Catholic Women's League (CWL) and subsidized by the Provincial Government
  - Bohol Therapeutic Massage Clinic in Tagbilaran City, a livelihood center for persons with different disabilities
  - 3 Model Senior Citizens Centers situated in Tagbilaran City, Loon and Ubay and 8 Day Centers for the Elderly/ Municipal Senior Citizens Centers in the municipalities of Alburquerque, Calape, Dagohoy, Jagna, Garcia-Hernandez, Sagbayan, Talibon, and Tubigon. All municipalities have organized their Senior Citizens Association.
  - 1,142 Day Care Centers found in all barangays of Bohol
  - Support counseling facility initiated by the Alburquerque LGU
  - Temporary Shelters in Brgy. Tagbuane and East Pob., both in the municipality of Alburquerque
  - Therapeutic/Crisis Center in Brgy Guinsularan (Duero) and Brgy Baco (Anda)
  - Women's Desk located in police stations are found in all municipalities of Bohol
- b. Privately-run and accredited by the DSWD such as
- Arms of Love in Brgy. Lourdes, Cortes
  - Trinity Angels Home in Wepo, Alburquerque
  - Shepherd's Arms in Dao, Daus

As shown above, Bohol's current welfare services have more than met the minimum required services standard for a province. Location of these facilities is shown in the map below.

Map 44. Location Of Existing Social Welfare Facilities  
Bohol Province



## 6.6 Poverty

Poverty reduction remains the main development thrust of the Provincial Government. Although the poverty reduction and development initiatives of the province have paid off with its poverty incidence significantly decreased by more than half in 2003 compared in year 2000, Bohol's poverty incidence, however, increased in 2006 at 38.8% (92,354 families), higher than the regional and national levels (Table 31). This trend is also reflected nationwide with poverty incidence increasing to 26.9% among families in 2006 compared to 24.4% in 2003.

The 2006 increase in poverty incidence in Bohol of almost 10% had an equivalent increase of 26,401 families. This means that for every 100 Boholano families, 47 were considered poor in 2006 compared to 35 Boholano families in 2003. A Boholano family comprising of five members needed ₱ 4,085.00 in 2006 to be able to sustain their family's minimum basic food needs, an increase of 32% from 2003. Food poor population or the subsistence population of Bohol, which is about 53 thousand families in 2006, remained high over the years as reported by the National Statistical Coordination Board (NSCB).

To be able to provide for both food and non-food basic requirements, a family of five in the Philippines needed ₱ 6,274 monthly income in 2006, an increase of more than 22% from 2003. A Boholano family of 5 needed a monthly income of ₱ 5,671 in 2006 to stay out of poverty, an increase of more than 22% from 2003.

Table 31. Annual Per Capita Poverty Thresholds, Poverty Incidence and Magnitude of Poor Families: Years 2000, 2003 and 2006

Region/Province	Annual Per Capita Poverty Threshold (in Pesos)			Poverty Incidence (%)			Magnitude of Poor Families		
				Estimates (%)			Estimates		
	2000	2003	2006	2000	2003	2006	2000	2003	2006
<b>Poverty Incidence Among Families (%)</b>									
<b>PHILIPPINES</b>	<b>11,458</b>	<b>12,309</b>	<b>15,057</b>	<b>27.5</b>	<b>24.4</b>	<b>26.9</b>	<b>4,146,663</b>	<b>4,022,695</b>	<b>4,677,305</b>
<b>Region VII</b>	<b>9,659</b>	<b>9,805</b>	<b>13,390</b>	<b>31.5</b>	<b>23.6</b>	<b>30.3</b>	<b>348,154</b>	<b>286,478</b>	<b>391,484</b>
<b>Bohol</b>	<b>9,762</b>	<b>10,032</b>	<b>13,610</b>	<b>50.2</b>	<b>29.2</b>	<b>38.8</b>	<b>105,470</b>	<b>65,953</b>	<b>92,354</b>
Cebu	9,914	10,222	13,960	26.2	17.1	23.5	170,929	125,346	184,207
Negros Oriental	8,981	9,017	12,159	29.7	37.1	43.7	66,788	89,654	110,724
Siquijor*	8,892	9,767	12,733	28.6	30.9	22.3	4,967	5,525	4,199
<b>Poverty Incidence Among the Population (%)</b>									
<b>PHILIPPINES</b>	<b>11,458</b>	<b>12,309</b>	<b>15,057</b>	<b>33</b>	<b>30</b>	<b>32.9</b>	<b>25,472,782</b>	<b>23,836,104</b>	<b>27,616,888</b>
<b>Region VII</b>	<b>9,659</b>	<b>9,805</b>	<b>13,390</b>	<b>36.2</b>	<b>28.3</b>	<b>35.4</b>	<b>2,016,910</b>	<b>1,652,316</b>	<b>2,213,167</b>
<b>Bohol</b>	<b>9,762</b>	<b>10,032</b>	<b>13,610</b>	<b>56.7</b>	<b>34.9</b>	<b>46.9</b>	<b>590,926</b>	<b>375,277</b>	<b>532,711</b>
Cebu	9,914	10,222	13,960	29.5	21.1	28.2	973,490	746,100	1,077,492
Negros Oriental	8,981	9,017	12,159	37.1	43.4	48.1	427,509	502,825	584,695
Siquijor*	8,892	9,767	12,733	32.7	37.4	21.5	24,984	28,114	18,269

Source: National Statistical Coordinating Board (NSCB)

Among Bohol's municipalities, Danao was the poorest municipality in 2003 with 6 out of 10 families classified as poor compared to the national average of 8 families, per report from NSCB-WB (Table 32). However, in the 2005 survey by NSCB-WB, Buenavista had the highest poverty incidence among families in Bohol at 70%, with Danao stepping down to 4<sup>th</sup> place. Although Danao has lowered its rank from no. 1 poorest to no. 4 in 2005, its poverty incidence has increased to 65.38% in 2005. All municipalities in Bohol had higher poverty incidence in 2005 averaging an increase of about 15%. The municipality of San Isidro had the biggest increase in terms of poverty incidence at 25%. Nine of 48 LGUs experienced an increase of more than 20% in their poverty incidence in 2005. All municipalities, except for Tagbilaran City, had poverty incidence of more than 20% in 2005.

Table 32. **Ranking Of Municipalities As To Poverty Incidence Among Families - Top 20 Poorest Municipalities : 2003 & 2005, Bohol Province**

Poverty Incidence			
Municipality	2003	Municipality	2005
<b>Bohol</b>	<b>29.96%</b>	<b>Bohol</b>	<b>45.44%</b>
1 Danao	57.21%	1 Buenavista	70.06%
2 Buenavista	51.68%	2 Getafe	67.93%
3 Pres. Garcia	50.21%	3 Pres. Garcia	66.28%
4 Bien Unido	46.40%	4 Danao	65.38%
5 Ubay	45.91%	5 Dagohoy	60.94%
6 Getafe	45.72%	6 Trinidad	59.58%
7 Mabini	45.64%	7 San Miguel	58.34%
8 Pilar	45.60%	8 Pilar	57.36%
9 Trinidad	44.62%	9 Talibon	57.18%
10 Inabanga	39.92%	10 Mabini	56.39%
11 Carmen	39.84%	11 Bien Unido	56.36%
12 Alicia	39.77%	12 Ubay	55.12%
13 Dagohoy	38.17%	13 San Isidro	54.71%
14 San Miguel	35.70%	14 Carmen	54.63%
15 Talibon	34.93%	15 Inabanga	54.05%
16 Sagbayan	34.89%	16 Alicia	53.17%
17 Catigbian	33.82%	17 Batuan	48.75%
18 Balilihan	31.22%	18 Sevilla	47.58%
19 Batuan	30.51%	19 Catigbian	47.23%
20 Anda	30.45%	20 Loon	46.64%

Source: National Statistical Coordinating Board (NSCB)/World Bank (WB)

With the increase in the number of poor families in the last three years, minimal improvement had likewise been observed in the patterns of income distribution in Bohol. Based on the latest Family Income and Expenditure Survey (FIES) of the National Statistics Office (NSO) for Bohol, its average family income for the year 2000 was estimated at ₱77.0 thousand annually or ₱6,441 monthly which can barely cover a family's minimum basic needs. This is very much lower compared to the national average at ₱144.0 thousand. According to the National Statistical Coordination Board (NSCB), the Income Index of Bohol ranked no. 66 out of 77 provinces, amongst the low-income provinces in the country in 2000.

The lack of economic opportunities and livelihood especially in the rural areas of Bohol where most of the poor lives, and, with most of households having low household incomes related generally to high levels of unemployment and under-employment are some of the contributory factors in the increase of poor families in the province. Low income level affects food affordability of a family in terms of choice and quantity of food than can be bought and the share of the household budget that is allocated to food resulting to poor health/nutritional status. With meager income, they have limited access to education resulting in low functional literacy, limited access to health services, poor access to credit facilities, extension services and agricultural services, and limited or difficult access to markets, agricultural and other services. The high and rising prices of commodities also contributed to the inadequacy of income of families to meet their food and non-food needs.

A study conducted by NSCB (Virola and Castro) showed that the hunger prevalence (Hunger Index) for Bohol province was estimated at 0.323 in 2003, indicating serious hunger situation.<sup>30</sup> About 15 percent or approximately 34 thousand families in Bohol in 2003 were poor hungry<sup>31</sup>. This increased to about 53 thousand families in 2006.

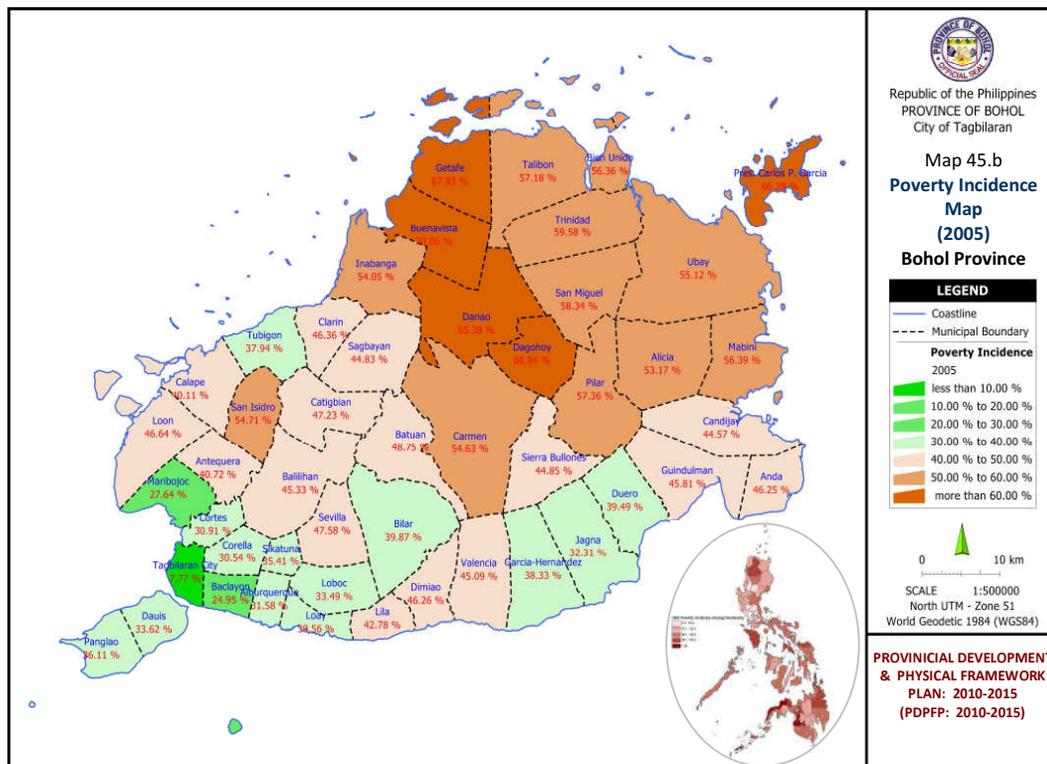
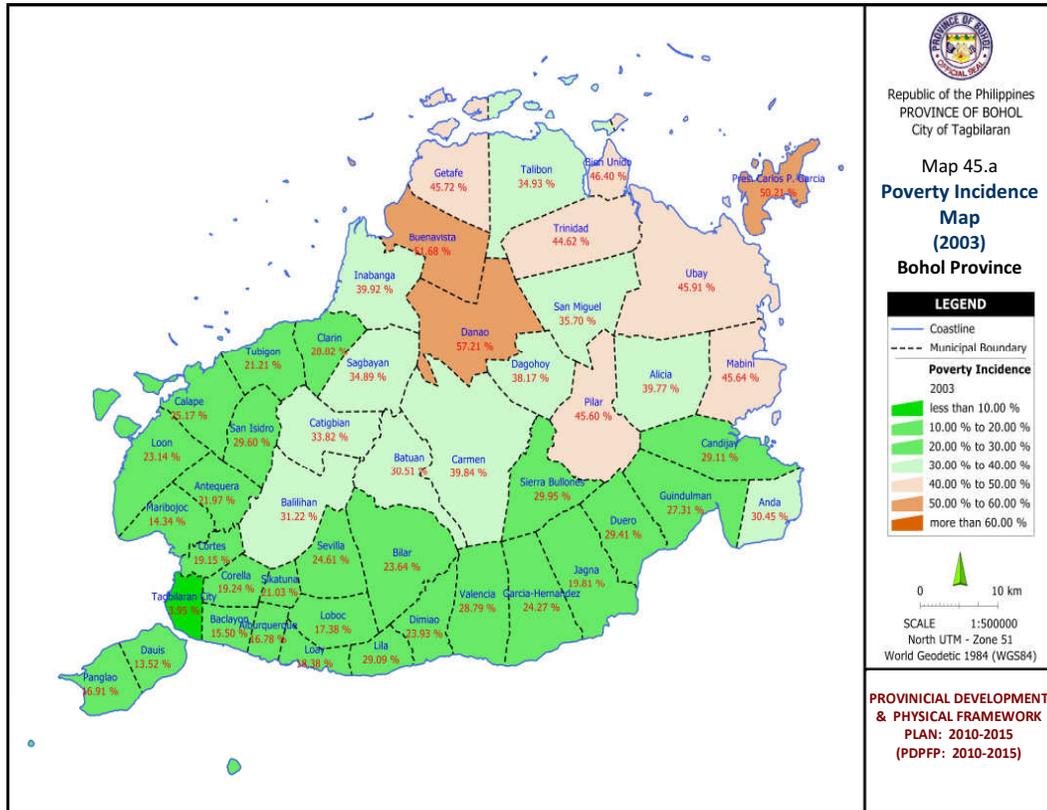
*Map 45* shows the poverty incidence of municipalities of Bohol in 2003 and 2005.

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<sup>30</sup> Virola, Ramon and Castro, Lina –Meeting the Challenge for Official Statistics on Hunger in the Philippines, 2003

<sup>31</sup> Families with income less than the food threshold or subsistence incidence

**Map 45. Poverty Incidence Map (2003 & 2005)**  
Bohol Province



## 7 Land Use and Physical Framework

### 7.1. Existing Land Use, Trends and Potential Expansion

#### 7.1.1 Existing Land Use and Vegetative Cover<sup>32</sup>

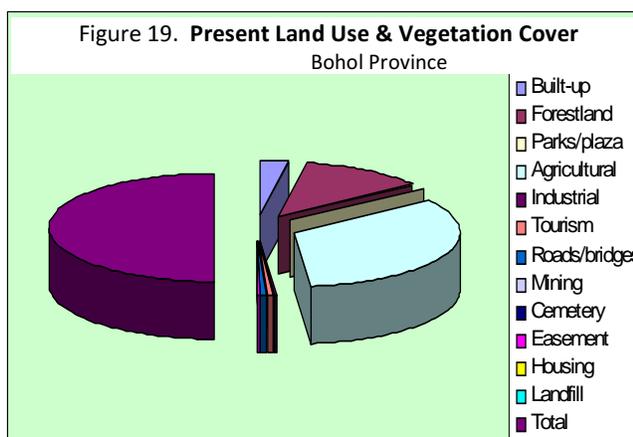
The province of Bohol has five major land uses, i.e., agricultural land, grassland/shrubland, woodland, wetland and miscellaneous land that includes built-up areas, reservoirs and mine sites (*Map 46*). Almost one-half of the province’s total land area is covered by grassland/shrubland, while one-third of its total area is utilized for agricultural activities. About 67% of Bohol’s land is used for agriculture while forestland occupies 25% of the province’s total land area.

The province has a larger coverage of woodland (10.69%) compared to Cebu and some other provinces in the region. Wetland constitutes 4.92%, which includes mangrove, nipa, beach sands and fishponds while built-up areas comprise 10.22%.<sup>33</sup>

Table 33. Existing Land Use Distribution In Bohol

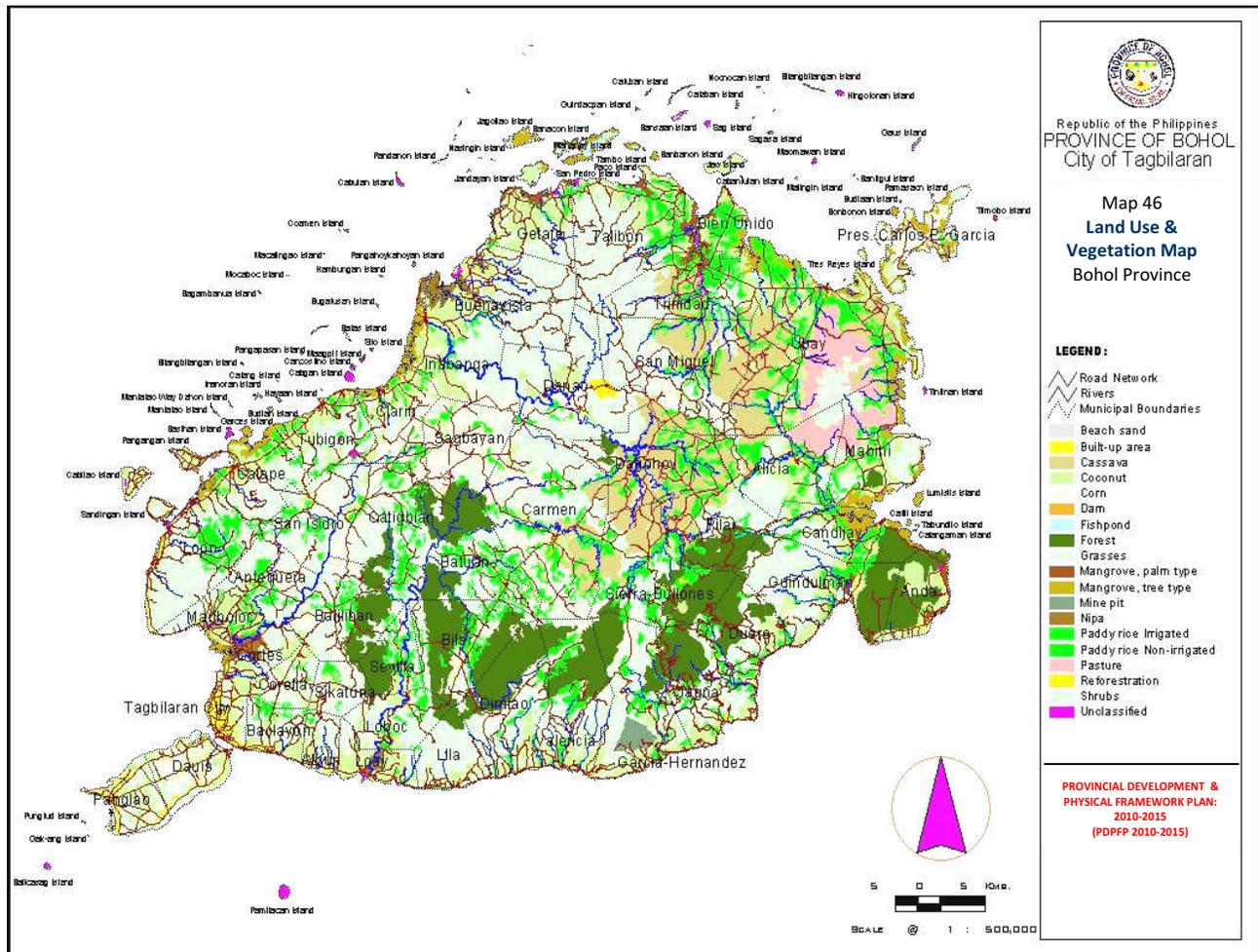
Land Use Category	Area	Percent
Built-up	21,882	5.32%
Forestland	101,271	24.61%
Parks/plaza	196	0.05%
Agricultural	273,950	66.56%
Industrial	2,672	0.65%
Tourism	3,663	0.89%
Roads/bridges	4,612	1.12%
Mining	1,138	0.28%
Cemetery	115	0.03%
Easement	1,916	0.47%
Housing	69	0.02%
Landfill	102	0.02%
<b>Total</b>	<b>411,586</b>	<b>100.00%</b>

Source: Approved Municipal/City Land Use Plan



<sup>32</sup> Bohol Ecological Profile of DENR, 1992

<sup>33</sup> Bohol Ecological Profile, DENR 1992



Mangrove forests play a very vital role in shaping the ecology and economy of the Boholanos. Ecologically, mangroves are among the most productive coastal resources of Bohol as they serve not only as feeding, breeding and nursery grounds for many aquatic and terrestrial animals, but also as a protective structure against destructive waves and currents along the shoreline. Bohol has the biggest mangrove area in Central Visayas at 16,287.42 hectares (*Tables 21 & 22-Annex 1*). The biggest mangrove stands are located in Getafe, Talibon, Ubay, Pres. Garcia, Mabini and Candijay municipalities. The province also has the most diverse mangrove ecosystem in the Philippines with some 32 identified species. The largest and most diverse mangrove area is found in Cogtong Bay, which is bounded by Mabini and Candijay towns and covers an area of 2,200 hectares<sup>34</sup>. The most popular man-made mangrove forest in Bohol is around Banacon Island in Getafe town comprising an area of 1,750 hectares.

<sup>34</sup> Bohol Coastal Environment Profile of 2002

## 7.1.2 Urbanization and Settlements

### Existing Settlement Pattern

About 24% or 275,128 of Bohol's population reside in the urban areas.<sup>35</sup> This is a 10 percent increase in urban population compared to 1970. Aside from Tagbilaran City which is 100% urban, the other municipalities with 20% or more urban population are the following:

Table 34. **City/Municipalities with Urban Population of 20 Percent & Above, 2007**  
Bohol Province

Geo-Political Subdivisions	% Urban Pop 2007	Geo-Political Subdivisions	% Urban Pop 2007
1 Tagbilaran City	100%	10 Carmen	26%
2 Bien Unido	90%	11 Sevilla	24%
3 Dausi	66%	12 San Isidro	24%
4 Candijay	42%	13 Clarin	22%
5 Mabini	34%	14 Inabanga	22%
6 Alburquerque	29%	15 Pres. Garcia	21%
7 Sierra Bullones	29%	16 Catigbian	21%
8 Loon	27%	17 Danao	21%
9 Jagna	27%		

Most of the settlement areas of Bohol are found along its coast with concentration of people in its urban settlement centers. The existing general settlement pattern in the province may be described as a nucleated type of settlement wherein compact clusters of dwellings surround a central organizational point such as a church, plaza, a public market, municipal hall or along road networks. The Poblaciones of Bohol serve as the nucleated urban settlement center in the rural areas of the province. Bohol's existing settlement pattern may be described as a four-level hierarchy as shown in the *Table 35* and *Map 47* below, as follows:

- Small/medium City (with >75,000 Population): Tagbilaran City

With a total population of almost 93 thousand in the 2007 Census, Tagbilaran City serves as the major gateway of the province to Manila and the other provinces in the Visayas and Mindanao. It has strong inter-regional linkages to Metro Cebu and other provincial centers in the Visayas and Northern Mindanao thru its airport and seaports. Tagbilaran City is the third largest urban center outside of Cebu Province in Central Visayas.

<sup>35</sup> Per NSO classification

- Large Towns (with 50,000-75,000 Population): Talibon and Ubay Municipalities

These two municipalities accounted for 10 percent of Bohol's total population in 2007. Talibon is also a gateway to Cebu with its seaport while Ubay is Bohol's gateway to Leyte/Samar and Metro Manila through sea and land transportation bringing in passenger traffic as well as export goods such as handicrafts to these areas. Ubay municipality has an existing feeder airport.

- Medium Towns (with 20,000-49,999 Population): 23 municipalities (Tubigon, Guindulman, Carmen, Loon, Dauis, Getafe, Inabanga, Candijay, Calape, Mabini, Valencia, Jagna, Trinidad, Pilar, Buenavista, Sierra Bullones, Panglao, Pres. Garcia, Alicia, Bien Unido, Catigbian, San Miguel, Garcia-Hernandez)

There are 23 towns belonging to this category. Most of these municipalities are found along the coast with good road network and seaports.

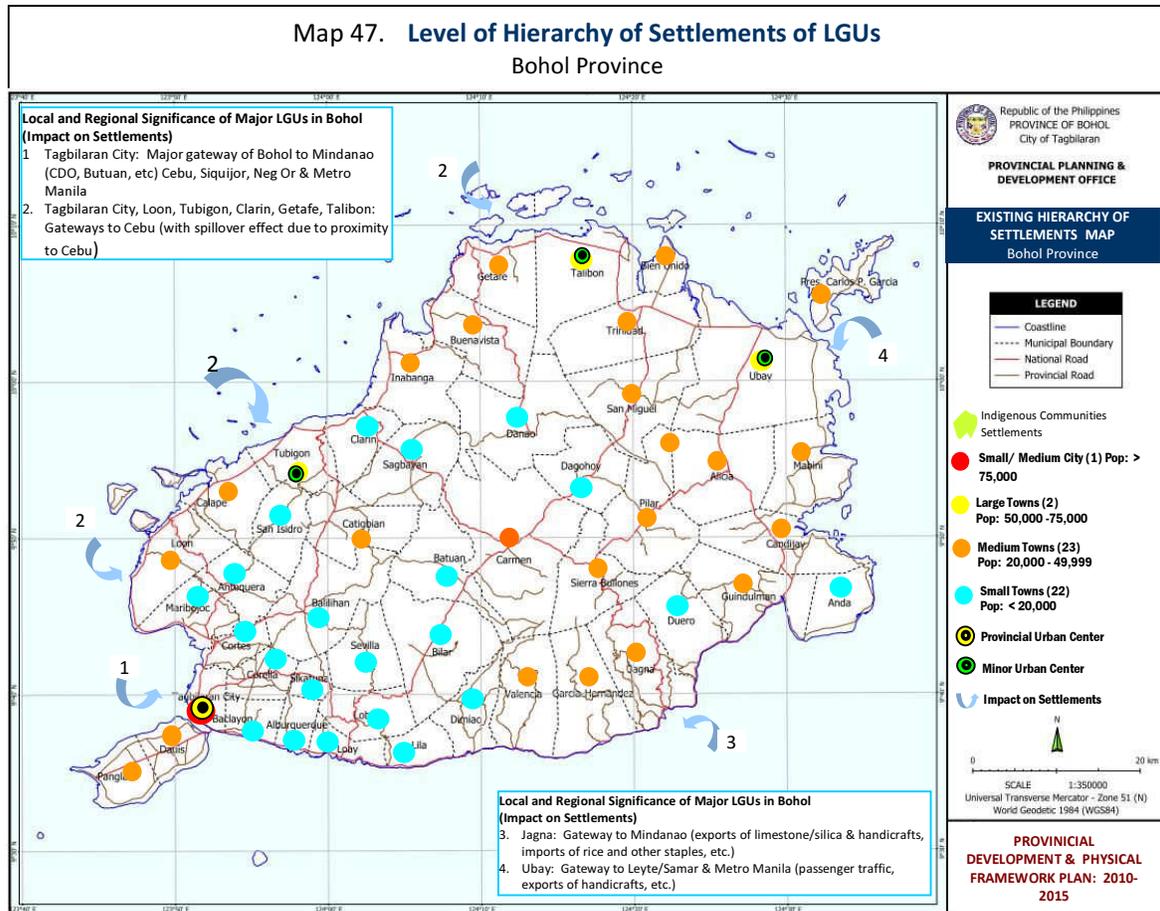
- Small Towns (with < 20,000 Population ): 22 municipalities (Sagbayan, Clarin, Dagohoy, Maribojoc, Baclayon, Danao, Duero, Balilihan, Bilar, Anda, Loboc, Loay, Cortes, Antequera, Dimiao, Batuan, Sevilla, Lila, Albuquerque, Sikatuna, Corella, San Isidro)

Twenty-two (22) municipalities of Bohol belong to this category found mostly at the southern part of Bohol. These are small towns both in land area and population and serve as expansion areas of Tagbilaran City. They typically rely on the city for their major service requirements such as tertiary health and education services.

Almost all of the urban expansion in the municipalities in the past years are in the Poblaciones where rapid urban development have been occurring. They are expected to accommodate most future expansion in urban population in the municipality. The agricultural areas in and around the Poblaciones will most likely be the first to be subjected to land use conversion. Increasing need for land due to continuous expansion of the urban areas primarily due to population increases over the years will lead to rapid conversion of many agricultural lands to residential, industrial and other non-agricultural uses.

Table 35. Hierarchy of LGUs in Bohol

City/ Municipality	2007 Census	Hierarchy of LGUs	City/ Municipality	2007 Census	Hierarchy of LGUs
1 Tagbilaran City	92,297	<b>Small/ Medium City (1)</b>	1 Ubay	65,900	<b>Large Towns (2)</b>
			2 Talibon	59,274	
City/ Municipality	2007 Census	Hierarchy of LGUs	City/ Municipality	2007 Census	Hierarchy of LGUs
1 Tubigon	44,434	<b>Medium Towns (23)</b>	1 Sagbayan	19,399	<b>Small Towns (22)</b>
2 Guindulman	43,331		2 Clarin	18,871	
3 Carmen	43,153		3 Dagohoy	18,311	
4 Loon	42,441		4 Maribojoc	18,113	
5 Dausi	36,525		5 Baclayon	18,015	
6 Getafe	32,355		6 Danao	17,716	
7 Inabanga	32,034		7 Duero	17,254	
8 Candijay	31,183		8 Balilihan	17,131	
9 Calape	29,786		9 Bilar	17,078	
10 Mabini	28,788		10 Anda	16,616	
11 Valencia	28,043		11 Loboc	16,299	
12 Jagna	27,852		12 Loay	15,881	
13 Trinidad	27,580		13 Cortes	14,586	
14 Pilar	27,276		14 Antequera	14,357	
15 Buenavista	26,443		15 Dimiao	14,187	
16 Sierra Bullones	26,398		16 Batuan	12,137	
17 Panglao	25,558		17 Sevilla	11,289	
18 Pres. Garcia	25,118		18 Lila	10,801	
19 Alicia	23,422		19 Alburquerque	9,644	
20 Bien Unido	23,412		20 San Isidro	9,176	
21 Catigbian	23,333		21 Corella	7,471	
22 San Miguel	22,199		22 Sikatuna	6,335	
23 Garcia-Hernandez	21,308				

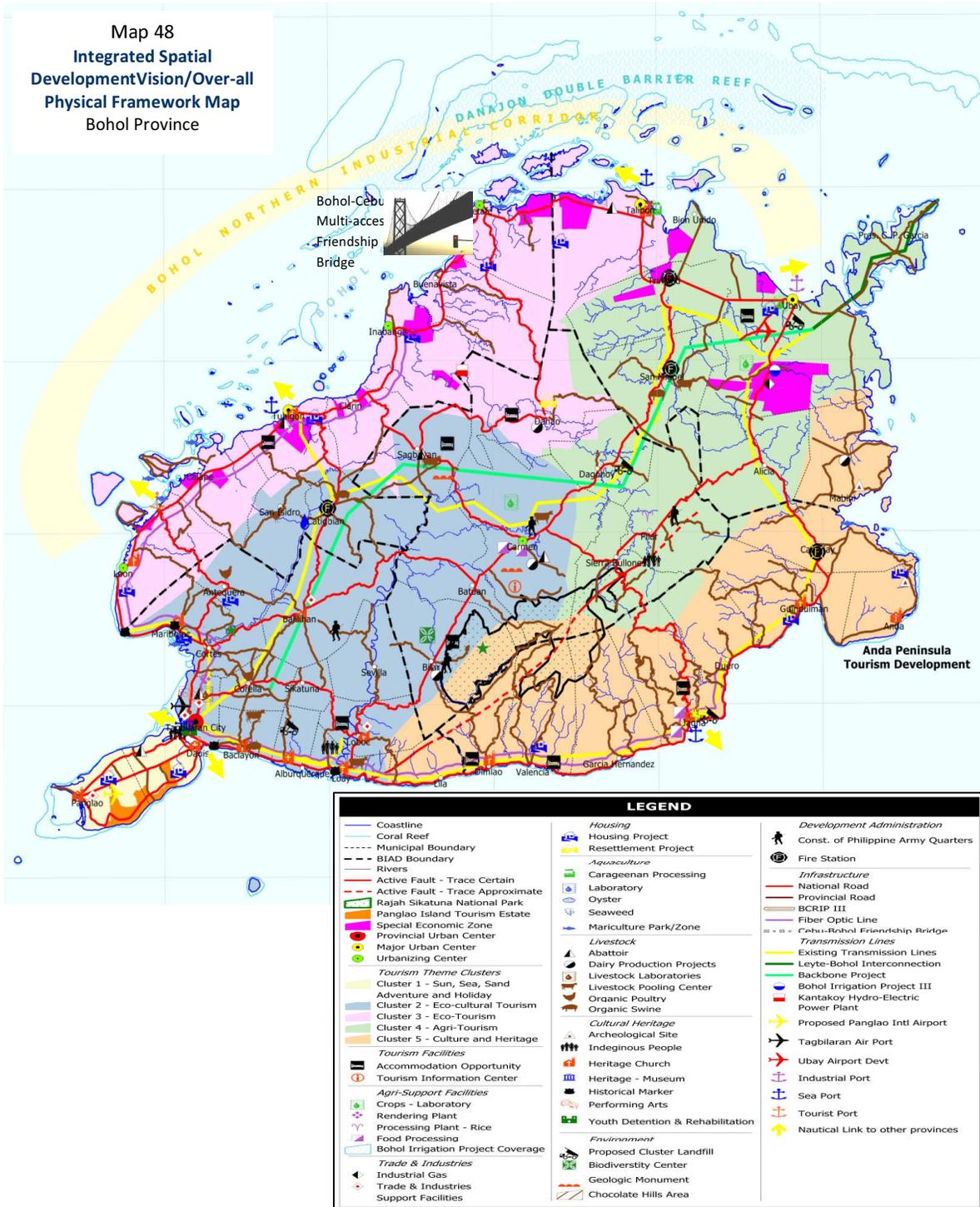


Among the formal settlements in Bohol are three (3) cultural groups/indigenous peoples (IPs) recognized by the government, namely: Eskaya, Ati and Badjao. The Eskayas have established settlement sites in areas classified as ancestral domains. They are found in 2 barangays in Alicia, 4 barangays in Candijay, Brgy. Taytay in Duero, Brgy. Biabas in Guindulman, 3 barangays in Pilar, and 1 each in Sierra Bullones and Valencia towns. The Atis are located in Brgys. Calvario and Las Salinas Norte in Loon town while majority of the Badjaos are found in Brgy. Totolan, Dauis. The IPs in Bohol constitutes a very small percentage of its total population.

## 7.2. Physical Framework

### 7.2.1 Overall Physical Framework: Integrated Spatial Development Vision Map of Bohol

The Integrated Spatial Vision of Bohol will guide future physical developments of Bohol Province. This document comprises several proposed general components including settlements, production, protection, transport and other proposed infrastructures that will be located in the province. The framework will set the parameters by which future growth and development will take place in Bohol. *Map 48* illustrates this spatial development vision.



The Integrated Spatial Development Vision Map of the Province is a product of the overall collaboration and partnership of the representatives from the development sector of the province. It paints a picture of the plans and programs in the province for the next five years.

Growth of Bohol is being most heavily influenced by tourism and the implementation of strategic infrastructures that enabled the province to have the capacity to create economic opportunities. In terms of spatial growth centres, agriculture is stronger as a growth driver in the central to northeast part of the province more particularly in the production of rice, corn, banana, mango, oil palm and coconut. Tourism, on the other hand, is a significant growth driver in the southwest part of the province near the city of Tagbilaran and the island of Panglao. More recently, the towns of Danao and Anda have become increasingly popular as alternative tourism sites; the former specializing in adventure tourism while the latter focused on eco-tourism as distinguishing marks.

The province intends to disperse economic growth activities to spread benefits to the people in the different areas of the province. In terms of industry, for special economic zones are planned along the northeast part adjacent to the island of Cebu. Tourism activities, on the other hand are planned to be de-concentrated away from the current tourism highway (Panglao to the Chocolate hills) to the northeastern part of Bohol, e.g., Anda and the northern municipality of Danao.

### **7.2.2 Settlements**

The Settlement Framework of Bohol encompasses urban and rural area development. Urban area development will focus on the component urban and urbanizing areas of the province. Tagbilaran City will remain to be the primary urban growth center in Bohol while other urban/urbanizing centers in the province such as Talibon, Ubay, Tubigon, Jagna and Carmen towns are expected to experience rapid urbanization and will continue to play significant roles in the socio-economic development of the province. Moreover, growth will be expected in municipalities with major ports and those being developed or planned to be developed as growth sites and centers. Consequently, the facilities in these areas and their service capacities will have to be enlarged and strengthened to keep up with the anticipated increase in demand in the coming years. Future growth pressures will increase the potential for sprawl development in urban sites, a condition that results in higher costs in providing basic services and facilities in these areas.

Expansion of linear or ribbon type residential development along the principal road networks of Bohol and the dispersed settlement patterns in rural areas should be

taken into consideration as a matter of public concern in rural development. Recognizing the potential problems and conflicts arising from development in the rural area, major concerns connected with any rural area development should be taken into account such as location, nature and scale. Encroachment of urban development into rural areas threatens to remove prime agricultural lands from needed agricultural uses.

Due to the vigorous policy of the Provincial Government to attract new economic activities particularly in agro-industrialization and tourism into the province, several municipalities in Bohol should also see rapid settlement growth in the years to come.

### **Future Settlement Trends**

Possible future sites with settlement impact in Bohol (*Map 49*):

- Tourism development sites

The tourism development areas in Bohol are the priority sites for tourism development identified in the national/regional/provincial tourism master plans, as well as legislative and executive issuances. Concentration of people in these areas is expected as more tourism-support and related facilities will be established. These areas include the Tourism Cluster Areas which will bring economic opportunities for eco-tourism and agricultural industries as well as social services that will draw a number of workers and attract migrants over time, leading to higher and more population settlements for Bohol.

- Areas with tertiary or Higher Educational Institutions such as colleges and universities. Universities and colleges as well as other educational facilities will continue to draw in people to an area. Students from faraway places will set-up living quarters in these institutions or in nearby places, thus creating their own settlements.

- Future Infrastructure development sites

Mega projects in the offing in Bohol will draw people and settlements in these areas. Among the major projects lined up are:

- a) Proposed Panglao-Bohol International Airport

With its construction set this year in Panglao Municipality, the Airport is envisioned to have a complete hub of hotels and resorts, convention facilities, sports and recreational facilities and the like. This will need a lot of manpower over a period of time just to keep these facilities going whether it be in the construction or operation phase.

b) Proposed Bohol-Cebu Multi-access Friendship Bridge

This transport structure will provide new opportunities and easy access to Bohol especially for the town of Getafe and its neighboring municipalities as an alternative prospect for residence of workers from Cebu. It can be the 'bedroom' of expats and other white-collar workers who prefer a more laidback/less stressful lifestyle which the municipality of Getafe (where the bridge will be located on Bohol's side) and its proximate municipalities can offer. Blue-collar workers may also avail of low-cost housing in these municipalities which can be readily made available.

c) Proposed Bohol Northeastern Industrial Corridor

This will bring in large number of workers for its factories and other agro-industries such as the proposed Bio-ethanol Plant in Brgy. San Jose, Talibon and a Seaweed Processing Plant proposed to be located in Ubay town. There are areas already identified as Industrial/Special Economic Zones in the covered municipalities along this corridor in their CLUPs.

d) Panglao Island Tourism Estate

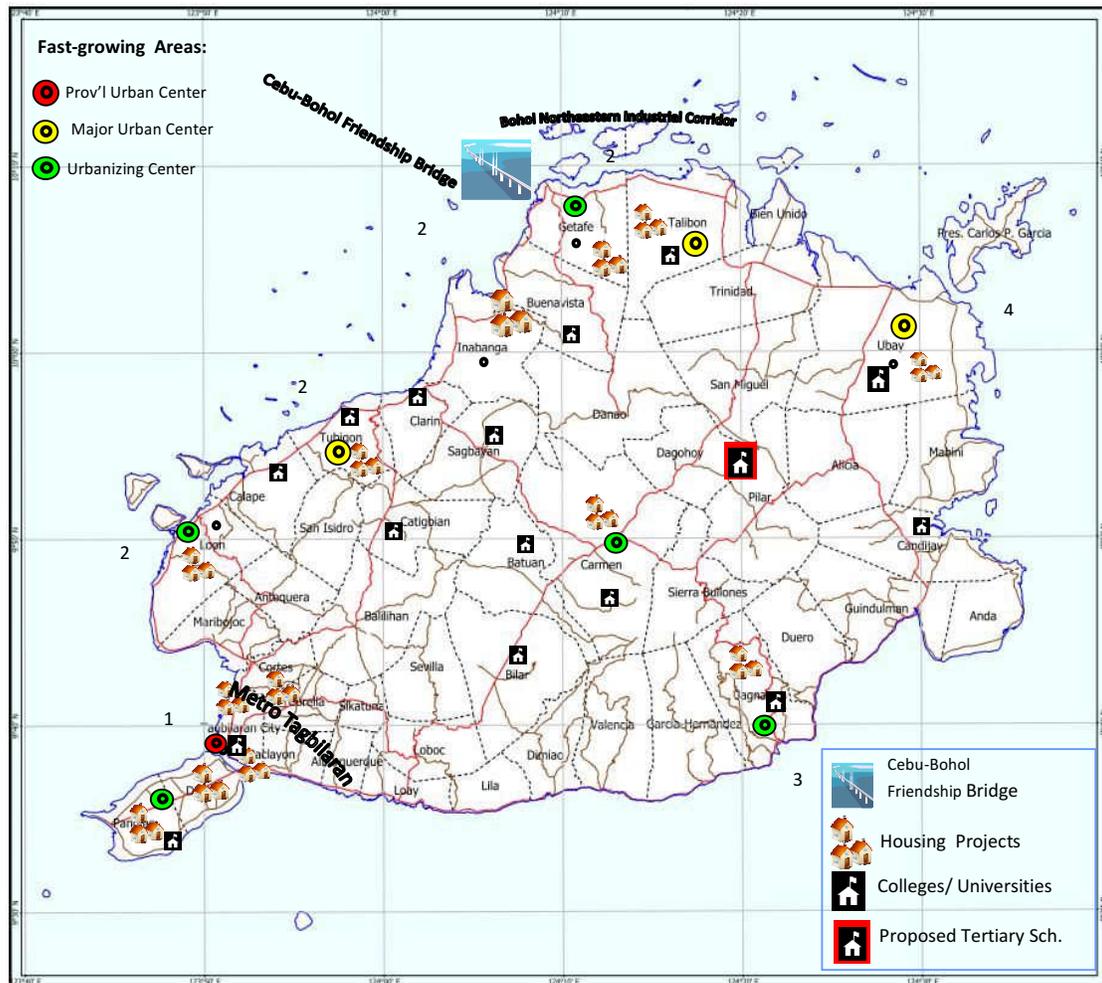
As already established by a Presidential Proclamation, this will also augur settlement growth especially in the Panglao-Dauis areas and in the city.

e) Proposed Housing Development Projects

The resettlement of people and construction of new housing facilities will create new settlements in these localities.

Given Bohol's demographic growth trends, virtually all settlements in the province will experience a continuing growth of its population. Bohol's urban area is estimated to expand by 5 percent of its current area (*Table 9-Annex 1*). Tagbilaran City will continue to account for most of Bohol's urban population as well as the urban centers of Talibon, Ubay, Tubigon, Loon, Carmen and Jagna by the end of the planning period.

Map 49 **Prospective Increase In Settlements**  
Bohol Province



**7.2.3 Protection Framework**

The Protection Framework will ensure an effective management of Bohol’s forest, freshwater, coastal marine and urban ecosystems as set by the Bohol Environment Code. Bohol’s development limitations shall include areas that are environmentally critical, constrained and protected, to wit:

- **Nature Protection and Landscape**

The latest data shows that Bohol has a total of 75,766 hectares under protection as initial component of the National Integrated Protected Area System’s (NIPAS Act or RA 7586). Protection purposes are for the conservation of biological diversity (flora and fauna) and natural heritage areas, conservation of forest cover, as well as provision for livelihood opportunities, water conservation and

sustainable development for those living in and around these areas. All development within these areas shall follow the provision embodied in the NIPAS Law (*Tables 23-24, Annex 1*).

- **Environmentally Constrained Areas**

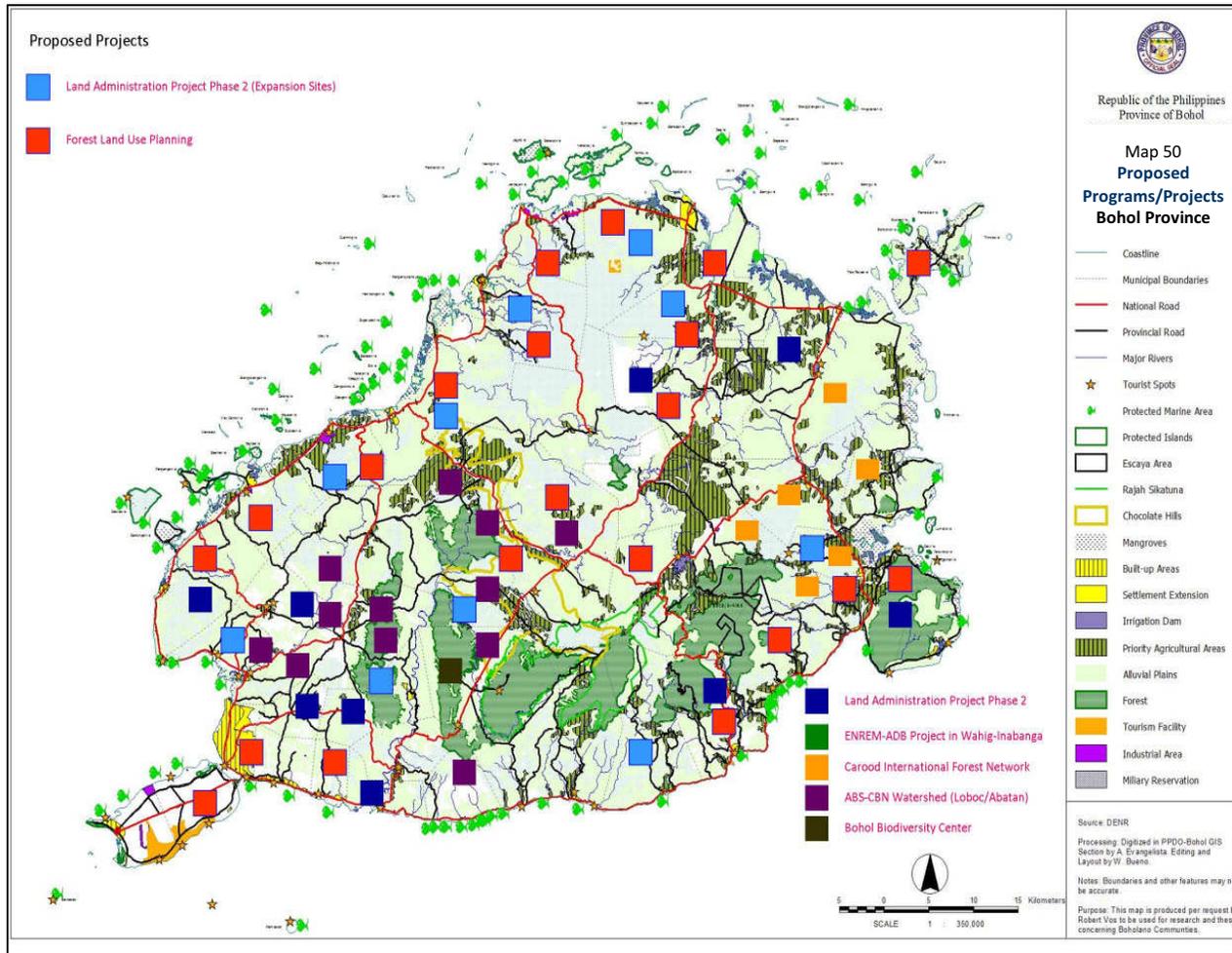
These are areas prone to natural hazards, severe erosion and more specifically hydrological and geological produced changes. The NIPAS Law does not cover these areas. However, they should be subject to restrictions in land uses in order to prevent the occurrences of accidents that endanger lives and properties (*Table 25-Annex 1*).

- **Environmentally Critical Areas (ECAs)**

These are areas covered by Presidential Proclamation 2146 but not belonging to environmentally constrained areas. They also impose limitations in terms of land use development. Non-suitable land uses should be disallowed in these areas. In addition there are areas degraded through intensive agricultural use, erosion, mining and quarrying that need to be rehabilitated.

The framework will also ensure the **protection of agricultural lands for food security** and income generation (*Table 26- Annex 1*). The vital service provided by the upland and lowland agricultural ecosystems are the capacity to satisfy the demands of the growing population for food and other agricultural commodities and to meet adequate food supplies for nutritionally balanced diets. The land also serves as the niche for precious plant and animal resources.

Map 50 shows the proposed programs and projects of the Environment Sector.



### 7.2.4 Production Framework

**Agriculture.** The level of land utilization in the province shows that there is still a substantial potential for the province to enhance its agricultural productivity and harness other crops suitable for its soil and weather conditions. These will eventually increase economic opportunities and benefits for the people.

The total land devoted for agricultural use is approximately 66% of the total area of the province. These are mostly planted with palay, corn, coconut, vegetables and rootcrops. Current 2008 BAS data shows a total of 76,063 hectares of land harvested with palay, of which 31,323 hectares are irrigated and 44,740 hectares are rainfed while the industrial demand for corn is also increasing, as the livestock sector in the province continues to prosper. In 2008, there are about 14,325 hectares of land harvested with this crop. Coconut production in 2008 in Bohol reached 138,766 metric tons. The crop is still among the top outgoing



## Planning Environment

commodity in the province. Another emerging crop in Bohol is the oil palm, which offers promising economic opportunities and benefits to farmers with about 6,500 hectares planted with oil palm. However, not all of these lands have been fully utilized and exploited. In 2008, Bureau of Agricultural Statistics (BAS) records show that area planted and harvested with major crops only accounted to 151,944 or about 55% of the total area devoted for agriculture.

### Investment Opportunities in the Province

To push its economic development, the province has identified preferred growth areas. The following sectors have been identified to be accorded “primary growth focus” in terms of incentives, assistance and public investment support by the province:

- Tourism: Accommodation facilities, Health and wellness tourism facilities, Retirement villages, Agri-tourism establishments, Nature park / Mountain resort, Transportation services, Restaurant / Food outlet, and other tourism-related services
- Agri-Business: High-value crop production, Aquaculture, Post-harvest facilities, Fruit / Meat processing, Feed mill, Tree farming,
- Light Manufacturing: Crafts, Processed food, Farm implements, Furniture / Furnishings, Precision assembly, Semiconductors
- Services: Information technology, Media/Advertising, Medical services/Facilities, Financial services, Engineering / Architectural services, Training and sports facilities, Human resource development; i.e., training facilities, educational institutions
- Energy: Development of indigenous and off- grid power sources, Power generation, transmission and other activities using environment- friendly technologies

### Projected Agricultural Production and Demand

The projected agricultural production is presented in *Table 36* which serves as basis for determining whether Bohol can meet the food requirements of the population during the planning period. Referring to the actual BAS 2008 production data, the projected production is computed based on the estimate of the Bohol Agriculture Master Plan (BAMP) percentage of incremental production. Averting all risks that might arise during the planning period, the following commodities will still continue to experience shortage in its production: corn and vegetables. Fish and duck eggs, however, are able to recover in year 2013 to meet the per capita food requirement of Boholanos for these products.

**Table 36. Projected Production and Consumption (In Metric Tons)  
Bohol Province: Years 2009, 2011 and 2013**

Commodity	PRODUCTION *			CONSUMPTION			SURPLUS/DEFICIT		
	2009	2011	2013	2009	2011	2013	2009	2011	2013
Rice	130,700	153,154	182,797	107,238	109,668	112,198	23,462	43,486	70,599
Corn	7,584	8,889	10,611	10,990	11,239	11,499	(3,406)	(2,350)	(888)
Vegetables	9,477	14,215	24,947	27,966	28,600	29,260	(18,490)	(14,385)	(4,313)
Fruits	57,240	77,017	113,677	36,744	37,576	38,443	20,496	39,440	75,233
Root Crops	113,236	125,437	141,606	23,351	23,881	24,431	89,885	101,557	117,175
Fish	24,240	29,863	37,460	35,499	36,303	37,141	(11,259)	(6,440)	320
Carabeef	2,207	2,363	2,531	780	797	816	1,427	1,566	1,715
Beef	5,322	5,718	6,202	4,376	4,475	4,578	946	1,243	1,624
Pork	41,461	61,489	91,190	8,828	9,028	9,236	32,634	52,461	81,954
Chevon	495	544	621	38	39	39	457	505	582
Chicken	11,125	17,383	27,161	5,759	5,890	6,026	5,366	11,493	21,135
Egg									
- Chicken	4,860	7,594	11,865	3,269	3,344	3,421	1,591	4,250	8,445
- Duck	63	98	153	126	129	132	(63)	(31)	21

### Identified Key Production Areas Of Major Agricultural Products

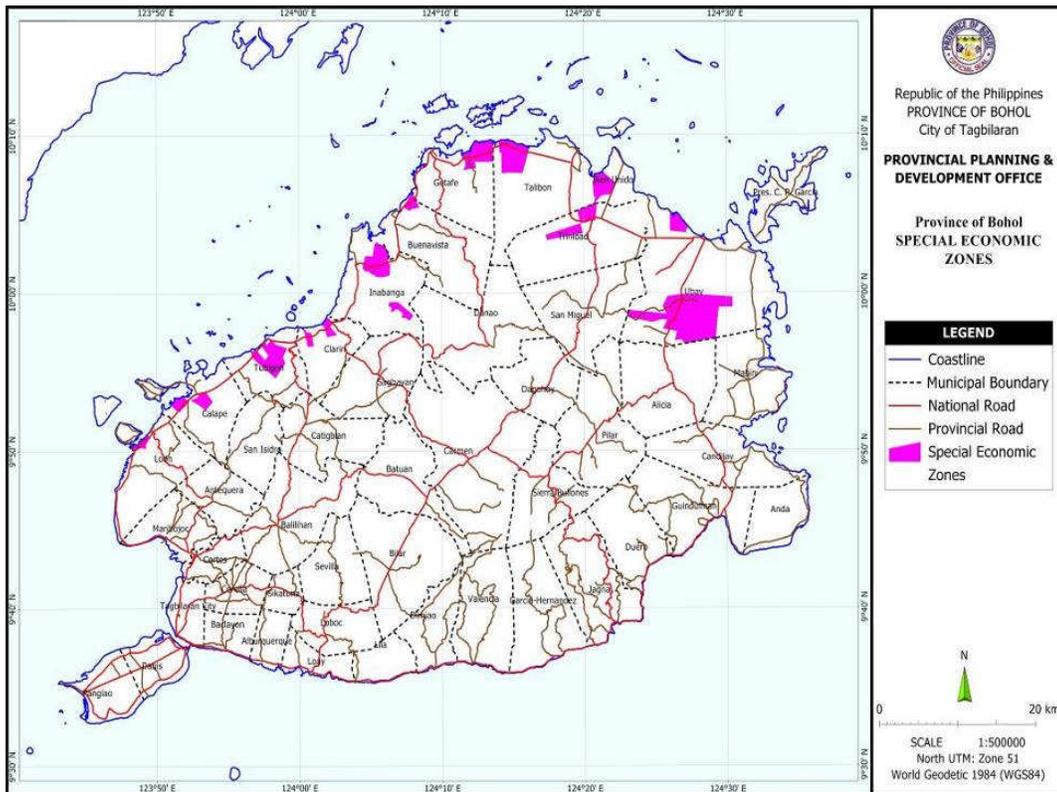
Bohol's agricultural development is anchored on sound environmental principles which serve as the foundation and guiding mechanism for sustainable growth and development. This takes primary consideration on the need to produce more food for the growing population and market demands while simultaneously addressing the protection and management of the environment. To maximize and fully utilize the province's agricultural potentials, key production areas of major commodities are identified as basis for agriculture development. *Table 29-Annex 1* presents the identified key production areas for Bohol's major agricultural commodities.

These areas are considered the most suitable location for the propagation, raising and development of high value crops, livestock and fisheries based on soil and geographical suitability, land classes/uses, proximity to support facilities, and environmental consideration. These production areas, if properly utilized and sustainably developed, will push Bohol's agriculture production to satisfy domestic requirements as well as provide for export commodity demands. Land consolidation and production integration can also be facilitated to achieve economies of scale and expansion of market reach.

**Special Economic Zone/ Industrial Estates Development**

Special economic/ industrial zones (SEZ) in the province are seen as vital in the generation and promotion of investments. Possible SEZ areas of investments are in light manufacturing and agro-industries that support primary production and processing. Areas identified are the Bohol Northern Industrial Corridor at northern part of Bohol facing the industrial center of Cebu; proposed agro-industrial zones in Ubay and Talibon identified; and initial three industrial estate sites along the northwestern portion particularly along the municipalities of Loon, Calape and Tubigon with preferred investments to include roll-on-roll-off (ro-ro) port facilities, plantations/agro-forestry, agri-based industries, processing and post-harvest, infrastructure and utilities, light manufacturing and agri-tourism (Map 51).

Map 51. **Proposed Special Economic Zones**  
Bohol Province

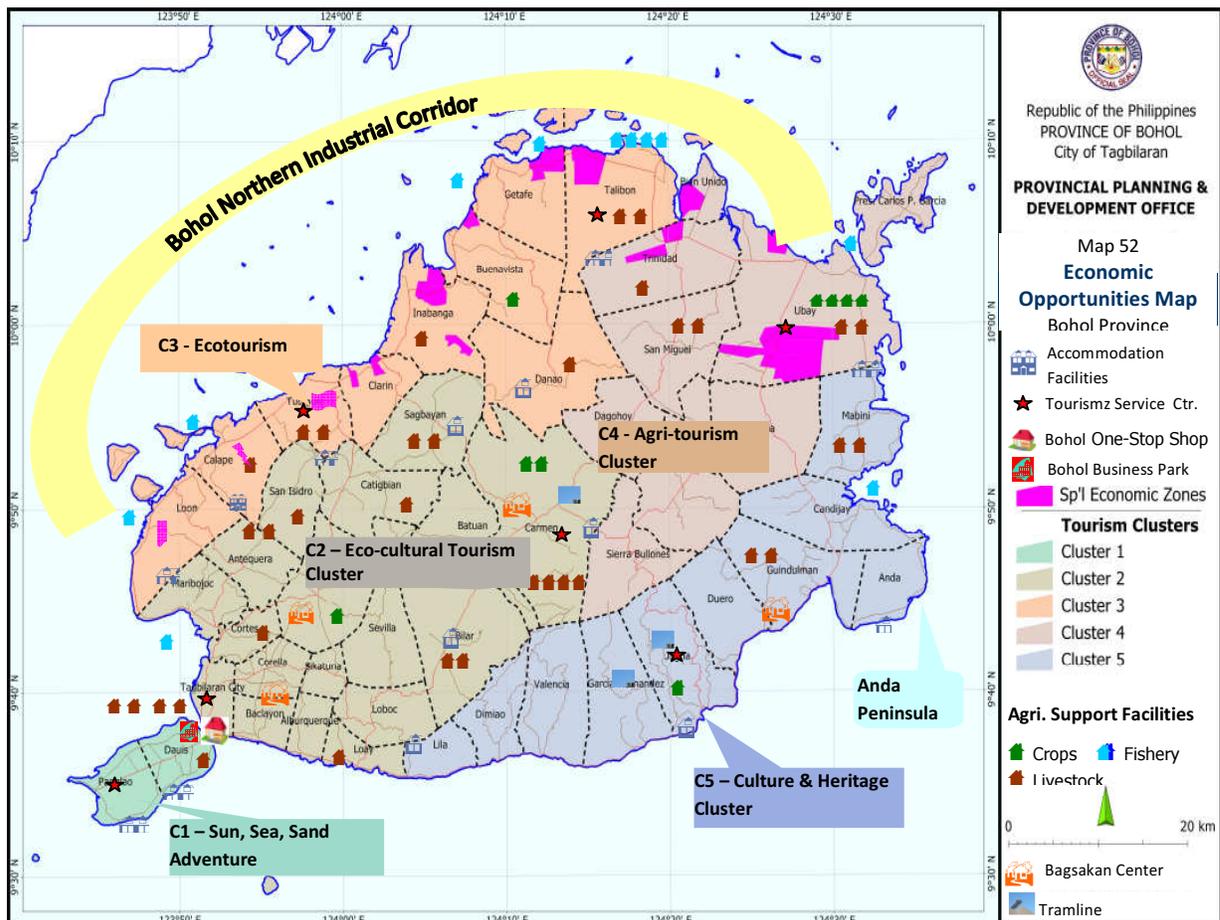


**Tourism.** Also identified as areas for potential economic opportunities in Bohol is in tourism. This will be the future site of the Panglao-Bohol International Airport. The projected area requirement of the province for its proposed industrial activities and expansion in 2010 is about 9 thousand hectares while about 10 thousand hectares will be needed in 2015 (Table 37).

Table 37. Current and Projected Industrial Area Requirement, Bohol, 2000-2020

Year	Area Requirements (Hectares)		
	Light	Medium	Heavy
2000	911.3	2,847.8	4,556.5
2005	960.2	3,000.5	4,800.8
2010	984.1	3,075.3	4,920.4
2015	1,079.8	3,374.3	5,398.8
2020	1,145.8	3,580.6	5,729.0

Map 52 shows the economic opportunities in Bohol.



## Transport/Infrastructure Framework

The transport/infrastructure framework of Bohol covers the land, air and sea transport systems. It is a framework that identifies and improves the efficiency of infrastructure use and support to Bohol's primary industries of tourism and agriculture, economic centers and human settlements as well as access and connection to remote Bohol's communities. This framework addresses urban transport, public transport and measures to optimize the safe use of existing infrastructure.

### Settlements and Traffic

Most of the densely populated areas in the province are along the northeastern towns of Bohol mostly located in the second and third congressional districts. Passenger traffic in these areas are observed as moderate to high, compared to the those near the city of Tagbilaran, Bohol's provincial urban center. The City has the highest traffic volume per kilometer of road and will continue to be so in the coming years. The towns of Ubay, Talibon and Tubigon are considered minor urban centers of Bohol with population density ranging from 400 to 1000 people per square kilometer. Four towns proximate to Tagbilaran namely, Panglao, Dauis, Corella and Baclayon registered the highest density increase in seven years (2000-2007) of between 20-38%. This indicates the spreading out of settlement sites to nearby areas indicating increased traffic.

The province experienced a steep increase in vehicle registrations in the previous year. The table below indicates a high increase in registered cars, buses, trucks, and motorcycles in 2009 from the 2008 base figures implying greater traffic volume in roads all throughout the province, though variations are observed in different road segments.

Bohol's spatial vision and the current economic and social condition of people and communities impact on traffic and roads through the following foreseen effects:

- a. Environmental condition affects largely the maintenance of roads as well as their sustainable management. Climate change issues as well as increased precipitation has tremendous impact on how roads are maintained. The presence of protected area also poses problems on maintenance supplies, more particularly those which involve quarrying. In recent projects on road maintenance in Bohol, heavy rain impacted on maintenance activities.
- b. Road improvements increase accessibility of areas currently unreachable or hardly accessible. On the positive side, it will improve access of the people to government

Table 38. **Total Vehicle Registration, Bohol: CY 2008-2009**

Vehicles Registered	Year		% Change
	2007	2008	
Car/Vans	15,329	17,528	14%
Buses	201	263	31%
Trucks	2,460	3,622	47%
Tricycles	2,647	2,116	-20%
Motorcycles	32,269	36,656	14%
Others	26	56	115%

services and other public goods. On the other hand, it will also change drastically the spending behavior of people and their investment on transport machines. A steep increase in registration of new vehicles between 2008 to 2009, more particularly motorcycles, cars and trucks indicates that with greater accessibility, road traffic will also increase, causing more need for periodic and guided maintenance. Correspondingly, increased traffic conflicts are inevitable.

- c. The economic development strategy of the province, i.e., agricultural-based economic development, and eco-cultural tourism will impact on roads and traffic. The increase in tourist arrivals over time signals an on-going trend of the popularity of Bohol as a quality tourism destination. This trend will have significant impact on road programming as increased tourist arrival means increased road usage and pressures on the environment.
- d. Land use changes will ensue when areas become more accessible through roads. While there is no validated data to this claim in so far as Bohol is concerned, changes in land use will significantly impact on road usage and may even create packets of problematic road areas. The planned dispersal of settlement sites, the creation of special economic zones will alter current traffic assessment results.

#### Road Requirements:<sup>36</sup>

Presently, the road network in the province is quite adequate to serve the growing population in 2015 based on the DPWH planning standard for roads at 3.9 kilometers/1,000 population for rural and 2.4 kilometers/1,000 population for urban. However, Bohol will need an additional of 856.42 kilometers or 17,128 hectares after 2016 onwards.

#### **Total Land Requirements for Roads:**

Road Right of Way	=	8,820.03 hectares (see Table 40)
Road Network	=	<u>17,128.40 hectares</u>
<b>Total</b>	=	<b>25,948.43 hectares</b>

Land Requirement based on DPWH Standards for Road Right Of Way:

Table 39. **Area Requirement For Road Right Of Way**

<b>Classification</b>	<b>Total Length (Kilometers)</b>	<b>Area of Road Right of Way (Hectares)</b>
City	74.395	99.85 hectares
National	622.362	1,766.64 hectares
Provincial	920.229	1,457.03 hectares
Municipal	309.32	277.31 hectares
Barangay	4,021.71	5,219.20 hectares
<b>Total</b>	<b>5,948</b>	<b>8,820.03 hectares</b>

<sup>36</sup> Based on Planning Standards of DPWH

Given the current road network or access condition, the province shall focus on the improvement of its existing road network that are not within road standards like its earth and gravel roads with poor sub-base and poor drainage system.

The transport network system in Panglao Island as well as its access/connectivity to mainland Bohol also need to be upgraded and improved in anticipation of the increase in passenger and cargo traffic in the area as a result of developments of Panglao Island such as the proposed establishment of the Panglao-Bohol Airport as well as the realization of the Panglao Island Tourism Estate. Traffic volume is expected to significantly increase especially at the proposed site of the new airport in Brgys. Bolod and Tawala in Panglao Municipality which site will cover an approximate area of 287 hectares.

#### Sea Transportation

The proximity of Bohol to Cebu, Negros, Mindanao and to the Island of Leyte makes Bohol a potential location for business, thus the need to improve and develop Bohol's ports. The urgency for the development of major ports need serious attention considering the influx and fast growing rate of incoming tourists/passengers and the realization of the national government's program to link the islands of the Philippines through the modernization of ports and construction of ro-ro transportation facilities. The following seaports are identified for development and improvement including reclamation areas with a total area of 2.2 hectares: Port of Catagbacan/Loon, Tubigon, Getafe, Talibon, Jagna, Ubay, Tapal/Ubay and Tagbilaran City.

The Transport/Infrastructure Framework Plan includes the implementation of the following:

- Bohol-Cebu Multi-access Friendship Bridge Project. Connects Bohol via Getafe to Cordova (Cebu) and will provide a convenient, fast, safe and reliable mode of transportation between two provinces and can also serve as access mode for the conveyance of power and telecommunication cables transmitted to Bohol. It will support the Provincial Government's thrust of developing the northern corridor of the province
- Provincial Road Network Development Plan thru the Provincial Road Management Facility (PRMF). This program seeks to rehabilitate provincial roads and capacitate provincial workers in road planning, among others. It aims to increase economic growth and improve public access to infrastructure and services in Bohol.



- Bohol Circumferential Road Project (BCIRP), Phase III. This proposed BCIRP Phase III has a total road length of 140.35 kilometers with the following components:
  1. Panglao Island Central Spur Road (PICS);
  2. Panglao Island Coastal Circumferential Road (PICC);
  3. Guindulman-Anda-Candijay (GAC) Coastal Circumferential Road;
  4. Candijay-Mabini-Ubay (CMU) Coastal Circumferential Road;
  5. Tagbilaran City Diversion Road;
  6. Baclayon Bypass Road; and
  7. Panglao Island Bridge Links

This project is supported by a Feasibility Study. This is the next phase in the development of Bohol's road infrastructure.

- Bohol Irrigation Project (BIP), Stage 3. BIP 3 consists of upgrading the Malinao Dam and Spillway in Pilar town. The upgrading of the Malinao Dam is expected to benefit the Stage 1 area of Pilar, Dagohoy and part of San Miguel towns, Stage 2 areas of San Miguel, Trinidad and Ubay and Stage 3 areas of Alicia and Trinidad.
- Bohol Backbone Transmission Project. The project seeks to improve the reliability and efficiency of power transmission in the province (Map 38) and involves the installation of 95 kilometers of 138 KV overhead transmission line and new substations in Corella and Ubay.
- Panglao-Bohol International Airport Project. The project involves the construction of a terminal and other facilities. This will take the place of the Tagbilaran Airport the location of which is already congested.
- Fiber Optic Network projects in Bohol that will be Bohol's entry to the information technology (IT) highway

## D. MAJOR DEVELOPMENT ISSUES & CHALLENGES

Bohol's development challenge is in addressing the following critical issues and concerns which over the years have remained unchanged. The most pressing concerns include:

### 1 Multi-sectoral Development Issues and Challenges

#### 1.1 High Poverty Incidence

With 39% of its families below the poverty line in 2006, Bohol ranked 35 among the country's 77 provinces in terms of poverty incidence affecting 47% of its population. This is higher than the regional figure of 30% and the national incidence of 27%. Hunger prevalence (Hunger Index) for Bohol province was estimated at 0.323 in 2003, indicating serious hunger situation.<sup>1</sup> About 15 percent or approximately 34 thousand families in Bohol in 2003 were poor hungry<sup>2</sup>. This increased to about 53 thousand families in 2006.

In Bohol, poverty has resulted to the following:

- **High incidence of malnutrition especially among Bohol's children**  
Although Bohol has been a consistent regional Green Banner Awardee because of its relentless efforts and initiatives in reducing malnutrition, a number of its children are still malnourished. About 9% of pre-school children and 19% of school children were found to be malnourished in 2008, equivalent to almost 50 thousand children. Among newborns, about 4% had low birth weight (less than 2500 gms.) affecting an equivalent of almost a thousand infants in 2008.
- **High Infant Mortality**  
Of the total births in 2008, 9 infants died per 1,000 live births. Although this is a lesser ratio compared to previous years, this is indicative of the poor state of health of the newborn and the mother. This ratio is quite high and needs to be addressed.
- **High incidence of School Drop-outs**  
In 2008, about 2 in every 100 elementary students and 6 in every 100 high schoolers drop out of school. Most of them are males who, according to a study by DepEd dropped out of school to find employment to augment their family's income. Compounding this is the 31% of children aged 6 to 12 years old and 57% aged 13 to 16 who are not in school during the year. Of those enrolled, only about 76 percent who enter first grade complete their elementary education while only 62 percent of pupils enrolled complete secondary education in Bohol.
- **Low Functional Literacy**  
Based on the latest FLEMM Survey of NSO, Bohol's overall 2000 Literacy Rate declined compared to 1994 from 96 percent to 92 percent in the same period. A decline in the

<sup>1</sup> Virola, Ramon and Castro, Lina –Meeting the Challenge for Official Statistics on Hunger in the Philippines, 2003

<sup>2</sup> Families with income less than the food threshold or subsistence incidence

Functional Literacy Rate of Boholanos is noted from 85 percent to 82 percent. Although Simple Literacy is high, the number of Boholanos who can read, write and comprehend is quite low at 82% of total population. In 2007, about 5% of population 5 years old and over had no grade completed while only 8% are academic degree holders.

- High prevalence of gastro-enteritis/diarrhea and respiratory illnesses/pneumonia  
Of the total estimated population of Bohol, it is projected that 10% of Bohol's population will get sick with about 135 thousand people needing health care services in the province within the planning period mostly infections from these diseases. Contributory to the incidence of these water-borne diseases are contaminated drinking water (fecal contamination) from leaking pipelines. About 5% of households in the province have unsanitary toilets while 10% have no toilets at all. Respiratory illnesses/pneumonia accounted for 4% of infant deaths. It is the leading cause of death among this age group.

## 1.2 Population Issues and Challenges

These include:

- Rapid population growth
- Increasing urban population, density and demand for urban services
- Unplanned expansion of settlement areas
- Limited access to land
- Need to enhance and update LGU spatial plans
- Need to address the gap between the provision of infrastructure and basic services and the demand of existing population

Rapid urbanization, low income levels and lack of areas allocated for affordable residential development have led to overcrowded and informal settlements, mostly concentrated in urban areas/Poblaciones of municipalities of Bohol. This has also led to encroachment of population to environmentally-critical areas in the province, e.g., protected forests, along river banks and coastal areas of Bohol.

## 1.3 Environmental Issues and Challenges

Population growth and economic activities have created pressures on Bohol's environment and natural resources. High demand for physical infrastructure like roads, water systems and power, more settlement areas, greater demand for goods and services are expected to increase. These often create environmental stress and adverse impact on critical resources. It can also bring about exposure of people and property to danger due to natural hazards such as flooding, landslides, earthquakes and typhoons including man-made hazards.

Some land use issues have to do with:

- Encroachment in critical ecosystems and degradation of critical habitats both inside and outside designated protected areas

Bohol has retained an overall high-quality natural environment, yet the impact of human activities on the environment could upset its natural ecological balance and its aesthetic quality. The increasing demands of urban development such as increased road works and settlements may significantly alter this ecological balance that is detrimental to human health while compromising the beauty and tranquility of the natural environment.

- Disaster Risks and Hazards. Bohol as an island province is vulnerable to various hazards resulting from natural and man-made disasters such as flooding, rain-induced landslides, earthquake, storm surges, liquefaction, fire, air and water pollution and contaminated land. Inappropriate location and design of developments can aggravate exposure and impact of hazards including climate change like sea-level rise and storm surges, among others.

- Land pollution

This is due to indiscriminate use of inorganic fertilizers and pesticides especially in farmlands and the indiscriminate dumping of solid wastes including toxic and hazardous materials and chemicals. Arbitrary disposal of solid waste and domestic wastewater have affected the quality of water sources both underground and surface water. With population increase, Bohol will need a sustainable waste disposal facility which can accommodate the increasing volume of its wastes. Bohol has allocated 38 hectares for a sanitary landfill. The total existing area identified in every cluster is 59 hectares which is sufficient enough to answer the need for a disposal site within the planning period.

- Unregulated conversion of forest lands to other uses

In 2008, DENR reported that the forest reserves of Bohol are declining due to conversion of forest area to agricultural use and other uses, among other causes. Ten percent of Bohol's population is dependent on the forest through farming in forest lands.

- Soil erosion

Eight out of the eleven (11) watersheds in Bohol are experiencing 26 to 38 percent soil erosion rates<sup>3</sup>. These sites are now at a critical stage with an annual soil erosion rate of ten cubic meters per hectare.

## 1.4 Transport and Other Infrastructure Issues and Challenges

### 1.4.1 Issues and concerns hindering an effective road service delivery

- Increasing public transport demand driven by increasing population growth and fuel prices
- Failure of government to coordinate required investments across the supply chain and anticipate forecast demand; efforts need to be coordinated among local, regional and national agencies in order to develop a sound transportation system for the province.
- Urban congestion / air pollution due to transport emissions

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<sup>3</sup> Bureau of Soil and Water Management (BSWM) Region 7

- No coordinated action plan to address growing urban congestion
- Road safety issues
  - Laws and rules on road safety are not consciously factored into road designs;
  - Road safety signs are lacking and education as well as information on road safety for communities is not undertaken
  - Inadequate pedestrian lanes especially in the City of Tagbilaran and rapidly urbanizing municipalities of Tubigon, Talibon, Ubay, Jagna and Carmen
- Absence of community participation in transport planning
- Lack of cohesive and integrated spatial transport planning, forecasting, and consultation

#### 1.4.2 Inadequate Infrastructure-support facilities and services

- Poor Road Condition

Of Bohol's total road length of 5,948 kilometers, only 21% are either asphalted or of concrete. Majority (79%) are either earth or gravel roads with 23% still made of earth.

- The increasing passenger and cargo traffic at the Tagbilaran Airport requires the upgrading of its facilities and equipment if not its relocation.

- Inadequate Tourist-support Facilities and Services

Existing tourist infrastructures are still insufficient to support the growing needs of the tourism industry such as high-end hotels/accommodations, convention halls and restaurants, tourism info centers, sustainable water supply, proper waste disposal facility and sanitary toilets/restrooms, among others. Most of the present facilities and services have yet to meet the quality standards of international tourists.

- Inadequate Health and Educational Facilities and Resources

Most of Bohol's barangays have yet to establish their own health/medical facilities to make basic health services easily accessible by the populace. Only 11% of barangays in Bohol have birthing facilities while only 36% of its barangays have Barangay Health Stations (BHS) with some segments of the population still limited by poor road network and transportation access to these facilities.

With most of its population in the school-going age, the need for more classrooms has to be addressed. For the planning period 2010 to 2015, it is projected that about 10,229 classrooms will be needed for the basic education level of public schools with 70% for the secondary level which already have an unmet need of 1,249 classrooms in SY 2007-2009. This will entail a financial requirement amounting to Php 2.46 billion for the entire planning period.

#### 1.4.3 Absence of Drainage and Sewerage System

There is neither a centralized drainage system nor sewage system in the province of Bohol, even in the City of Tagbilaran. Presently, there is no strict supervision and monitoring in the

construction of septic tanks as well; hence, many septic vaults have been improperly designed which has resulted in fecal contamination of water resources and degradation of aquifer water. Big industrial establishments in the province have their own sewage treatment but in terms of the operation of their treatment plants, there are problems. They instead prefer to dispose their liquid wastes in drains that contaminate water reservoir. Once contaminated, water treatment is difficult and very expensive.

#### 1.4.4 Poor quality of water in Bohol's catchments and streams

This will continue to deteriorate as human development activities increase. A survey of Bohol's wells conducted by SWECO in 1999 revealed that the water for drinking do not satisfy the water quality standards for safety and potability. Water quality problems such as high salinity content, excessive amounts of iron and manganese and bacteriological pollution are some of the current problems affecting water quality.

These resources need to be managed in order to meet the growing demand for domestic, agricultural, industrial, recreational and commercial uses as well as prevent public health hazards associated with increasing incidence of water contamination and pollution from negligent human activities.

#### 1.4.5 Inadequate water for domestic, industrial and agriculture use

The present waterworks system operating in the city rely on groundwater resources as do most municipal waterworks systems which has resulted in reduced water table levels leading to water contamination and saline intrusion. Continued reliance on these water sources would eventually result to inability of water stock to meet the increasing demand for water and adverse negative effect to the health of the people. Average systems loss in most waterworks system operating in the province is quite high at 20% due to undersized and old distribution pipelines. The total projected water demand in 2010 is estimated at 68,942 cum/d of which 87% is for domestic consumption. This is projected to increase to 119,433 cum/d with the tourism and industrial estates accounting for 13% of water consumption by 2015. The bulk of water demand is still projected to be from domestic users.

### 1.5 Economic Development Issues and Challenges

#### 1.5.1 Inadequacy of Employment Opportunities

Bohol's rapid population growth will have a corresponding proportionate increase in its labor force. The labor force shows an upward trend in the 15 and over population, while the employment rate continues to decrease. As the labor force increases, demand for employment and means of livelihood to sustain life also increases which would in turn affect the economy of the province. Unemployment figures will rise in the next six years unless the government shall undertake measures in addressing the problem.

#### 1.5.2 Low Level of Investments

While investments in tourism-related services particularly in accommodation facilities, restaurants, travel and tour operations, and land transportation services have been noted to have surged over the past years, the agri-business sector, either in production and/or



processing, has experienced a snail-paced growth. Investments in manufacturing continue to remain sluggish with only very few, if any, taking place. Retail and service businesses continue to be the primary economic activities throughout the province as Boholanos are timid to go into manufacturing and processing ventures.

### 1.5.3 Uncompetitive Business Environment of LGUs

Development challenges also lie in the absence or lack of support mechanisms to warrant an enabled and business-friendly environment in Bohol and among its LGUs. The province needs to make in place the necessary framework conditions so that more investments will be visible in Bohol within the next five years.

### 1.5.4 Need to address the following pressing concerns of Bohol's main economic drivers:

#### Tourism

1. The need to upgrade and develop new tourism attractions and their corresponding support infrastructures
2. The need to integrate tourism packages towards the development of viable tourism circuits
3. The need to enhance tourism services, promote Bohol's new attractions and strengthen institutional linkages
4. The need to upgrade tourism data to assist planning and monitoring to include the review of the extent to which visitor arrivals are documented in both accredited and non-accredited tourism establishments as well as the magnitude of excursionists (visitors within the day) which could have a significant but unknown impact to the province's tourism industry

#### Agriculture Sector

For the agriculture sector, there is an apparent necessity to address certain issues that have been hindering the full development of agricultural land in Bohol. Foremost is the still large area of idle lands in the province, unutilized or underutilized for agriculture. Many of the rural poor are landless, or have limited farm lands which may not be appropriate to achieve viable financial returns. These farmers still remain engaged in subsistence farming. Issues on land consolidation continue to hamper the development of alternative crops like oil palm, jatropha and other high value crops. Implementation of the Comprehensive Agrarian Reform Program in the province also needs to be intensified, not just to facilitate land distribution and lease for the beneficiaries, but also on the proper and economic usage of the land. Other major concerns:

1. The need to contain conversion of prime agricultural land to some other uses as a result of urbanization
2. The need for more/improved support infrastructures such as
  - o Improvement of farm-to-market roads and other transportation and communication facilities. Development of agricultural lands has also been

- impeded by lack of accessibility and limited road networks that link farms to production support facilities and markets.
- Establishment of irrigation and post-harvest facilities including appropriate storage facilities that will permit a more stable supply and price levels of local products, and processing facilities that will allow higher value-added production
- Implement effectively farm modernization and the application of more efficient technologies which are acceptable and can be practiced by Boholano farmers; and
- Stable power supply

### **1.6 Other Major Development Issues and Challenges**

- **Poor revenue generation of Local Government Units**

Resource levels of municipalities are highly dependent on their ability to raise locally-generated revenues. Based on the current situation, municipalities still remain to be heavily dependent on the Internal Revenue Allotment. In 2008, 25 out of 48 LGUs in the province are 85% or more IRA-dependent while only 8 municipalities including Tagbilaran City have an IRA-dependency of less than 70%.
- **Need to increase awareness of people on disaster management**

This has been identified by the PGB as crucial to ensure a safer province. There is a need for Municipal LGUs to develop and operate their Disaster Risk Management Plans and revitalize their local Disaster Coordinating Councils to ensure readiness to manage disasters, coordinate relief operations, rehabilitation and other related services.
- **The level of calamity funds to the cost of damage presents a real enormous financing gap for the LGU with the limited LGU financial resources channeled to reconstruction and rehabilitation rather than meeting the backlog in basic services. Disasters erode the province's development gains, resulting not only to economic losses but affecting development as well.**



## 2 Sector-Specific Issues and Challenges

### 2.1 Environment And Natural Resources Management

#### 1.1 Land Resource Management

- Encroachment in critical ecosystems (protected areas)
- Degradation of critical habitats both inside and outside designated protected areas
- Land pollution due to indiscriminate use of inorganic fertilizers, pesticides and dumping of solid wastes including toxic and hazardous materials and chemicals
- Unregulated conversion of forest land and agricultural land to other uses
- Soil erosion
- Pollution

#### 1.2 Forestry

- Quality of the forest cover in forestland continue to deteriorate
- Absence of clearly defined boundaries of permanent forest land
- Reduction of biodiversity due to forest destruction, hunting and wildlife trading
- No study on the effect of climate change to biodiversity and water resources

#### 1.3 Water Resources

- Over-extraction of groundwater sources which causes salt-water intrusion
- Non-systematic approach to water resource management
- Water crisis due to inefficiency of essential water infrastructure facilities
- Continued pollution and exhaustion of water tables and permanent destruction of valuable aquifers
- No karst landscape management program to protect underground water sources
- Limited water conservation practices for domestic, agricultural and industrial uses

#### 1.4 Mineral Resource Management

- Unregulated small-scale mining and the non-observance of the restoration provisions under PD 1198 (amended Mining Law of 1995)
- Open pit mining reducing forest and other vegetative cover
- Erosion from mining activities
- Uncertainties concerning protected areas and local government discretion
- Inadequate personnel to monitor mining activities
- Mining in geologically sensitive formations such as cave areas

- Mining exploration permit issued without the knowledge of local officials and landowners

### **1.5 Coastal/Marine Resources**

- Degradation of marine environment due to land-based activities like pollutive operation of industries, reclamations, agriculture, animal husbandry and settlements (shanties)
- Exploitation of coastal and marine habitat resources
- Non-consideration for sustainable coastal land use planning and principles
- Coastal erosion and sedimentation
- Degradation of shoreline and foreshore areas
- Non-observance of 20-meters salvage zone in the shoreline for environmental protection
- Seawater level rise and ocean acidification

### **1.6 Urban Environment/ Management**

- Improper waste management systems in all local government units
- Weak enforcement of existing laws, rules and regulations, e.g., RA 9003, (RA 9275 Clean Water Act) RA 6969
- Poor enforcement of air and sound quality regulations especially in industries and vehicles, e.g., Clean Air Act (RA 8749)
- Indiscriminate burning of crop residues (rice hulls, straw), household wastes and in dumpsites

#### ***Air Pollution***

- Indiscriminate burning of crop residues (rice hulls, straw), household wastes and dumpsites
- Inadequate financial resources to purchase air quality monitoring equipment
- Poor enforcement of air quality regulations especially industries and vehicles

#### ***Climate Change***

- Inadequate adaptation or resilience plan on climate change such as the occurrence of (la niña) and drought (el niño) and other natural phenomenon

#### ***Disaster Risk Management***

- Vulnerable to ecological risks, e.g., typhoon, tsunamis, flooding, earthquake, rain-induced landslides, drought, and forest fires
- Lack of capacity to assess natural hazards in terms of frequency, intensity and impact and analyze vulnerability and risk

## 2.2 Economic Development

### 2.2.1 Agriculture and Rural Development

1. Crops
  - Low agricultural productivity
  - High cost of farm inputs
  - Farm gate price of farm products is very low
  - Limited capitalization for agri-based enterprises
  - Limited farm machinery and post-harvest facilities
  - Lack of entrepreneurial knowledge of farmers
  - Poor adoption of new agricultural technologies
  - Limited farm size and land holding
  - Declining soil fertility
  - Farmer migration for job opportunity
2. Livestock
  - a) Production
    - Conversion of forage and pasture areas to residential and industrial zone or planted with high-value crops
    - High cost of commercial feeds for swine and poultry
    - Dwindling livestock breeder base
  - b) Animal and Public Health
    - Emerging and re-emerging diseases causing risk to animal and public health
    - Most meat sold at local markets come from non-accredited abattoir
  - c) Marketing and Enterprise Development
    - Livestock products and by-products produced by backyard raisers are not commercially competitive
  - d) Waste Management
    - Livestock-based waste contributing to environmental pollution
3. Fishery
  - Dwindling fish catch
  - Intrusion of commercial fishers to municipal fishing grounds
  - Presence of illegal fishing and use of destructive methods of fishing
  - Non-observance of "open and closed season" fishing that prohibits fishing during spawning period
  - Poor enforcement of fishery law
  - Lack of proper waste management disposal
  - Inadequate facilities and post harvest technologies
  - Agri Enterprise
  - Poor market linkages
  - Lack of adequate promotion of locally produced agri products

### 2.2.2 Tourism

The economic activities that the tourism industry brings in the province generated significant benefits to the Boholanos, in form of employment to workers and profits for investors and facility owners. However, growth of tourism industry in Bohol has some constraints that hamper its full development. Foremost, there is limited investment to high-end tourist infrastructures and facilities. This explicates the shortage of rooms

during tourism peak seasons and on large conventions and gatherings held in the province. There is also a need for continued investments for access facilities like roads, airport, and seaports that could improve travel efficiencies and capacities. The quality of tourism services and facilities needs to be continually enhanced to focus more on tourist satisfaction and welfare, rather than on economic returns only. With this, it is imperative to control and impose commonly-acceptable standards to regulate the quality of tourism sites, products and services, which will eventually enhance visitor experience and promote tourism patronage for Bohol. To ensure proper disposal and management of waste brought by increasing tourism activities, it is necessary for the province to develop or improve sewerage and solid waste systems in key tourism centers and zones. There are also insufficiencies in the development and promotion of new tourist products to visitors, which, if addressed, could enhance the array of tourism sites and boost the industry in the province. Equally significant is to seriously consider the environmental effects of tourism, with the call for strictly enforcing the laws and regulations to protect and preserve the natural resources of the province. All these mentioned issues and their general strategies are necessary aspects to look at and deal with to strengthen and sustain the foundation which puts Bohol at the limelight of the country's tourism map. It is, however, important to note that all of these are ultimately geared towards improving the lives of the Boholanos, ensuring that economic benefits brought by tourism should trickle down, in equitable manner, to the poor.

#### **4. Inadequacy / inefficiency of tourism services and support facilities**

- Inadequate and inefficient provision of tourism services.
- Not enough accommodations to sustain tourism development.
- Inaccessibility of tourism destinations due to poor road networks especially in interior towns.
- Insufficient water supply in tourist areas.
- Lack of attractive investment package to lure business investors.
- Land availability (i.e. clean land titles) that could spur interests on prospective investors particularly in Panglao Island.

#### **5. Improper policy/ regulatory framework implementation**

- Laxity on the strict imposition of existing regulations regarding solid waste management and non-compliance of the zoning ordinance.
- Lack of information dissemination at the grassroots level in support to economic development through sustainable tourism and environmental protection.
- No proper policing on marine life extractions and poaching intended for souvenir collections of tourists.

### **2.2.3 Trade and Industry**

#### **• Inadequacy of Employment Opportunities**

Bohol's rapid population growth rate at 2.9 percent will automatically mean proportionate increases in the labor force. The labor force shows an upward trend in the 15 and over population, while the employment rate continues to decrease. As the labor force increases demand for employment and means of livelihood to sustain life also increases which would in turn affect the economy of the province.

Unemployment figures will rise in the next six years unless the government shall undertake measures in addressing the problem.

- **Low Level of Investments**  
While investments in tourism related services particularly in accommodation facilities, restaurants, travel and tour operations, and land transportation services, have been noted to have surged over the past years, the agribusiness sector, either in production and/or processing, has experienced a snail-paced growth. Investments in manufacturing continue to remain sluggish with only very few, if any, taking place. Retail and service businesses continue to be the primary economic activities throughout the province as Boholanos are timid to go into manufacturing and processing ventures.
- **Uncompetitive Business Environment of LGUs**  
Development challenges also lie in the absence or lack of support mechanisms to warrant an enabled and business-friendly environment in Bohol and among LGUs. The province needs to make in place the necessary framework conditions so that more investments will be visible in Bohol within the next five years.
- **Culture of entrepreneurship is very low among rural poor**  
Women's sector has not been tapped to its full potential as an engine for economic growth

### **3.0 Social Development**

#### **3.1 Education & Manpower Development**

- Mismatch between formal education graduates and needs resulting to unemployment of majority of graduates
- Limited access to college education especially by the poor due to high cost of college education
- High incidence of drop-out rates especially at the secondary level
- Low Cohort Survival Rate resulting to minimal number of graduates in all levels of education
- Low Participation Rates in all levels of education
- Low functional literacy

#### **3.2 Health**

- **Rapid Population Growth**

Although the annual population growth rate of Bohol has slowed down from 2.95% to 1.06% between 2000 and 2007, the current rate is still high considering that about 13 thousand persons are added every year. A growing population increases the need for health services. With a total population of 1.23 million estimated to increase to 1.35 million by the end of the planning period or an average of 13,288 additional persons every year thereafter, Bohol's resources will be hard pressed just to meet the basic health care needs of its populace.

- Crisis in the health workforce

With projected shortage of doctors, midwives, nurses and other health support workers in Bohol due to massive exit of this workforce to abroad, without massively increasing training of health workers, the growing gaps will exert even greater pressure on the outflow of health workers.

- High Cost of Health Care

Although there exists a network of health care system in the province, its access, especially by the poor, is hampered mainly by high cost of health care as well as physical and socio-cultural barriers. In Bohol, many have poor health simply because they have no means of paying the often exorbitant cost of health care today. Based on the Family Income and Expenditure Survey (FIES) of the National Statistics Office (NSO), Bohol's average family income for the year 2000 was estimated at ₱77.0 thousand or ₱6,441 monthly which can barely cover a family's minimum basic needs. This is very much lower compared to the national average at ₱ 144.0 thousand. According to the National Statistical Coordination Board (NSCB), the Income Index of Bohol ranked no. 66 out of 77 provinces, amongst the low income provinces in the country in 2000. Only less than 1% of a family's income was spent on medical care.

- Poor Delivery of Health Care Services

The delivery of health care services in Bohol is affected by several factors.

- Inaccessible health services

For some, inaccessibility exist because of geographical factors. Many Boholanos are still living in remote and hard to reach areas, making access to primary health care services difficult. This has, in effect, affected the delivery of basic health services such as essential obstetric/pre-natal care services.

- Inadequate Public Health Facilities and Resources

The absence of health facilities in greater part of Bohol is another issue. Out of its 1,109 barangays, only 36% of these barangays have a Barangay Health Station (BHS) where primary health care services can be availed especially by the rural communities of the province. This could explain the fact that majority of child deliveries in Bohol in 2008 were done in the home (54%) rather than in hospitals or other health centers with only 88% of deliveries in that year performed by government doctors, nurses and midwives.<sup>4</sup> Some of the causes of maternal deaths in Bohol may have been prevented if pre-natal care, a basic health care service, were directly and easily accessible and available in most communities in Bohol.

- Inadequate health/medical Workforce

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<sup>4</sup> FHSIS Report, PHO Annual Report 2008

Although there are a number of health workers in Bohol, the existing health human resources in the province is unevenly distributed. Most health practitioners are located in the city, if not in urban centers or Poblaciones of municipalities. In the Health Report of PHO for 2008, it was revealed that about 204 child deliveries in Bohol were performed by untrained “*hilots*”, all done in the rural communities of the province.

- Minimal hospital diagnostic equipment especially in government-owned hospitals resulting to poor quality of hospital diagnosis

In areas where public hospital facilities are existing, hospital service quality is unsatisfactory especially in the Provincial Government-owned (PG) hospitals. This is primarily attributed to, among others, the lack of hospital diagnostic equipment which in turn, is ascribed mainly to the very low and sometimes non-allocation of funds for hospital equipment. In 2008, of the total budget of the Provincial Government appropriated to health, only about 1% was spent for hospital capital outlay in that year. As a result, the quality of patient diagnosis suffer, affecting the hospitals’ efficiency and effectiveness causing majority of paying Boholano patients to bypass these hospitals, preferring instead the private hospitals in Tagbilaran City or going directly to the hospitals in Cebu or Manila leaving mostly the non-paying patients (about 60%) in these hospitals. With an annual average occupancy rate of only 57.71%, the annual target revenue of ₱8.0 million for the year for the 10 PG hospitals altogether was not achieved.

- Still High Prevalence Of Gastro-Intestinal Illnesses (Diarheal Diseases) In Bohol Causing Deaths Among Infants and Children

The prevailing high rate of gastro-Intestinal Illnesses particularly diarrheal diseases in Bohol is a result of poor quality of drinking water in majority of the areas in the province especially in its component inhabited islands/islets. Provincial health statistics reveal that about 41% of households in Bohol in 2008 have no access to potable water while 17% of its households were still without sanitary toilet facilities in 2008. Available drinking water in Bohol is largely untreated.<sup>5</sup> Outbreaks of diarrhea were reported by PHO in Loon in 2007 affecting 1,330 and in Danao town with two reported deaths. Gastro-intestinal illness (diarheal disease) is among the top 10 leading cause of death among Boholanos in 2008.

- Prevalence of Child Malnutrition

Hunger and malnutrition still pose a major challenge in Bohol with quite a number of its children still found to be malnourished at varying degrees affecting affecting 4% of newborns, 9% of children below 6 yrs old and 18% of school children in 2008.

- Rapid emergence of chronic illnesses/lifestyle diseases in the last few years

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<sup>5</sup> At present, only one (1) of these laboratories (located at the Provincial Health Office in Tagbilaran City) is functioning

The availability of effective vaccines and drugs to cope with these health threats imposes huge practical and moral imperatives to respond effectively.

- Inadequate medical services related to childbirth and reproductive health-related infections especially in the remote areas of Bohol.

The lack of birthing facilities in the rural areas of Bohol has led to more home deliveries done by non-health personnel with most of child births in Bohol done in the home with some deliveries performed by *hilots*.

- Limited distribution, accessibility and availability of low cost medicines.

Assurance on the availability of quality low-cost drugs is among the regulatory priority of the province through the establishment of Botica ng Barangay and Botica ng Bayan and Health Plus Outlets. There are only 240 Botica ng Barangay and Botica ng Bayan established in Bohol where low cost medicines can be availed.

- Limited coverage and benefits of social health insurance.

There are still a number of poor families most in need of such insurance who are without this benefit. In 2008, only about 276 thousand were beneficiaries of PhilHealth.

- Minimal awareness on family planning methods and women's health needs and concerns.

Where there is awareness, the challenge is to meet the unmet family planning needs especially of those who prefer to space births.

- Growing fears of new health infectious threats such as H1N1, SARS and avian influenza as well as incidence of dengue, Tuberculosis, HIV/STI, Leprosy and Malaria

With new flu virus strains coming out, Boholanos are now at a high risk of contamination from these highly infectious diseases, being a prime tourist destination.

- Continued Incidence of Schistosomiasis

In Bohol, schistosomiasis is endemic in two (2) municipalities namely, Trinidad and Talibon municipalities. Based on records of PHO, the prevalence of said disease has decreased over the years but not yet totally eradicated. A woman died from this disease in 2007.

- Negative effects of devolution to the health care delivery system

With the devolution of health services to the LGUs, the provincial and district hospitals are now under the Provincial Government while the Municipal Government manages the rural health units (RHUs) and barangay health stations (BHS). The financial burden of operating and maintaining these facilities has brought enormous problems to the LGUs, eating a huge chunk of the LGUs' finances. This has greatly affected the delivery of health services to the community.

### 3.2 Housing

- Meet the growing housing needs of the province
- Identify new areas for residential development
- Create a viable and sustainable source of housing finance
- Expand private sector participation in socialized housing finance and construction.
- Low priority of housing programs by some LGUs (lukewarm response to housing problems, political bickering between the executive and legislative branches, etc.)
- High cost of land in urban and urbanizable areas
- High cost of land development prompting LGUs not to take up housing projects
- Tedious technical requirements of housing projects (ECC, Eng. Geo-hazard and Geological Assessment Report, Land Conversion, etc.)
- Lack of technical expertise of some LGUs in undertaking housing development

### **3.3 Social Welfare and Development**

- Continued incidence of poverty
  - Inadequate income distribution/ high percentage of population below “poverty line”
  - Worsening poverty among families due to lack of productive skills and opportunities and lack of resources
- Alarming number of juvenile offenders (high incidence of cases on minors in conflict with the law)
- Growing number of mentally-ill persons
- A number of families in difficult and in crisis situations
- Increasing incidence of violence against women (VAWC) and children and trafficking of persons
- Increasing number of children needing pre-school education
- Increasing number of Children In Need of Special Protection (CNSP) (Abused, abandoned, neglected and exploited children)
- Absence of a Provincial Youth Detention Home for the Province for Children In Conflict with the Law (Balay Batang Bol-anon established by the Tagbilaran City Government will not accept minors referred from the municipalities)
- Very minimal numbers of adoptive applicants/parents and foster parents to abandoned children in Bohol in need of immediate and temporary care as well as adoptive parents to legally adopt abandoned/neglected children despite the conduct of an Adoption and Foster Forum
- Absence of Crisis Intervention Units in most of the municipalities of Bohol to immediately respond to the needs of clients in the municipality.
- The need for Rebel returnees’ reintegration into the mainstream of society

### **3.4 Culture Preservation & Enrichment**

#### **Culture & Arts**

- Rapid urbanization and increasing population have put pressure on heritage sites and buildings. Some of the sites are at risk of being undertaken by development or of deteriorating due to high cost of restoration.
- Absence of a venue for the performing arts or a CULTURAL STRUCTURE that will be a HOME for the arts and heritage and for production and training that is globally competitive
- Need to hire a trained and competent provincial archaeologist who will serve the needs of the archaeological conservation programs of Bohol
- Arts and Culture must put food on the table by mobilizing its potentials as sources for livelihood for sustainable development, thus answering the need for reducing and eradicating poverty
- Lack of an integrated and comprehensive education and training in arts and heritage to strengthen the arts as a profession and raise the levels of cultural excellence.

#### **Indigenous Peoples (IPs)**

- Need to identify permanent resettlement sites for Bohol's IPs;
- No delineation yet of ancestral domains for Bohol's Indigenous Peoples (IPs)/cultural communities

## **4.0 Development Administration**

### **4.1 Public Finance**

- IRA-Dependent Provincial and Municipal Government Operations
- Low-level locally-generated taxes and revenues, unrealized income estimates for local revenues
- Limited local revenue –generation activities
- Increasing operational expenditures and budgetary requirements of government offices
- Resources and appropriations not maximized nor fully utilized
- Local Governments' economic enterprises not fully maximized nor effectively operating
- Some Provincial Government real property/ fixed assets remained underutilized for operational, economic and income-generating activities
- Lack of appreciation among PGB offices on planning-budgeting linkages and project prioritization
- Most of the municipalities are heavily IRA-dependent and remained as 5th and 4th class municipalities
- Several municipalities have incomplete or unapproved cadastral surveys and tax maps
- Outdated Provincial Medium-term Financial Plan
- No dedicated and stand alone office at the PGB to handle the development and management of PGB economic enterprises
- High delinquency rate of real property taxpayers and high cost of real property tax campaign
- Incomplete inventory of government properties, facilities and equipment
- Inconsistencies in the application of audit and internal control systems

- Lack of coordination between offices, LGUs and National Government Agencies concerning databases, documents, public information and policy implementation
- Limited human resource technical capacities and competencies
- Unmet building, office space, facilities and equipment requirements for the public finance sector
- Delayed full implementation of Electronic New Government Accounting System (E-NGAS), and interfacing of the Real Property Tax Information System – Billing Collection System

#### **4.2 Local Governance**

- Delayed completion and implementation of the Provincial Government Re-Engineering Program
- Employees awards and incentives system not fully implemented
- Multiplicity of various mandated local councils that hinders the conduct of regular meetings
- Lack of coordination between offices, LGUs and National Government Agencies in policy development, implementation and enforcement
- Project Monitoring and Evaluation System not fully supported by PGB offices
- Poverty Database Monitoring System not fully utilized by LGUs and NGAs as a tool for project identification, implementation and monitoring.
- Limited capacities of Municipal LGUs in revenue generation, project development , fund sourcing and accessing external funds
- Management Executive Team (MET) Meetings not regularly conducted to discuss policy and management matters
- Need for LFC representation in SP Sessions and Committee hearings for better coordination and early resolution of matters regarding appropriation and resource utilization
- Limited functionality and accessibility of the Legislative Tracking System
- Need to improve consultation process for the crafting of the Legislative Agenda
- Lack of coordination with Sangguniang Bayans and Panlalawigan regarding referrals of ordinances and other requests
- No overall PGB Organizational Strategic Plan; Offices' strategic plans are fragmented
- Lack of public libraries and reading centers in the province (ideal is 1 Library per Municipality)
- Limited budgetary support for library operations and a general lack of interest of LGUs to establish local libraries and information centers
- Lack of sports centers in the province
- Unmet building, office space, facilities and equipment requirements for some local governance offices and employees' groups
- Provincial Government lacks the necessary facilities and services for the promotion of employee welfare (e.g. medical/ dental clinic, cafeteria, wellness center, medical insurance, elevator and appropriate access ways)

#### **4.3 Justice and Safety**

- Presence in the Province of illegal gambling, illegal fishing, drug abuse, incidence of human trafficking

- Non-participation of some local officials in crime prevention/ enforcement efforts of the local police force
- Limited opportunities for personnel development and training (for justice, safety, peace and order offices)
- Limited budget to support operations on crime prevention, disaster management, emergency services, safety, peace and order, intelligence gathering, prosecution, search and rescue, counter-insurgency, legal services
- Absence of trained Explosive and Ordnance Disposal (EOD) unit, K-9 unit to deal with bomb threats in the province (PNP, Phil. Army)
- Non-incorporation of disaster management plans into the development plan
- No permanent disaster and emergency office – the Public Safety and Emergency Management Office to handle the affairs of the Provincial Disaster Coordinating Council
- Slow litigation processes of inmates' cases – causing detention beyond maximum penalties and congestion in local jails
- Limited databank on disaster-related information (e.g. high risk areas, emergency services available)
- Limited support mechanisms for volunteer groups, emergency responders and community organizations
- Absence of calamity insurance for public infrastructure and facilities
- Insufficient equipment support for emergency, search and rescue and other justice and safety functions (BDJ, PCG, BFP, Parole & Prob., PCG, PNP, PNRC, Prosecutor, PNP –Marine, Phil. Army, PAO, PLO, PhiVolcs, OCD)
- Lack of regular and qualified personnel for the Justice and Safety Sector (Provincial District Jail, Provincial Parole & Probation Administration, Office of the Civil Defense, PCG, PAGASA, PhiVolcs, PNP, PNRC, Prosecutors, PNP-Maritime Police, PAO)
- Lack of necessary building/ office spaces (BDJ, PAGASA, BFP, Prosecutor, PLO)
- Non-compliance with safety laws such as building code, fire code, land use zoning
- Need to improve inter-office coordination and support (PLO-LGUs, PNP-Parole, Prosecutor - CIDT/Military, PNP-Prosecutor, RedCross – Health Services, Emergency Services)
- Implementation of new laws that somehow hinder the execution of functions (PNP difficulty in operating anti-illegal drugs campaign with the passage of new-anti-illegal drugs law that requires several requisites and procedures before any action is made; DepEd Memorandum preventing students/ parents from giving donations/ aids to Red Cross)
- Threat of not sustaining programs and projects to address all types of disaster

## 5.0 Infrastructure Development

### 5.1 Transport and Access Development

- Inadequate and insufficient maintenance funds
- Poor design of barangay roads
- Lack of safety devices causing high rate of accidents
- ECC compliance



## Development Issues & Challenges

- Poor condition of barangay roads
- Old and Unsafe bridges
- Encroachment within RROW limit
- Delayed conversion of provincial roads into national roads
- Delayed acquisition of RROW
- Lack of coordination between the building officials and PEO/DEO
- Lack of coordination of utility owners with PEO/DEO
- Inefficient drainage system
- Limited space for Tagbilaran Airport
- Delayed implementation of projects
- No port zone delineation of Port of Tagbilaran

### 5.2 Water Supply & Irrigation Development

- Limited water source
- Inadequate capacity of distribution pipes
- Salt water intrusion
- Limited government financial resources
- Unregulated water use
- E-coli contamination
- Poor Management of water system
- Soil erosion in upland areas and river banks
- Flooding
- Forest denudation
- Water management not yet a priority of LGUs
- Uncoordinated inter-agency work involving water related concerns
- Proliferation of shanties along riverbanks
- Inadequate IECS
- Improper waste disposal
- Degrading aquatic life
- Harmful farming practices

### 5.3 Communications Development

- Poor communication access
- Very poor postal delivery services
- Outdated/obsolete communication facilities
- Lack of coordination and cooperation between providers and LGUs

### 2.3 Power & Energy

- Capacity of Power (c/o SIPC)
- Reliability of Power (c/o NGCP)
- Forecasted Demand especially in Panglao Island for the next 5 years
- Affordability of Power Rates (BOHECO I & II and BLCI)
- Sub-standards lines

**E. DEVELOPMENT FRAMEWORK OF BOHOL**

**1 Overarching Development Framework**

The Provincial Development and Physical Framework Plan (PDPFP) of the Province of Bohol for CY 2010-2015 has been prepared under the umbrella framework of the Millennium Development Goals (MDGs), to which the Province of Bohol seeks to contribute. Bohol’s PDPFP runs parallel to the national development thrusts of poverty reduction and economic growth.

Anchored on the PDPFP, the Provincial Government commits to the following goals as enumerated under the main headings of: (1) Environmental Protection and Management, (2) Social Equity and Inclusion, (3) Local/Regional Economic Development and Strategic Wealth Creation, (4) Upholding Cultural Heritage and Boholano Values, and (5) Responsive, Transparent and Accountable Governance (Figure 20).

**Figure 20. Overarching Development Framework of Bohol**



In line with the province’s vision and anchored by the PDPFP and its Development Framework, the Provincial Government sustains the following overarching strategies:

- Green Agri-based Economic Development
- Eco-cultural Tourism
- Public-private partnership

## **General Goals & Development Strategies**

### **1. Environmental Protection and Management**

On the concern of Environmental Protection and Management, the Provincial Government aims to:

- Promote the advocacy and observance of the Biodiversity and Eco-tourism Framework Plan and ensure the continued implementation of the Bohol Environment Code.
- Promote the development of physical framework and spatial plans at the municipal level to serve as blueprints for long-term development.
- Ensure that the Comprehensive Land Use Plans (CLUPs) of municipalities continue to enforce development guidelines and land use controls to protect the environment.
- Develop and promote plans and programs which are responsive to climate change.
- Create strategies for projecting climate change-vulnerable areas, determining extent of the consequences of natural hazards and calamities, and taking up adaptation and disaster risk management strategies.
- Develop a mechanism to filter and screen development proposals that could deprive Boholanos of their access to water, marine life, and other environmental resources.
- Promote the integration of hazard maps with infrastructure development to address potential hazards and prescribe the use of and reference to hazard maps in all local government development planning.
- Support initiatives in coastal and natural resource management, including biodiversity conservation.
- Rehabilitate open and denuded areas, especially those within watersheds and forest reserves, and explore and strengthen partnerships with external institutions in support of this endeavor.
- Support initiatives in climate change, resiliency and environmental management under Local Agenda 21, and encourage “green” infrastructure.
- Develop and implement programs to improve household, commercial, and environmental sanitation.
- Pursue reduction in levels of generated waste and improvement of disposal, collection, retrieval, treatment, and other waste management practices.
- Promote the adoption of viable recycling technologies in both urban and rural areas.



*Man-made forest, Municipality of Bilar*



## 2. Social Equity and Inclusion

On the concern of Social Equity and Inclusion, the Provincial Government commits to the following, as enumerated under their respective sub-headings:

- **On Poverty Reduction**
  - Sustain Poverty Reduction as a priority, but now paired with the strategy of local and regional economic development (LED/LRED). Based on the lessons gleaned from the implementation of the 2004-2009 MTDP, a needs-based response to poverty reduction is difficult to sustain by itself. There needs to be an economic development (wealth creation) strategy, which is opportunity-based, implemented alongside it. The new version of the PDMS helps address this need.
  - Sustain the focus of poverty reduction efforts (paired with LED/LRED strategies) towards the challenge for Bohol to meet the global MDG target of reducing incidence of extreme poverty by 50% in 2015.
- **On Peace and Development**
  - Maintain a peaceful environment conducive to investment development
  - Sustain, strengthen and develop initiatives in peace and development, especially those which seek to build the capacity of barangays and rural communities to autonomously address their problems.
  - Continue the integration of poverty reduction into peace and development efforts, to ensure that they address poverty as the root cause of insurgency.
  - Build up police presence in heavily populated areas and in areas designated for development with the objective of reducing the incidence of criminality, such as robbery, theft, and petty crimes.
  - Establish a system to provide additional logistical support for law enforcement agencies whenever proper and necessary.
- **Population and Human Settlements**
  - Sustainably manage population growth, using a strategy that allows and promotes a multiplicity of family planning options consistent with the religious convictions.
  - Study probable causes for reduced population growth, from the 2.95 % in 2000 to 1.06 %, recorded in the 2007 population census covering the period from 2000 to 2007 and, where possible and practicable, sustain or promote such causes.
  - Ensure adequate housing, utilities, and services for human settlements.

- Sustain and strengthen partnerships with Gawad Kalinga, Habitat for Humanity and other programs and institutions that aim to address the shortage of housing for the poor.
- Plan for developing areas where opportunities lie in housing: for example, in Getafe and Buenavista after the construction of the Friendship Bridge; or in the towns of Cortes, Maribojoc, Albur, Antequera, and other neighboring towns, since Tagbilaran is starting to get congested. With the growth of the eco-cultural tourism industry and, resultantly, of local commercial activity, there shall be a natural increase in human settlements and such need must be anticipated and provided.
- Sustainably manage township expansion, rural living, rural road networks, and rural waste collection and disposal to protect agricultural lands, forests and other protected areas from undue or abrupt conversion and irreversible damage to the environment.
- **Education, health and well-being of Boholanos, particularly of vulnerable groups**  
Vulnerable groups in Bohol include women in especially difficult circumstances; children in need of social protection; disadvantaged/out of school youth; persons with disabilities; older persons; rebel returnees; indigenous peoples and upland settlers; dysfunctional families; victims of disasters and calamities; persons adversely affected by socio-economic risks and shocks, as well as natural and climate change-associated hazards and calamities. It is the aim of the Provincial Government to:
  - Assist the Department of Education in ensuring the delivery of quality basic education, including reduction of school drop-out rates.
  - Assist the DepEd in adopting or creating policies to encourage library usage by students and enlarge library collections in public schools. Development of computer facilities and teaching of basic computer skills may be corollary to this program but it should be noted that library materials are easier to monitor than are reference materials available with internet access.
  - Expand coverage under the PhilHealth system of financially disadvantaged Boholanos as identified in the poverty database.
  - Ensure the delivery of health services and poverty-focused programs to address maternal and child mortality, malnutrition, chronic diseases such as dengue and malaria, prevention of rabies, and other health problems that threaten Boholano communities.



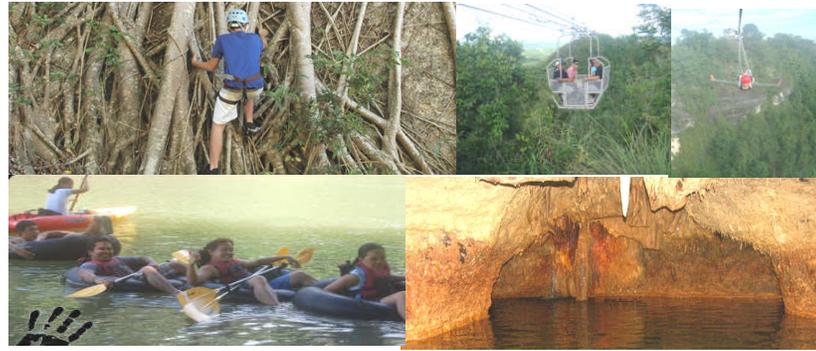


- Adopt and disseminate law enforcement policies that outline preventive or relief measures for the special protection of vulnerable groups, when and where needed.
- Adopt relocation and resettlement policies consistent with the development framework of the PDPFP and to be effective when necessary.
- Support medical and relief missions to enable the poor to access state-of-the-art medical intervention and other forms of assistance.
- Encourage and support private sector-initiated literacy programs, wherever implemented.
- **Gender and Development**
  - Ensure the implementation and advocacy of the Gender and Development (GAD) code, and ensure the mainstreaming of GAD principles into the Provincial Government's programs and projects.

### **3. Local/Regional Economic Development and Strategic Wealth Creation**

On the concern of Local/Regional Economic Development and Strategic Wealth Creation, the Provincial Government commits to the following:

- **On Eco-cultural Tourism**
  - Highlight the Tourism Development Clusters set forth in the Tourism Master Plan.
  - Continue to promote Bohol as a wholesome eco-cultural tourism destination, targeting both domestic and foreign tourists, notably for family tours and special interest groups (such as retirees and lakbay-aral contingents).
  - Explore the island's potential for prominence as a wedding destination and develop or promote the establishment of the soft infrastructure required to support it.
  - Be pro-active in the development of other tourism destinations in the province (Anda Peninsula and other emerging destinations), to avoid overcrowding already established destinations such as Panglao Island and Loboc. Prerequisite to this is the collaboration with LGUs and communities in developing and promoting local and community-based eco-tourism destinations and establishments. Another prerequisite is clarification of ownership, management, and revenue distribution policies of the destination. It is the objective to eliminate "copycat" destinations that offer substantially nothing new and tend to cancel each other out.



- Develop alliances with emerging tourism destinations in other provinces (e.g. Camiguin and Siquijor) to which Bohol serves or may serve as a gateway and ensure reciprocity of benefits between the parties involved.
  - Recommend and review updating of municipal CLUPs to take into account the development needs required within the framework of the tourism cluster and the PDPFP.
  - Guide development and infrastructure for eco-tourism and, in accordance with the Bohol Arts and Cultural Heritage Code, establish aesthetic standards and design principles consistent and representative of Boholano arts and heritage.
  - Continue to promote the upgrading of tourism facilities and amenities to become more globally competitive.
  - Prepare and orient local tourism development so that it is able to address the effects of international phenomena, such as the global recession. Acacia Terrace, Cafe Lewis, Municipality of Dauis, Bohol There is also a need to recognize the effect of natural disasters and climate change-related hazards on tourist arrivals, which could be felt within both the short- and long-term planning horizons.
  - The impact of eco-cultural tourism must be felt at the bottom line and should be manifest in the jobs and livelihood generated (primarily through community-based entrepreneurship) and the markets accessed or developed by such strategies.
- **On the concern of Agriculture and Agri-Tourism, the Provincial Government aims to:**
    - Integrate the “Green Economy” concept into the province’s commercial agricultural development and advocate the adoption of sustainable agriculture practices.
    - Utilize Agribusiness as a tool for catalyzing local economic development.



- Address hard infrastructure requirements that shall directly reduce costs of production and distribution of agricultural commodities.
  - Promote high productivity at the household level, especially in agricultural communities, not just for food sufficiency, but also for agribusiness, while also promoting demand-side strategies such as improvement of access to markets.
  - Prevent/address potential conflict between land uses for agricultural and eco-tourism purposes; and ensure that the agriculture sector does not lose out. (For example, rice paddies, once converted, are irrecoverable.)
  - Pilot and replicate successes in small landholding-based agriculture. Focus on the realities of the land ownership structure in Bohol: the reality is that farmers are generally small landholders; therefore, agricultural investment strategies should hew to this reality.
  - Address the challenge of turning farmers into entrepreneurs. This includes challenges in working with farmers of varying educational backgrounds; replicating best practices of exemplary small landholdings; teaching farmers not to be taken advantage of by unscrupulous middlemen, etc.
- **Promote Green MSMEs:** Micro, Small and Medium Enterprises that adhere to sustainable agricultural practices and the overarching principles of sustainable development.
    - Facilitate access of these MSMEs to Microfinance, as an additional tool for LED/LRED. However, Microfinance services must be properly screened to ensure that they help, and not hinder, MSME development. Onerous, informal lending practices, especially by non-Filipino citizens (which tends to funnel currency outside of the domestic economy), must be discouraged.

- **On Support Infrastructure for LED/LRED:**

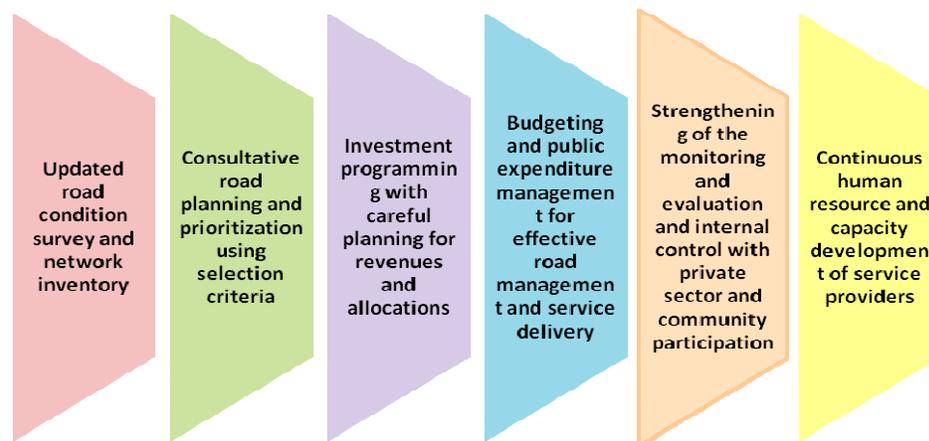
- Road Network Development, with emphasis on high-quality road maintenance and rehabilitation. This shall be taken by the Road Network Development Strategy, to be laid out in a detailed plan known as the Provincial Road Network Development Plan (PRNDP). Road network development throughout the province shall focus on the inter-municipal provincial roads, notably those under the Bohol Tourism Road Improvement Project (Bohol TRIP). The vision of provincial roads takes inspiration from the provincial vision of Bohol and is crafted by a group of stakeholders gathered together for the purpose of defining the directions of the province in developing its strategy



for road network development. Roads are very important in achieving economic and tourism development, two of Bohol's primary development strategy. The provincial envisioned roads to be durable and safe and managed by a competent bureaucracy with increased citizen involvement. The roads, as the provincial road vision statement suggests, are means to achieve economic and social development for the Boholanos.

Towards this end, the Provincial Government of Bohol shall embark on a multi-year road network development strategy that shall include:

- a. An updated road condition survey and network inventory for better decision-making
- b. Road planning and prioritization using selection criteria in consultation with stakeholders
- c. Investment programming for provincial roads including careful planning for revenues and allocations
- d. Budgeting and public expenditure management to ensure cost-effective road management and service delivery
- e. Strengthening of the monitoring and evaluation and internal control in the road sector and engaging the participation of communities and the private sector
- f. Continuous human resource and capacity development of service providers for better road management



- Major Infrastructure Projects, such as: Panglao Bohol International Airport, Bohol Circumferential Road Project Phase III (BCRIP-3), Bohol Irrigation Project Phase III (BIP-3) and smaller-scale/communal irrigation systems, Bohol Business Park (for F/S), Talibon Special Economic Zone, Bohol-Cebu Friendship Bridge (for F/S), Solid Waste Management (ISWM) and Wastewater Treatment/Management Facilities

- Ensuring Sustainable Power and Water Supply
  - a. Upgrade the availability and quality of power supply throughout the province by tapping sources within the Central Visayas Grid, by developing renewable sources of power within the mainland (such as hydropower), and also by encouraging the use of off-grid/renewable power supply technology in island-barangays and inaccessible rural communities.
  - b. Promote the development of water supply systems throughout the province, in accordance with the Bohol Integrated Water Supply Master Plan (BIWSMP), especially for Northeastern Bohol, which has grand plans for infrastructure (Bohol-Cebu Friendship Bridge, Talibon Economic Zone).
  - c. Enable a gradual shift by water service providers in the utilization of water sources from groundwater (which is vulnerable to over-extraction) to surface water.
  - d. Pro-actively address potential conflicts in water use.
- **On Information and Communication Technology (ICT)**
  - Support efforts to improve the global ICT connectivity of the Province, whether initiated by the public or private sector.
  - Enhance the Province's capability to become globally competitive in the now-borderless world through ICT development.
- **On Promoting Domestic and Foreign Investments**
  - Capitalize on the assistance and facilitation provided by the Bohol Business One-Stop Shop (Bohol BOSS) to encourage investments, both domestic and foreign, throughout the Province.
  - Prioritize the development of Economic Zones, such as the Talibon Special Economic Zone in Northeastern Bohol.
  - Strengthen ties and partnerships with foreign governments to attract tourists and investments, and facilitate the sharing of technological breakthroughs and developmental best practices.
- **Ensure that LED and LRED strategies and principles are applied as a corollary to poverty reduction:**
  - PDMS can be of great help in identifying municipal and community assets (natural, physical, human, etc.) that can catalyze LED/LRED.
  - Identify Bohol's competitive advantage vis-à-vis other provinces within the region, as well as its comparative advantage in relation to the myriad products and services it offers, without becoming single-industry dependent.

- a. Develop demand side-based strategies to accompany existing LED/LRED strategies which are supply side-based.
- b. Develop a mechanism for designing the Provincial Government's new development metrics, such as the number of jobs generated and MSMEs established.

#### 4. Upholding Cultural Heritage and Boholano Values

On this concern, the Provincial Government aims to:

- Institutionalize a respect for Culture and the Arts as an integral part of Bohol's environment. On one hand, to preserve indigenous culture and conserve tangible heritage and, on the other, to recognize the freedom for local artists to explore, experiment, and evolve.
- Promote the incorporation of provincial and municipal history and institutionalization of heritage and culture appreciation in the basic education curriculum of both public and private schools. Any such topic must pass review by the Bohol Arts and Cultural Heritage (BACH) Council before inclusion in the curriculum.
- Support initiatives that showcase the creativity and talent of Boholanos in various art forms and recreational endeavors: music, film, theater, dance, visual arts, sports, etc.
- Integrate Boholano values, such as warmth and social inclusiveness, into the eco-cultural tourism industry. In line with this, policies should be adopted to allow Boholanos greater opportunity to enjoy the comforts and amenities of Bohol's resorts and, on the side of the tourists, to establish an accreditation and monitoring system for home-stay accommodations and services as such facilities enhance their experience of Boholano culture.
- Integrate Boholano architectural aesthetics into the design of hotels, resorts, restaurants and other tourism establishments. This shall have an effect on the resources and livelihood of makers of nipa thatches, amakan, bamboo furniture, and other such materials.



## 5. Responsive, Transparent and Accountable Governance

On the concern for Responsive, Transparent and Accountable Governance, the Provincial Government commits to the following:

- **On Inter-LGU Alliances/Bohol Integrated Area Development (BIAD) Partnerships**
  1. Use the Bohol Integrated Area Development (BIAD) partnerships as a tool for facilitating inter-municipal alliances, replication of best practices among municipalities, clustering of development initiatives (such as common service facilities), and mutual strengthening of partner municipalities.
  2. Encourage the use of the integrated spatial planning approach within each BIAD to identify and plan development in emerging growth centers and potential urban areas.
  3. Institutionalize the BIADs, using the BIAD 5 experience as a model.

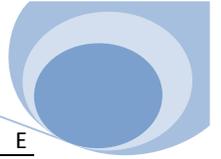
**Bohol Integrated Area Development Cluster V  
(BIAD 5):**

**Batuan, Bilar, Carmen, Dagohoy, Danao, Sierra  
Bullones, Sagbayan and Pilar**

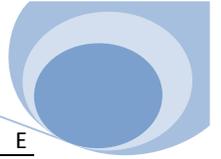
*Sharing the Cluster's Formalization Experience*



- **On Local Finance and Revenue Generation**
  1. Expand the Provincial Government's revenue base to fund development programs/initiatives, notably through public economic enterprises and similarly non-traditional methods. As a result of the global economic downturn of the last 3 years, leading to lower revenue collections by the national government, IRA is expected to decrease by 2011-2012 and onwards (the BIR and Bureau of Customs are already falling short of revenue targets). The PGBh should be prepared to deal with this phenomenon.
  2. Continue the advocacy of Value-for-Money, transparency and accountability in the use of public funds.



- **Stakeholder Participation & Collaboration/Public-Private Partnership**
  - Institutionalize Public-Private Partnership in local governance decision-making processes and even service delivery. At this point, stakeholder participation should be quite sophisticated, and there should be an exploration of specific contributions that the private sector can make in eco-tourism.
  - Ensure constant reference to stakeholder input, feedback and satisfaction ratings through surveys and polls.
  - Partner with the Academe in enabling young citizens to own and love Bohol. Explore ways for the Development Framework of the PDPFP to find its way into academic discussions and be factored into school curricula.
  
- **Policy Development, Local Governance Structure and Administration**
  - Continue to re-examine the responsiveness of the Provincial Government's policy development system and local governance structure to its expressed priorities.
  - Emphasize the importance of measuring productivity through performance and results, rather than activities and outputs.
  - Install, maintain and strengthen computerized systems to improve LGU operational effectiveness and efficiency.



## 2 Land Use Policy Framework

### 2.1 Settlements Development

#### Objective

The objective of settlements development is the allocation and utilization of land to achieve and promote an orderly and efficient development of human settlements that is responsive to the needs of its inhabitants and the environment.

#### Urban Area Development

##### Summary

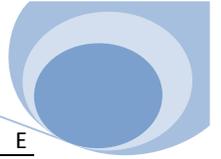
Growth in the Province of Bohol is being most heavily influenced by tourism and the implementation of strategic infrastructures that enabled the province to have the capacity to create economic opportunities. Tagbilaran City and the southwest section of the province have been absorbing the brunt of this growth pressure and will continue to do so in the future. Future growth pressures will increase the potential for sprawl development, a condition that results in higher costs in providing basic services and facilities due to the extension, then the under-utilization, of those services.

##### Goal 1

To encourage the containment of growth within existing urban centers, provide for the orderly, staged, diversified and compatible development of all of the city and municipalities of the Province of Bohol, and assure an efficient transition from rural to urban and land use.

##### Policies

1. In cooperation with Tagbilaran City and the municipalities, the Province of Bohol shall encourage urban growth to take the form of a series of compact, balanced communities, each with its own business and community center and each related to centers of employment.
2. The Province of Bohol shall cooperate and coordinate with each local government unit in the development of urban growth boundaries and shall adopt an urban area growth management plan for each local government unit within its territorial jurisdiction and the means by which the urban growth boundaries can be modified.
3. The Province of Bohol shall recognize the lands within the urban growth boundaries as the appropriate and desired location for urban development.
4. The Province of Bohol shall coordinate with Tagbilaran City and rapidly urbanizing municipalities of Tubigon, Talibon, Ubay, Jagna and Carmen to allocate an urban reserve area. The urban reserve area identifies high priority areas to meet long-term urban growth needs to the year 2023. Interim rural development within the urban reserve area shall be



regulated with tools such as corridor plans, clustering and redevelopment plans to ensure that long-term options for urban development are protected.

## **Goal 2**

To encourage the containment of urban services and facilities and other public sector capital improvements within existing urban areas in order to achieve an orderly pattern of urban growth.

### **Policies**

1. The Province of Bohol shall continue to seek full cooperation and coordination among the local government units and relevant national government agencies in jointly planning and programming all land use, urban services and facilities and other public improvements having an impact on the rate and direction of urban growth.
2. The Province of Bohol shall seek to establish a general commitment by the Housing and Land Use Regulatory Board, National Housing Authority and other housing agencies that no subdivision plans in designated urban areas shall be permitted without the provision of urban services commensurate with the location, nature and scale of the proposed development, recognizing the overall capital program for community services and the ultimate net cost to the community of the services to be provided.
3. The Province of Bohol, in coordination with the local governments and housing authorities, shall ensure that settlements and housing programs shall be affordable by the poor and that they shall be involved in the planning, design and maintenance of the housing program.
4. The Province of Bohol shall coordinate with the local government units to ensure that rural residential development contiguous with urban growth boundaries does not restrict long-term options for urban expansion.

## **Goal 3**

To create convenient and attractive communities, which can be efficiently serviced with roads, utilities, institutions and commerce, and can take advantage of desirable physical features.

### **Policies**

1. The Province of Bohol shall continue to recognize that the appropriate location of high density residential development is in areas having a full range of urban services and amenities or immediately adjacent to central business districts; immediately adjacent to public traffic generators such as schools, hospitals, shopping centers, or in selected small areas having unique scenic qualities and a location where water supply and solid waste disposal systems, adequate access by way of a road collector and other urban services necessary to meet the needs of the residents can and shall be provided.



2. The Province of Bohol shall continue to recognize that the appropriate location of low-density residential development is in areas with adequate access and services to satisfy the scale of ultimate development that can and shall be provided. Such areas would be generally within, or contiguous with, existing urban centers, but may also be in selected small areas having unique scenic qualities or, where the need may be demonstrated, in selected outlying areas of varying size having appropriate site qualities and other supporting services.

## Urban Growth Development

### Summary

The City of Tagbilaran and the urbanizing municipalities of Tubigon, Talibon, Ubay, Jagna and Carmen had established, or are in the process of establishing, an urban growth boundary or limit. The staged extension of urban services shall facilitate orderly urban expansion. Growth pressures in and around the City of Tagbilaran and the urbanizing municipalities of Tubigon, Talibon, Ubay, Jagna and Carmen make these areas particularly vulnerable to land use conflicts.

### Goal

To encourage local governments of the City of Tagbilaran and the urbanizing municipalities of Tubigon, Talibon, Ubay, Jagna and Carmen to adopt the staged extension of urban services that shall facilitate orderly urban expansion.

### Policies

1. All urban growth boundaries in the Province of Bohol shall be delineated as shown in the comprehensive land use plans of each municipality and no extension of urban land uses or water services beyond the designated urban growth limits or boundaries shall be undertaken without concurrent amendments to both respective municipal and provincial comprehensive land use plans.
2. The Province of Bohol shall encourage major land uses or functional areas and domestic water supply and sewerage service areas in the municipalities to develop progressively outward and to be extended on a staged basis until they are co-extensive with and has fully service the designated urban area.

## Housing and Shelter

### Summary

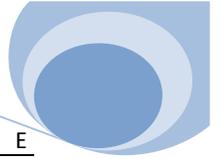
The rising costs in land, labor and materials, combined with increasing population pressure, have created a housing problem in the Province of Bohol. The province has numerous units in need of rehabilitation to make them safe, sanitary and decent places to live. Nationally subsidized housing programs have provided some relief for those who could not otherwise afford quality shelter, yet it appears that those badly in need are still unaided.

**Goal**

Adequate provision of affordable, safe, sanitary and decent housing for all residents of Bohol

**Policies**

1. The Province of Bohol shall continue to cooperate with all government and housing agencies within the country in promoting unified housing policies and action programs as well as an equitable distribution of assisted housing throughout the province.
2. The Province of Bohol shall continue to encourage municipalities to enforce building, mechanical and plumbing codes for all new construction and to require home-owners to upgrade existing housing units to code standards. It is further recommended that the government shall promote the settlement/housing upgrading, allowing people to participate in the gradual but affordable process of improving housing units.
3. The Province of Bohol shall provide opportunities for a variety of housing types in different residential environments, including single-family structures, conventional and modular type construction to serve the housing needs.
4. The Province of Bohol shall encourage an adequate supply of new and rehabilitated housing units for rental or purchase by low and moderate income families and individuals through support of, and participation in, national shelter programs.
5. The Province of Bohol shall coordinate its efforts with each municipality and the City of Tagbilaran in order to avoid potential conflicts with respect to province-wide housing opportunities and demand.
6. The Province of Bohol shall establish a process by which builders and citizens can receive an energy efficiency evaluation of their site and house plans.
7. Home occupations shall continue to be recognized and reasonably regulated in all residential areas in accordance with accepted standards and practice in urban environments.
8. A reasonable expansion of the concept and definition of home occupation shall apply to residential areas where small-scale, family-operated, home-craft industry or repair service has been traditionally carried on, and such cases shall be reasonably regulated, subject to limitations on location, scale, performance characteristics, commercial character, and adjoining property.
9. The local government units shall allocate, identify and designate site for socialized housing and resettlement purposes within their territorial jurisdiction in coordination with the NHA, NAMRIA and the Land Management Bureau of DENR.
10. Sites that are identified for socialized housing and resettlement purposes shall be designated as such in the LGUs' land use plan and zoning ordinance so that the integrity of the environment shall be preserved. Additional sites shall be further identified as the need arises.



## 2.2 Protection Land Use

### Objectives

The objectives of protection land use are:

1. Protection, preservation and enhancement of critical ecosystems and other areas in Bohol from any human encroachment given their existing and potential biodiversity;
2. Regeneration and rehabilitation of degraded land marine resources;
3. Protection of the Boholanos from environmental hazards and those areas which are subject to unregulated activities; and
4. Preservation, enhancement of and sustaining the benefits derived from maintaining the integrity of Bohol's land resources.

### Forestlands

#### Summary

The forest is an important natural resource that provides a wide range of benefits for the Province of Bohol. It has been and continues to be, subjected to numerous yet conflicting uses that include furniture manufacturing, the use of minor forest products for handicrafts, food production, human settlements, tourism and recreation, quarrying, energy production, watershed and other economic activities or any combination thereof. It is a fragile, yet over-exploited ecosystem. Deforestation had reduced the forest cover of Bohol to less than 14,502 hectares from about 17,890 hectares in 2000. As a consequence, there has been accelerated soil erosion particularly in the Inabanga Watershed, siltation of water reservoirs, rivers and creeks, more frequent flash floods, shortages of wood and forest products, and the extinction of an unquantifiable number of plant and animal species.

Growing demand for land and its natural resources creates competition and conflict. As population growth continues, the remaining forestland is converted to agricultural use. Conversion of forestlands to agriculture in Bohol is still proceeding, albeit illegally and is likely to continue. Forest destruction has been caused largely by indiscriminate timber cutting as well as slash and burn farming.

#### Goal

To conserve and to manage Bohol's forestlands and the resources therein on a sustainable basis consistent with existing bio-physical conditions, thereby, ensuring adequacy of forest cover, a habitat for wildlife, protection of forest soils and watershed, and the preservation of recreational opportunities.



### **Policies**

1. The use of forest resources should be within their biological capacity and ecological limits. The rate of extraction of forest resources, whenever allowed, should not exceed the rate of resource generation. A minimum amount of forest cover should be retained all the time to maintain ecological balance.
2. The formulation of forestland use plans should be based on a participatory approach where the vision and collective decision of the LGUs, PAMB and the communities are guided by the DENR framework for forest resource allocation. The process of planning and allocation of forestland resources should be a continuing negotiation between and among the various stakeholders. Such process further involves the resolution of conflicts, i.e, economic, social, political and cultural resulting in the use and for the assignment of the use of forestlands. The process should have the goal of the “best forest use” option where economic considerations are in balance, both in time and space, with ecological long-term considerations.
3. Land use plans should be sensitive to the needs, aspirations and culture of the upland and indigenous communities and should have defined impact on the overall growth requirements of the entire communities within the watersheds. The plan should map and acknowledge ancestral lands.
4. The forestland use plans shall utilize an integrated approach as it recognizes the forest as a complex system where man must co-habitate with all forms of plant and animal life. Furthermore, institutions whether formal or informal, and social systems must relate with nature.
5. Soil and water conservation must be accorded the highest consideration in allocating lands for various uses.
6. The Province of Bohol adopts CBFM or the direct involvement of communities in the management and utilization of forest resources for promoting the socio-economic upliftment of local communities and for ensuring the sustainability of forest resources. The community is given the responsibility to manage and protect forest resources while at the same time, they are able to obtain benefits from goods and services that are derived therefrom.
7. The forestland use plan should give prime consideration in conserving and protecting biodiversity. Zoning of forestlands should put a premium to area rich in ecosystem, species and genetic biodiversity.
8. The forestland use plan should serve as an instrument to correct the misuse and abuse of forestlands as well as contribute to the resolution of land use conflicts.
9. The forestland use plan should be guided by the principle of “highest and best use” of the forestlands, which means that those uses, which shall maintain the productivity and ecological functions of forest resources should be given the highest priority. As such,

classification and zoning of forestland uses should be based on sound land evaluation, socio-economic considerations and ecological viability.

10. The Province of Bohol shall cooperate with DENR and small woodland owners to manage forest lands for the highest aggregate ecological, recreational and economic benefits which these lands can sustain, including timber production, wildlife habitat, watershed protection, erosion control and recreational land use.
11. The Province of Bohol shall continue to support reforestation programs and forest management plans and programs in order to preserve and rehabilitate forestlands in the province.
12. The Province of Bohol shall encourage the forestation of marginal agricultural lands in the province.
13. The Province of Bohol shall provide for the preservation of forestlands through management plans formulated by PAMBs of the various protected areas and appropriate zoning thereof.
14. The Province of Bohol recognizes that certain areas of the province are characterized by a mixture of agricultural and forest use such that the agricultural lands and forest land goals of this PDPFP are both applicable. Farm and forest resources within these areas shall be protected through mixed use zoning as embodied in PAMB management plans that recognizes both types of use.

## Water Resources

### Summary

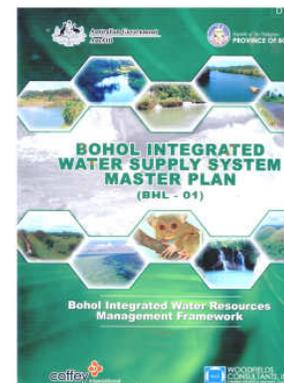
Efficient use of Bohol's water resources is a benefit to all citizens, as water is an essential part to the livability of an area.

### Goal

To conserve and manage efficiently Bohol's water resources in order to sustain and enhance the quantity and quality of flows for all consumptive and non-consumptive uses and to abate flood, erosion and sedimentation problems.

### Policies

1. The province of Bohol shall cooperate with national agencies and the LGUs in the province to identify, conserve and develop water resources on a long-range, multiple use basis in response to need, with full consideration given to the benefits, costs, potential uses and the carrying capacity of the resource.
2. The province of Bohol, in the development of its water resources shall adopt, promote and be guided by the Bohol Integrated Water





Supply System Master Plan;

3. The Province of Bohol shall develop plans in cooperation with relevant national agencies and LGUs to prevent flood-caused loss of life and property, by identifying and mapping the floodplains to those which are open and undeveloped, including forestry, agriculture, wildlife habitat and recreational areas and encouraging watershed management practices and the construction of watershed storage projects for flood control.
4. The Province of Bohol shall support the establishment of minimum stream flows to ensure the continuance of beneficial in-stream uses.
5. The Province of Bohol shall continue to support BSWM efforts to abet and control erosion, sediment and run-off.
6. The Province of Bohol shall coordinate with and support national water-quality plans and programs so that high water quality shall be achieved in the LGUs of the province, that sound watershed management practices shall take place, and that improved treatment of point and non-point sources of water pollution shall be achieved.
7. The Province of Bohol shall continue to support water monitoring programs in order to better managed Bohol's groundwater resources.
8. The Province of Bohol shall encourage the prudent use of all provincial resources and support the development of water conservation techniques and practices.
9. Where conflicting uses are identified or intended, in specific proposals or programs, the economic, social, environmental and energy consequences of the conflicting uses shall be determined and used as a basis for decision-making.
10. It is the policy of the Province of Bohol to protect riparian vegetation from damage that may result from land use applications for development that is permitted within the regulations of this plan. To achieve this objective, the Province of Bohol shall review land use applications for development in riparian areas in an effort to mitigate or prevent damage to riparian vegetation that might result from development. For purposes of this policy, "*riparian areas*" refers to areas within 20 meters measured horizontally from the ordinary high water line of rivers and streams.
11. It is the policy of the Province of Bohol that land use management practices and non-structural solutions to problems of erosion and flooding are preferred to structural solutions. Water erosion control structures, including riprap and fill, should be reviewed by the appropriate permitting authority to ensure that they are necessary, are designed to incorporate vegetation where possible, and designed to minimize adverse impacts on water currents, erosions, and accretion patterns.

## Wildlife

### Summary

The Province of Bohol has rich and varied wildlife resources which includes the tarsier, flying lemur, etc. who are living in sensitive wildlife habitat areas whose protection is essential for the



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## Overall Development Plan Framework

well being of the resource. Land use conflicts can occur which would degrade Bohols' wildlife resource.

### **Goal**

To conserve the wildlife habitat of Bohol with a view to maintaining an optimum ecological balance and protecting endangered species.

### **Policies**

1. The Province of Bohol shall cooperate with the DENR, BSWM and DOT to identify, conserve and protect wildlife habitats; determine areas of critical imbalance and threats to particular species; and formulate and implement measures for the improvement of existing habitat and the creation of new habitat where needed.
2. The Province of Bohol shall recognize the need to conserve and protect wildlife habitat in its plan implementation measures; and the following shall be considered in any public or private land use determination subject to the review of the Provincial Land Use Committee, the Provincial Development Council and the Sangguniang Panlalawigan; the impact of harvesting forest areas where there is no forest management plan for the regeneration of forest lands; the filling or drainage of swamps; the damming of rivers and streams; the location and construction of highways and utility transmission lines; and any other land development activities which significantly interfere with the vegetation or soil cover or drainage patterns in critical habitat areas.
3. All identified sensitive wildlife areas shall be classified as exclusive agriculture, forestland or open space. No major land use change, including but not limited to road construction and recreational developments shall be permitted without approval of measures to limit undesirable impact on sensitive wildlife areas.
4. The habitat of species indicated as endangered, threatened, or vulnerable shall be preserved. Nesting sites of endangered species shall be protected and buffered from conflicting uses.

## **Open Space**

### **Summary**

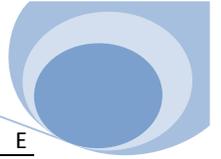
The Province of Bohol possesses an extensive open space network that contributes to the overall rural character and livability of the province.

### **Goal 1**

To ensure continuance of open space and the overall rural character of the province.

### **Policies**

1. The Province of Bohol shall cooperate with all government agencies to identify open space and scenic resources, to determine resident and non-resident recreation needs, and to formulate and implement measures for open space preservation and use.



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Overall Development Plan Framework

2. The Bohol Environment and Management Office (BEMO), BFAR and DENR shall cooperate to conduct an inventory which shall include but not limited to the location, quantity and quality of the following resources: fish and wildlife habitat, ecologically and scientifically significant natural areas; outstanding scenic view and sites; water areas; wetlands; watersheds; and groundwater resources; wilderness areas; historic areas; sites; structures and objects; cultural areas; potential recreation trails; potential parks and recreation sites.
3. Where conflicting uses are identified concerning an open space, natural or scenic resource proposal, the economic, social and environmental consequences of the conflicting uses shall be determined and programs developed to achieve the goal.

## **Goal 2**

To preserve and improve potential recreational and other open spaces in both rural and urban environments for all to enjoy.

### **Policies**

1. The Province of Bohol shall seek to establish a permanent provincial open space network; increased public access to areas of prime recreational significance; and the development of additional recreational opportunities.
2. The Province of Bohol shall seek to establish the continuity of scenic views, buffer areas, wildlife and natural habitat and associated natural environment.

## **Ecologically and Scientifically Significant Natural Areas**

### **Summary**

An inventory of ecologically and scientifically significant natural areas in the Province of Bohol indicates a number of land and water areas that are important as objects of scientific studies and as habitat for flora and fauna.

### **Goal**

To protect land and water areas that have substantially retained their natural character and land and water areas that, although altered in character, are important as habitat for plant, animal or marine life, for the study of natural, historical, scientific, or paleontological features, or for the appreciation of their natural features.

### **Policy**

The Province of Bohol shall establish a Natural Heritage Database of natural areas which shall be incorporated in the PDPFP by reference and shall serve as supplementary in the analysis of

information, policy formulation, protection and preservation of ecologically and scientifically significant natural areas.

## Outstanding Scenic Views and Sites

### Summary

Outstanding scenic views and sites exist throughout Bohol. Scenic views are an important component of the livability, attractiveness, and economic health of the province.

### Goal

To protect outstanding scenic views and sites for future generations of Boholanos.

### Policies

1. The Province of Bohol shall allow uses that may impact scenic resources subject to the provisions of the PDPFP, the CLUP of individual municipalities and its zoning provisions, particularly site design review, solid waste enforcement, and any other measures as may be adopted to protect the scenic attractiveness of the province.
2. The Province of Bohol shall develop a strategy for establishing viewing areas for outstanding scenic views and sites of the province.

## Historic Areas, Sites, Structures and Objects and Cultural Areas

The Province of Bohol has surveyed and inventoried historic and cultural resources in the province and has established mechanisms for the protection of significant historic and cultural resources.

### Goal

To protect sites, structures and objects that have local and national historical significance, and areas characterized by evidence of an ethnic, religious or social group with distinctive traits, beliefs and social forms, for future generations.

### Policies

1. Through its culture and heritage programs, the Province of Bohol shall limit uses that conflict with significant historic and cultural resources duly designated as Bohol landmarks.
2. The Province of Bohol shall continue to promote activities designed to further the public's understanding of the cultural and historic diversity of the province.



## Parks and Recreation

### Summary

The Province of Bohol provides a variety and different levels of recreation opportunities for the residents of Bohol and transient population. There is a need to increase recreational opportunities in the province.

### Goal

To provide adequate recreational opportunities in both rural and urban environments to meet existing and projected needs.

### Policies

1. The Province of Bohol shall cooperate with government agencies within the province to identify recreation, open space and scenic resources; determine resident and non-resident needs and formulate and implement measures for providing recreation services.
2. The Province of Bohol shall seek the cooperation of local government units and the DepEd in the joint acquisition, development, operation and maintenance of combined school and neighborhood park and playground sites in harmony with projected neighborhood needs and surrounding uses.
3. The Province of Bohol shall seek to offer greater opportunities for water-based recreation in the Loboc, Abatan, Moalong, Inabanga and Ipil River and their tributaries.
4. The Province of Bohol shall encourage the location of urban parks in scenic areas which are easily accessible to much of the urban population and which can be developed to provide recreation opportunities for all ages and interest groups.
5. The Province of Bohol shall encourage the development of rural parks with appropriate spacing to serve the needs of residents on sites which have unique aesthetic value, appropriate access road, path or trail, and are otherwise suitable for picnics.
6. The Province of Bohol shall appropriate amount for recreation development designed to meet the needs of the transient and provincial population.
7. The Province of Bohol shall promote the development of an integrated bicycle and pedestrian trail system for recreational opportunities and to link open space with communities.
8. The Province of Bohol shall encourage cooperation among government agencies to increase recreation opportunities, programs and facilities for residents, and shall explore the possibilities or providing recreation programs for the rural areas of the province.
9. The government shall promote the development and operation of non-traditional recreational facilities that showcase local assets and resources. Mechanisms shall be set for the proper maintenance of these facilities to include organization of volunteer groups and user fee schemes.
10. For the purpose of implementing recreation programs and development, the Province of Bohol shall investigate funding alternatives such as tax levies, grants-in-aid, and user fees.



## Environmental Quality

### Air, Water and Land Resources Quality

#### Summary

The Province of Bohol has retained an overall high-quality natural environment, yet the impact of human activities on the environment has upset the natural ecological balances and the high aesthetic quality of the province in the past, and poses the threat of future deterioration. The increasing demands put upon the air resources of the province affect the capability of those resources to provide for a clean, enjoyable and safe environment. Suspended particulates from a number of sources, including vehicle emissions, dust, garbage burning, slash and burn farming, pose the largest air pollution problem of the province.

#### Goal 1

To conserve and protect natural resources, including air, water, soil and vegetation and wildlife, from pollution or deterioration, which would dangerously alter the ecological balance, be detrimental to human health, or compromise the beauty and tranquility of the natural environment.

#### Policies

1. The Province of Bohol shall cooperate with DENR in enforcing national laws and regulations designed to achieve high air quality.
2. The Province of Bohol shall, in making land use decisions relative to industrial or other uses likely to pose a threat to air quality, consider proximity of the proposed use to residential areas and meteorological factors such as seasonal prevailing wind direction and velocity.
3. The Province of Bohol shall cooperate with DENR in implementing noise control regulations.
4. Consideration shall be given to adopting an ordinance requiring environmental impact assessment of all major public and private development proposals and the social and economic costs and benefits associated with any particular development proposal shall be properly evaluated prior to public endorsement or approval.
5. In order to maintain and improve the air quality, water and land resources, the Province of Bohol shall seek to minimize irreversible and other long-term impact in its development of energy resources; support efforts, where feasible, for the appropriate and efficient recovery of energy as a means to reduce waste problems, and encourage a program to recover and recycle used motor oil.

#### Goal 2

To preserve and enhance the charm and amenity value of Bohol while accommodating change, through ensuring harmony between urban development and the natural environment, at the same time cultivating more attractive urban environments in which to live, work and play.

**Policies**

1. The Province of Bohol shall, in cooperation with local government units, work to establish high standards for urban development and redevelopment, initiate incentives and regulatory programs to achieve such standards and seek abatement of the aesthetic degradation of the environment resulting from conflicting land uses and blighted neighborhoods, indiscriminate waste disposal, offensive outdoor storage and advertising, and the lack of adequate natural and landscaped open space.
2. The Province of Bohol shall work to maintain a healthy natural balance among the many life forms existing together within the province.

**Disaster Risk Reduction/Hazards**

Bohol as an island province is vulnerable to various hazards resulting from natural and man-made disasters such as flooding, rain-induced landslides, earthquake, storm surges, liquefaction, fire, air and water pollution and contaminated land. Inappropriate location and design of developments can aggravate exposure and impact of hazards including climate change like sea-level rise, storm surges and among others.

**Goal**

Protect people, property and natural resources from exposure to natural and man-made hazards including impact to climate change

**Strategic Priorities**

- Design and plan for structures both vertical and horizontal shall be in accordance with the hazard risk management policies to wit:
  - Avoid permanent development within and adjacent to areas vulnerable to hazards
  - Design of buildings and other infrastructure development shall consider the long term effect
  - Establish protection zone to buffer the works during construction stage
- Prevent creation of hazards

**2.3 Production Land Use**

Portions of production lands in the province are located in both Alienable and Disposable (A & D) and forestland areas that are currently under intensive use. It means that the use is not sustainable in the long term. There are large of tracts of land lying idle and not utilized, which are used marginally for pasture and grazing. These lands can be put to a more productive use and contribute to the overall development of the area.

## Objectives

The objectives of production land use is the allocation of lands, whether public or private, aimed at determining the most efficient, most effective, most sustainable and equitable manner of utilizing, developing and managing land for productive purposes.

## Mineral and Aggregate Resources

### Summary

The mineral resources of the Province of Bohol are largely non-metallic minerals and consist mainly of sand, gravel and rock quarries. Several rivers are major sources of sand and gravel. Unless properly developed and rehabilitated, quarrying activity can pose irreparable environmental damage.

### Goal 1

To ensure that all quarrying of sand, gravel and rocks shall take place under conditions which foster compatibility with existing surrounding land uses; and to provide for the restoration of quarry sites for future agriculture, open space, recreational or other appropriate uses.

### Policies

1. The mineral land aggregate resources shall be recognized as a non-renewable resource important to the growth and development of the province.
2. The Province of Bohol shall continue to cooperate with DENR to identify lands that are, can, or should be utilized for resources or processing of aggregates; shall determine present and future needs; and shall formulate and implement necessary measures for the protection of such sources or sites; and sites that are found to be compatible with the plan goals shall be recognized through appropriate plan designations
3. Areas designated in the PLUP for urban and rural residential development or other conflicting uses shall continue to be protected from incompatible extractive activities through appropriate zoning measures.
4. Areas designated by the PLUP for extractive activities or as quarry sites shall continue to be protected from incompatible urban and rural residential development and other conflicting uses through appropriate zoning measures. If such development is approved, adequate setbacks and use limitations shall be applied to the development to minimize conflicts with adjacent future extractive or quarrying operations.
5. Where a property has been identified as having important mineral and aggregate resources and is identified as agricultural or forestland in the PLUP, and conflicts exists between



competing uses, consideration of the economic, social, environmental and energy consequences shall be a part of the aggregate site designation and zoning process.

## **Goal 2**

To ensure that irreparable environmental damage or the creation of safety hazards does not result from mining, quarrying or extractive activities; and to ensure that restoration of mining, quarrying and extraction sites are accomplished according to an approved restoration plan.

### **Policies**

1. All applications for mining, quarrying, and extractive operations shall be required to prepare and submit detailed plans of the site operation and plans for restoration to ensure proper continued operation and final closure of the development. Approval of the request may occur only after the posting of all necessary performance bonds and submittal of all applicable plans.
2. The Province of Bohol shall cooperate with DENR in support of the restoration of all lands subject to mining, quarrying and extractive activities; and assurance shall be required at the outset of the development by the posting of adequate performance bonds.
3. All requests for operations within any stream bed shall require the approval of appropriate governmental agencies.
4. Operating standards adopted for mineral resource sites shall be designed to the greatest extent possible to protect air and water quality, soil resources and natural vegetation from deterioration or irreparable environmental damage.

## **Agricultural Lands**

### **Summary**

Agriculture plays an integral role in the overall economy of the province. The need to maintain the integrity and viability of the agricultural land base has been clearly recognized by the residents of Bohol. Expansion of urban development into rural areas creates conflicts between farm and urban activities, thereby decreasing the potential for agricultural productivity. Conversion of agricultural lands to non-agricultural uses tends to occur in productive areas devoted to rice and other crops. Allowing this trend to continue in rice growing areas or other crop producing areas would seriously put Bohol's food security at risk.

A significant amount of land within the province has soils with high quality agricultural capability. Soil erosion in Bohol is widespread due to deforestation, cultivation of steeply sloping lands and improper land use of hilly areas. Loss of topsoil results in the deterioration of crop productivity. On the other hand, pollution of croplands occurs through the excessive use of pesticides. Excessive application of chemical fertilizers causes soil acidification and may contaminate



groundwater sources. Soil erosion and soil pollution are the major causes of the degradation of land and the decline in productivity. Small-scale farmers shall be given enough information on the soil suitability so as to maximize the utilization of the land and increase productivity and revenues and to organize themselves to be able to produce adequate volumes of high value crops to cope with market opportunities.

Unequal distribution of land has been identified as one of the major causes of rural poverty. Concentration of land ownership to few families has placed the rural population in a very disadvantaged position. Landless farmers have very limited opportunities for improving their economic and social status.

In addition to agriculture's important role in the economy of the province, farm land provide the residents of Bohol with scenic open space which contributes to their health and welfare.

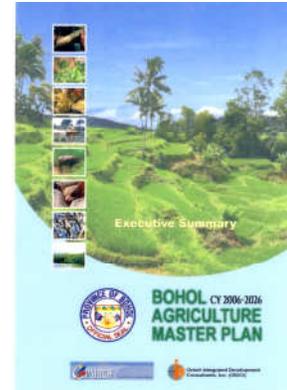
### **Goal 1**

To conserve Bohol's prime agricultural land for the production of crops and livestock and to ensure that the conversion of agricultural land to urban use, where necessary and appropriate, occurs in an orderly an economical manner.

### **Policies**

1. The Province of Bohol shall provide for the preservation of prime agricultural land through appropriate zoning, recognizing comparative economic returns to agriculture and alternative uses, changing ownership patterns and management practices, changing market conditions for agricultural products, and various public financial incentives.
2. The Province of Bohol shall provide for the protection of prime agricultural lands that are covered under the Network of Protected Areas for Agriculture and Agro-Industrial Development (NPAAAD). These areas are as follows: (1) all irrigated areas; (2) all irrigable lands; (3) all alluvial plain lands that are highly suitable for agriculture, whether irrigated or not; (4) agro-industrial croplands or land presently planted to industrial crops that support the viability of existing agricultural infrastructure and agro-based enterprises; (5) highlands or areas located at an elevation five hundred (500 meters or above and have the potential for growing semi-temperate and high value crops; and (6) all agricultural lands that are not ecologically fragile, the conversion of which shall result in serious environmental degradation, and mangrove areas and fish sanctuaries.
3. The Province of Bohol shall provide for the conservation of prime agricultural lands through various plan implementation measures and the review of any public or private land use determinations within the jurisdiction of the province, including urban development activity and the location and construction of major roads and utility transmission lines which disturb the soil cover and natural drainage pattern, increase storm runoff, erosion and sedimentation.
4. The Province of Bohol shall recognize and continue to support all irrigation projects whether managed by the National Irrigation Administration or by Irrigators Associations, for their agricultural and flood control benefits.
5. The Province of Bohol shall not permit the conversion of prime agricultural lands that had been identified under the SAFDZ as not illegible for conversion in order preserve such lands for production and to ensure long term food security.

6. In order to conserve energy in the production and the delivery of food and other agricultural products, the Province of Bohol shall encourage the creation of farmer's markets in strategic areas shall encourage the use of less-petroleum-intensive farming methods while providing technical assistance.
7. The Provincial Government of Bohol needs to monitor and analyze the volume of production of basic crops in relation to food requirements of the province to determine the production capacity of agricultural lands and ensure appropriate capacity.
8. The Province of Bohol shall adopt provisions in the provincial zoning ordinance that shall be used as standards for review of requests to change land uses within the areas designated as SAFDZ or to change the category to a different land use category.
9. Any comprehensive land use plan or zoning map amendment that would reduce the prime agricultural lands identified in the SAFDZ shall not be granted until the amendment has been considered and approved each by the Provincial Land Use Committee, the Provincial Development Council and the Sangguniang Panlalawigan of the Province of Bohol.
10. The Province of Bohol shall promote and be guided by the Bohol Agriculture Master Plan in any agricultural development that shall take place in the province.



## Goal 2

To conserve the soil resources of the province in a manner reflecting their suitability for forestry, agriculture and urban development and for their sustained use for the purposes designated in the provincial land use plan map.

## Policies

1. The Province of Bohol shall continue to preserve those areas for agricultural use, which exhibit Class A, B, C, D, to L, M, X and Y soils as identified in the Soil Capability Classification of the Bureau of Soils and Water Management (BSWM) of the Department of Agriculture.
2. The Province of Bohol shall continue to support soil conservation measures and best management practices designed to protect and improve forest and agricultural land productivity and to prevent unnecessary losses through excavation, stripping, erosion and sedimentation.
3. The Province of Bohol shall adopt measures for the proper management of land through the adoption of soil and water conservation, soil erosion control measures, nutrient maintenance, and groundwater quality protection through proper waste disposal.
4. The Province of Bohol to mitigate the impacts of natural hazards such as floods, droughts, typhoons, and landslides through the adoption of measures such as flood protection, water supply development especially communal irrigation systems, adjustments in cropping

- calendar to avoid typhoon months, and slope stabilization through vegetative cover maintenance.
5. The Province of Bohol shall establish an ordinance to control erosion and sedimentation in all vertical and horizontal infrastructure development including public and private roadway construction.
  6. The Province of Bohol shall coordinate with municipal governments in requiring that construction permits contain provisions to protect sites from soil erosion.

## Rural Development

### Summary

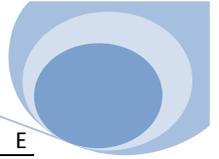
Expansion of linear or ribbon type residential development along the principal road networks and the dispersed settlement patterns in rural areas is a matter of public concern because of the risks of vehicular accidents, the high cost in providing community services conflict between farm and urban activities and the adverse environmental impacts of development. Recognizing the potential problems and conflicts arising from development in the rural area, major concerns connected with any rural area development are its location, nature and scale. Encroachment of urban development into rural areas threatens to remove prime agricultural lands from needed agricultural uses.

### Goal 1

To provide adequate amount of land, development areas and sites to accommodate cluster-type residential development and to continue to adhere to the basic goal of urban containment and orderly urban development and the capacity of the rural people to be involved in the operation and maintenance of services developed in the rural areas.

### Policies

1. The Province of Bohol shall recognize the lands designated in the municipal comprehensive land use plans as built-up areas as the appropriate and desired location for rural residential development, while at the same time encouraging opportunities for small-scale or intensive agricultural and forestry activities within these CLUP designated areas.
2. All proposed rural area developments shall be based on a reasonable expectation of the demand for the use of such land or facilities within a reasonable period of time and no large scale development shall be approved without:
  - a) The submission and approval of a layout and design concept; with the provision for the staging and servicing of all phases of development;
  - b) The approval of national agencies relative to any applicable health, safety and environmental controls; and



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Overall Development Plan Framework

- c) An adequate demonstration of the financial capacity and responsibility of the proponents to complete the development and provide for operation and maintenance services.
3. All proposed rural area development and facilities:
  - a) Shall be appropriately, if not uniquely, suited to the area or site proposed for development.
  - b) Shall not be located in any natural hazard area, such as a floodplain or area of geologic hazard, steep slope, severe drainage problems or soil limitations for building or sub-surface sewage disposal, if relevant.
  - c) Shall be furnished with adequate access and an adequate individual or community water supply, if required.
4. No proposed rural area development shall require or substantially influence the extension of costly services and facilities normally associated with urban centers, such as water supply, sewerage, electricity and telephone services, nor shall it impose inordinate additional net costs on mobile, centralized public services, such as police and fire protection or garbage collection.
5. Proposed rural development within acknowledged urban limits or designated urban reserve areas shall be reviewed every 4 years by the affected city or municipality to ensure that long-term options for development with full urban services are protected.

## **Goal 2**

To accommodate the demand for rural residential development in areas which are not amenable to cluster-type neighborhood designs, provide such areas are suited to the uses intended and exhibit high amenity value, and such developments use prime agricultural or timberland, or generate inordinate service demands of their own.

1. The Province of Bohol shall continue to recognize that the appropriate location of rural residential development is in designated built-up areas where commitments to such uses have already been made through existing municipal comprehensive land use plans provided that the anticipated magnitude or density of such development is not such as shall require more than a very basic level of services, such as single road access, individual domestic wells and sewage disposal systems and possibly community fire protection.
2. The Province of Bohol shall continue to recognize that the appropriate location of rural residential development is in areas where reasonable opportunities for agricultural activities exist and where the anticipated magnitude or density of development is such that it shall not require more than the very basic level of services, such as single local-road access, individual domestic wells and sewerage disposal systems, and possibly community fire protection.

## Economic Development

### Summary

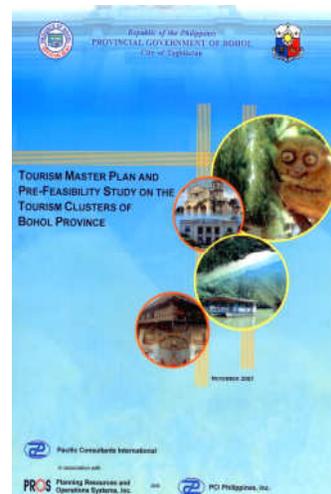
The economy of the Province of Bohol is largely based on agriculture and fishery. Economic diversification generally results in a stronger, more stable local economy by increasing employment opportunities. High levels of unemployment and under-employment have traditionally plagued the Province of Bohol, but the attraction of tourism in recent years has helped to alleviate this condition. A Comprehensive Economic Development Plan can serve as guide to the fulfillment of its economic development goals and policies.

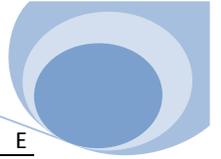
### Goal

To maintain a rate and pattern of economic growth sufficient to prevent recurring high levels of unemployment and under-employment in the province, balance the real property tax base of the various municipalities, and strengthen local economic bases.

### Policies

1. The Province of Bohol shall, in cooperation with local government units, local chambers of commerce and industry, investment promotion groups, national agencies concerned with national, regional and local economic development, encourage a diversified employment base, the strengthening of trade centers, and the attraction of both capital and labor intensive enterprises, consistent with the needs of each municipality and the province as a whole.
2. The Province of Bohol shall encourage economic development projects that do not conflict with the predominant agricultural and eco-tourism character of the province.
3. The Province of Bohol shall encourage the organization and operation of economic clusters in municipalities composed of the marginal farmers/fishers and retailers to be engaged in economic activities with a broader market reach.
4. The Province of Bohol shall ensure the equality-beneficial forward and backward linkages between the labor-intensive and agro-producing population, the investors and capitalist, and end users.
5. The Province of Bohol shall ensure citizen participation in economic development planning through the Economic Development Committee of the Provincial Development Council.
6. The Province of Bohol shall develop a Comprehensive Economic Development Plan, which is consistent with the Provincial Land Use Plan.
7. In the development of its tourism industry, the province of Bohol shall adopt, promote and be guided by its Tourism Master Plan.





## Commercial Development

### Summary

The Boholano residents' orientation to Tagbilaran City and Cebu City for shopping, entertainment, medical services and other related commercial services and facilities has tended to drain the commercial vitality of many municipalities. Commercial development is often characterized by sprawl, conflicting uses, lack of access control and service roads, inadequate setback, and lack of adequate off-street parking and loading facilities.

### Goal

To create an environment for commercial development, which shall preserve and enhance the vitality of the municipal central business districts, assure safer, more convenient and attractive municipal and neighborhood commercial centers, and protect prime commercial sites for use in advance of need.

### Policies

1. Local or neighborhood commercial uses shall be encouraged to locate or relocate only within or immediately adjacent to a residential development or area intended to be served and be spaced in a pattern reflecting this market.
2. The Province of Bohol shall discourage the expansion of strip commercial development and encourage local government units to provide redevelopment or commercial strip areas within their territories.
3. Commercial uses unsuited to the town centers shall normally be restricted to other areas within the urban growth boundary or limit.
4. The Province of Bohol shall adopt landscape and design criteria for all forms of commercial development occurring outside urban growth boundaries or limits.
5. Highway service and tourist commercial uses catering to the needs of the traveling public shall be encouraged to locate within existing urban centers. Traditional central commercial uses shall be encouraged to locate or relocate only in existing municipal centers and dispersal of such uses to peripheral locations shall be discouraged.
6. As part of the on-going planning program, the Province of Bohol shall coordinate with the City of Tagbilaran and the urbanizing municipalities of Tubigon, Talibon, Ubay, Jagna and Carmen to:
  - a) Prepare and maintain an inventory of buildable commercial lands; and
  - b) Work with businessmen and community groups to formulate redevelopment plans for existing commercial areas.
7. Recreational commercial uses shall be encouraged to locate within urban growth areas or in compatible urban commercial areas where their location and space requirements can be most satisfactorily fulfilled.

8. Highway oriented commercial development shall only be permitted in urban areas where direct access is provided from a local street system so as to maintain the integrity and function of the highway system.

## Industrial Development

### Summary

Industrial development is important to the economic vitality of the Province of Bohol. The provision of adequate urban services is a major concern in an industry's location and operation. Industries that are identified and promoted are encourage to complement each other to in order to improve operating efficiency and minimize adverse effect of scattered land development. Some industrial activities generate land, water, air or noise pollution, which can pose both a hazard and a nuisance to those living in the area. Industrial parks serve to consolidate industrial activities into a designated area in order to reduce incompatibility with surrounding land uses. Performance standards are a means of regulating industrial activity so as to moderate or abate objectionable features in their operation.

### Goal

To concentrate industries of similar types, service needs, and performance characteristics within designated areas of each of the existing urban centers, to encourage adequate land for new industrial development within urban growth boundaries; to encourage the relocation of existing industries from undesirable locations in order to eliminate land use conflicts; to attract new industries in accordance with the need to achieve a more balanced property tax and employment base, while maintaining a high standard of environmental quality; and to protect the stability and functional aspect of industrial areas by protecting them from incompatible uses.

### Policies:

1. Industrial uses with seasonal or high nuisance characteristics shall be encouraged to locate or relocate only in or immediately adjacent to urban areas where all required services are available, well removed and shielded from existing or projected residential development; and conversely, that industrial sites shall be identified and protected from encroachment of other urban uses.
2. To the greatest extent possible, industrial areas shall be located within urban growth boundaries or limits. Those industrial areas located outside urban growth boundaries or limits shall be compatible with the industrial development goal and shall be located where they can be adequately served by necessary major utility lines, including electric power substations and transmission lines, trunk water, sewer lines and access to facilities such as ports and road networks.
3. Industrial uses which are incompatible with surrounding residential or commercial development and cannot bear the cost of abating their incompatible characteristics, whether related to performance or appearance, shall be encouraged to locate or relocate only within urban centers, where contact with residential development is, or shall be at a



- minimum, and where all required services are immediately available. As such, mitigating measures shall be installed and implemented to control these incompatibilities.
4. Industrial uses which are compatible with surrounding residential development and are shall to bear the cost of maintaining high performance characteristics and attractive site and building layout and design, shall be encouraged to locate or relocate in designated industrial parks and that such parks and their staged development shall be subject to planned unit development agreements.
  5. Industrial uses shall be located so that adequate buffer space is provided between incompatible land uses.
  6. The Province of Bohol shall develop appropriate performance, design and specification standards and requirements for all existing and possible future industrial uses to guide their location or relocation in the province and within existing industrial areas of the province.
  7. Agricultural, forestry and resource-oriented industry shall be accommodated in areas close to the resource utilized, provided that such industrial uses are compatible with any nearby urban development, is able to provide for its own water and sewerage requirement, and its waste discharges do not constitute a threat to the environment.
  8. Established industrial areas may be extended and new industrial areas designated by plan amendment where development trends warrant such extension or designation and full urban services are extended into the area, if appropriate and, the extension or designation of land use and services is consistent with all other goals of the PLUP.
  9. Industrial development shall utilize or encourage inter-modal transport system in an efficient and safe manner and reduce energy consumption by identifying for industrial development areas with alternative transportation opportunities, and by locating employment opportunities close to public transportation and, where appropriate, in community areas.
  10. The Province of Bohol shall undertake a study to determine the availability and suitability for development of existing industrial land.
  11. The Province of Bohol shall encourage industry that is energy conserving and energy efficient. Energy efficient and conservation measures that shall be promoted include, but are not limited to, the following:
    - a) Efficient building, manufacturing practices
    - b) Cogeneration systems including the disposal of wastes; and
    - c) Utilization of new and alternative systems
  12. The Province of Bohol shall encourage industrial development, which bases its products on renewable and indigenous raw materials.
  13. The Province of Bohol shall continue to recognize and encourage small and medium scale industries as viable alternatives to larger, conventional enterprises. Furthermore, the government shall promote industries that foster cooperation and formation of communities/organizations in the localities.



## 2.4 Infrastructure Development

### Objective

The objective of infrastructure development is to allocate and utilize land, whether public or private, for the use of infrastructure projects that are in support of national and local development objectives.

### Transport

#### Goal

To provide and encourage an efficient, safe, convenient and economic transportation system, including road, water, and air, to serve the needs of existing and projected urban and rural development within the province, as well as to accommodate the movement of people and goods and the transfer of energy, recognizing the economic, social and energy impacts of the various modes of transportation.

#### Policies

1. All transportation related decisions shall be made in consideration of land use impacts including but not limited to adjacent land use patterns, both existing and planned, and their designated uses and densities.
2. The Province of Bohol shall cooperate and establish close liaison with the DPWH, DOTC, PPA, ATO, MARINA, NAPOCOR, all local government units, the private utility companies operating in the province, in respect to matters relating to the location, design and programming of roads, public transit facilities, airports, transmission lines, pipelines, waterways, energy corridors and communication facilities to guide and accommodate the emerging development patterns of the province.
3. The Province of Bohol shall, in cooperation with DPWH and the local governments, establish a comprehensive list of recommended road improvement throughout the province, establish a suitable review mechanism for arriving at and amending priorities on a continuing basis and work towards the creation of an on-going capital improvement program closely coordinated with all agencies of government responsible.
4. The Province of Bohol shall cooperate with and support the DPWH, DOTC and all relevant infrastructure agencies in an effort to establish a viable and productive provincial transportation planning process and operation system geared to identifying, prioritizing and resolving both present and future transportation needs, with special reference to provincial road network.
5. The Province of Bohol shall appoint a committee of interested citizens to study all roads in the province and inventory and evaluate the aesthetic features of the views from such roads, consider the eligibility of specific sections for designation as scenic areas.
6. The Province of Bohol, in cooperation with the local government units, and in consultation with relevant national agencies, and private companies providing transit services, make a



- comprehensive study of public transit possibilities, and if economically found feasible, shall seek such services as are found to be safe, efficient and convenient in serving the transportation needs of the residents of the province.
7. The Province of Bohol shall encourage competition among transport service providers for sea, land and air travel to promote better and affordable service to the people.
  8. The Province of Bohol shall encourage pedestrian traffic as an element of the transportation system by coordinating with the City of Tagbilaran and the rapidly urbanizing municipalities of Tubigon, Talibon, Ubay, Jagna and Carmen to develop an integrated system of safe and convenient pedestrian ways to complement other modes of transportation. In the City of Tagbilaran, measures and strategies shall be implemented for the provision of parking spaces such as multi-level parking and metered parking system. The Province of Bohol shall require new developments to:
    - a) Limit access points on highways designated as arterials when alternative access points are feasible
    - b) Provide a frontage setback requirement of 10 meters from the public- right-of-way of all designated arterials within the province for commercial and industrial development;
    - c) Minimize direct access points onto arterials right-of-way by encouraging the utilization of common driveways.
  10. All provincial transportation-related decisions shall be made in particular consideration of energy efficiency and conservation.
  11. The Province of Bohol shall establish programs, such as van or car pooling to increase vehicle occupancy and reduce unnecessary passenger car travel and at the same time conserve fuel and energy (promotion and improvement of public transport with greater passenger capacity).
  12. Transportation needs for the disadvantage, such as low income, the handicapped, and the elderly, shall be considered in the development of the provincial transportation system.
  13. The Province of Bohol shall utilize existing facilities and right-of-ways to the fullest extent possible provided that such use is consistent with the PLUP.
  14. All transportation-related decisions shall be made in support of the efficient and economic movement of people, goods, and services throughout the province, and shall be based on the location and adequacy of facilities for such goods and services.
  15. The PLUP shall continue to recognize the need for protecting the Tagbilaran, Ubay and Panglao Airport as vital province-wide transportation facility and efforts shall be made to regulate land use in the environs of the airport to prevent the erection of further airport hazards and obstructions, at the same time preventing any residential encroachment upon the critical noise contours.
  16. The status and proposed location or expansion of all airport facilities shall be specifically designated in the plan map and shall be accorded a planned-unit development designation

in the zoning ordinance, in order to assure a compatible association of airport growth with surrounding urban development.

## Utilities

### Summary

Transmission lines and water mains and lateral lines cross kilometers of land, consume many hectares of right-of-way, and have a significant impact on land use. The Province of Bohol recognizes the effects that the development of utilities has on land use and sees a need for close consideration and cooperation with the utility companies.

### Goal

To develop a timely, orderly and efficient management of utilities within the framework of urban and rural development

### Policies

The Province of Bohol shall review all right-of-way acquisitions for utility lines and facilities and, where appropriate, require:

1. That the route or corridor chosen locate on or parallel to existing public or private right-of-ways and avoid the creation of unusable parcels;
2. That the route or corridor chosen have a minimum visual impact along highways and in residential areas, blend well with the natural landscape, and create minimum conflict with present and planned uses of the land;
3. That clearing for, and construction of, transmission lines, water mains and other utility facilities be performed in a manner which shall maximize preservation of natural beauty and conservation of natural resources, and which shall minimize scarring of the landscape or siltation of streams.
4. That the following construction of utility facilities, construction areas shall be cleaned up and efforts shall be made to restore the landscape and the land capability to its original condition prior to the construction.
5. That a maintenance program for utility facilities include maintenance of the environmental preservation and restoration achieved during all phases of construction.

## Public Facilities and Services

### Summary

The Province of Bohol sees a need to integrate public facilities and services in an effort to eliminate costs and conserve energy. Coordination with all relevant government agencies and all local government units is essential in the development and maintenance of adequate public facility systems. The expansion of public facilities is a major factor in directing urbanization. The consolidation of water and sanitary sewer facilities can reduce the construction, operation and maintenance costs of such facilities. The joint acquisition and use of school and municipal park



sites can represent a substantial economic benefit to the Department of Education and the local government units. There are a number of sites of historic and archaeological significance worthy of preservation within the province. It is necessary to identify, reserve and protect future domestic water supply sources in order to meet the increasing urban and rural needs. It is a concern of the Province of Bohol to regulate public and quasi-public institutional uses within the areas of the province. Recycling of solid waste materials conserves natural resources and energy.

**Goal**

To develop a timely, orderly and efficient arrangement of public services and facilities to serve as a framework for urban and rural development, including public lands and buildings, parks and recreation areas and facilities, schools, police and fire protection, domestic water supply, sanitary and storm sewerage and other drainage facilities, and power and telecommunication services.

**Policies**

1. The Province of Bohol shall coordinate with local government units within its jurisdiction to provide an orderly phasing of water, sanitary sewerage, storm drainage and other public services and facilities within the urban growth boundaries.
1. Public facilities and services for rural areas shall be provided and maintained at levels appropriate for rural use only.
2. In recognition of the necessity to promote the conservation of energy, the Province of Bohol shall be a role model through the application of energy conservation practices that shall support the development and operation of an efficient arrangement of public facilities and services within the province.
3. The Province of Bohol shall coordinate with DOH and the local government units in providing for the health needs and other services of the public, particularly the needs of the disadvantaged, including the young, the elderly and the handicapped.
4. The Province of Bohol shall encourage the consolidation of the location of administrative offices of provincial and national government agencies, as opportunities that shall promote energy conservation, provide convenient, centralized services and open space groupings.
5. The Province of Bohol, where practicable, shall encourage the consolidation of facilities and services, in order to realize economies of scale in land acquisition, development, and operation and maintenance costs, and eliminate present facilities which are incompatible with sensitive residential and commercial areas throughout the province.
6. Close cooperation shall be encourage among the local government units and the Department of Education in respect to matters of school site selection, acquisition, planning, servicing, and joint use in keeping with the anticipated direction and pattern of urbanization within the urban growth boundary.
7. The Province of Bohol shall work with the National Historical Commission, the local government units, and all other interested groups to identify and preserve sites of historic or archaeological interest.
8. The Province of Bohol shall cooperate with relevant national agencies to identify, acquire and/or reserve in advance through appropriate zoning designations suitable watershed areas and reservoir sites to serve the domestic water needs of the emerging urban and rural development areas of the province.



9. The Province of Bohol, in coordination with local government units, shall continue to develop water sources for domestic use. It shall put to place necessary measures to economically serve rural areas as set by the Bohol Integrated Water Supply System Master Plan (BIWSSMP)
10. The Province of Bohol shall encourage the dedication of major drainage ways such as wetlands, intermittent creek basins and roadside depressions for the purpose of storm water collection.
11. The Province of Bohol shall encourage and support inter LGU cooperation in solid waste management programs subject to equitable cost sharing arrangements for each of the solid waste services and facilities developed on an inter municipal basis.
12. Each local government unit shall identify, designate and allocate land within their territorial jurisdiction to serve as waste disposal site.
13. The Province of Bohol shall assist in the organizations of special purpose districts such as health districts, water districts, irrigators associations which would be able to utilize national and provincial government funds to build common service facilities, collection and treatment facilities and provide the necessary services to their respective municipalities or clientile.
14. The development of sanitary sewerage systems shall be supported where such systems conform to all applicable national standards pertinent to the collection, treatment and final disposal of effluent; support shall be given for the continued separation of sanitary and rainwater collection systems and the development of collection programs to reduce ground and surface water infiltration; support shall be given for the separation and disposal of industrial wastes which differ significantly from normal domestic sewage in strength or composition, or which contain significant quantities of grease, chemicals or suspended metals; and the planning management criteria enunciated for domestic water systems should be applied with equal consideration to sanitary sewerage systems.
15. The Province of Bohol shall support any consolidation of water and sewer facilities to secure the potential for economies of scale and organization, provided their potential environmental impacts are consistent with PLUP, related urban growth goals and policies, established water quality standards, and while separate local facilities are shown to be more expensive.

## Energy Conservation

### Summary

At the present time, the Province of Bohol depends on oil for electricity to meet 25% of its fuel and utility needs. Almost all of the oil is imported into the country, which means taking more capital out of the domestic economy to pay for oil. Renewable energy resources such as geothermal power, solar energy, fresh water, timber, and biomass/biofuels must be carefully managed to avoid exceeding the capacity to replenish them. If efficiently and appropriately used, they offer numerous benefits including reducing energy-related expenses, conserving and creating local jobs, reducing pollution and preserving natural resources.

Solar energy is available in Bohol to provide substantial portions of the residential and commercial electricity requirements. Sufficient wind energy is available at sites in the province to generate electricity. Water, power and biomass wastes also offer potential energy sources.

**Goal**

To reduce the per capita use of fossil fuels and other non-renewable sources of energy through efficient and appropriate use of all energy resources;

To promote the conservation of existing depletable energy resources and the development of local renewable resources to ensure that an adequate supply shall be available to the residents of Bohol at a reasonable cost

**Policies**

1. The Province of Bohol shall encourage and support current and future energy efficient design standards in all land use issues,
2. The Province of Bohol shall identify, monitor and protect sites of energy supply, especially, but not limited to, wind and water power.
3. The Province of Bohol shall support efforts to investigate and establish appropriately scaled units of renewable energy production.
4. The Province of Bohol shall promote development of renewable energy resources, including but not limited, to solar, wind, water and biomass.
5. The Province of Bohol shall continue efforts of cooperation and communication between citizens, utilities, local governments and national agencies concerning energy-related issues and programs, and shall participate in formulating national and regional policies that determine how energy is to be produced and consumed locally.
6. The Province of Bohol shall continue to provide information, technical assistance and demonstrate energy conservation.
7. The Province of Bohol shall continue its energy conservation planning program, amplifying its energy-related inventories, proposals, programs and plans, in efforts to guarantee a reasonable level of energy self-sufficiency.
8. The Province of Bohol shall establish standards to guide the appropriate and efficient use of energy in its programs and practices.
9. The Province of Bohol shall establish standards to conserve energy in its motor pool vehicles and practices.
10. The Province of Bohol shall analyze and minimize total life cycle costs in its new remodelling programs, and other capital investments.
11. The Province of Bohol shall encourage programs for resource recovery and recycling of solid wastes.
12. The Province of Bohol shall assist local governments to promote the use of conservation, solar and other renewable sources of energy supply.

## **Annexes**

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**Table 1. Population Enumeration In Various Censuses By City/Municipality: 1903-2007**  
Bohol Province

Geo-Political Subdivisions	Census Year											
	1903	1918	1939	1948	1960	1970	1975	1980	1990	1995	2000	2007
	2-Mar	31-Dec	1-Jan	1-Oct	15-Feb	6-May	1-May	1-May	1-May	1-Sep	1-May	1-Aug
<b>Bohol</b>	<b>269,223</b>	<b>356,537</b>	<b>486,231</b>	<b>551,768</b>	<b>592,809</b>	<b>682,228</b>	<b>756,734</b>	<b>804,421</b>	<b>943,643</b>	<b>994,440</b>	<b>1,139,130</b>	<b>1,230,110</b>
Ipil	1,891											
1 Alburquerque	7,356	6,361	6,311	5,966	6,285	6,907	6,505	7,062	6,881	7,709	8,715	9,644
2 Alicia	-	-	-	-	11,860	12,717	14,770	15,766	18,653	19,402	21,605	23,422
3 Anda	4,938	6,712	9,751	11,688	11,730	12,535	12,658	12,625	13,497	16,108	17,863	16,616
4 Antequera	7,578	11,129	15,974	16,070	12,254	10,397	11,130	11,641	12,348	12,072	13,758	14,357
5 Baclayon	8,055	9,000	9,453	8,379	9,050	10,704	10,490	10,776	11,986	12,808	14,996	18,015
6 Balilihan	6,590	9,973	18,991	23,937	11,161	14,533	13,912	13,925	14,850	14,400	16,837	17,131
7 Batuan	1,817	3,610	5,982	7,503	7,750	8,712	9,940	9,833	11,438	11,898	11,835	12,137
8 Bien Unido	-	-	-	-	-	-	-	-	19,047	19,185	22,176	23,412
9 Bilar	8,103	6,265	8,667	9,701	9,930	11,154	12,226	12,715	14,926	16,029	16,628	17,078
10 Buenavista	-	-	-	-	10,992	13,523	15,802	18,088	21,665	24,215	25,960	26,443
11 Calape	13,354	18,392	21,319	21,383	22,820	20,888	21,499	22,488	24,608	26,051	27,921	29,786
12 Candijay	6,522	6,522	8,372	13,749	15,658	16,035	17,114	19,750	21,342	25,729	30,389	31,183
13 Carmen	3,106	5,214	14,026	19,006	18,669	19,571	23,580	26,359	34,573	36,797	40,713	43,153
14 Catigbian	1,580	-	-	-	13,438	13,782	15,570	15,620	17,362	17,596	21,461	23,333
15 Clarin	-	-	15,809	15,005	10,248	11,723	13,105	13,721	16,021	15,961	18,040	18,871
16 Corella	5,005	6,127	5,676	5,194	4,583	5,244	5,286	5,197	6,150	5,526	6,048	7,471
17 Cortes	6,644	7,877	8,652	7,959	7,908	8,853	9,056	9,350	10,527	11,133	12,702	14,586
18 Dagohoy	-	-	-	-	6,699	7,291	8,578	9,451	13,121	13,943	16,845	18,311
19 Danao	-	-	-	-	-	7,362	8,447	10,298	12,671	14,042	17,265	17,716
20 Dausis	8,378	10,275	12,154	12,303	13,595	15,812	17,955	18,260	23,601	24,041	26,415	36,525
21 Dimiao	8,650	10,497	10,213	10,673	9,315	10,009	11,225	10,845	11,697	12,372	14,151	14,187
22 Duero	6,853	8,314	9,272	8,939	8,929	9,965	11,522	11,619	14,242	14,299	16,485	17,254
23 Garcia-Hernandez	6,060	8,555	11,486	13,960	12,828	13,604	16,701	16,715	18,956	21,323	21,428	21,308
24 Getafe	4,331	6,643	12,384	15,804	12,177	14,338	15,903	16,769	21,135	23,927	26,826	27,852
25 Guindulman	10,447	13,355	16,670	18,597	19,715	20,144	23,563	24,376	26,225	26,945	31,028	32,355
26 Inabanga	12,002	22,017	23,855	27,220	28,352	29,972	31,820	32,918	37,400	40,015	40,714	43,331
27 Jagna	13,123	14,210	15,371	16,239	16,732	19,618	21,895	23,494	26,163	29,354	30,643	32,034
28 Lila	5,243	6,514	7,981	8,701	7,693	8,645	8,728	8,278	8,556	9,014	10,322	10,801
29 Loay	8,941	10,513	11,093	10,694	10,137	10,634	11,256	10,842	12,677	12,450	14,433	15,881
30 Loboc	10,756	11,335	11,015	11,201	10,367	11,767	11,799	11,778	13,716	13,335	15,734	16,299
31 Loon	18,114	23,713	28,799	29,683	30,370	33,153	34,225	35,643	34,400	32,716	45,215	42,441
32 Mabini	-	9,005	17,473	22,673	14,703	16,223	19,071	20,876	21,854	23,370	27,250	28,788
33 Maribojoc	11,830	13,627	13,834	13,906	13,003	14,055	14,333	14,008	15,214	14,664	16,786	18,113
34 Panglao	7,050	9,065	9,411	11,274	11,836	13,309	13,624	14,547	17,004	18,095	21,337	25,558
35 Pilar	-	-	-	-	-	10,888	13,928	14,902	19,930	21,141	25,095	27,276
36 Pres. Garcia	-	-	-	-	-	8,831	16,597	18,142	21,173	19,096	20,744	25,118
37 Sagbayan	-	-	-	-	8,720	10,822	12,500	12,703	15,364	16,488	18,346	19,399
38 San Isidro	-	-	-	-	-	6,923	7,281	7,369	7,840	7,548	9,106	9,176
39 San Miguel	-	-	-	-	-	10,051	11,117	12,220	16,775	17,979	20,828	22,199
40 Sevilla	5,698	6,216	7,347	7,949	7,130	7,997	8,551	9,073	9,165	8,671	10,281	11,289
41 Sierra Bullones	2,683	6,446	15,964	19,385	19,347	13,807	15,132	17,904	21,101	20,787	25,499	26,398
42 Sikatuna	-	4,452	4,600	4,713	4,781	4,658	5,169	5,244	5,525	6,030	6,602	6,335
43 Tagbilaran City	10,108	12,305	15,617	16,051	20,250	33,005	37,335	42,683	56,363	66,683	77,700	92,297
44 Talibon	6,085	12,227	26,077	23,455	30,640	35,223	41,270	46,110	41,873	44,854	54,147	59,274
45 Trinidad	-	-	-	14,214	16,428	11,461	13,867	15,501	19,945	20,893	25,683	27,580
46 Tubigon	15,168	21,261	21,766	23,344	25,040	25,768	28,275	29,993	34,302	34,578	40,385	44,434
47 Ubay	7,355	8,255	21,213	29,961	34,090	32,727	34,195	38,289	48,902	50,745	59,827	65,900
48 Valencia	7,809	10,555	13,653	15,289	15,596	16,888	18,229	18,655	20,879	22,423	24,363	28,043

Source: National Statistics Office, Census of Population & Housing

Table 2. **Population Distribution & Number Of Households: 2007 Census**  
Bohol Province

City/ Municipality	Total Population	% Share to Population		Household Population	Households	Average Household Size
		2000	2007			
<b>BOHOL</b>	<b>1,230,110</b>	<b>100%</b>		<b>1,227,809</b>	<b>242,307</b>	<b>5.07</b>
1 Alburquerque	9,644	0.77%	0.78%	9,626	1,964	4.9
2 Alicia	23,422	1.90%	1.90%	23,406	4,564	5.13
3 Anda	16,616	1.57%	1.35%	16,616	3,286	5.06
4 Antequera	14,357	1.21%	1.17%	14,306	3,098	4.62
5 Baclayon	18,015	1.32%	1.46%	17,994	3,546	5.07
6 Balilihan	17,131	1.48%	1.39%	17,131	3,381	5.07
7 Batuan	12,137	1.04%	0.99%	12,135	2,494	4.87
8 Bien Unido	23,412	1.95%	1.90%	23,408	4,454	5.26
9 Bilar	17,078	1.46%	1.39%	17,046	3,322	5.13
10 Buenavista	26,443	2.28%	2.15%	26,432	4,917	5.38
11 Calape	29,786	2.45%	2.42%	29,782	6,236	4.78
12 Candijay	31,183	2.67%	2.53%	31,177	5,951	5.24
13 Carmen	43,153	3.57%	3.51%	42,917	8,562	5.01
14 Catigbian	23,333	1.88%	1.90%	23,333	4,429	5.27
15 Clarin	18,871	1.58%	1.53%	18,871	4,004	4.71
16 Corella	7,471	0.53%	0.61%	7,462	1,534	4.86
17 Cortes	14,586	1.12%	1.19%	14,524	2,928	4.96
18 Dagohoy	18,311	1.48%	1.49%	18,311	3,528	5.19
19 Danao	17,716	1.52%	1.44%	17,680	3,174	5.57
20 Daus	36,525	2.32%	2.97%	36,495	6,982	5.23
21 Dimiao	14,187	1.24%	1.15%	14,187	2,894	4.9
22 Duero	17,254	1.45%	1.40%	17,254	3,502	4.93
23 Garcia-Hernandez	21,308	1.88%	1.73%	21,298	4,330	4.92
24 Getafe	27,852	2.35%	2.26%	27,852	5,230	5.33
25 Guindulman	32,355	2.72%	2.63%	32,332	6,598	4.9
26 Inabanga	43,331	3.57%	3.52%	43,324	8,755	4.95
27 Jagna	32,034	2.69%	2.60%	31,940	6,637	4.81
28 Lila	10,801	0.91%	0.88%	10,801	1,934	5.58
29 Loay	15,881	1.27%	1.29%	15,708	3,150	4.99
30 Loboc	16,299	1.38%	1.33%	16,297	3,031	5.38
31 Loon	42,441	3.97%	3.45%	42,425	8,682	4.89
32 Mabini	28,788	2.39%	2.34%	28,788	5,561	5.18
33 Maribojoc	18,113	1.47%	1.47%	18,102	3,904	4.64
34 Panglao	25,558	1.87%	2.08%	25,454	4,734	5.38
35 Pilar	27,276	2.20%	2.22%	27,246	5,045	5.4
36 Pres. Garcia	25,118	1.82%	2.04%	25,118	4,654	5.4
37 Sagbayan	19,399	1.61%	1.58%	19,323	4,232	4.57
38 San Isidro	9,176	0.80%	0.75%	9,171	1,954	4.69
39 San Miguel	22,199	1.83%	1.80%	22,196	4,387	5.06
40 Sevilla	11,289	0.90%	0.92%	11,262	2,000	5.63
41 Sierra Bullones	26,398	2.24%	2.15%	26,398	4,874	5.42
42 Sikatuna	6,335	0.58%	0.51%	6,335	1,266	5
43 Tagbilaran City	92,297	6.82%	7.50%	91,464	18,045	5.07
44 Talibon	59,274	4.75%	4.82%	59,109	11,481	5.15
45 Trinidad	27,580	2.25%	2.24%	27,570	5,544	4.97
46 Tubigon	44,434	3.55%	3.61%	44,392	8,965	4.95
47 Ubay	65,900	5.25%	5.36%	65,795	13,544	4.86
48 Valencia	28,043	2.14%	2.28%	28,016	5,020	5.58

Source: National Statistics Office, Census of Population & Housing

**Table 3. Population Distribution, Density & Annual Population Growth Rate (APGR, %) By City/Municipality, Bohol Province**

Geo-Political Subdivisions	% Share & Rank to Total Population						Population Density (per sqkm)				APGR, in Percent (%)			
	1990		2000		2007		1990	1995	2000	2007	1990-1995	1995-2000	1990-2000	2000-2007
	Share	Rank	Share	Rank	Share	Rank								
Philippines							202	229	255	295	2.32	2.36	2.34	2.04
Central Visayas	7.6%		7.5%		7.2%		307	335	381	428	1.65	2.79	2.18	1.59
<b>BOHOL</b>	<b>1.6%</b>		<b>1.5%</b>		<b>1.4%</b>		<b>242</b>	<b>242</b>	<b>277</b>	<b>299</b>	<b>0.89</b>	<b>2.92<sup>3</sup></b>	<b>1.83</b>	<b>1.06</b>
1 Alburquerque	0.7%	46	0.8%	46	0.8%	45	240	269	304	337	2.15	2.49	2.36	1.41
2 Alicia	2.0%	23	1.9%	21	1.9%	22	163	169	189	205	0.74	2.16	1.47	1.12
3 Anda	1.4%	34	1.6%	29	1.4%	36	221	264	292	272	3.37	1.44	2.80	-0.99
4 Antequera	1.3%	38	1.2%	40	1.2%	40	151	147	168	175	-0.42	2.65	1.08	0.59
5 Baclayon	1.3%	39	1.3%	37	1.5%	31	352	376	441	530	1.25	3.21	2.24	2.56
6 Balilihan	1.6%	31	1.5%	32	1.4%	34	99	96	112	114	-0.57	1.48	1.26	0.24
7 Batuan	1.2%	41	1.0%	42	1.0%	42	146	152	151	155	0.74	0.15	0.34	0.35
8 Bien Unido	2.0%	21	1.9%	20	1.9%	23	425	428	495	522	0.14	1.61	1.52	0.75
9 Bilar	1.6%	30	1.5%	34	1.4%	35	112	120	125	128	1.34	0.71	1.08	0.37
10 Buenavista	2.3%	13	2.3%	15	2.1%	18	248	277	297	303	2.11	1.4	1.81	0.25
11 Calape	2.6%	10	2.5%	11	2.4%	12	323	342	367	391	1.07	1.39	1.27	0.9
12 Candijay	2.8%	14	2.7%	10	2.5%	11	300	296	350	359	-0.27	1.73	1.52	0.36
13 Carmen	3.6%	5	3.6%	6	3.5%	6	139	148	164	174	1.17	2.03	1.64	0.81
14 Catigbian	1.8%	24	1.9%	22	1.9%	24	221	224	273	297	0.25	1.47	2.12	1.16
15 Clarin	1.7%	27	1.6%	28	1.5%	28	255	254	287	301	-0.07	2.39	1.19	0.62
16 Corella	0.6%	47	0.5%	48	0.6%	47	203	182	199	246	-1.98	1.71	-0.17	2.96
17 Cortes	1.1%	42	1.1%	41	1.2%	39	241	254	290	333	1.05	2.71	1.88	1.92
18 Dagohoy	1.4%	35	1.5%	31	1.5%	29	144	153	185	201	1.15	3.68	2.50	1.16
19 Danao	1.3%	37	1.5%	30	1.4%	32	129	143	176	181	1.94	2.9	3.10	0.36
20 Dausi	2.5%	11	2.3%	14	3.0%	8	550	561	616	852	0.35	1.9	1.12	4.42
21 Dimiao	1.2%	40	1.2%	39	1.2%	41	152	160	183	184	1.06	2.68	1.91	0.04
22 Duero	1.5%	32	1.4%	35	1.4%	33	160	161	185	194	0.07	2.89	1.46	0.63
23 Garcia-Hernandez	2.0%	22	1.9%	23	1.7%	26	162	182	183	182	2.23	0.1	1.22	-0.08
24 Getafe	2.2%	16	2.4%	13	2.3%	15	212	240	269	279	2.35	2.21	2.38	0.58
25 Guindulman	2.8%	8	2.7%	8	2.6%	9	223	229	264	275	0.51	1.58	1.68	0.86
26 Inabanga	3.9%	4	3.6%	5	3.5%	5	284	304	309	329	1.27	0.35	0.85	0.61
27 Jagna	2.8%	9	2.7%	9	2.6%	10	217	243	254	266	2.18	0.84	1.58	0.52
28 Lila	0.9%	44	0.9%	43	0.9%	44	235	248	284	297	0.98	2.74	1.87	0.63
29 Loay	1.3%	36	1.3%	38	1.3%	38	364	358	415	456	-0.34	1.58	1.30	1.33
30 Loboc	1.4%	33	1.4%	36	1.3%	37	161	156	184	191	-0.53	1.61	1.31	0.49
31 Loon	3.6%	6	4.0%	4	3.5%	7	287	273	378	354	-0.94	3.3	2.73	-0.87
32 Mabini	2.3%	12	2.4%	12	2.3%	13	339	362	422	446	1.26	3.1	2.21	0.76
33 Maribojoc	1.6%	29	1.5%	33	1.5%	30	293	282	323	349	-0.69	1.49	0.98	1.05
34 Panglao	1.8%	25	1.9%	24	2.1%	20	307	327	385	462	1.17	3.32	2.27	2.52
35 Pilar	2.1%	20	2.2%	18	2.2%	17	319	338	402	437	1.11	3.14	2.30	1.16
36 Pres. Garcia	2.2%	15	1.8%	26	2.0%	21	324	293	318	385	-1.92	1.63	-0.20	2.67
37 Sagbayan	1.6%	28	1.6%	27	1.6%	27	159	170	190	201	1.33	2.16	1.77	0.77
38 San Isidro	0.8%	45	0.8%	45	0.7%	46	191	184	222	224	-0.71	1.78	1.49	0.11
39 San Miguel	1.8%	26	1.8%	25	1.8%	25	183	196	227	242	1.31	2.97	2.17	0.88
40 Sevilla	1.0%	43	0.9%	44	0.9%	43	141	134	159	174	-1.03	2.81	1.15	1.3
41 Sierra Bullones	2.2%	17	2.2%	17	2.1%	19	192	189	232	241	-0.28	2.15	1.89	0.48
42 Sikatuna	0.6%	48	0.6%	47	0.5%	48	207	225	247	237	1.65	1.83	1.78	-0.57
43 Tagbilaran City	5.9%	1	6.8%	1	7.5%	1	1841	2178	2538	3,015	3.20	3.22	3.21	2.4
44 Talibon	4.4%	3	4.8%	3	4.8%	3	237	253	306	335	1.30	2.81	2.57	1.25
45 Trinidad	2.1%	19	2.3%	16	2.2%	16	212	222	272	293	0.87	1.97	2.53	0.99
46 Tubigon	3.6%	7	3.5%	7	3.6%	4	454	458	534	588	0.15	1.69	1.63	1.33
47 Ubay	5.1%	2	5.3%	2	5.4%	2	235	244	288	318	0.70	1.89	2.04	1.34
48 Valencia	2.2%	18	2.1%	19	2.3%	14	207	223	242	278	1.35	1.62	1.54	1.96

Source of basic data: National Statistics Office, Census of Population & Housing

Table 4. Coastal & Island Population By City/Municipality  
Bohol Province

City/Municipality/ Barangay Name	Coastal Population				Island Population			
	1990	1995	2000	2007	1990	1995	2000	2007
1 Alburquerque	3,925	4,544	5,104	5,747				
2 Anda	8,986	10,980	12,187	11,737				
3 Baclayon	7,144	7,878	9,031	11,040	1,052	1,016	1,258	1,189
4 Bien Unido	9,380	9,278	10,569	11,126	9,667	9,907	11,607	11,047
5 Buenavista	5,609	6,020	6,701	7,042	3,151	3,317	3,464	3,286
6 Calape	9,064	9,504	10,386	11,125	4,216	4,579	4,529	5,014
7 Candijay	12,301	12,017	14,390	14,959				
8 Clarin	6,510	6,830	7,402	7,839				
9 Cortes	3,857	4,357	4,824	5,830				
10 Dauis					20,622	20,993	22,757	31,119
11 Dimiao	2,811	3,050	3,284	3,532				
12 Duero	6,173	6,186	7,212	8,412				
13 Garcia-Hernandez	9,456	10,510	10,771	10,771				
15 Guindulman	11,370	11,637	13,537	14,275				
16 Inabanga	14,039	14,825	15,288	15,927	2,361	2,700	2,823	3,416
17 Jagna	8,487	9,721	10,105	10,628				
14 Jetafe	9,476	10,728	12,152	12,835	8,516	9,548	10,759	11,034
18 Lila	5,249	5,815	6,687	7,053				
19 Loay	7,858	7,762	8,931	10,419				
20 Loon	8,704	12,136	16,449	17,220	7,912	7,942	11,320	10,547
21 Mabini	14,880	15,895	18,687	19,935				
22 Maribojoc	7,072	7,052	7,956	8,582				
23 Panglao					16,326	17,482	20,521	20,950
24 Pres. Carlos P. Garcia	-	-	-	-	3,427	3,263	3,670	25,118
30 Tagbilaran City	31,538	37,551	44,311	52,619				
25 Talibon	19,201	20,568	24,557	27,847	11,458	12,121	14,508	15,448
26 Tubigon	15,156	15,827	18,327	21,506	3,128	3,111	3,699	3,624
27 Trinidad	3,065	2,999	3,754	4,203				
28 Ubay	24,584	24,883	28,611	30,947	653	707	756	580
29 Valencia	6,679	7,427	7,800	9,077				
Total	257,797	295,980	339,013	372,233	92,489	96,686	111,671	142,372
% to Provincial Total	27.18%	29.76%	29.76%	30.26%	9.75%	9.72%	9.80%	11.57%

Source of Population: NSO

Table 5. Population Density & Percentage Change By Municipality: 2000 & 2007  
Bohol Province

Population Density (persons per sq. km)							
Rank	City/Municipality	2000	% Inc/Dec (1990- 2000)	Rank	City/Municipality	2007	% Inc/Dec (2007- 2000)
	<b>Bohol</b>	<b>2.77</b>	<b>12.6%</b>		<b>Bohol</b>	<b>2.99</b>	<b>7.4%</b>
1	Tagbilaran City	2,538	27.5%	1	Tagbilaran City	30.15	15.8%
2	Dauis	6.16	10.7%	2	Dauis	8.52	27.7%
3	Tubigon	5.34	15.1%	3	Tubigon	5.88	9.1%
4	Bien Unido	4.95	14.1%	4	Baclayon	5.30	16.8%
5	Baclayon	4.41	20.1%	5	Bien Unido	5.22	5.3%
6	Mabini	4.22	19.8%	6	Panglao	4.62	16.5%
7	Loay	4.15	12.2%	7	Loay	4.56	9.1%
8	Pilar	4.02	20.6%	8	Mabini	4.46	5.3%
9	Panglao	3.85	20.3%	9	Pilar	4.37	8.0%
10	Loon	3.78	23.9%	10	Calape	3.91	6.3%
11	Calape	3.67	11.9%	11	Pres. Garcia	3.85	17.4%
12	Candijay	3.50	14.1%	12	Candijay	3.59	2.5%
13	Maribojoc	3.23	9.4%	13	Loon	3.54	-6.5%
14	Pres. Garcia	3.18	-2.1%	14	Maribojoc	3.49	7.3%
15	Inabanga	3.09	8.1%	15	Alburquerque	3.37	9.6%
16	Talibon	3.06	22.7%	16	Talibon	3.35	8.6%
17	Alburquerque	3.04	21.0%	17	Cortes	3.33	12.9%
18	Buenavista	2.97	16.5%	18	Inabanga	3.29	6.0%
19	Anda	2.92	24.4%	19	Ubay	3.18	9.2%
20	Cortes	2.90	17.1%	20	Buenavista	3.03	1.8%
21	Ubay	2.88	18.4%	21	Clarin	3.01	4.4%
22	Clarin	2.87	11.2%	22	Catigbian	2.97	8.0%
23	Lila	2.84	17.1%	23	Lila	2.97	4.4%
24	Catigbian	2.73	19.1%	24	Trinidad	2.93	6.9%
25	Trinidad	2.72	22.3%	25	Getafe	2.79	3.7%
26	Getafe	2.69	21.2%	26	Valencia	2.78	13.1%
27	Guindulman	2.64	15.5%	27	Guindulman	2.75	4.1%
28	Jagna	2.54	14.6%	28	Anda	2.72	-7.5%
29	Sikatuna	2.47	16.3%	29	Jagna	2.66	4.3%
30	Valencia	2.42	14.3%	30	Corella	2.46	19.0%
31	Sierra Bullones	2.32	17.2%	31	San Miguel	2.42	6.2%
32	San Miguel	2.27	19.5%	32	Sierra Bullones	2.41	3.4%
33	San Isidro	2.22	13.9%	33	Sikatuna	2.37	-4.2%
34	Corella	1.99	-1.7%	34	San Isidro	2.24	0.8%
35	Sagbayan	1.90	16.3%	35	Alicia	2.05	7.8%
36	Alicia	1.89	13.7%	36	Dagohoy	2.01	8.0%
37	Duero	1.85	13.6%	37	Sagbayan	2.01	5.4%
38	Dagohoy	1.85	22.1%	38	Duero	1.94	4.5%
39	Loboc	1.84	12.8%	39	Loboc	1.91	3.5%
40	Dimiao	1.83	17.3%	40	Dimiao	1.84	0.3%
41	Garcia-Hernandez	1.83	11.5%	41	Garcia-Hernandez	1.82	-0.6%
42	Danao	1.76	26.6%	42	Danao	1.81	2.5%
43	Antequera	1.68	10.2%	43	Antequera	1.75	4.2%
44	Carmen	1.64	15.1%	44	Sevilla	1.74	8.9%
45	Sevilla	1.59	10.9%	45	Carmen	1.74	5.7%
46	Batuan	1.51	3.4%	46	Batuan	1.55	2.5%
47	Bilar	1.25	10.2%	47	Bilar	1.28	2.6%
48	Balilihan	1.12	11.8%	48	Balilihan	1.14	1.7%
Average % Increase =			15.5%				6.5%

Source of Land Area: DENR; Population Density computed by PPD0

**Table 6. Population Count & Projection: CY 2010 to 2015**  
2007 Census-based Population Projection of Bohol Province

Geo-Political Subdivisions	Annual Growth Rate (%, 2000-2007)	Population Projection					
		2010	2011	2012	2013	2014	2015
<b>BOHOL</b>	<b>1.06</b>	<b>1,275,214</b>	<b>1,289,515</b>	<b>1,304,107</b>	<b>1,318,998</b>	<b>1,334,194</b>	<b>1,349,704</b>
1 Alburquerque	1.41	10,058	10,200	10,343	10,489	10,637	10,787
2 Alicia	1.12	24,287	24,559	24,834	25,113	25,394	25,678
3 Anda	-0.99	16,518	16,355	16,193	16,033	15,874	15,717
4 Antequera	0.59	14,732	14,819	14,906	14,994	15,082	15,171
5 Baclayon	2.56	19,216	19,708	20,213	20,730	21,261	21,805
6 Balilihan	0.24	17,456	17,498	17,540	17,582	17,624	17,667
7 Batuan	0.35	12,394	12,438	12,481	12,525	12,569	12,613
8 Bien Unido	0.75	24,100	24,280	24,462	24,646	24,831	25,017
9 Bilar	0.37	17,447	17,512	17,577	17,642	17,707	17,772
10 Buenavista	0.25	26,950	27,017	27,085	27,153	27,221	27,289
11 Calape	0.9	30,752	31,029	31,308	31,590	31,874	32,161
12 Candijay	0.36	31,851	31,965	32,081	32,196	32,312	32,428
13 Carmen	0.81	44,473	44,833	45,197	45,563	45,932	46,304
14 Catigbian	1.16	24,214	24,495	24,779	25,067	25,357	25,652
15 Clarin	0.62	19,375	19,495	19,616	19,738	19,860	19,983
16 Corella	2.96	8,031	8,269	8,514	8,766	9,025	9,293
17 Cortes	1.92	15,365	15,660	15,961	16,267	16,580	16,898
18 Dagohoy	1.16	19,002	19,223	19,446	19,671	19,900	20,131
19 Danao	0.36	18,095	18,161	18,226	18,292	18,357	18,423
20 Dauis	4.42	40,387	42,172	44,036	45,982	48,015	50,137
21 Dimiao	0.04	14,399	14,404	14,410	14,416	14,422	14,427
22 Duero	0.63	17,718	17,830	17,942	18,055	18,169	18,284
23 Garcia-Hernandez	-0.08	21,574	21,557	21,539	21,522	21,505	21,488
24 Getafe	0.58	33,193	33,385	33,579	33,774	33,970	34,167
25 Guindulman	0.86	44,701	45,085	45,473	45,864	46,259	46,657
26 Inabanga	0.61	32,883	33,084	33,286	33,489	33,693	33,898
27 Jagna	0.52	28,539	28,688	28,837	28,987	29,137	29,289
28 Lila	0.63	11,092	11,162	11,232	11,303	11,374	11,446
29 Loay	1.33	16,536	16,756	16,979	17,205	17,434	17,665
30 Loboc	0.49	16,691	16,773	16,855	16,938	17,021	17,104
31 Loon	-0.87	42,294	41,926	41,561	41,199	40,841	40,486
32 Mabini	0.76	29,639	29,865	30,092	30,320	30,551	30,783
33 Maribojoc	1.05	18,756	18,953	19,152	19,353	19,556	19,762
34 Panglao	2.52	27,241	27,928	28,631	29,353	30,093	30,851
35 Pilar	1.16	28,306	28,634	28,967	29,303	29,642	29,986
36 Pres. Carlos P.Garcia	2.67	26,851	27,567	28,303	29,059	29,835	30,632
37 Sagbayan	0.77	19,977	20,130	20,285	20,442	20,599	20,758
38 San Isidro	0.11	9,326	9,336	9,346	9,357	9,367	9,377
39 San Miguel	0.88	22,910	23,112	23,315	23,520	23,727	23,936
40 Sevilla	1.3	11,748	11,900	12,055	12,212	12,371	12,531
41 Sierra Bullones	0.48	27,028	27,158	27,288	27,419	27,551	27,683
42 Sikatuna	-0.57	6,351	6,315	6,279	6,243	6,208	6,172
43 Tagbilaran City	2.4	98,145	100,501	102,913	105,382	107,912	110,501
44 Talibon	1.25	61,622	62,392	63,172	63,962	64,761	65,571
45 Trinidad	0.99	28,525	28,808	29,093	29,381	29,672	29,966
46 Tubigon	1.33	46,267	46,882	47,506	48,138	48,778	49,427
47 Ubay	1.34	68,632	69,552	70,484	71,428	72,386	73,355
48 Valencia	1.96	29,564	30,144	30,734	31,337	31,951	32,577

Based on Population Data of NSO; Projection computation by PPDO

**Table 7. Population Projection By Age Group : Years 2010-2015\***  
Bohol Province

Age Group	Census 2000 Population	Census 2007 Population	Population Projection					
			2010	2011	2012	2013	2014	2015
<b>Bohol</b>	<b>1,139,130</b>	<b>1,230,110</b>	<b>1,275,214</b>	<b>1,289,515</b>	<b>1,304,107</b>	<b>1,318,998</b>	<b>1,334,194</b>	<b>1,349,704</b>
Under 1	27,720	29,934	31,032	31,380	31,735	32,097	32,467	32,844
1-4	105,583	114,016	118,196	119,522	120,874	122,254	123,663	125,101
5-9	138,545	149,610	155,096	156,835	158,610	160,421	162,269	164,156
10-14	135,729	146,569	151,944	153,648	155,386	157,160	158,971	160,819
15-19	118,753	128,238	132,940	134,430	135,952	137,504	139,088	140,705
20-24	100,506	108,533	112,513	113,775	115,062	116,376	117,717	119,085
25-29	84,798	91,571	94,928	95,993	97,079	98,188	99,319	100,473
30-34	74,928	80,912	83,879	84,820	85,780	86,759	87,759	88,779
35-39	66,443	71,750	74,380	75,215	76,066	76,934	77,821	78,725
40-44	57,476	62,066	64,342	65,064	65,800	66,551	67,318	68,101
45-49	46,635	50,360	52,206	52,792	53,389	53,999	54,621	55,256
50-54	40,894	44,160	45,779	46,293	46,817	47,351	47,897	48,453
55-59	37,566	40,566	42,054	42,525	43,007	43,498	43,999	44,510
60-64	32,351	34,935	36,216	36,622	37,036	37,459	37,891	38,331
65 +	71,203	76,890	79,709	80,603	81,515	82,446	83,396	84,365
<b>Age Group Type</b>			<b>Population Projection</b>					
	<b>2007</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	
Infant (Age < 1)	29,934	31,032	31,380	31,735	32,097	32,467	32,844	
Child (Age 1-4)	114,016	118,196	119,522	120,874	122,254	123,663	125,101	
Reproductive Age Group (15-49)	593,430	615,189	622,088	629,127	636,311	643,642	651,124	
Labor Force (15 yrs old & over)	789,981	818,946	828,131	837,502	847,065	856,824	866,784	
Elderly (Age >65)	76,890	79,709	80,603	81,515	82,446	83,396	84,365	

Based on Population Data of NSO; Projection computation by PPDO

**Table 8. Projected Labor Force : Years 2010-2015\***  
Bohol Province

Item	2002	Population Projection					
		2010	2011	2012	2013	2014	2015
In the Labor Force	489,744	548,250	554,399	560,672	567,074	573,607	580,276
Employed	414,323	463,820	469,021	474,329	479,745	485,272	490,913
Unemployed	75,421	84,431	85,377	86,344	87,329	88,336	89,362
Visibly Underemployed	30,854	34,540	34,927	35,322	35,726	36,137	36,557
Not in the Labor Force	226,256	253,285	256,126	259,024	261,982	265,000	268,081

\* Computations by PPDO using Interpolation Technique

Table 9. Existing & Proposed Built-Up & Urban Areas By Municipality  
Bohol Province

Land Use Category	Total Municipal Land Area	Built-up Area (in Hectares)							
		Existing				Proposed			
		Total	% Built-up to Total Area	Urban	% Urban to Mun Total	Total	% Built-up to Total Area	Urban	% Urban to Total Area
<b>Bohol</b>	<b>411,726</b>	<b>12,542</b>	<b>3.05%</b>	<b>3,907</b>	<b>0.95%</b>	<b>21,488</b>	<b>5.22%</b>	<b>6,460</b>	<b>1.57%</b>
1. Alburquerque	2,865	130	4.54%	16	0.57%	217	7.57%	37	1.30%
2. Alicia	11,450	163	1.42%	64	0.56%	335	2.93%	72	0.63%
3. Anda	6,110	88	1.44%	45	0.74%	183	3.00%	145	2.37%
4. Antequera	8,205	59	0.71%	15	0.19%	167	2.04%	77	0.94%
5. Baclayon	3,402	287	8.44%	0	0.00%	423	12.43%	53	1.56%
6. Balilihan	15,022	63	0.42%	14	0.10%	504	3.35%	54	0.36%
7. Batuan	7,815	165	2.11%	20	0.26%	483	6.18%	113	1.44%
8. Bien Unido	4,482	561	12.51%	150	3.35%	633	14.12%	53	1.18%
9. Bilar	13,315	295	2.21%	124	0.93%	479	3.60%	179	1.34%
10. Buenavista	8,730	474	5.43%	29	0.34%	474	5.43%	69	0.79%
11. Calape	7,615	281	3.69%	53	0.70%	540	7.09%	201	2.64%
12. Candijay	8,687	851	9.80%	240	2.76%	955	10.99%	38	0.44%
13. Carmen	24,804	321	1.30%	19	0.08%	2,603	10.49%	181	0.73%
14. Catigbian	7,848	50	0.64%	16	0.20%	122	1.55%	29	0.37%
15. Clarin	6,279	178	2.84%	73	1.17%	344	5.48%	163	2.59%
16. Corella	3,033	50	1.65%	12	0.38%	145	4.78%	20	0.65%
17. Cortes	4,377	102	2.33%	13	0.31%	135	3.08%	16	0.37%
18. Dagohoy	9,101	354	3.89%	17	0.19%	1,487	16.34%	120	1.32%
19. Danao	9,786	177	1.81%	46	0.47%	527	5.39%	150	1.53%
20. Daus	4,288	132	3.07%	15	0.35%	280	6.53%	23	0.54%
21. Dimiao	7,713	122	1.58%	36	0.47%	192	2.48%	65	0.84%
22. Duero	8,890	105	1.18%	18	0.20%	204	2.30%	79	0.89%
23. Garcia-Hernandez	11,684	72	0.62%	4	0.04%	133	1.14%	14	0.12%
24. Guindulman	11,770	206	1.75%	40	0.34%	275	2.34%	73	0.62%
25. Inabanga	13,166	278	2.11%	54	0.41%	520	3.95%	88	0.67%
26. Jagna	12,063	204	1.70%	316	2.62%	331	2.74%	315	2.61%
27. Jetafe	9,980	150	1.50%	52	0.52%	375	3.76%	289	2.90%
28. Lila	3,640	34	0.93%	15	0.40%	63	1.72%	36	1.00%
29. Loay	3,479	72	2.07%	34	0.98%	91	2.62%	45	1.28%
30. Loboc	8,541	72	0.84%	9	0.11%	163	1.91%	31	0.37%
31. Loon	11,975	247	2.06%	49	0.41%	512	4.28%	276	2.31%
32. Mabini	6,455	89	1.38%	21	0.32%	259	4.01%	67	1.03%
33. Maribojoc	5,192	253	4.88%	44	0.84%	460	8.86%	177	3.40%
34. Panglao	5,537	2,067	37.32%	220	3.98%	1,294	23.37%	240	4.34%
35. Pilar	6,248	70	1.12%	16	0.26%	80	1.28%	185	2.96%
36. Pres. Carlos P. Garcia	6,528	144	2.21%	174	2.67%	56	0.86%	174	2.67%
37. Sagbayan(Borja)	9,675	164	1.70%	64	0.66%	282	2.92%	82	0.85%
38. San Isidro	4,104	80	1.95%	21	0.51%	104	2.55%	36	0.88%
39. San Miguel	9,156	157	1.72%	20	0.22%	173	1.89%	44	0.48%
40. Sevilla	6,486	129	1.99%	15	0.23%	154	2.37%	44	0.68%
41. Sierra Bullones	10,975	347	3.16%	52	0.47%	640	5.83%	76	0.69%
42. Sikatuna	2,675	29	1.08%	11	0.42%	53	1.98%	21	0.77%
43. Tagbilaran City	3,061	1,276	41.69%	1,276	41.69%	1,545	50.47%	1,545	50.47%
44. Talibon	17,704	103	0.58%	28	0.16%	336	1.90%	83	0.47%
45. Trinidad	9,427	120	1.27%	22	0.23%	208	2.21%	104	1.10%
46. Tubigon	7,556	256	3.39%	174	2.31%	423	5.60%	294	3.90%
47. Ubay	20,755	543	2.61%	70	0.34%	628	3.03%	3	0.01%
48. Valencia	10,077	373	3.70%	69	0.69%	898	8.91%	183	1.81%

Source: Municipal Comprehensive Land Use Plans (CLUP)

Table 10. **Coastline Areas and Length**  
Bohol Province

	Municipality	Area of Municipal Waters		Length of Shoreline(kms.)	
		In Hectares	In Sq. Km.	Including Offshore	Excluding Offshore
1	Alburquerque	3,203.20	32.03	5.88	5.88
2	Anda	48,722.73	487.23	21.19	21.19
3	Baclayon	44,924.74	449.25	11.13	6.78
4	Bien Unido	51,299.00	512.99	43.86	22.81
5	Buenavista	6,569.29	65.69	32.41	25.37
6	Calape	12,486.08	124.86	53.65	21.68
7	Candijay	1,529.73	15.30	32.82	28.68
8	Clarin	3,178.82	31.79	28.62	17.94
9	Cortes	122.24	1.22	7.30	5.97
10	Dausis	9,964.91	99.65	28.26	28.26
11	Dimiao	8,907.41	89.07	6.00	6.00
12	Duero	1,357.11	13.57	6.81	6.81
13	Garcia-Hernandez	19,891.07	198.91	16.44	16.44
14	Getafe	20,282.52	202.83	84.74	24.60
15	Guindulman	12,158.05	121.58	16.81	16.81
16	Inabanga	18,932.10	189.32	66.79	60.26
17	Jagna	28,855.95	288.56	13.55	13.55
18	Lila	12,543.90	125.44	8.67	8.67
19	Loay	10,754.12	107.54	13.58	12.97
20	Loon	37,707.94	377.08	60.94	34.42
21	Mabini	15,507.02	155.07	36.97	31.73
22	Maribojoc	3,692.48	36.92	17.26	16.54
23	Panglao	74,613.52	746.14	37.64	30.54
24	Pres. C. P. Garcia	57,470.18	574.70	79.62	64.39
25	Tagbilaran City	2,590.78	25.91	12.45	12.45
26	Talibon	52,466.34	524.66	98.92	33.54
27	Trinidad	42.62	0.43	98.92	1.95
28	Tubigon	38,176.30	381.76	1.95	14.97
29	Ubay	20,296.22	202.96	59.47	55.87
30	Valencia	6,259.64	62.60	6.58	6.58
	<b>Total</b>	<b>624,506.01</b>	<b>6,245.06</b>	<b>1,009.23</b>	<b>653.65</b>

Source: Bohol Coastal Profile 2002, derived using Geographic Information System generated maps (draft) including the perimeter of all offshore islands within the LGU coastal waters

**Table 11. Soil Types and Topography By Municipality**  
Bohol Province

<b>Municipality</b>	<b>Soil Types</b>	<b>Relief/Topography</b>
Alburquerque Alicia	Bolinao Clay Faraon Clay Batuan clay Bolinao 0	Mildly rolling to rolling and hilly Rolling and hilly Level to rolling Mildly rolling to rolling and hilly, mountainous with some level area
Anda	Batuan Clay Loam Batuan-Faraon Complex Faraon Clay	Undulating Rolling to hilly Rolling to hilly
Balilihan	Batuan Clay Loam Bolinao	Undulating Mildly rolling to rolling and hilly, mountainous with some level area
Batuan	Sevilla Clay Batuan-Faraon Complex Batuan Clay Batuan-Faraon	Rolling to hilly Rolling to hilly Level to rolling Level to rolling
Bilar	Batuan Clay Batuan-Faraon Complex Annam Clay	Level to rolling Level to rolling Rolling to roughly rolling to hilly
Buenavista	Baluarte Clay Ubay Clay	Heavy flat to undulating Undulating to rolling and hilly
Calape	Bolinao Clay Calape Clay Loam Batuan-Faraon Complex	Mildly rolling to rolling and hilly, mountainous with some level area Level to undulating Rolling to hilly
Candijay	Candijay Clay	Undulating
Carmen	Batuan-Faraon Clay Ubay Clay Ubay Clay Loam	Rolling to hilly Undulating to rolling and hilly Undulating to rolling and hilly
Catigbian	Batuan Clay Batuan-Faraon Clay	Undulating Rolling to hilly
Clarín	Bolinao Clay Annam Clay Bantog Clay Inabanga Clay Batuan-Faraon Complex	Mildly rolling to rolling and hilly, mountainous Rolling to roughly rolling and hilly Level to rolling Rolling to hilly Rolling to hilly
Corella	Bolinao Lugo Clay	Mildly rolling to rolling and hilly, mountainous with some level area Rolling to hilly
Cortes	Bolinao Clay Calape Clay Loam	Level to rolling Level to undulating
Dagohoy	Ubay Clay Ubay Clay Loam	Undulating to rolling and hilly Undulating to rolling and hilly
Danao	Ubay Clay Ubay Clay Loam Batuan-Faraon Complex Annam Clay	Undulating to rolling and hilly Undulating to rolling and hilly Rolling to hilly Rolling to roughly rolling and hilly
Dausi	Faraon Clay	Rolling to hilly
Dimiao	Faraon Clay Calape Clay Loam	Rolling to hilly Level to undulating
Duero	Faraon Clay Mandaue Clay Loam	Rolling to hilly Level
Garcia-Hernandez	Faraon Clay Calape Clay Loam Annam Clay	

Guindulman	Bolinao Clay	Mildly rolling to rolling and hilly, mountainous with some level area
Inabanga	Ubay Clay Bantog Clay Bolinao Clay  Ubay Clay Loam Annam Clay Batuan-Faraon Complex	Undulating to rolling and hilly Level to rolling Mildly rolling to rolling and hilly, mountainous with some level area Undulating to rolling and hilly Rolling to roughly rolling and hilly Rolling to hilly
Jagna	Calape Clay Loam Annam Clay Ubay Sandy Loam Batuan-Faraon Complex	Level to undulating Rolling to roughly rolling and hilly Undulating to rolling and hilly Rolling to hilly
Lila	Faraon Clay	Rolling to hilly
Loay	Sevilla	Rolling to hilly
Loboc	Sevilla Clay Calape Clay Loam	Rolling to hilly Level to undulating
Loon	Faraon Clay Bolinao Clay	Rolling to hilly Mildly rolling to rolling and hilly, mountainous with some level area
Mabini	Ubay Sandy Loam	Undulating to rolling and hilly
Maribojoc	Faraon Clay Bolinao Clay	Rolling to hilly Mildly rolling to rolling and hilly, mountainous with some level area
Panglao	Bolinao Clay	Mildly rolling to rolling and hilly, mountainous with some level area
Pilar	Ubay Clay Ubay Clay Loam	Undulating to rolling and hilly Undulating to rolling and hilly
Pres. Garcia	Ubay Clay Ubay Clay Loam	Undulating to rolling and hilly Undulating to rolling and hilly
San Isidro	Annam Clay Batuan-Clay Loam Batuan-Faraon Complex	Rolling to roughly rolling and hilly Undulating Rolling to hilly Undulating to rolling and hilly
San Miguel	Ubay Clay	Undulating to rolling and hilly
Sagbayan	Batuan-Faraon Complex Sevilla Clay Inabanga Clay	Rolling to hilly Rolling to hilly Rolling to hilly
Sevilla	Sevilla Clay	Rolling to hilly
Sierra Bullones	Ubay Clay Ubay Clay Loam	Undulating to rolling and hilly Undulating to rolling and hilly
Sikatuna	Bolinao Clay	Mildly rolling to rolling and hilly, mountainous with some level area Roughly rolling to almost hilly
Talibon	Ubay Sandy Loam	Undulating to rolling and hilly
Trinidad	Ubay Clay Ubay Sandy Loam	Undulating to rolling and hilly Undulating to rolling and hilly
Tubigon	Bolinao Clay  Batuan-Faraon Complex Annam Clay Calape Clay Loam Bantog Clay	Mildly rolling to rolling and hilly, mountainous with some level area Rolling to hilly Rolling to roughly rolling to hilly Level to undulating Level to rolling
Ubay	Ubay Sandy Loam Ubay Clay	Undulating to rolling and hilly Undulating to rolling and hilly
Valencia	Calape Clay Loam Faraon Clay	Level to undulating Rolling to hilly
Tagbilaran City	Faraon Clay	Undulating to rolling and hilly

Table 12. Land Area Profile of Bohol Province

CITY/MUNICIPALITY	TOTAL LAND AREA (Hectares)	LAND CLASSIFICATION (Hectares)		RE MARKS (approved cadastral)
		A & D	TIMBERLAND	
1 Alburquerque	2,865.00	2,850.00	15.00	
2 Alicia	11,450.00	11,043.00	407.00	
3 Anda	6,110.00	4,005.00	2,105.00	
4 Antequera	8,205.00	6,500.00	1,705.00	approved
5 Baclayon	3,402.00	3,402.00	-	
6 Balilihan	15,022.00	12,897.00	2,125.00	approved
7 Batuan	7,815.00	5,100.00	2,715.00	approved
8 Bien Unido	4,482.00	3,900.00	582.00	
9 Bilar	13,315.00	8,190.00	5,125.00	
10 Buenavista	8,730.00	6,070.00	2,660.00	approved
11 Calape	7,615.00	7,094.00	521.00	conflict w/ Antequera
12 Candijay	8,687.00	6,000.00	2,687.00	
13 Carmen	24,804.00	17,626.00	7,178.00	
14 Catigbian	7,848.00	5,423.00	2,425.00	
15 Clarin	6,279.00	5,500.00	779.00	approved
16 Corella	3,033.00	2,918.00	115.00	
17 Cortes	4,377.00	4,224.00	153.00	
18 Dagohoy	9,101.00	6,701.00	2,400.00	
19 Danao	9,786.00	6,640.00	3,146.00	conflict w/ Buenavista
20 Daus	4,288.00	4,263.00	25.00	approved
21 Dimiao	7,713.00	7,583.00	130.00	conflict w/ Valencia
22 Duero	8,890.00	2,781.00	6,109.00	approved
23 Garcia-Hernandez	11,684.00	10,059.00	1,625.00	approved
24 Getafe	9,980.00	8,023.00	1,957.00	no conflict
25 Guindulman	11,770.00	9,661.00	2,109.00	
26 Inabanga	13,166.00	8,444.00	4,722.00	
27 Jagna	12,063.00	10,200.00	1,863.00	no conflict
28 Lila	3,640.00	3,540.00	100.00	approved
29 Loay	3,479.00	3,205.00	274.00	
30 Loboc	8,541.00	6,635.00	1,906.00	approved
31 Loon	11,975.00	9,455.00	2,520.00	approved
32 Mabini	6,455.00	4,055.00	2,400.00	approved
33 Maribojoc	5,192.00	4,535.00	657.00	approved
34 Panglao	5,537.00	5,537.00	-	
35 Pilar	6,248.00	5,659.00	589.00	conflict w/ SM & SB
36 Pres. C. P. Garcia	6,528.00	4,693.00	1,835.00	
37 Sagbayan	9,675.00	4,735.00	4,940.00	
38 San Isidro	4,104.00	3,617.00	487.00	
39 San Miguel	9,156.00	6,950.00	2,206.00	approved
40 Sevilla	6,486.00	4,161.00	2,325.00	approved
41 Sierra-Bullones	10,975.00	6,863.00	4,112.00	approved
42 Sikatuna	2,675.00	1,780.00	895.00	
43 Tagbilaran City	3,061.00	2,994.00	67.00	
44 Talibon	17,704.00	2,787.00	14,917.00	no conflict
45 Trinidad	9,427.00	8,300.00	1,127.00	conflict w/ Danao
46 Tubigon	7,556.00	7,250.00	306.00	approved
47 Ubay	20,755.00	19,200.00	1,555.00	approved
48 Valencia	10,077.00	7,277.00	2,800.00	
<b>Total</b>	<b>411,726.00</b>	<b>310,325.00</b>	<b>101,401.00</b>	

Source: PENRO, DENR Bohol 2009

**Table 13. National Integrated Protected Area System (NIPAS) Areas  
Bohol Province**

<b>NIPAS COMPONENT Protected Area</b>	<b>LOCATION</b>	<b>Proclamation Number</b>	<b>Date</b>	<b>AREAS (Has.)</b>
<b>A) National Park</b> 1. Rajah Sikatuna Protected Landscape	Bilar, Batuan, Carmen Dimiao, Sierra Bullones Valencia	PP # 127 amending PP # 287	4/1/2000	<b>10,450.60</b>
<b>B) Natural Monument</b> 1. Chocolate Hills Natural Monument <i>Note: exclude the A &amp; D portion of lands subject to ground survey</i>	Carmen, Batuan, Sagbayan Bilar, Sierra Bullones and Valencia	PP # 333 amending PP # 1037	7-18-02	<b>19,410.00</b>
<b>C) Critical Watershed Areas</b> 1. Wahig-Inabanga River Watershed Reserve <i>Note: This Presidential Proclamation is already amended but still the data has not changed; subject to actual ground delineation survey (exclude the alienable and disposal lands)</i>	(For updating as amended) Danao Sierra Bullones Pilar Dagohoy Carmen Inabanga Buenavista Trinidad Sagbayan San Miguel Talibon Jagna Ubay Alicia Duero Getafe	PP # 223 amending PP # 468	7-18-02	<b>14,000.00</b> <b>57,675.00</b> 13,842.00 10,539.00 8,451.00 5,731.00 5,683.00 5,100.00 3,399.00 2,501.00 1,117.00 413.00 316.00 316.00 194.00 73.00 ? ?
2. Loboc Watershed Forest Reserve	Balilihan, Batuan, Bilar Carmen, Valencia, Jagna Garcia Hernandez, Lila Loboc, Sevilla, Catigbian Sierra Bullones	PP # 450	12-23-53	<b>10,387.00</b>
3. Alejawan-Cansuhay- Anibongan River Watershed Forest Reserve	Duero, Jagna	PP # 881	03-20-92	<b>3,620.00</b>
<b>D) Wilderness Areas</b> 1. Tubigon Group of Islands Protected Seascape/Landscape 2. Clarin Group of Islands Strict Nature Reserve	a. Budlaan Island b. Hayaan Island c. Inanoran Island a. Silo Island b. Cabgan Island c. Cancostino Island d. Tabaon Island e. Maagpit Island	PP # 2151	12-29-81	<b>2,091.67</b> 19.00 19.00 8.00 12.00 97.00 38.00 12.00 19.00

NIPAS COMPONENT	LOCATION	Proclamation Number	Date	AREAS
3. Calape Group of Islands Protected Seascape/ Landscape	a. Basihan Island			36.00
	b. Poom Point			117.00
4. Getafe Protected Seascape	a. Banacon Island			599.00
5. Talibon Group of Islands Protected Seascape/ Landscape	a. Sag Island			45.00
	b. Bansaon Island			148.00
	c. Tambu Islet			194.00
	d. Banbanon Island			67.00
	e. Pamasuan Islet			23.00
6. Inabanga Protected Seascape	a. Bugatusan Island			6.00
	b. Pangahoykahoyan Is.			64.00
	c. Hambongan Island			272.00
7. Ubay Protected Seascape	a. Tintinan Island			25.89
8. Pres. Garcia Protected Seascape	a. Lapinig Island			74.87
	b. Budlaan Island			8.91
9. Candijay Group of Islands Protected Seascape	a. Catiil Island			32.00
	b. Calangaman Island			7.00
	c. Tabundijo Island			10.00
10. Mabini Protected Seascape	a. Lumisli Island			138.00
<b>E. Mangrove Swamp Forest Reserve</b>	a. Calape	PP # 2152	12-20-81	<b>8,772.00</b>
	1. Pangangan Island			596.00
	b. Loon			
	1. Cabilao Island			766.00
	2. Sandingan Island			569.00
	c. Albur-Loboc-Loay River & Mangrove Swamp			156.00
	d. Getafe			
	1. Jandayan Island			550.00
	e. Inabanga			
	1. Hambungan Island			6.00
	2. Lawis to Pangpang of Buenavista)			1,069.00
	f. Talibon			
	1. Mahanay Island			2,100.00
	2. Banacon Island			59.00
	3. Pamasuan Island			23.00
	g. Ubay Area I (Pangpang to East of Soom Trinidad)			170.00
	h. Ubay Area II (Biabas, Cagting, Cuya, Paraiso & del Mar shorelines)			1,564.00
	i. Mangrove Swamp along shoreline of Pres. Garcia			315.00

NIPAS COMPONENT	LOCATION	Proclamation Number	Date	AREAS
	j. Along shoreline of Anda to Candijay			435.00
	k. Batasan Is. Tubigon			14.00
	l. Pres. Garcia			
	1. Lapinig-Chico Is.			76.00
	m. Basio-Kasag Pt.			304.00
	n. Panglao Island	PP# 426 amending PP# 2152	7-22-03	385.66

Source: PENRO, DENR Tagbilaran, 2009

Table 14. Areas of Production & Protection Forests in Bohol Province: CY 2008

Congressional District	Name Of Municipality	Production Forest (Hectares)	Protection Forest (Hectares)	Untenured Areas (Hectares)
<b>2nd District</b>	1. Bien Unido	46.00	1,210.00	1,044.24
	2. Buenavista	4,596.89	1,504.82	4,537.58
	3. Dagohoy	875.76	2,043.44	2,837.89
	4. Danao	2,977.43	540.00	2,130.28
	5. Inabanga	872.39	694.07	1,241.83
	6. Getafe	2,592.71	5,508.89	4,340.72
	7. Pres. Garcia	456.40	1,601.30	1,491.78
	8. San Miguel	655.01	115.59	645.13
	9. Talibon	2,500.63	2,159.17	4,373.80
	10. Trinidad	3,464.05	1,590.95	5,392.16
	11. Ubay	2,358.57	1,133.53	3,385.10
	<b>Sub-total</b>	<b>21,395.84</b>	<b>18,101.76</b>	<b>31,420.51</b>
<b>3rd District</b>	12. Alicia	1,805.95	95.05	1,411.51
	13. Anda	1,374.45	713.05	1,887.50
	14. Candijay	2,017.25	1,505.75	1,100.88
	15. Guindulman	300.00	339.80	572.35
	16. Mabini	1,130.00	1,100.50	993.85
	17. Pilar	577.70	870.00	849.33
	<b>Sub-total</b>	<b>7,205.35</b>	<b>4,624.15</b>	<b>6,815.42</b>
<b>Total</b>		<b>28,601.19</b>	<b>22,725.91</b>	<b>38,235.93</b>

Source: CENRO Talibon 2008

Table 15. Major Provincial Roads In Bohol & their Significance to Social & Economic Services

Road Name	Class	Location	Connectivity
Tinago-Biking Road (RC = Fair)	2	Dauis	Beaches
Tinago-Bingag Road (RC = Bad)	1	Dauis	Tourists spot
Corella-Balilihan Road (RC = Fair)	1	Corella, Cortes, Balilihan	Municipality to municipality
Sikatuna-Balilihan via Badiang Road	2	Balilihan, Sikatuna	Vast agricultural areas
Antequera-Balilihan via Dorol Road (RC = Fair)	1	Antequera, Balilihan	Water Falls, agricultural and cultural areas
Pob.(Catigbian)-Ambuan-Sagasa(Balilihan) Road (RC = Fair)	2	Balilihan, Catigbian	Vast agricultural areas
Rizal(Catigbian)-San Isidro Road (RC = Bad)	2	Catigbian, San Isidro	Vast agricultural areas
Antequera-Catigbian via San Isidro Road (RC = Fair)	2	Antequera, San Isidro, Catigbian	Vast agricultural areas,, hospital, municipality to municipality
Calape-Pangangan Road (RC = Fair)	1	Calape	National highway to tourist destination island
Baclayon-Coreolla Road	2	Baclayon, Coreolla	Agricultural areas, water source
Albuquerque-Sikatuna Road (RC = Fair)	1	Albur, Sikatuna	Agricultural areas, poultry, livelihood centers
Garcia Hernandez-Tabuan-Datag Road (RC = Fair)	2	Garcia Hernandez	Vast agricultural areas, quarry site, access to education
Jct.(TER)-Pob.(Valencia)-Anoyon-Omjon Road (RC = Fair)	2	Valencia	Vast agricultural areas
Dimiao-Oac-Bilar Road	1	Dimiao, Bilar	Vast agricultural areas, municipality to municipality, quarry sites, short access from east to interior
Guadalupe-Monte Video Road (Fair)	2	Carmen	Vast agricultural areas, chocolate hills
Carmen-Vallehermoso Road (Fair)	2	Carmen	Vast agricultural areas, chocolate hills
Alegria(Catigbian)-Baang-Jagbuaya-Janopol Road	2	Catigbian	Vast agricultural areas
Catigbian-Clarín via Bogtongbood Road (RC = Fair)	2	Catigbian, Clarín	Vast agricultural areas, tourist destination, connects two national roads, access to social services
Pob.(Sagbayan)-Sagbayan Sur-Kabasakan Road (RC = Fair)	1	Sagbayan	Vast agricultural areas, connects two national road, to provincial road, access to social services
Pob.(Inabanga)-Lawis Road (RC = Fair)	2	Inabanga	Beaches, Religious Community
Inabanga-Sagbayan via Lapacan-Magtangtang Rd. (RC = Fair)	2	Inabanga, Buenavista, Danao	Vast agricultural areas, connects national road, to provincial road, access to social services, and tourism site
Pob.-Bonot-Bonot-Tiguman-Overland Road (RC = Fair)	2	Buenavist, Getafe	Vast agricultural areas, connects two national road, to provincial road, access to social services

Road Name	Class	Location	Connectivity
Jct.(LIR)-Mahayag-Danao Road (RC = Fair)	1	San miguel, Danao	Vast agricultural areas, connects two national road, to provincial road, access to social services, municipality to municipality.
Pob.-San Francisco Road, Talibon (RC = Good)	2	Talibon	Aqua-culture,,access to social services, fishing ground
Dagohoy-Caluasan Road	2	Daohoy	Agricultural areas, irrigation, access to education
San Miguel-Bayongan-Bulilis-Mabuhay(Ubay) Rd (RC = Good)	2	San Miguel, Ubay	Agricultural areas, irrigation dam, access to education and other social services, connects two national highway
Cabulao-Ondol (Mabini)-Union (Ubay) Road(Ubay Side)	1	Mabini	Vast agricultural areas, connects two provincial road
Jct. (LIR)-Mahayag-Katipunan Road(San Miguel Side)	2	San Miguel, Dagohoy, Pilar, Alicia	Vast agricultural areas, connects two national roads
Jct. (LIR)-Mahayag-Katipunan Road (Alicia Side)	2		
Cabulao-Ondol (Mabini)-Union (Ubay) Road(Mabini Side)	1		Vast agricultural areas, connects provincial to national road
Cogtong (Candijay)-Panas-Pangpang-Badiang Road (Fair)	1	Candijay, Anda	Access to education(BISU-Cogtong campus) fishing ground, quarry site. Connects two municipalities
Jct. ( TER)-Guindulman-Anda-Badiang Road (Fair)	1	Guindulman, Anda	Connects national highway to municipality, beach resorts, quarry site, fishing ground of the east
Jct.(TER)-Guindulman-Catungawan-Mayuga-Lombog-Lundag Road (Fair)	2	Guindulman	Connects national road to provincial roads, vast agricultural areas, quarry sites, short-cut rout to Pilar

Table 16. Existing Level III Systems, Bohol Province

Municipality City	Service Providers (Operating Body)	Water Consumption			Service Coverage								
		Type of Water Source <sup>1</sup>	Water Consumption (cu.m/day)	Domestic Supply (%)	No. of Brgys. Served			No. of Household Served			No. of Population Served		
					Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Alburquerque	Alburquerque Mun. WWS	SP			2	10	12	196	720	916	980	3,593	4,573
Alicia	Alicia WWS				3		3		413	413		2,043	2,043
	Del Monte WWS	SP			1		1		140	140		300	300
	Katipunan WWS	SP			1		1		69	69		500	500
	La Hacienda WWS	SP	67			1	1		300	300		1,800	1,800
	Napo WWS	SP			1		1	204		204	1,181		1,181
	Progreso WWS	SP			1		1	130		130	650		650
	Putlongcam WWS	SP				1	1		82	82		432	432
	Untaga WWS	SP				1	1		17	17		90	90
	<b>Municipal Total</b>	SP	67		2	8	10	334	1,021	1,355	1,831	5,165	6,996
Anda	Anda WWS	SP			2	3	5	421	321	742	2,218	1,900	4,118
Antequera	Antequera LGU	SP			2	13	15	474	2,028	2,502	2,493	1,798	4,291
Baclayon	Baclayon WWS	DW	946		3	7	10	903	1,877	2,780	4,130	9,460	13,590
Balilihan	Balilihan Mun. WWS	DW			4	9	13	428	480	908	2,140	2,400	4,540
Batuan	Batuan LGU	SP			2		2	328		328	1,738		1,738
Bien Unido	Bien Unido WWS	DW	10		2		2	670		670	3,522		3,522
Bilar	Bilar WWS	SP/DW/Sur			2	9	11	318	883	1,201	3,024	8,287	11,311
Buenavista	Buenavista WWS	DW	48		2	6	8	292	911	1,203	1,583	4,733	6,316
Calape	Calape Waterwork	SP/DW	74	100	4	27	31	989	3,959	4,948	5,968	17,912	23,880
Candijay	Candijay	SP			3	6	9	870	635	1,505	5,011	3,505	8,516
Carmen	Carmen Waterwork	SP/DW	15,305	100		2	2		645	645		3,537	3,537
Catigbian	Catigbian	DW			2	2	4	302	239	541	1,783	3,107	4,890
Clarín	Clarín Water District	SP/DW	594	100	5	12	17	656	472	1,128	3,320	2,380	5,700
Corella	Corella WWS	DW	500	100	1	7	8	162	960	1,122	853	4,800	5,653
Cortes	Cortes WWS	SP/DW	1	96	2	12	14	502	1,035	1,537	2,460	5,196	7,656
Danao	Danao LGU	SP/DW	152	98	1	9	10	297	360	657	3,031	9,154	12,185
Dausi	Dausi WWS	DW	31			8	8		1,148	1,148		10,317	10,317
Dimiao	Dimiao LGU Source-1	SP	424	100	2	8	10	126	153	279	492	1,049	1,541
	Dimiao LGU Source-2	DW	376	100	1		1	95		95	341		341
	Dimiao LGU Source-3	DW	469	100	1		1	95		95	384		384
	<b>Municipal Total</b>	SP/DW	1,268	100	4	8	12	316	153	469	1,217	1,049	2,266
Duero	Angilan	SP			2	3	5	354	273	627	1,759	1,483	3,242
	Bangwalog	SP				6	6		377	377		1,829	1,829
	Tangcobo	SP			2	4	6	351	709	1,060	1,831	4,422	6,253
	<b>Municipal Total</b>	SP			4	13	17	705	1,359	2,064	3,590	7,734	11,324
García Hernández	G. Hernández LGU	SP			3	8	11	654	471	1,125	3,924	2,826	6,750
Guindulman	GUINBUWASSCO	DW	894	98	2	6	8	448	1,665	2,113	2,240	8,325	10,565
Inabanga	Inabanga WW	SP/DW			1	6	7	557	356	913	2,894	1,840	4,734
Jagna	Jagna WWS	SP	3	28	7		7	1,852		1,852	9,260		9,260
Lila	Lila LGU	SP			2	5	7	211	257	468	2,005	2,939	4,944
Loay	Alegria Sur	DW				1	1		80	80		419	419
	Botoc Occidental	DW				1	1		51	51		245	245
	Conception	DW				5	5		251	251		1,421	1,421
	Hinawanan	DW				5	5		221	221		1,279	1,279
	Las Salinas Sur	SP				1	1		80	80		491	491
	Tayong Occidental	SP/DW				1	1		41	41		262	262
	Tayong Oriental	SP				1	1		30	30		171	171
	Tocdog Dacu	SP				1	1		114	114		632	632
	Tocdog Ilaya	SP				1	1		71	71		331	331

Municipality City	Service Providers (Operating Body)	Water Consumption			Service Coverage									
		Type of Water Source <sup>1</sup>	Water Consumption (cu.m/day)	Domestic Supply (%)	No. of Brgys. Served			No. of Household Served			No. of Population Served			
					Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	
<b>Municipal Total</b>		SP/DW				17	17			939	939		5,251	5,251
Loboc	BARUWASA	SP	16	100	1	1			117	117		662	662	
	Cabadiangan	SP			1	1			41	41		275	275	
	Calunasan Norte	DW			1	1			69	69		345	345	
	Loboc Mun. WWS	SP	200	100	2	6	8	257	470	727	1,336	2,702	4,038	
	Quinoguidan-Bahian WWS	DW	9		2		2	167		167	915		915	
	Tatay WATSAN	SP				1	1		30	30		249	249	
	<b>Municipal Total</b>	SP/DW	225	96	4	10	14	424	727	1,151	2,251	4,233	6,484	
Loon	Loon LGU	SP/DW	2,417	92	10	8	18	1,771	1,387	3,158	12,330	16,835	29,165	
Mabini	Mabini WWS	SP/DW			4	12	16	1,092	2,814	3,906	5,953	16,746	22,699	
Maribojoc	Maribojoc WWS	SP	1,058	100	7	8	15	557	1,051	1,608	5,629	7,023	12,652	
Panglao	Bolod No. 1	SP	102	100		4	4		350	350		1,900	1,900	
	Camansilis, Lo-oc	DW			1		1	220		220	1,323		1,323	
	Canhilbas Lourdes	DW			3	3	6	1,461	859	2,320	7,931	4,559	12,490	
	<b>Municipal Total</b>	SP/DW	102	100	4	7	11	1,681	1,209	2,890	9,254	6,459	15,713	
Pilar	PICOWASCO	SP	469	98		8	8		559	559		2,251	2,251	
Sagbayan	Sagbayan WW	DW			1	13	14	420	593	1,013	2,083	2,953	5,036	
San Isidro	San Isidro LGU	DW	25	9		1	1		90	90		444	444	
Sevilla	Sevilla LGU	SP/DW	8		1	8	9	150	862	1,012	831	4,810	5,641	
Sierra Bullones	Abachanan WW	SP			1		1	413		413	2,042		2,042	
	Anibongan WW	SP	141			1	1		125	125		671	671	
	Bugsoc WWS	SP			1		1	117		117	820		820	
	Canhayag-Uwanan Spring	SP				1	1		76	76		390	390	
	Canta-ub WWS	SP	141			1	1		42	42		240	240	
	Danicop WW	SP				1	1		192	192		980	980	
	Dusita WW	SP				1	1		45	45		198	198	
	Lataban WWS	SP				1	1		96	96		518	518	
	Magsaysay WW	SP				1	1		84	84		480	480	
	Matin-ao WWS	SP	9		1		1	262		262	1,506		1,506	
	San Isidro WWS	SP	9			1	1		253	253		1,428	1,428	
	Sierra Bullones WWS	SP	1,099	91	2	5	7	529	437	966	3,104	2,564	5,668	
	Sta. Cruz	SP				1	1		77	77		452	452	
	Villa Garcia WW	SP			1	1	2		109	109		569	569	
	<b>Municipal Total</b>	SP	1,398	72	6	15	21	1,321	1,536	2,857	7,472	8,490	15,962	
Sikatuna	Poblacion I	DW	170	100	1		1	187		187	931		931	
	Sikatuna LGU	DW				6	6		426	426		2,383	2,383	
	<b>Municipal Total</b>		170	100	1	6	7	187	426	613	931	2,383	3,314	
Tagbilaran City (Capital)	Bohol Water Utilities	DW			14		14	9,800		9,800	49,000		49,000	
	Tagbilaran City WWS	DW	2,231	100	2		2	3,484		3,484	20,896		20,896	
	<b>Municipal Total</b>	DW	2,231	100	16		16	13,284		13,284	69,896		69,896	
Talibon	Talibon Water District	DW	425	97	2	5	7		722	722		4,123	4,123	
Trinidad	Trinidad	SP/DW	90	79	1	1	2	143	29	172	786	160	946	
Tubigon	Panadtaran WWS	SP/DW	388			1	1		100	100		500	500	
	Panaytayon WW	DW			1		1	170		170	1,100		1,100	
	Pinayagan WWS	DW			1		1	197		197	1,787		1,787	
	Tubigon WWS	SP/DW	800	100	5	5	10	1,210	445	1,655	6,692	2,461	9,153	

Municipality City	Service Providers (Operating Body)	Water Consumption			Service Coverage									
		Type of Water Source <sup>1</sup>	Water Consumption (cu.m/day)	Domestic Supply (%)	No. of Brgys. Served			No. of Household Served			No. of Population Served			
					Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	
	Villanueva-Cahayag WW	DW				2		2		119	119		1,470	1,470
<b>Municipal Total</b>		SP/DW	1,188	67	7	8	15	1,577	664	2,241	9,579	4,431	14,010	
Ubay	Ubay Mun. WWS				3	5	8	485	481	966	2,425	2,405	4,830	
	UWASCO				3	5	8	637	859	1,496	3,203	4,320	7,523	
<b>Municipal Total</b>					6	10	16	1,122	1,340	2,462	5,628	6,725	12,353	
Valencia	Valencia LGU	SP	519	96	2	33	35	413	1,990	2,403	2,218	11,084	13,302	
<b>Provincial Total</b>			30,219	2281	136	366	502	37,027	38,893	75,920	206,056	226,358	432,414	

1/ Type of Water Source: DW – Deep Well; Sur – Surface Water (River); SP – Spring; IG – Infiltration Gallery

Table 17. Existing Water Districts, Bohol Province

Water Service Provider	Number of Connections						Production (cu. m/mon)	Accounted for Water (cu. m/mon)
	Domestic	Institutional	Commercial	Industrial	Total	Metered		
Clarín Water District	1,128				1,128	1,128	38,232	17,820
Talibon Water District	722		80	3	805	805	17,940	14,841

Table 18. Existing Level II Systems, Bohol Province

Municipality/ City	Water Service Provider	Service Coverage								
		No. of Brgys. Served			No. of Household Served			No. of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Anda	Anda Mun. Waters		6	6		190	190		1,125	1,125
Antequera	Antequera WWS	1	15	16	15	175	190	79	847	926
Baclayon	San Roque		1	1		15	15		76	76
Balilihan	Balilihan LGU		3	3		75	75		409	409
Batuan	Cabacnitan		1	1		110	110		560	560
	Catigdas		1	1		20	20		100	100
	Garcia		1	1		35	35		178	178
	Poblacion Norte	1		1	175		175	950		950
	Poblacion Vieja		1	1		65	65		331	331
	Quezon		1	1		35	35		178	178
	San Jose	1		1	20		20	109		109
<b>Municipal Total</b>		2	5	7	195	265	460	1,059	1,347	2,406
Bilar	Bilar LGU	1	5	6	25	125	150	135	708	843
Candijay	Abihilan		1	1		170	170		938	938
	Anoling		1	1		110	110		607	607
	Boyo-an		1	1		170	170		938	938
	Cadapdapan		1	1		30	30		166	166
	Canawa		1	1		100	100		552	552
	Luan		1	1		115	115		635	635
	Lungsoda-an	1		1	85		85	490		490
	Pagahat		1	1		24	24		133	133
	Tambongan		1	1		55	55		300	300
	Tubod		1	1		70	70		386	386
<b>Municipal Total</b>		1	9	10	85	844	929	490	4,655	5,145
Carmen	ACWSA		1	1		60	60		332	332
	Buenos Aires		1	1		50	50		277	277
<b>Municipal Total</b>			2	2		110	110		609	609

Municipality/ City	Water Service Provider	Service Coverage								
		No. of Brgys. Served			No. of Household Served			No. of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Catigbian	Bongbong BWSA		1	1		35	35		183	183
	Libertad Sur		1	1		25	25		131	131
<b>Municipal Total</b>			2	2		60	60		314	314
Clarín	Bontud LGU		1	1		30	30		151	151
	Katipunan Water Assn.		1	1		35	35		176	176
	Mataub Water Assn.		1	1		60	60		301	301
	SISILAMCO (PO)		1	1		75	75		376	376
<b>Municipal Total</b>			4	4		200	200		1,004	1,004
Danao	Hibale		1	1		30	30		123	123
	Remedios		1	1		20	20		82	82
<b>Municipal Total</b>			2	2		50	50		205	205
Dauis	Biking		1	1		145	145		1,302	1,302
	Bingag		1	1		55	55		494	494
	Dao		1	1		145	145		1,302	1,302
	San Isidro		1	1		210	210		1,886	1,886
	Tabalong		1	1		15	15		135	135
<b>Municipal Total</b>			5	5		570	570		5,119	5,119
Duero	Imelda		1	1		35	35		178	178
	Taytay		1	1		40	40		203	203
<b>Municipal Total</b>			2	2		75	75		381	381
Inabanga	Inabanga LGU	1	9	10	55	385	440	281	2,002	2,283
Getafe	Getafe LGU	3	1	4	75	30	105	179	180	359
Loay	Palo	1		1	69		69	276		276
	Sagnap		1	1		60	60		320	320
	Tambangan		1	1		125	125		625	625
	Tangcasan Sur		1	1		105	105		561	561
<b>Municipal Total</b>		1	3	4	69	290	359	276	1,506	1,782
Loboc	Agape WWS		1	1		100	100		553	553
	Bonbon Lower		1	1		10	10		58	58
	Cambance WWS		1	1		65	65		378	378
	Candabong WWS		1	1		40	40		232	232
	Candasag WWS		1	1		40	40		232	232
	Oy WWS		1	1		90	90		523	523
<b>Municipal Total</b>			6	6		345	345		1,976	1,976
Mabini	Abad Santos		1	1		35	35		191	191
	Baybayon	1		1	50		50	264		264
	Minol		1	1		20	20		109	109
	San Jose	1		1	20		20	109		109
	San Rafael		1	1		30	30		164	164
	Tangkigan	1		1	30		30	158		158
<b>Municipal Total</b>		3	3	6	100	85	185	531	464	995
Sagbayan	Calangahan WW		1	1		50	50		249	249
San Isidro	Abehilan		1	1		25	25		123	123
	Baryong Daan		1	1		30	30		148	148
	Baunos		1	1		20	20		99	99
	Cabanugan		1	1		30	30		148	148
	Caimbang		1	1		60	60		296	296
	Cambansag		1	1		75	75		370	370
	Candungao		1	1		35	35		173	173
	Cansague Norte		1	1		30	30		148	148
	Cansague Sur		1	1		10	10		49	49
	Causwagan Sur		1	1		30	30		148	148
	Masonoy		1	1		40	40		197	197
	Poblacion		1	1		25	25		123	123
	<b>Municipal Total</b>			12	12		410	410		2,022

Municipality/ City	Water Service Provider	Service Coverage								
		No. of Brgys. Served			No. of Household Served			No. of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
San Miguel	Corazon		1	1		54	54		270	270
	Poblacion		1	1		25	25		123	123
	San Jose Water Assn.		1	1		60	60		375	375
<b>Municipal Total</b>			3	3		139	139		768	768
Sierra Bullones	Anibongan WW		1	1		15	15		87	87
	Cahayag		1	1		20	20		116	116
	Canlangit WW		1	1		60	60		349	349
	Casilay WW		1	1		20	20		116	116
	Danicop WW		1	1		30	30		174	174
	Dusita WW		1	1		30	30		174	174
	La Union WW		1	1		20	20		116	116
	Magsaysay WW		1	1		40	40		232	232
	Man-od		1	1		120	120		697	697
<b>Municipal Total</b>			9	9		355	355		2,061	2,061
Trinidad	TMDA	1	1	2	60	10	70	329	55	384
Tubigon	Banlasan WWS		2	2		50	50		258	258
	Cawayanan WWS		1	1		85	85		439	439
	Genonocan WWS		1	1		20	20		103	103
	Ilijan Norte WW	1		1	55		55	292		292
	Ilijan Sur WWS		1	1		90	90		465	465
	Libertad		1	1		40	40		200	200
	Macaas WS	1		1	150		150	795		795
	Matabao WWS		1	1		15	15		78	78
	Pandan WW Assn.	1		1	75		75	398		398
	Talenceras WWS		1	1		35	35		181	181
	Tan-awan WW		1	1		45	45		233	233
<b>Municipal Total</b>		3	9	12	280	380	660	1,485	1,957	3,442
Ubay	Ubay Mun. Water Sys.	3	2	5	105	10	115	525	50	575
Valencia	Valencia LGU		19	19		285	285		1,587	1,587
<b>Provincial Total</b>		20	139	159	1064	5528	6592	5369	31676	37045

Table 19. Summary of Water Demand Projections for the Whole Province of Bohol

Demand Category	Demand (cumd)					
	2010	2015	2020	2025	2030	2035
Domestic	59,985	94,789	112,526	131,073	143,411	152,195
Commercial/Industrial	4,007	6,000	13,158	15,480	16,543	17,273
Institutional	2,996	3,272	3,965	5,490	5,790	6,024
Tourism	1,954	3,387	3,675	5,249	5,249	5,249
Industrial Estate	-	11,985	21,420	21,420	21,420	22,270
Total Water Demand	68,942	119,433	154,744	178,712	192,413	203,011
Non-Revenue Water	37,122	29,858	38,686	44,678	48,103	50,753
Average Daily Demand	106,064	149,291	193,430	223,390	240,516	253,764
Maximum Day Demand	134,499	188,924	244,840	281,637	303,223	319,906
<b>Yearly Demand (mcm/yr)</b>	<b>38.71</b>	<b>54.49</b>	<b>70.60</b>	<b>81.54</b>	<b>87.79</b>	<b>92.62</b>

Source: Bohol Integrated Water Supply System Master Plan

**Table 20. Irrigation Development Status And Program**  
As of December 31, 2008

<b>A. STATUS</b>	<b>Area (Hectares)</b>	<b>Percentage (%)</b>
1. Total Land Area (Hectares)	411,726	
2. Arable (Hectares)	256,400	62.27%
3. Riceland Area (Hectares)	36,544	8.88%
4. Potential Irrigable Area (Hectares)	40,800	9.91%
5. Firmed-up Service Area of about 287 existing CIS and 3 National Irrigation System	21,698	53.18%
6. Irrigation Development Status		<b>53.18%</b>
<b>B. EXISTING DEVELOPMENT</b>		
<b><u>Category</u></b>	<b><u>Area</u> (Hectares)</b>	<b><u>Percentage</u> (%)</b>
1. Communal Irrigation System	11,438	28.03
2. National Irrigation System		
a. Capayas Irrigation System	750	1.84
b. Bohol Irrigation System (Stage I)	4,960	12.16
c. Bohol Irrigation System (Stage II)	4,550	11.15
<b>Sub - Total</b>	<b>21,698</b>	<b>53.18</b>
<b>C. PROGRAM</b>		
1. Communal Projects		
a. Small Reservoir Irrigation Projects	13,460	32.99
b. Pumps and Farm Ponds	2,192	5.37
2. National Projects		
a. BHIP – Stage III	3,450	8.46
<b>Sub - Total</b>	<b>19,102</b>	<b>46.82</b>
<b>OVERALL TOTAL</b>	<b>40,800</b>	<b>100%</b>

Source : NIA, 2008

Table 21. Location and Area of Mangrove Forests and Fishponds in Bohol

Municipality	Mangrove Area (Has)	Fishpond Area (Has)
1. Alburquerque	737.50	
2. Anda	400.00	
3. Calape	489.00	595.40
4. Candijay	1,041.00	554.00
5. Clarin	199.50	103.00
6. Cortes	164.22	41.34
7. Dausi	25.00	
8. Getafe	2,981.50	
9. Inabanga	806.70	583.30
10. Loay	304.96	15.04
11. Loon	601.70	71.00
12. Mabini	809.47	290.53
13. Maribojoc	287.45	143.84
13. Pres. Garcia	1,584.14	456.40
14. Tagbilaran City	55.25	11.75
15. Talibon	2,782.00	382.00
16. Trinidad	230.00	221.00
17. Tubigon	141.00	108.00
18. Ubay	2,647.03	590.07
<b>Total</b>	<b>16,287.42</b>	<b>4,166.67</b>

Source: Bohol Ecological Profile DENR Land Classification 2009

Table 22. **Mangrove Sites in Bohol**

Name of Wetland	Type
Inabanga Mangroves	estuary, intertidal, mudflats, mangrove forest, river aquaculture ponds
Getafe Mangroves	mangrove forest, intertidal mudflats
Handayan Mangroves	offshore island, mangrove forest, intertidal sunflats
Banacon Mangroves	offshore island, mangrove forest, intertidal sandflat
Bansan Mangroves	offshore island, mangrove forest, tidal sandflat
Trinidad Mangroves	inland mangrove forest, tidal sandflat, mudflat, estuary, rivers, creeks fishponds
Lapinig Island Mangroves	offshore islands, mangrove forest, fishpond, river
Cabulao Mangroves	offshore islands, mangrove forest, estuary, mudflats
Cogtong Mangroves	offshore islands, mangrove forest, estuary, mudflats
Loay Mangroves	mangrove forest, estuary, nipa, swamp, river
Maribojoc Mangroves	estuary, tidal mudflats, mangrove forest, fishponds
Calape Mangroves	estuary, tidal mudflats, sandflats, mangrove forest aquaculture ponds
Cogtong Bay	vast complex of mangrove forest and rivers, some are still intact crocodylus porosus, varanus salvador, hydrossaurus potulosus and denodrocygna arcuata are still present threatened with fishpond conversion
Cabulao Bay	undisturbed, vast and diverse mangrove forest crocodylus porosus, ducks and herons are present possibly a nursery and breeding ground for fish and crustaceans
Maribojoc Bay	extensive and diverse mangrove forest/river complex under threat from fishpond conversion possibly for coastal fishing possibly a key site for migratory birds

Source: Bohol Ecological Profile DENR 1992

Table 23. **Protected Areas in Bohol (NIPAS Areas)**

Name Of Protected Areas	Date Of Proclamation	Location	Area (Ha.)
1. Wahig Inabanga River Watershed Forest Reserve	PP 223	Municipalities of Pilar, Sierra Bullones, Carmen, Jagna, Duero, Sagbayan, Dagohoy, Danao, Buenavista, Inabanga, Getafe, Talibon, Trinidad and San Miguel	14,000 subject to actual ground verification
2. Talibon Group of Islands Protected Seascape	PP 2151 (Mangrove Wilderness Area) June 1999	Islands of Sag, Banbanon, Bansaon and Tambu, all of the municipality of Talibon	6,455
3. Candijay Group of Islands Strict Nature Preserve	PP 2151 (Mangrove Wilderness Area)	Islets of Calanggaman, Catiil, Tabangdio and Lumisli Islet of Candijay and Mabini	For verification
4. Candijay Protected Seascape/Landscape	PP 2152 (Mangrove Swamp Forest Reserve)	Cogtong, Panas, Candijay, Bohol and Badiang, Anda, Bohol	For verification
5. C.P.G. Protected Seascape/ Landscape	PP 2151 & 2152 (Wilderness Area & Mangrove Swamp Forest Reserve) December 29, 1981	Aguining, Baud, Basiao, Canmangao, Lapinig Island, Villa Milagrosa	446.04
6. Inabanga Group of Island Strict Nature Reserve	PP 2151(Wilderness Area)	Islets of Pangahoykahoyan, and Bugatusan, all of Inabanga	534
7. Inabanga Protected Seascape/Landscape	PP 2152 (Mangrove Swamp Forest Reserve)	Hambungan, Fatima, Lawis, Sto. Niño and Bugang, all of Inabanga	2,045
8. Ubay Protected Seascape and Landscape	PP 2152 (Mangrove Swamp Forest Reserve) December 29, 1981	Biabas, Cagting, Cuya, Fatima, Juagdan, Pangpang and Tintinan Island, all of Ubay	1,564

Name Of Protected Areas	Date Of Proclamation	Location	Area (Ha.)
9. Getafe Group of Islands Protected Seascape/Landscape	PP 2151 & 2152 (Wilderness Area and Mangrove Swamp Reserve)	Jandayan Norte and Sur, Handumon, Tuy-oran, Alumar, Banacon Is, Jagoliao Is, Nasingin Is, Mahanay Is, all of Getafe	4,785
10. Chocolate Hills Natural Monument	PP 1031 February 26, 2003	Municipalities of Batuan, Carmen, Sagbayan, Sierra-Bullones, Valencia and Bilar	19,410
11. Loboc Watershed Forest Reserve	PP 450	Municipalities of Bilar, Batuan, Carmen, Balilihan, Sierra-Bullones, Lila, Loboc, Sevilla	10,387
12. Alejawan- Cansuhay Anibongan River Watershed Forest Reserve	PP 881	Boctol, Lonoy, Mayana, Odiong, Jagna, Bohol and Angilan, Anibongan, Bangwalog, Cansuhay, Taytay, Payao, San Antonio, San Pedro, Duero, Bohol	3,620
13. Albur-Loay-Loboc Protected Landscape and Seascape	PP 293 April 23, 2000	Bahí, San Agustin, Western Poblacion, Eastern Poblacion, Sta. Felomina, Tagbuane, Albuquerque Alegria Sur, Sagnap, Palo, Villalimpia, Loay Agape, Ugpong, Canlasid, Poblacion (Western part), Loboc	156
14. Sandingan-Cabilao Mangrove Swamp Forest Reserve	PP 2152	Basdio, Calayugan Sur, Calayugan Norte, Canigaan, Sondol, Ubujan, Mocpoc Sur, Sandingan, Loon, then Talisay, Cabacungan, Cambaguing, Pantudland, Looc, Cabilao, Loon	1,335

Name Of Protected Areas	Date Of Proclamation	Location	Area (Ha.)
15. Tubigon Group of Islands Wilderness Area	PP 2151	Inanuran Island, Budlaan Island, Hayaan Island, Batasan Island, Tubigon	40
16. Rajah Sikatuna Protected Landscape	PP 127	Municipalities of Bilar, Carmen, S-Bullones, Garcia Hernandez, Valencia, Batuan and Dimiao	10,450
17. Calape Group of Island Strict Nature Reserve	PP 2151	Banihan, Poom, Calape	153
18. Pangangan Island Mangrove Swamp Forest Reserve	PP 2152	Lawis, Talisay, Kinabag-an, Looc, Magtongtong, Madangog, Lomboy, Kahayag, all of Pangangan Island, Calape	385.66
19. Panglao Island Protected \seascape	PP 426 July 22, 2003	Poblacion, Songcolan, Totolan, Daus and Poblacion, Doljo, Panglao	
20. Clarin Group of Island Protected Landscape/Seascape	PP 2151	Cabgan, Cancostino, Maagpit, Tabaon, Silo-siloan, Clarin	
<b>Total</b>			<b>75,766</b>

Source : PENRO, DENR Tagbilaran 2008 (Profile NIPAS)

Table 24. Marine Parks and Reserve Areas in Bohol Province

Name of Area	Rationale
Danajon Bank Marine Park	<ul style="list-style-type: none"> <li>&gt; slope on the outer barrier reef has large reef dwelling fishes, rays and sharks</li> <li>&gt; unique invertebrates are abundant</li> <li>&gt; with unique double barrier reef morphology</li> <li>&gt; site of eucheuma farm</li> <li>&gt; threatened by illegal fishing specially blast fishing and coral gathering</li> </ul>
Panglao Municipal Reserve	<ul style="list-style-type: none"> <li>&gt; area has very good coral cover of diverse kinds</li> <li>&gt; whales, rays, turtles and sharks are occasional visitors of the reef areas</li> <li>&gt; poison, dynamite fishing and over collection threaten the reef resources</li> </ul>
Balicasag Municipal Reserve	<ul style="list-style-type: none"> <li>&gt; the slope supports interesting invertebrates</li> <li>&gt; underwater caves are present</li> <li>&gt; area has good coral cover</li> <li>&gt; conus, gloriamaris, cypraea quatata and c. valencia are rare shells that are present</li> <li>&gt; fishing and shell collection are the main livelihood of the islanders which also threaten the reef resources</li> <li>&gt; threatened with poisoning, acanthaster predation and dynamite fishing</li> </ul>
Guindulman Municipal Marine Park	<ul style="list-style-type: none"> <li>&gt; unique coral reef cover</li> </ul>
Tagbilaran Marine Reserve	<ul style="list-style-type: none"> <li>&gt; beautiful coral reef cover</li> <li>&gt; site of artificial reef</li> </ul>

Source: Bohol Ecological Profile DENR 1992

Table 25. Summary of Geohazard Assessment in Bohol: September 2007

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
1. Alburquerque	11	4	Cantiguib	Moderate	1	W-Poblacion	Rare/low
			Dangay	Low to moderate			
			Basacdacu	Low			
			Toril	Low			
2. Alicia	15	14	Cagongcagong	High	8	Cambaol	Seasonal flooding
			Sudlon	High		Cabatang	Seasonal flooding
			Del Monte	Moderate		Cayacay	Sheet and seasonal flooding
			La Hacienda	Moderate		Napo	Seasonal flooding
			Napo	Moderate		Pagahat	Rare/low
			Pagahat	Moderate		Putlongcam	Seasonal flooding
			Untaga	Moderate		Progreso	Sheet and seasonal flooding
			Cambaol	Low to moderate		Poblacion	Sheet flooding
			Mahayag	Low			
			Putlongcam	Low			
			Cabatang	None to low			
			Cayacay	None to low			
			Katipunan	None to low			
Progreso	None to low						
3. Anda	6	4	Buena Suerte	Moderate	1	Badiang	Seasonal flooding
			Katipunan	Low to moderate		Poblacion	Coastal flooding during heavy rains
			Candabong	Low to moderate		Suba	Coastal flooding during heavy rains
			Tawid	Low		Tawid	Flah flooding in low-lying areas
4. Antequera	21	14	Canlaas	Moderate	11	Angilan	Seasonal flooding
			Quinapon-an	Moderate		Bantolinao	Seasonal flooding
			Obujan	Low to moderate		Bicahan	Seasonal flooding
			Angilan	Low		Bitaugan	Seasonal flooding
			Bantolinao	Low		Bungahan	Seasonal flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Bicahan	Low		Celing	Rare/low
			Bitaugan	Low		Danicop	Seasonal flooding
			Bungahan	Low		Mag-aso	Seasonal flooding
			Danao	Low		Sto. Rosario	Seasonal flooding
			Mag-aso	Low		Tupas	Seasonal flooding
			Sto. Rosario	Low		Viga	Seasonal flooding
			Tabuan	Low			
			Tupas	Low			
			Viga	Low			
5 Baclayon	15	13	Cambanac	Moderate	6	Cambanac	Rare/low
			Don Juan San	Moderate		Don Juan San	Rare/low
			Buenaventura			Buenaventura	
			Payahan	Moderate		Laya	Rare/low
			Dasitam	Low to moderate		San Roque	Rare/low
			Landican	Low to moderate		San Vicente	Rare/low
			Libertad	Low to moderate		Taguihon	Rare/low
			Tanday	Low to moderate			
			Laya	None to low			
			Montaña	None to low			
			San Roque	None to low			
			San Vicente	None to low			
			Sta. Cruz	None to low			
			Taguihon	None to low			
6. Balilihan	15	15	Del Carmen Este	Moderate			
			Del Carmen Sur	Low to moderate			
			Boctol	Low			
			Candasig	Low			
			Cantomimbo	Low			
			Datag Sur	Low			
			Del Carmen Norte	Low			
			Del Carmen Weste	Low			
			Dorol	Low			
			Maslog	Low			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Magsija	Low			
			Sal-ing	Low			
			San Isidro	Low			
			San Roque	Low			
			Datag Norte	None to low			
7. Batuan	15	5	Aloja	Moderate	4	Cabacnitan	Seasonal flooding
			Cambacay	Low		Cantigdas	Seasonal flooding
			Rizal	Low		Poblacion Sur	Seasonal flooding
			Rosariohan	Low		Sta. Cruz	Seasonal flooding
			Garcia	None to low			
8. Bien Unido	7		Poblacion	None	1	Tuboran	Seasonal flooding
			Puerto San Pedro	None			
			Tuboran	None			
			Nueva Estrella	None			
			Liberty	None			
			Mandawa	None			
			Esperanza	None			
9. Bilar	17	11	Cambigsi	Low to moderate	14	Bugang Norte	Rare/low
			Bonifacio	Low		Dagohoy	Seasonal flooding
			Bugang Norte	Low		Cabacnitan	Moderate flooding
			Dagohoy	Low		Owac	Rare/low
			Cabacnitan	Low		Subayon	Rare/low
			Owac	Low		Yanaya	Seasonal flooding
			Subayon	Low		Bugang Sur	Rare/low
			Yanaya	Low		Campagao	Rare/low
			Bugang Sur	None to low		Cansumbol	Rare/low
			Campagao	None to low		Quezon	Rare/low
			Cansumbol	None to low		Riverside	Rare/low
						Rizal	Rare/low
						Roxas	Rare/low
						Zamora	Rare/low

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
10 Buenavista	33	23	Magkaya	High	7	Cambus-oc	Sheet flooding
			Bago	High		Lapacan Norte	Seasonal flooding
			Cantores	High		Lapacan Sur	Flooding due to drainage system
			Cawag	Moderate		Cruz	Low
			Nueva Granada	Moderate		Panghagban	Flooding due to overfloe of 2 rivers
			Nueva Montaña	Moderate		Merryland	Sheet flooding
			Anonang	Moderate		Cangawa	Sheet flooding
			Lusong	Moderate			
			Overland	Moderate			
			Cambus-oc	Moderate			
			Bantuan	Moderate			
			Cantuba	Low			
			Baluarte	Low			
			Putingbato	Low			
			Lapacan Norte	Low			
			Lapacan Sur	Low			
			Dait Norte	Low			
			Hunan	Low			
			Cruz	Low			
			Panghagban	Low			
			Catigbian	Low			
			Lubang	Low			
			Rufohill	Low			
			Sweetland	None			
			Cantomogcad	None			
			Buga-ong	None			
			Merryland	None			
			Cambuhat	None			
			Asinan	None			
			Poblacion	None			
			Cangawa	None			
			Bonotbonot	None			
			Bato	None			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
11. Calape	28	10	Sampoangon	High	7	Liboron	Sheet flooding
			Sohoton	High		Ulbujan	Prone to flashfloods
			Camias	High		Abucay Norte	Sheet flooding
			Cabayugan	Moderate		Bentig	Prone to flashfloods
			Cabudburan	Moderate		Calunasan	Prone to flashfloods an creek overflow
			Canguha	Moderate		Abucayan Sur	Seawater flooding
			Banlasan	Moderate		Catmonan	Flashfloods due to overflow of creek
			Tinibgan	Low			
			Mandaug	Low			
			Bonbon	None to low			
			Tultugan	None			
			Liboron	None			
			Sat. Cruz	None			
			Binogawan	None			
			San Isidro	None			
			Ulbujan	None			
			Abucay Norte	None			
			Desamparados	None			
			Madangog	None			
			Looc	None			
			Kahayag	None			
			Lawis	None			
			Labuon	None			
			Bentig	None			
			Lucob	None			
			Calunasan	None			
			Abucayan Sur	None			
			Catmonan	None			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
12. Candijay	15	10	Cambane	High			
			Canawa	Moderate			
			Tubod	Moderate			
			Pagahat	Low to moderate			
			Anoling	Low			
			La Union	Low			
			Luan	Low			
			Can-olin	None to low			
			Poblacion	None to low			
			Cadapdapan	None to low			
13. Carmen	29	11	Buenavista	High	3	El Progreso	Moderate
			Guadalupe	High		Nuva Fuerza	Flooding near creek during intense rain
			Nueva Vida Este	High		Vallehermoso	Flooding greater than 1m depth of purok 5
			Montevideo	Moderate to high			
			La Salvacion	Moderate			
			Montesunteng	Low to moderate			
			La Libertad	Low			
			Montehermoso	Low			
			Nueva Fuerza	Low			
			Nueva Vida Norte	Low			
			Villaflor	Low			
14. Catigbian	22	16	Baang	Moderate to high	6	Ambuan	Seasonal flooding
			Ambuan	Moderate		Baang	Seasonal flooding
			Bongbong	Moderate		Cambailan	Seasonal flooding
			Bagtic	Low to moderate		Hagbuaya	Seasonal flooding
			Mahayag Norte	Low to moderate		Liboron	Seasonal flooding
			Mahayag Sur	Low to moderate		Poblacion Weste	Seasonal flooding
			Alegria	Low			
			Kang-iras	Low			
			Libertad Sur	Low			
			Rizal	Low			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Cambailan	None to low			
			Hagbuaya	None to low			
			Haguilanan	Purok 2,3 High			
			Poblacion	Purok Bugho High			
			Sinakayanan	Purok 1,3 High			
			Poblacion Weste	None			
15. Clarin	18	18	Tontunan	Moderate	8	Katipunan	Seasonal flooding
			Matab	Low to moderate		Danahao	Seasonal flooding
			Buangan	Low to moderate		Bogtongbod	Seasonal flooding
			Cantoyoc	Low to moderate		Nahawan	Seasonal flooding
			Buntod	Low		Caluwasan	Seasonal flooding
			Villaflor	Low		Bacani	Seasonal flooding
			Caboy	Low		Tangaran	Coastal flooding, storm surge
			Katipunan	Low		Bonbon	Flooding due to floodwaters of Bonbon river
			Danahao	Low			
			Poblacion Sur	Low			
			Cabog	None to low			
			Bogtongbod	None to low			
			Nahawan	None to low			
			Caluwasan	None to low			
			Tuibod	None to low			
			Bacani	None to low			
			Buacao	None to low			
			Lajog	None to low			
16. Corella	8	1	Tanday	Low			
17. Cortes	14	8	Malayo Norte	Moderate	2	Malayo Norte	Seasonal flooding
			Malayo Sur	Moderate		Rosario	Rare flooding
			New Lourdes	Moderate			
			Poblacion	Low to moderate			
			Salvador	Low			
			Lourdes	Low			
			Upper Dela Paz	Low			
			Dela Paz	Low			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
18. Dagohoy	14	5	Esperanza	High	1	Poblacion	Purok 2, 6, flooding due to proximity to Wahig River
			Villa Aurora	High			
			Cagawasan	Low			
			Can-oling	Low			
			Estaca	Low			
19. Danao	16	10	Carbon	High	15	Carbon	Rare
			Nahud	High		Cabatuan	Rare
			San Miguel	High		Cantubod	Seasonal flooding
			Tabok	Moderate		Conception	Seasonal flooding
			Cabatuan	Moderate		Hibale	Seasonal flooding
			Conception	Moderate		Magtangtang	Rare
			Sto. Niño	Low		Nahud	Seasonal flooding
			Hibale	Low		Poblacion	Rare
			San Carlos	Low		Remedios	Seasonal flooding
			Dagohoy	Low		San Carlos	Seasonal flooding
						San Miguel	Rare
						Sta. Fe	Seasonal flooding
						Sto. Niño	Seasonal flooding
						Tabok	Rare
						Taming	Rare
20. Dausi	12	1	Catarman	Moderate			
21. Dimiao	26	21	Bauhugan	High	1	Lungsodaan East	Seasonal flooding
			Guinguyuran	High		Lungsodaan west	Seasonal flooding
			Limokon Ilaya	Moderate		West Canayaon	Seasonal flooding
			Cabagakian	Moderate			
			Cambayaon	Moderate			
			Malijao	Moderate			
			Catugasan	Low to moderate			
			Alemania	Low			
			Limokon Ilaod	Low			
			Cambacol	Low			
			Bakilid	Low			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Ile	Low			
			Pangihawan	Low			
			Oac	Low			
			Cadap-agan	Low			
			Canhayupon	Low			
			Lapsaon	Low			
			Cabanbanan	Low			
			Canlambong	Low			
			Guindaguitan	Low			
			Balbalan	Low			
			Tangohay	None			
			Tawid Bitaoag	None			
			Poblacion	None			
			Puangyuta	None			
			Banban	None			
22. Garcia Hernandez	29	21	Cagwang	High	3		
			Datag	Low			
			Pasong	High			
			Catmon	Moderate to high			
			Antipolo	Moderate to high			
			Abijilan	Moderate			
			Basiao	Moderate			
			Candanas	Moderate			
			Candulao	Moderate			
			Estaca	Moderate			
			Sacuan	Moderate			
			Tabuan	Moderate			
			Cupa	Low to moderate			
			Tagbongon	Low to moderate			
			Calma	Low			
			Cambuyo	Low			
			Cayam	Low			
			East Canayaon	Low			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Libertad	Low			
			Malinao	Low			
			Victoria	Barangay proper-Low, Purok 2- High			
23. Gatafe	15	14	Sto. Niño	Moderate	5	Campao Oriental	Seasonal flooding
			Saguise	Low		CPG	Seasonal flooding
			Tugas	Low		Salog	Seasonal flooding
			Corte-Baud	Low		Cabasakan	Seasonal flooding
			Campao Occidental	Low		Tulang	Seasonal flooding
			Campao Oriental	Low			
			Buyog	Low			
			Taytay	Low			
			CPG	Low			
			Salog	Low			
			Cabasakan	Low			
			San Jose	Low			
			Cangmundo	Low			
			Tulang	None to low			
			Poblacion	None			
24. Guindulman	19	7	Basdio	High	2	Bato	Seasonal flooding
			Biabas	High		Casbu	Seasonal flooding
			Lombog	Moderate			
			Mayuga	Moderate			
			Tabunok	Moderate			
			Bayong	Low			
			Trinidad	None to low			
25. Inabanga	47	14	Riverside	High	29	Riverside	High flooding
			Baguhan	Moderate		Baguhan	Threat of flooding from Inabanga river
			Ilaya	Moderate		Ilaya	Flashfloods due to overflow of Inabanga river
			Lomboy	Moderate		Sua	Low flooding
			Datag	Low		San Jose	Low flooding
			Lapacan Norte	Low		Banahao	Rare
			Anonang	Low		Canlinte	Low flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Sua	Low		Ilihan	Seasonal flooding
			San Jose	Low		Ubujan	Seasonal flooding
			Banahao	Low		Liloan Sur	Flooding due to overflow of Inabanga river
			Canlinte	Low		Luyo	Rare
			Ilihan	Low		Bugang	Seasonal flooding
			Mabuhay	Low		Cagayan	Rare
			Ubujan	Low		Lapacan Sur	Seasonal flooding
			Liloan Sur	None		Cambitoon	Low
			Luyo	None		Maria Rosario	Low
			Bugang	None		Bahan	Low
			San Isidro	None		Dagnawan	Low
			Fatima	None		Tambook	Seasonal flooding
			Dait Sur	None		Lonoy Cainsican	Seasonal flooding
			Liloan Norte	None		Cawayan	Seasonal flooding
			Cagayan	None		Napo	Seasonal flooding
			Nabuad	None		Santo Rosario	Seasonal flooding
			Baogo	None		Santo Niño	Seasonal flooding
			Lapacan Sur	None		Lawis	Seasonal flooding
			Cambitoon	None		Ondol	Seasonal flooding
			Maria Rosario	None		Saa	Seasonal flooding
			Bahan	None		Tungod	Seasonal flooding
			Dagohoy	None		Poblacion	Seasonal flooding
			Tambook	None			
			Lonoy Rama	None			
			Lonoy Cainsican	None			
			Cawayan	None			
			Napo	None			
			U-og	None			
			Santo Rosario	None			
			Badiang	None			
			Cagawasan	None			
			Lutao	None			
			Cogon	None			
			Santo Niño	None			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Lawis	None			
			Ondol	None			
			Saa	None			
			Tungod	None			
			Illaud	None			
			Poblacion	None			
26. Lila	12	3	Calvario	Moderate			
			Jambawan	Moderate			
			Datag	Low			
			Bonkohan Ubos	None			
			Malinao East	None			
			Macalingan	None			
			Candulang	None			
			Poblacion	None			
			Lumanoy	None			
			Tiguis	None			
			La Fortuna	None			
			Taug	None			
27. Loay	24	10	Tayong Oriental	High	11	Palo	Seasonal flooding
			Palo	Moderate		Tangkasan Norte	Seasonal flooding
			Tangkasan Sur	Moderate		Tocdog Ilaya	Rare
			Tangkasan Norte	Moderate		Tocdog Dacu	Seasonal flooding
			Tayong Occidental	Moderate		Agape	Rare
			Tocdog Ilaya	Moderate		Bonbon	Rare
			Alegria Norte	Low		Concepcion	Rare
			Botoc Occidental	Low		Hinawanan	Rare
			Las Salinas Norte	Low		Sagnap	Rare
			Tocdog Dacu	Low		Tambangan	Rare
						Villalimpia	Rare
28. Loboc	28	23	Candasag	High	17	Bahian	Seasonal flooding
			Canlasid	Moderate to high		Camayaan	Seasonal flooding
			Bagumbayan	Moderate		Jimi-lian	Seasonal flooding
			Bahian	Moderate		Poblacion Sawang	Rare

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Cabadiangan	Moderate		Villadolid	Seasonal flooding
			Gotozon	Moderate		Agape	Seasonal flooding
			Jimilian	Moderate		Poblacion Ondol	Seasonal flooding
			Oy	Moderate		Ugpong	Seasonal flooding
			Bugho	Low to moderate		Gotozon	Rare
			Buenavista	Low to moderate		Tigbao	Rare
			Cambanse	Low to moderate		Alegria	Rare
			Ugpong	Low to moderate		Calunasan Sur	Rare
			Agape	Low		Gon-ob	Rare
			Alegria	Low		Oy	Rare
			Bonbon Lower	Low		Taytay	Rare
			Bonbon Upper	Low		Villaflor	Rare
			Candabong	Low			
			Calunasan Norte	Low			
			Gon-ob	Low			
			Quinoguitan	Low			
			Taytay	Low			
			Calunasan Sur	None to low			
			Poblacion Sawang	None to low			
29. Loon	54	40	Quinocoban	Moderate to high	20	Cabadug	Low flooding
			Cabadug	Moderate		Cabug	Low flooding
			Cabug	Moderate		Canmanoc	Low flooding
			Canmanoc	Moderate		Tan-awan	Low flooding
			Tan-awan	Moderate		Tiwi	Low flooding
			Tiwi	Moderate		Tontonan	Low flooding
			Bugho	Moderate		Taytay	Low flooding
			Canhangdon	Low		Cuasi	Low flooding
			Oriental	Low		Song-on	Low flooding
			Cansuaguit	Low		Lintuan	Low flooding
			Panaquilon	Low		Moto Sur	Low flooding
			Bahi	Low		Basdacu	Low flooding
			Nueva Vida	Low		Cogon Sur	Low flooding
			Candaigan	Low		Tangnan	Low flooding
			Cantam-is Bago	Low		Agsoo	Low flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Cantam-is Baslay	Low		Pig-ot	Low flooding
			Biasong	Low		Tubodio	Flooding confine along river channel
			Tontonan	Low		Genomoan	Flooding confine along river channel
			Taytay	Low		Campatud	Low flooding
			Cuasi	Low		Napo	Low flooding
			Song-on	Low			
			Lintuan	Low			
			Moto Sur	Low			
			Basdacu	Low			
			Cogon Sur	Low			
			Tangnan	Low			
			Agsoso	Low			
			Pig-ot	Low			
			Tubodio	Low			
			Tabuan	Low			
			Cantaongon	Low			
			Canmaag	Low			
			Genomoan	Low			
			Campatud	Low			
			Bagacay Saong	Low			
			Bagacay Kawayan	Low			
			Bagacay Katipunan	Low			
			Ticugan	Low			
			Badbad Occidental	Low			
			Badbad Oriental	Low			
			Cansubayon	Low			
			Basac	None			
			Canghangdon Occ.	None			
			Ubayon	None			
			Catagbacan Sur	None			
			Catagbacan Norte	None			
			Catagbacan Handig	None			
			Cantomocad	None			
			Pondol	None			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Napo	None			
			Tubodacu	None			
			Nagtuang	None			
			Bungco	None			
			Cogon Norte	None			
30. Mabini	22	18	Marcelo	High	16	Marcelo	Seasonal flooding
			Baybayon	Moderate		Baybayon	Seasonal flooding
			Lungsodaan	Moderate		Lungsodaan	Seasonal flooding
			Abad Santos	Low to moderate		Paraiso	Rare
			Valaga	Low to moderate		San Jose	Seasonal flooding
			Del Mar	Low		San Roque	Rare
			Concepcion	None to low		Abaca	Seasonal flooding
			Paraiso	Low		San Isidro	Seasonal flooding
			San Jose	Low		Cabidian	Seasonal flooding
			San Rafael	Low		Tambo	Seasonal flooding
			Aguipo	Moderate		Cawayanan	Rare
			Bulawan	Moderate		Poblacion 1	Rare
			Cawayanan	High			
			Cabidian	Brgy. Proper- None, Purok 5-High			
			Poblacion 1	Purok Nangka-High, Brgy. Proper-None			
			Poblacion 2	Purok 3-High			
			Tangkigan	Brgy. Proper- None, Purok 3-High			
			Tambo	Brgy. Proper- None, Purok 6-High			
31. Maribojoc	22	6	Pagnitaan	Moderate	5	Guiwanon	Seasonal flooding
			Candavid	Low to moderate		Jandig	Moderate
			Guiwanon	Low to moderate		Lagtangon	Common Flooding
			Jandig	Low		Punta Cruz	Seasonal flooding
			Lagtangon	Low		Busao	Seasonal flooding
			Punta Cruz	Low			
32. Panglao	10	1	Bulod	Low			
33. Pilar	21	10	Bagacay	High	3	Aurora	Seasonal flooding
			Ilaud	High		Cagawasan	Flooding due to overflow of dam
			Lundag	High		Rizal	Seasonal flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			San Vicente	High			
			Cansungay	Moderate			
			Inaghuban	Moderate			
			La Suerte	Moderate			
			Bayong	Low to moderate			
			Lumbay	Low			
			San Carlos	Low			
34. Pres. Carlos P. Garcia	19	19	Aguining	Low			
			Basiao	Low			
			Baud	Low			
			Bayog	Low			
			Bogo	Low			
			Bonbonon	Low			
			Campamanog	Low			
			Canmangao	Low			
			Kabangkalan	Low			
			Lipata	Low			
			Pitago (Poblacion)	Low			
			Popoo	Low			
			Saguise	Low			
			San Jose	Low			
			San Vicente	Low			
			Santo Rosario	Low			
			Tugas	Low			
			Tugnao	Low			
			Villa Milagrosa	Low			
35. Sagbayan	24	13	Canmaya Diot	Purok 1,5 High	9	Canmaya Diot	Seasonal flooding
			Dagnawan	Purok 3,4,5 High		Calangahan	Rare
			Langtad	Purok 3 High		Canmano	Rare
			Libertad Sur	Low		Poblacion	Rare
			Mantalongon	Low		San Agustin	Rare
			Calangahan	None to low		San Antonio	Rare
			Canmano	None to low		Sta. Cruz	Rare
			Canmaya Centro	None to low		San Vicente Norte	Rare

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Poblacion	None to low			
			San Agustin	None to low			
			San Antonio	None to low			
			Sta. Cruz	None to low			
			San Vicente Norte	None to low			
36. San Isidro	12	8	Candungao	Moderate	3	Baryong Daan	Rare
			Abehilan	Moderate		Caimbang	Rare
			Masonoy	Moderate		Cansague Sur	Rare
			Baryong Daan	Moderate			
			Cabanugan	Low			
			Causwagan	Low			
			Caimbang	Low			
			Cansague Norte	Low			
			Cambansag	None			
			Poblacion	None			
			Cansague Sur	None			
			Baunos	None			
37. San Miguel	18	6	Camanaga	High	2	Caluasan	Flooding with depths less than .5m
			Garcia	Low to moderate		Bugang	Seasonal flooding
			Tomoc	Low			
			Caluasan	Low			
			Capayas	Low			
			San Jose	Low			
38. Sevilla	13	11	Bayahawan	Low	4	Ewon	Rare
			Licolico	Low		Calinginan Norte	Rare
			Cabancalan	Low		Calinginan Sur	Seasonal flooding
			Calinga-an	Low		Poblacion	Rare
			Guinob-an	Low			
			Ewon	Low			
			Cambagui	Low			
			Calinginan Norte	Low			
			Lagtangan	Low			
			Calinginan Sur	Low			

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Loggob	Low			
			Poblacion	None			
			Magsaysay	None			
39. Sierra Bullones	21	13	Bugsoc	High	10	Bugsoc	Seasonal flooding
			Danicop	High		Danicop	Seasonal flooding
			Casilay	Moderate		La Union	Rare
			La Union	Moderate		Poblacion	Seasonal flooding
			Magsaysay	Moderate		Salvador	Rare
			San Isidro	Low to moderate		San Agustin	Rare
			Cahayag	Low		San Isidro	Rare
			Cantaud	Low		San Jose	Rare
			Dusita	Low		San Juan	Rare
			Lataban	Low		Sta. Cruz	Seasonal flooding
			Matin-ao	Low			
			Nan-od	Low			
			Sta. Cruz	Low			
40. Sikatuna	8	3	Abucay Sur	None to low			
			Can-agong	None to low			
			Libjo	Brgy Proper-None Mountainous area-High			
41. Talibon	17	4	Magsaysay	Moderate	14	Zamora	Flooding with low depths
			Sikatuna	Low		Burgos	Flooding with low depths
			Zamora	Low		Santo Niño	Low flooding
			Burgos	Low		San Roque	Rare
			Tanghaligue	None		San Pedro	Low flooding
			Santo Niño	None		San Jose	Low flooding
			San Roque	None		San Isidro	Rare
			San Pedro	None		San Francisco	Low flooding
			San Jose	None		San Carlos	Low flooding
			San Isidro	None		Rizal	Low flooding
			San Francisco	None		Balintawak	Low flooding
			San Carlos	None		Bagacay	Low flooding
			San Agustin	None		Poblacion	Low flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Rizal	None			
			Balintawak	None			
			Bagacay	None			
			Poblacion	None			
42. Trinidad	19	12	Soom	Low	9	Manuel Roxas	Seasonal flooding
			Manuel Roxas	Low		Mahagbu	Seasonal flooding
			Mahagbu	Low		Guinobatan	Seasonal flooding
			La Union	Low		M. Cabiguhan	Seasonal flooding
			Guinobatan	Low		Hinlayagan Ilaud	Seasonal flooding
			M. Cabiguhan	Low		San Isidro	Seasonal flooding
			Hinlayagan Ilaud	Low		Kauswagan	Seasonal flooding
			Hinlayagan Ilaya	Low		Catoogan	Seasonal flooding
			Bongbong	Low		Santo Tomas	Seasonal flooding
			Banlasan	Low			
			San Isidro	Low			
			Kauswagan	Low			
			Catoogan	None			
			Tagum Sur	None			
			Tagum Norte	None			
			La Victoria	None			
			Kinan-oan	None			
			Santo Tomas	None			
			Poblacion	None			
43. Tubigon	28	12	Banlasan	Moderate to high	16	Banlasan	Seasonal flooding
			Tanawan	Moderate to high		Bunacan	Low flooding
			Genonocan	Moderate		Panadtaran	Seasonal flooding
			Ilihan Sur	Moderate		Ubojan	Low flooding
			Bunacan	Moderate		Telenceras	Seasonal flooding
			Panadtaran	Low		Bosongon	Low flooding
			Ubojan	Low		Libertad	Low flooding
			Telenceras	Low		Buenos Aires	Low flooding
			Bosongon	Low		Cawayanan	Low flooding
			Libertad	Low		Potohan	Seasonal flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Buenos Aires	Low		Pinayagan Sur	High flooding
			Cawayanan	Low		Centro	Low flooding
			Panaytayon	None		Tinangnan	Low flooding
			Matabao	None		Macaas	Low flooding
			Guiwanon	None		Cabulijan	Low flooding
			Potohan	None		Pooc Occidental	Low flooding
			Pinayagan Norte	None			
			Pinayagan Sur	None			
			Pandan	None			
			Cahayag	None			
			Villanueva	None			
			Ilihan Norte	None			
			Centro	None			
			Pooc Oriental	None			
			Tinangnan	None			
			Macaas	None			
			Cabulijan	None			
			Pooc Occidental	None			
44. Ubay	43	9	Juagdan	Moderate	16	Lomangog	Low flooding
			Lomangog	Low		Governor Boyles	Flooding due to overflow of irrigation canal
			Imelda	Low		Achila	Seasonal flooding
			San Francisco	Low		Camalian	High flooding
			Ilihan	Low		Tubog	Moderate
			Villa Teresita	Low		Humayhumay	Rare
			Los Angeles	Low		Bongbong	Low flooding
			Governor Boyles	Low		San Pascual	Low flooding
			Buenavista	Low		California	Low flooding
			Tapon	None		Gabi	Low flooding
			Poblacion	None		San Vicente	Low flooding
			Fatima	None		Bulilis	Low flooding
			Katarungan	None		Bay-ang	Low flooding
			Bood	None		Pag-asa	Low flooding
			Casate	None		Calangaman	Low flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			Achila	None		Benliw	Flooding due to overflow of Casitac creek
			Camambugan	None			
			Tuburan	None			
			Camalian	None			
			Tubog	None			
			Humayhumay	None			
			Pangpang	None			
			Bongbong	None			
			San Pascual	None			
			California	None			
			Gabi	None			
			San Vicente	None			
			Bulilis	None			
			Hambabaoran	None			
			Bay-ang	None			
			Pag-asa	None			
			Calangaman	None			
			Union	None			
			Sentinila	None			
			Tapal	None			
			San Isidro	None			
			Sinandigan	None			
			Cuya	None			
			Guintaboan	None			
			Cagting	None			
			Biabas	None			
			Benliw	None			
			Tipolo	None			
45. Valencia	35	29	Pangi-an	High	12	Anas	Seasonal flooding
			Balingasao	Moderate to high		Adlawan	Seasonal flooding
			Anoyon	Moderate		Canduaon	Seasonal flooding
			Banderahan	Moderate		Occidental	Seasonal flooding
			Canlusong	Moderate		Canduaon	Seasonal flooding
			Ginopolan	Moderate		Oriental	Seasonal flooding

Name of Municipality	# of Barangays Assessed	Number of Barangays with Hazards Susceptibility					
		Landslide			Flooding		
		# of Brgys	Location	Susceptibility	# of Brgys	Location	Susceptibility
			La Victoria	Moderate		Canlusong	Seasonal flooding
			Loctob	Moderate		Canmanico	Seasonal flooding
			Magsaysay	Moderate		Cutcutan	Seasonal flooding
			Cutcutan	Low to moderate		Danao	Seasonal flooding
			Lantang	Low to moderate		Pob-or	Seasonal flooding
			Taug	Low to moderate		Poblacion	Seasonal flooding
			Tausion	Low to moderate		Occidental	Seasonal flooding
			Anas	Low		Simang	Seasonal flooding
			Anonang	Low		Taug	Seasonal flooding
			Botong	Low			
			Buyog	Low			
			Cansibao	Low			
			Catug-an	Low			
			Danao	Low			
			Genoveva	Low			
			Limokon	Low			
			Marawis	Low			
			Maubo	Low			
			Nailo	Low			
			Omjon	Low			
			Simang	Low			
			Taytay	Low			
			Ticum	Low			
46. Tagbilaran City	13		Poblacion 3	Presence of sinkhole			
			Bool	Presence of sinkhole			
			Mansasa	Presence of sinkhole			
			Cabawan	Presence of sinkhole			
			Tiptip	Presence of sinkhole			
			Cogon	Presence of sinkhole			
<b>Total</b>	<b>930</b>	<b>520</b>			<b>302</b>		

Source: Mines and Geoscience Bureau (MGB-DENR 7), September 2007

Table 26. Protected Areas for Agriculture Development, Bohol Province

CITY/MUNICIPALITY	LAND CATEGORY (Hectares)							TOTAL
	A	B	C	D	E	F	G	
1 Alburquerque	-	-	-	1,360	-	710	-	2,070
2 Alicia	638	682	610	3,350	-	1,968	-	7,248
3 Anda	50	-	1,254	-	492	-	-	1,796
4 Antequera	86	-	57	1,287	-	2,439	-	3,869
5 Baclayon	-	-	-	144	-	1,329	-	1,473
6 Balilihan	293	78	230	1,461	-	2,295	-	4,357
7 Batuan	1,128	87	672	422	-	1,374	8	3,691
8 Bien Unido	-	-	2,132	1,434	-	578	42	4,186
9 Bilar	899	-	1,006	1,301	-	1,080	-	4,286
10 Buenavista	-	234	-	1,304	-	1,612	-	3,150
11 Calape	298	79	46	2,298	-	2,698	67	5,486
12 Candijay	1,127	520	46	1,035	-	1,820	240	4,788
13 Carmen	1,450	-	4,250	4,164	-	4,756	-	14,620
14 Catigbian	88	293	2,303	500	-	2,912	-	6,096
15 Clarin	277	-	1,240	893	-	1,562	-	3,972
16 Corella	-	51	225	1,771	-	828	-	2,875
17 Cortes	-	-	-	964	-	1,443	-	2,407
18 Dagohoy	2,200	-	1,128	3,215	-	108	-	6,651
19 Danao	-	78	640	1,685	-	2,311	-	4,714
20 Dausi	-	-	-	1,564	-	298	-	1,862
21 Dimiao	240	-	624	1,382	-	516	-	2,762
22 Duero	589	-	-	620	-	624	-	1,833
23 Garcia-Hernandez	865	-	92	1,514	-	1,828	10	4,309
24 Getafe	-	300	-	1,436	-	852	530	3,118
25 Guindulman	576	-	-	2,586	408	3,320	-	6,890
26 Inabanga	154	-	934	859	-	4,748	-	6,695
27 Jagna	438	22	126	2,883	96	3,006	-	6,571
28 Lila	-	-	-	700	-	565	-	1,265
29 Loay	52	-	16	987	-	640	-	1,695
30 Loboc	54	50	-	1,518	-	3,037	-	4,659
31 Loon	-	-	-	3,021	-	4,989	21	8,031
32 Mabini	254	636	308	2,516	-	2,368	-	6,082
33 Maribojoc	83	-	18	1,892	-	981	-	2,974
34 Panglao	-	-	-	1,552	-	173	46	1,771
35 Pilar	2,958	31	148	1,531	-	1,307	-	5,975
36 Pres.C.P.Garcia	-	408	595	575	-	2,777	4	4,359
37 Sagbayan	332	-	3,048	350	-	1,441	-	5,171
38 San Isidro	134	-	432	1,228	-	1,229	-	3,023
39 San Miguel	595	1,544	660	3,224	-	2,232	-	8,255
40 Sevilla	-	-	332	1,873	-	1,120	-	3,325
41 Sierra-Bullones	1,310	40	66	2,269	-	1,464	-	5,149
42 Sikatuna	-	714	1,236	-	-	780	-	2,730
43 Tagbilaran City	-	-	-	592	-	191	-	783
44 Talibon	385	676	510	1,335	-	1,628	550	5,084
45 Trinidad	350	972	892	4,456	-	907	-	7,577
46 Tubigon	446	280	-	2,526	-	2,022	107	5,381
47 Ubay	1,404	1,045	3,060	11,449	-	6,201	44	23,203
48 Valencia	594	-	572	1,045	112	1,608	-	3,931
<b>Total</b>	<b>20,347</b>	<b>8,820</b>	<b>29,508</b>	<b>86,071</b>	<b>1,108</b>	<b>84,675</b>	<b>1,669</b>	<b>232,198</b>

Legend:

A - all irrigated areas

B - all irrigable lands already covered by irrigation projects with firm funding commitments

C - all alluvial plains highly suitable for agriculture, mainly non-irrigated areas  
- agro-industrial croplands or lands presently planted to industrial crops that support the viability of existing agricultural infrastructure and agro-based enterprises

D - highland or areas located w/ elevations of 500 meters or above & have potential for growing semi-temperature & high value crops  
- all agricultural lands that are ecologically fragile, the conversion of which to non-agricultural uses will result in serious environmental degradation, mangrove areas and fish sanctuaries

E - all fishing areas as defined in the Fisheries Code of 1998

Source: CY 2000, DA-BSWM Region 7

Table 27. Summary of Disaster Incidence in the Province of Bohol

Date/Year	Nature of Event (natural/man-made)	Number of Occurrence	Location	Cost of Damage (million pesos)
Oct. 2004	Flashflood	1	Jagna	Php 0.100
Jan-Dec. 2005	Heavy rains, landslide, fire incidents, typhoon earthquake	7	Jagna, Getafe, Calape, Tagbilaran City	Php 15.048
Jan-Dec. 2006	Disease outbreak (diarrhea), lightning incidence, landslide, sea mishap, capsized vessel, tidal waves, land cracks, typhoons	18	Loon, Pilar, Tubigon, Ubay, Valencia, Loay, Panglao, Jagna, Candijay, Bien Unido, Getafe, Cortes, Alicia, Sierra Bullones, Batuan	Php 16.450
Jan-Dec. 2007	Landslide, fire incidents, whirlwind (alimpus), lightning incidents, poisoning, drowning, earthquake, capsized motor blanca, typhoon	18	Tagbilaran City, Jagna, Pres. Garcia, Talibon, Getafe, Trinidad, Pilar, Tubigon, Valencia, Ubay, Loon, Loboac, Loay, Candijay	Php 6.547
Jan-Dec. 2008	Flashflood, fire incident, landslide, typhoon, capsized vessel/fishing boat, airplane crash	28	Clarin, Tubigon, Tagbilaran City, Cortes, Buenavista, Panglao, Balilihan, Pilar, Talibon, Loon, Lila, Getafe, Dimiao, Loboc, Guindulman, Inabanga, Pres. Garcia	Php 30.828
<b>Total</b>		<b>72</b>		<b>Php 68.973</b>

Source: Office of the Civil Defense (OCD) 2009

Table 28. Disaster Preparedness Services and Facilities

Type of Services/Facilities	Name of Organization	Location
Search and Rescue Unit (SAR)	<ul style="list-style-type: none"> <li>▪ Bohol Outdoors Explorer Club, Inc. (BOEX)</li> <li>▪ Tagbilaran City Emergency Response Operating team (TECEMROT)</li> <li>▪ Divine Outdoors Club (DWOC)</li> <li>▪ Philippine National Red Cross (PNRC)</li> </ul>	Tagbilaran City
Evacuation Centers	All provincial, city and municipal evacuation center under its Disaster Coordinating Councils (DCCs) of Bohol	Province-wide
Relief Unit	<ul style="list-style-type: none"> <li>▪ All provincial, city and municipal evacuation center under its Disaster Coordinating Councils (DCCs) of Bohol</li> <li>▪ Office of the Provincial Social Worker and Development</li> </ul>	Province-wide
Fire Suppression	All provincial, city and municipal Fire Suppression unit under its Disaster Coordinating Councils of Bohol, Bureau of Fire Protection (BFP)	Province-wide
Emergency Medical Services	<ul style="list-style-type: none"> <li>▪ Tagbilaran City Emergency Response Operating Team (TECEMROT)</li> <li>▪ All government and private-owned hospitals</li> </ul>	Tagbilaran City Province-wide
Transportation Services	All Provincial, city and municipal disaster coordinating councils in Bohol	Province-wide

Source: Office of the Civil Defense (OCD) 2009

**Table 29. Identified Key Production Areas of Major Agricultural Commodities  
Bohol Province**

COMMODITY	LOCATION
<b>CROPS</b>	
Rice	Pilar, Ubay, San Miguel, Trinidad, Alicia, Dagohoy, Antequera, Carmen, Batuan, Bilar, Loboc, Sevilla, Balilihan, Catrigbian, Sagbayan, Danao, Inabanga, Getafe, Talibon, Bien Unido, S. Bullones, Candijay, Guindulman, Mabini, Duero, Jagna, G-Hernandez, Valencia, Dimiao, Lila, Loay, Maribojoc, Loon, Calape, Tubigon, Clarin
Mango	Ubay, Buenavista, Getafe, Talibon, Trinidad, Alicia, San Miguel, Dagohoy, Bein Unido, Danao, Inabanga, Clarin, Tubigon, Calape, Sagbayan, Catigbian, Carmen, Mabini, Guindulman, Duero, Jagna, Valencia, Dimiao, Sevilla, Daus, Panglao
Banana	Getafe, Talibon, Trinidad, Pres. Garcia, Ubay, Cortes, Danao, Inabanga, Sagbayan, Carmen, Dagohoy, Alicia, Sierra Bullones, Mabini, Candijay, Guindulman, Duero, Loon, San Isidro, Catigbian, Batuan, Bilar, Sevilla, Clarin
Ube	Alburquerque, Daus, Baclayon, Corella, Cortes, Panglao, Sikatuna, Tagbilaran City, G-Hernandez, Loay, Lila, Ubay, Mabini
Vegetable Farming Integration (Lowland)	Calape, Tubigon, Catigbian, Corella, Bilar, Carmen
Highland Vegetable Farming System	Jagna, Duero, S-Bullones, Guindulman, Candijay
Fiber Crops	
- Mulberry	Bilar
- Salago	Balilihan, Sikatuna
- Maguey	Dimiao, Lila
- Pineapple	S-Bullones
- Indigenous Crops	Loboc
Oil Palm	Alicia, Bien Unido, Buenavista, Calape, Carmen, Dagohoy, Danao, G-Hernandez, Getafe, Inabanga, Jagna, Mabini, Pilar, SAgbayan, San Miguel, S-Bullones, Talibon, Trinidad, Ubay, Valencia
<b>LIVESTOCK</b>	
Carabao	Alicia, Alburquerque, Carmen, Pilar, Bien Unido, Mabini, Anda, Clarin, Calape, San Miguel, Loon, Tubigon, Sagbayan, Dimiao, Trinidad, Candijay, Duero, Valencia, Ubay
Cattle	Alicia, Bilar, Pilar, Carmen, San Miguel, Mabini, Anda, Clarin, Calape, Trinidad, Loon, Tubigon, Sagbayan, Dimiao, Ubay, Duero, Candijay, Valencia, Bien Unido
Goat	Bien Unido, Dagohoy, Pres. Garcia, Buenavista, Getafe, Inabanga, Talibon, Trinidad, Ubay, Alicia, Anda, Bilar, Calape, Carmen, Loon, Clarin, Pilar, Mabini, San Miguel
Chicken	Alburquerque, Antequera, BAclayon, Cortes, Corella, Daus, Maribooc, PAnglao, Sikatuna, Tagbilaran City, San Isidro, Loay, G-Hernandez, Lila, Loboc, Guindulman, Jagna, Sevilla, BALilihan, Bilar, Sikatuna, Corella, Catigbian
Hog	Calape, Antequera, Ubay, Carmen, Pilar, Jagna, Maribojoc, Duero, San Miguel, Batuan, Alburquerque, Bien Unido, Getafe, Inabanga, Talibon, Trinidad, Candijay, Dimiao, G-Hernandez, Loon
<b>FISHERIES</b>	
Mariculture, Seaweeds Production	Talibon, Bien Unido, Getafe, Pres. Garcia, Beunavista
Grouper	Talibon, Buenavista, Ubay, Pres. Garcia, Bien Unido
Tilapia	Talibon, Bien Unido, Ubay, Trinidad, Inabanga
Oyster	Buenavista, Talibon, Ubay, Trinidad, Inabanga, Bien Unido
Mudcrab	Ubay, Talibon, Trinidad, Inabanga, Buenavista
Caulerpa (Lato)	Trinidad, Inabanga, Ubay, Pres. Garcia, Getafe, Buenavista

Source: Bohol Agriculture Master Plan, CY 2006-2026



Republic of the Philippines  
**PROVINCE OF BOHOL**  
*City of Tagbilaran*

**PROVINCIAL DEVELOPMENT COUNCIL  
PROVINCIAL PEACE AND ORDER COUNCIL  
SANGGUNIANG PANLALAWIGAN**

**JOINT RESOLUTION NO. 1, S. 2010**

**A RESOLUTION APPROVING THE PROVINCIAL DEVELOPMENT AND  
PHYSICAL FRAMEWORK PLAN (PDPFP) 2010-2015 OF THE PROVINCE  
OF BOHOL, AND FAVORABLY ENDORSING THE SAME TO THE  
NATIONAL ECONOMIC DEVELOPMENT AUTHORITY (NEDA)  
AND OTHER AUTHORITIES**

**WHEREAS**, as provided in Joint Memorandum Circular No. 01-2007 of the Department of Finance (DOF), National Economic Development Authority (NEDA), Department of Budget and Management (DBM) and Department of Treasury (DOT), provincial local government units (LGUs) are now mandated to craft, approve and implement their own Provincial Development and Physical Framework Plan (PDPFP);

**WHEREAS**, for this purpose and in compliance with said Joint Memorandum Circular and the applicable provisions of the Local Government Code (R.A. 7160), the Honorable Governor Erico B. Aumentado issued Executive Order No. 09, series of 2009, reactivating and reconfiguring the Sectoral Technical Working Groups (STWGs) of the PDC, to ensure a thoroughly participatory, collaborative and stakeholder-driven planning process;

**WHEREAS**, immediately after issuance of the aforementioned Executive Order and throughout the entire year of 2009, the STWGs initiated the PDPFP Planning Process, which required them to undertake the tasks of databanking and research, situational analysis, visioning and planning/programming for their respective sectors, followed by an integration of major cross-sectoral issues, concerns, strategies, plans and programs, and finally the crafting of Bohol's Overarching Development Framework for 2010-2015, including an updating of the Province's Vision, Mission and Goals;

**WHEREAS**, as a result of this planning process, the Provincial Government of Bohol, under the leadership of the Honorable Governor, with facilitation and coordination by the Provincial Planning and Development Office (PPDO), has successfully crafted the Provincial Development and Physical Framework Plan (PDPFP) 2010-2015, which has been presented to and discussed by this Joint Session assembled;

**WHEREAS**, to fully substantiate the Provincial Road Network Development Strategy set forth in the PDPFP in parallel with the province's development thrusts and priorities, there will also be crafted, as an addendum to the PDPFP and for the first time in the history of the Provincial Government of Bohol, a Provincial Road Network Development Plan (PRNDP), under the auspices of the Provincial Roads Management Facility (PRMF), an AusAID-assisted program;

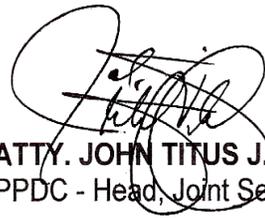
**WHEREAS**, having exhaustively discussed the merits of the PDPFP 2010-2015, and having found it worthy of approval, favorable endorsement to the necessary authorities, notably the National Economic Development Authority (NEDA), and worthy of immediate implementation, this Joint Session assembled hereby grants said approval and favorable endorsement;

**WHEREFORE**, be it **RESOLVED, AS IT IS HEREBY RESOLVED** by this Joint Session assembled, to approve the Provincial Development and Physical Framework Plan (PDPFP) 2010-2015 of the Province of Bohol, and to favorably endorse the same to the National Economic Development Authority (NEDA) and other authorities.

**DONE** this 2<sup>nd</sup> day of February 2010 at the City of Tagbilaran.

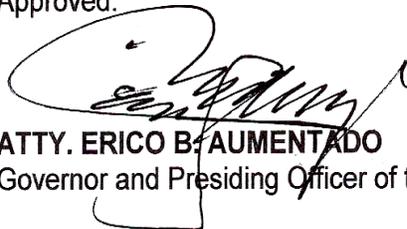
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**I HEREBY CERTIFY** to the correctness of the foregoing resolution.



**ATTY. JOHN TITUS J. VISTAL**  
PPDC - Head, Joint Secretariat

Approved:



**ATTY. ERICO B. AUMENTADO**  
Governor and Presiding Officer of this Joint Session Assembled



Republic of the Philippines  
**PROVINCE OF BOHOL**  
 City of Tagbilaran

## **OFFICE OF THE GOVERNOR**

EXECUTIVE ORDER NO. 09  
 SERIES OF 2009

### **CREATING THE SECTORAL TECHNICAL WORKING GROUPS (STWG) FOR THE FORMULATION OF THE PROVINCIAL DEVELOPMENT AND PHYSICAL FRAMEWORK PLAN (PDPFP) FOR THE PROVINCE OF BOHOL**

WHEREAS, pursuant to the provisions of the Local Government Code of 1991, all Local Governments are mandated to prepare their comprehensive development plans in the context of and in harmony with national and regional development goals and strategies;

WHEREAS, Joint Memorandum Circular No. 1, Series of 2007 was issued by the Department of the Interior and Local Government (DILG), National Economic and Development Authority (NEDA), Department of Budget and Management (DBM) and the Department of Finance (DOF) setting the guidelines to harmonize local planning, investment programming, revenue administration, budgeting and expenditure management;

WHEREAS, the said Guidelines require all provinces to prepare, among others, the Provincial Development and Physical Framework Plan (PDPFP), which is a plan document that merges the formerly separate Provincial Physical Framework Plan (PPFP) and Medium-Term Development Plan (MTDP) to address the disconnect between spatial and sectoral factors and between medium and long term concerns;

WHEREAS, in the case of the Provincial Government of Bohol, the PDPFP will set the province's overall development framework for the planning period 2010-2015, in continuation of the planning period covered by the MTDP from 2004-2009, setting forth the Province's vision, providing for analytical basis for understanding existing conditions, identifying issues and concerns, formulating goals, objectives, strategies and identifying priority programs and projects;

WHEREAS, the Provincial Government of Bohol recognizes the importance of the PDPFP for the province's holistic, integrated and sustainable development and, for the purpose of its formulation, there is a need to create Sectoral Technical Working Groups, expanded from the Provincial Development Council's Sectoral Committees, composed of a multi-stakeholder, multi-disciplinary membership which will be directly involved in the PDPFP's crafting;

NOW, THEREFORE, I, ERICO B. AUMENTADO, by virtue of the power and authority vested in me as Governor of the Province of Bohol, do hereby order:

Section 1 *Creation*. The Sectoral Technical Working Groups for the formulation of the Provincial Development and Physical Framework Plan (PDPFP), henceforth known as STWG-Bohol PDPFP, is hereby created.

Section 2. *Composition*. – (a) The STWG-Bohol PDPFP shall be composed of members representing the following offices:

### **ECONOMIC DEVELOPMENT SECTOR TWG**

#### **Non-Government Organizations (NGOs)/ People's Organizations/ Private Organizations:**

1. Bohol Chamber of Commerce, Inc. (BCCI)
2. PDC-Private Sector Representative
3. Community Economic Ventures (CEV)
4. Bohol Island Tour Guides Association of the Philippines, Inc. (BITGAP)
5. Bohol Initiator for Sustainable Agricultural Dev't. (BISAD)

#### **National Government Agencies:**

6. Bohol-Agricultural Promotion Center (B-APC)
7. Agricultural Training Institute (ATI)
8. Philippine Coconut Authority (PCA)
9. Bureau of Fisheries and Aquatic Resources (BFAR)
10. Department of Agrarian Reform (DAR)
11. Department of Trade and Industry (DTI)
12. Department of Labor and Employment (DOLE)
13. Department of Science and Technology (DOST)
14. Bureau of Agricultural Statistics (BAS)
15. Cooperative Development Authority (CDA)
16. National Food Authority (NFA)

#### **Provincial Government Offices/ Units:**

17. Office of the Provincial Agriculturist (OPA)
18. Office of the Provincial Veterinarian (OPV)
19. Bohol Investment and Promotion Center (BIPC)
20. Bohol Tourism Office (BTO)
21. Bohol Employment and Placement Office (BEPO)

#### **Sangguniang Panlalawigan (SP) Committee Chairpersons of:**

22. SP Tourism Committee
23. SP Agriculture Committee
24. SP Trade and Industry Committee
25. SP Cooperative and NGOs Committee
26. SP Labor and Employment Committee

## **SOCIAL DEVELOPMENT SECTOR TWG**

### **Non-Government Organizations (NGOs)/ People's Organizations/ Private Organizations:**

1. Bohol Integrated Development Foundation (BIDEF)
2. PROCESS Foundation
3. Habitat for Humanity Foundation, Inc. (HHFI)
4. World Vision
5. Women's Development Center, Inc. (WDCI)
6. WINGS
7. BANGON
8. Bohol Federation of Disabled Persons, Inc. (BFDP)
9. Feed the Children-Philippines, Inc. (FTCP)
10. Pagkahiusa sa mga Kapunungan sa Inahang Nagpakabana sa Bohol (PAGKAINA-Bohol)
11. Parents Teacher Association
12. First Consolidated Bank Foundation Inc. (FCBFI)

### **National Government Agencies:**

13. Department of Education (Dep Ed) – Bohol Schools Division
14. Department of Social Welfare and Development (DSWD)
15. Commission on Higher Education (CHED)
16. PHILHEALTH
17. Housing and Urban Development Coordinating Council (HUDCC)
18. National Housing Authority (NHA)
19. Presidential Commission for the Urban Poor (PCUP)
20. Department of Health (DOH)
21. Social Security System (SSS)
22. Pag-ibig Home Development Mutual Fund
23. Technical Education and Skills Development Authority (TESDA)
24. National Census and Statistics Office (NCSO)
25. National Commission for Indigenous People (NCIP)

### **Provincial Government Offices/ Units:**

26. Provincial Social Welfare and Development Office (PSWDO)
27. Provincial Health Office (PHO)
28. Center for Culture and Arts Development (CCAD)
29. Bohol Poverty Reduction Management Office (BPRMO)

### **City Government / City Offices/ Units/ Agencies:**

30. City Health Office
31. Department of Education (Dep Ed) – Tagbilaran City
32. Department of Social Welfare and Development (DSWD) – Tagbilaran City

### **Sangguniang Panlalawigan (SP) Committee Chairpersons of:**

33. SP Health and Public Sanitation Committee
34. SP Culture and Arts Committee
35. SP Education Committee
36. SP Women and Family Welfare Committee
37. SP Social Services and Population Development Committee

## **INFRASTRUCTURE DEVELOPMENT SECTOR TWG**

### **Non-Government Organizations (NGOs)/ People's Organizations/ Private Organizations:**

1. United Architects of the Philippines (UAP) – Bohol Chapter
2. Chocolate Hills Amateur Radio League, Inc. (CHARL)
3. Southeast Asia Regional Initiatives for Community Development (SEARICE)
4. Bohol Local Development Foundation (BLDF)
5. LIFE Philippines Foundation Bohol, Inc.
6. Philippine Institute for Civil Engineers (PICE)-Bohol Chapter
7. Bohol Electric Cooperative I (BOHECO I)
8. Bohol Electric Cooperative I (BOHECO II)
9. Bohol Light Co., Inc. (BLCI)
10. Bohol Water Utilities, Inc. (BWUI)
11. Globelines/ Islacom
12. Philippine Long Distance Telephone Co. (PLDT)
13. Cruz Telephone Company (CRUZTELCO)

### **National Government Agencies:**

14. Air Transportation Office (ATO)
15. Land Transportation Office (LTO) I
16. Land Transportation Office (LTO) II
17. Department of Public Works and Highways (DPWH) I
18. Department of Public Works and Highways (DPWH) II
19. Department of Public Works and Highways (DPWH) III
20. National Irrigation System (NIA) Tagbilaran and Ubay
21. Philippine Ports Authority (PPA)
22. National Power Corporation (NPC)
23. National Grid Corporation of the Philippines (NGCP)
24. Philippine Postal Corporation District I & II
25. National Telecommunication Office (TELOF)

### **Provincial Government Offices/ Units:**

26. Provincial Engineer's Office (PEO)
27. Provincial Motor Pool (PMP)
28. Bohol Law Enforcement Communication System (BLECS)
29. Bohol Integrated Water Resources Management Board (BIWRMB)

### **City Government / City Offices/ Units/ Agencies:**

30. City Engineer's Office
31. City Waterworks System

### **Sangguniang Panlalawigan (SP) Committee Chairpersons of:**

32. Public Works, Highways and Related Infrastructure Committee
33. Public Utilities and Franchises Committee

## **ENVIRONMENT MANAGEMENT SECTOR TWG**

### **Non-Government Organizations (NGOs)/ People's Organizations/ Private Organizations:**

1. Soil and Water Conservation Foundation, Inc. (SWCF)
2. Environmental Legal Assistance Center (ELAC)
3. Social Action Center (SAC) – Diocese of Tagbilaran
4. BANGON

### **National Government Agencies:**

5. Department of Environment and Natural Resources (DENR)
6. Community Environment and Natural Resources Office (Tagbilaran City)
7. Community Environment and Natural Resources Office (Talibon)
8. Environment Management Bureau (EMB)

### **Provincial Government Offices/ Units:**

9. Bohol Environment Management Office (BEMO)

### **Sangguniang Panlalawigan (SP) Committee Chairpersons of:**

10. Natural Resources and Environmental Protection Committee
11. Zoning, Urban and Rural Development Committee

## **DEVELOPMENT ADMINISTRATION COMMITTEE**

### **Non-Government Organizations (NGOs)/ People's Organizations/ Private Organizations:**

1. Bohol Alliance of Non-Government Organizations (BANGON)
2. Bohol Officials' Ladies Foundation, Inc. (BOLFI)
3. Bohol Association of Women in Government Service (BAWIGS)
4. Integrated Sports Development Organization, Inc. (ISDO)
5. Bohol Goodwill Volunteers, Inc. (BGVI)
6. Bohol Provincial Employees League (BOPEL)

### **National Government Agencies:**

7. Department of Interior and Local Government (DILG) – Bohol
8. Philippine National Police (PNP)
9. Philippine National Red Cross (PNRC)
10. Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
11. Philippine Coast Guard
12. Office of the Civil Defense
13. Bureau of Fire Protection (BFP)
14. Bureau of Jail Management and Penology (BJMP)
15. 802nd Brigade Philippine Army
16. PHIVOLCS – Field Station
17. Provincial Prosecutor's Office
18. Public Attorney's Office

**Provincial Government Offices/ Units:**

19. Governor's Office (GO)
20. Vice Governor's Office (VGO)
21. Provincial General Services Office (PGSO)
22. Provincial Treasurer's Office (PTO)
23. Provincial Assessor's Office (PASSO)
24. Provincial Budget Office (PBO)
25. Provincial Accountant's Office (PACCO)
26. Provincial Legal Office (PLO)
27. Bohol District Jail, as managed by the Bureau of Jail Management and Penology (BJMP)
28. Human Resource Management and Development Office (HRMDO)
29. Provincial Library
30. Barangay Affairs Office
31. Provincial Disaster Coordinating Council (PDCC)

**Sangguniang Panlalawigan (SP) Committee Chairpersons of:**

32. Appropriations Committee
33. Justice and Human Rights Committee
34. Good Government Committee
35. General Resolution and Ordinances Committee
36. Personnel and Related Policies Committee
37. Youth and Sports Committee
38. Government Property, Enterprises and Related Undertakings Committee
39. Ways and Means Committee
40. Peace and Order and Public Safety Committee
41. Barangay Affairs Committee

(b) The Mayors of the City and Municipal LGUs of the Province of Bohol, who are full-fledged members of the PDC Full Council, as well as the Members of the PDC Executive Committee, have the freedom and prerogative of attending any activity of any of the aforementioned Sectoral TWGs, as they see fit.

Likewise, the Coordinators of the five (5) Bohol Integrated Area Development (BIAD) Clusters shall participate in the formulation of the PDPFP and are considered members of all the Sectoral TWGs.

(c) Each STWG-Bohol PDPFP shall elect among themselves the following officers to lead and manage sectoral responsibilities and activities:

- Chairperson
- Vice-Chairperson
- Sub-Sectoral Coordinators

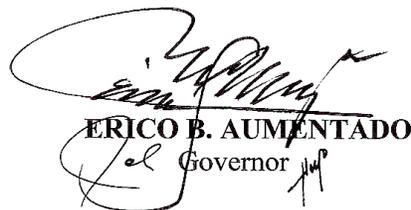
(d) The Provincial Planning and Development Office is hereby designated as Secretariat of the STWG-Bohol PDPFP.

Section 3. *Functions.* –The STWG-Bohol PDPFP shall perform the following functions:

- (a) Provide and integrate necessary data, information and statistical profiles to facilitate sectoral and overall socio-economic and ecological analysis to support for the formulation of the Provincial Development and Physical Framework Plan;
- (b) Participate actively in the discussions and workshops called upon by their respective TWG Chairpersons, based on agreed timeframe, to ensure comprehensive and well-rounded formulation of vision, mission, goals, objectives, strategies, targets and programs and projects and other parts of the PDPFP for consideration of the Provincial Development Council;
- (c) Integrate sectoral plans and programs of the province and coordinate all planning and programming activities of the sector;
- (d) Assist in the translation of national and regional goals and policies into specific sectoral objectives;
- (e) Coordinate and provide necessary support for the conduct of stakeholder consultation to enhance PDPFP formulation;
- (f) Provide necessary assistance for the finalization and approval of the PDPFP by the Provincial Development Council, Provincial Land Use Committee, Sangguniang Panlalawigan and the Regional Land Use Committee.
- (g) Evaluate the implementation of the Medium-term Development Plan of Bohol (CY 2004-2009) and the subsequent Provincial Development and Physical Framework Plan of the province

Section 4. *Effectivity.* – this order shall take effect immediately.

DONE this 4<sup>th</sup> day of March, 2009, at the City of Tabilaran, Bohol.

  
**ERICO B. AUMENTADO**  
Governor

**Provincial Development Council**  
**STWG-Bohol PDPFP**  
**MEMBERSHIP**

**SOCIAL DEVELOPMENT SECTOR TECHNICAL WORKING GROUP**

**Chairperson**  
**Vice Chairperson**

**Kag. Cesar Tomas M. Lopez**  
**Ms. Emilia Roslinda**

**Sub-sectors:**

• **EDUCATION & MANPOWER DEVELOPMENT**

**Sub-sector Coordinator**

**Dr. Norma S. Varquez**

SP Education Committee Chairperson  
 Commission on Higher Education (CHED)

Kag. Ester Corazon J. Galbreath  
 Dr. Candelario M. Aytona  
 Dr. Pedro C. Fudolig

Department of Education (DepEd)

- Bohol Schools Division
- City DepEd

Dr. Elpidio M. Jala  
 Ms. Amelia L. Cortidor  
 Dr. Norma S. Varquez  
 Ms. Liza. E. Maquiling

Technical Education and Skills  
 Development Authority (TESDA)

Dir. Francisca R. Opog

• **HEALTH, NUTRITION & POPULATION MANAGEMENT**

**Sub-sector Coordinator**

**Dr. Reymoses A. Cabagnet**  
**Dr. Greg Sodosta**

SP Health and Public Sanitation Committee  
 SP Social Services & Population Devt. Com. Chair  
 Department of Health (DOH)  
 National Census and Statistics Office (NSO)  
 Provincial Health Office (PHO)  
 Feed-The-Children  
 PhilHealth - Tagbilaran  
 PhilHealth - Talibon  
 PRISM - Bohol

Kag. Cesar Tomas M. Lopez  
 Kag. Josephine Socorro Jumamoy  
 Dr. Ma. Portia D. Reyes  
 Ms. Jessamyn Anne C. Alcazaren  
 Dr. Reymoses A. Cabagnet  
 Ms. Esperanza E. Abellana  
 Ms. Mona Liza O. de Veyra  
 Mr. Ruhneb T. Cabrera  
 Mr. Primitivo N. Fostanes

• **SOCIAL WELFARE & DEVELOPMENT**

**Sub-sector Coordinator**

**Atty. John J. Vistal**  
**Ms. Maricar Fuentes**

SP Women & Family Welfare Com. Chair  
 Dept of Social Welfare & Devt. (DSWD)  
 Provl Social Welfare & Devt. Office (PSWDO)  
 Bohol Poverty Reduction Mgt. Office (BPRMO)  
 Bohol Integrated Development Foundation  
 PROCESS Foundation

Kag. Aster L. Piollo  
 Ms. Papiasa B. Bustrilos  
 Ms. Constanca O. Tuñacao  
 Atty. John J. Vistal  
 Mr. Enrique G. Auxillo  
 Ms. Emilia M. Roslinda  
 Ms. Rosalinda Paredes  
 Ms. April Maita C. Palo  
 Engr. Panfilo M. Asares

BANGON

First Consolidated Bank Foundation (FCBFI)

- **HOUSING & COMMUNITY DEVELOPMENT**

- ***Sub-sector Coordinator***

- Housing & Urban Devt Coord. Council (HUDCC)
    - National Housing Authority (NHA)

- Presl Commission for the Urban Poor (PCUP)
    - Pag-ibig Home Devt. Mutual Fund (HDMF)
    - Habitat for Humanity Foundation, Inc. (HHFI)

- **Mr. Jose Pamaong**

- Archt. Fernando V. Garso
    - Engr. Gavino D. Figuracion
    - Engr. Constancio Atiniero
    - Mr. Jose Pamaong
    - Mr. Felix A. Garan
    - Kag. Leonides L. Borja

- **CULTURAL PRESERVATION & ENRICHMENT**

- ***Sub-sector Coordinator***

- SP Culture & Arts Committee Chair
    - Natl Commission for Indigenous People (NCIP)
    - Center for Culture & Arts Devt. (CCAD)
    - Office of Cultural Affairs & Devt. (OCAD)-HNU
    - Bohol Arts & Cultural Heritage Council (BACH)
    - Diocesan Commission for the Cultural Patrimony of the Church

- **Ms. Enriqueta B. Butalid**

- Kag. Amalia R. Tirol
    - Mr. Sisinio A. Amplayo
    - Ms. Enriqueta B. Butalid
    - Mr. Marianito M. Luso
    - Mr. Lutgardo L. Labad
    - Fr. Val Pinlac

## **ECONOMIC DEVELOPMENT SECTOR TECHNICAL WORKING GROUP**

---

**Chairperson**

**Mr. Alex V. Relova**

**Vice Chairperson**

**Mr. Norris Oculam**

**Sub-sectors:**

- **AGRICULTURE**

- ***Sub-sector Coordinator***

- **Engr. Eugene C. Cahiles**

- Agricultural Training Institute (ATI)

- Dr. Carolyn May Daquio

- Bohol Agricultural Promotion Center (B-APC)

- Mr. Manuel G. Jayectin

- Philippine Coconut Authority (PCA)

- Ms. Celerina T. Galorio

- Bureau of Fisheries & Aquatic Resources (BFAR)

- Ms. Rosenda R. Bucia

- Department of Agrarian Reform (DAR)

- Mr. Timoteo Lago, Jr.

- Bureau of Agricultural Statistics (BAS)

- Mr. Cresencio P. Pahamutang

- National Food Authority (NFA)

- Ms. Gloria C. Olavides

- Office of the Provincial Agriculturist (OPA)

- Atty. Johnson A. Sinco

- Office of the Provincial Veterinarian (OPV)

- Engr. Maximino A. Servillon

- Cooperative Development Authority (CDA)

- Ms. Ma. Fe H. Evasco

- SP Agriculture Committee Chair

- Ms. Liza M. Quirog

- Ms. Evelyn T. Maligsa

- Dr. Stella Marie Lapiz

- Ms. Daisy Basco

- Ms. Gemma Resquir

- Vice Gov. Julius Caesar Herrera

- Mr. Ric Obedencio

- **TRADE AND INDUSTRY**

- ***Sub-sector Coordinator***

- **Ms. Ma. Elena C. Arbon**

- Department of Trade & Industry (DTI)

- Ms. Vierna Ligan

- Department of Labor & Employment (DOLE)

- Mr. Wilson C. Cenas

Department of Science & Technology (DOST) Bohol Investment Promotion Center (BIPC)	Mr. Gerry Guidaben Engr. Marcial Tangaan Ms. Maria Fe Dominise Ms. Sharon A. Almero
Bohol Employment and Placement Office (BEPO)	Mr. Romulo Tagaan Ms. Vilma Yorong
Community Economic Ventures (CEV) Bohol Chamber of Commerce, Inc. (BCCI) SP Trade and Industry Committee Chair	Mr. Gaudioso B. Calibugan Ms. Marietta S. Gasatan Hon. Ma. Fe Lejos

○ **TOURISM**

**Sub-sector Coordinator**

Bohol Tourism Office (BTO)

SP Tourism Committee Chair

Bohol Island Tour Guides Asso. of the Phil. (BITGAP)

**Hon. Corazon Galbreath**

Ms. Josephine R. Cabarrus

Ms. Gina Peluchi S. Kapiro

Hon. Corazon Galbreath

Mr. Jovito Danilo C. Nazareno

## ENVIRONMENT DEVELOPMENT SECTOR TECHNICAL WORKING GROUP

---

**Chairperson**

**Mr. Renato Villaber (BEMO)**

**Vice Chairperson**

**Mr. William Granert (SWCF)**

**Sub-sectors:**

○ **LAND MANAGEMENT and FORESTRY**

**Sub-sector Coordinator**

Bohol Environment Management Office  
CENRO Tagbilaran City  
CENRO Talibon, Bohol  
SP Chairman- Committee on Natural  
Resources and Environmental Protection  
SP Chairman- Committee on Zoning/Urban  
and Rural Development

**For. Nestor Canda (PENRO)**

Mr. Leonilo Lafuente

Mr. Eusalem S. Quiwag

For. Alejandro A. Estopa

Hon. Alfonso Damalerio II

Hon. Bienvenido Molina Jr.

○ **BIODIVERSITY and CAVES**

**Sub-sector Coordinator**

Dept. of Environment & Natural Resources (DENR)

**Mr. William Granert (SWCF)**

Mr. Raul G. Paler

○ **MINERAL RESOURCES**

**Sub-sector Coordinator**

DENR MGB

**Mr. Leonilo Lafuente (BEMO)**

For. Nestor Canda

○ **FISHERY and AQUATIC RESOURCES**

**Sub-sector Coordinator**

ELAC Executive Director

**Ms. Adel Salutan (BEMO)**

Atty. Raul Barbarona

○ **AIR and WATER**

**Sub-sector Coordinator**

Bohol Environment Management Office (BEMO)

**Ms. Rosalina Gaterin (DENR-EMB)**

Engr. Moises Cañete

○ **WASTE MANAGEMENT**

**Sub-sector Coordinator**

**Ms. Elena Suarez (DENR-EMB)**

Bohol Environment Management Office (BEMO)

Ms. Maria Socorro Trinidad

○ **CLIMATE CHANGE**

**Sub-sector Coordinator**

Provl. Environment & Natural Res. Office  
Provincial Planning & Devt. Office (PPDO)  
Soil and Water Conservation Foundation  
BIAD Coordinator  
BANGON  
Social Action Center

**Ms. Jovencia Ganub (BEMO)**

Mr. Raul G. Paler  
Engr. Ronilita M. Bunado  
Ms. Aida Granert  
Mr. Eduardo Macalandag  
Ms. Aepril Maita C. Palo  
Rev. Fr. Felix Warli Salise

## INFRASTRUCTURE DEVELOPMENT SECTOR TECHNICAL WORKING GROUP

---

**Chairperson**

**Engr. Emigdio Acierto (BWUI)**

**Vice Chairperson**

**Engr. Dennis Rocamora (NTC)**

**Sub-sectors:**

○ **TRANSPORTATION**

**Sub-sector Coordinator**

Philippine Ports Authority  
Philippine Ports Authority  
Dept. of Public Works & Highways (DPWH 2)  
Dept. of Public Works & Highways (DPWH 3)  
Provincial Engineering Office (PEO)  
City Engineer's Office (CEO)  
Civil Aviation Authority of the Philippines (CAAP)  
Land Transportation Office (LTO) I  
Land Transportation Office (LTO) II  
Provincial Motor Pool  
United Architects of the Philippines (UAP) – Bohol  
Philippine Institute of Civil Engineers (PICE)  
Chairperson, Public Works & Highways, Related  
Infra Com.

**Engr. Celestino Adlaon (DPWH 1)**

Mr. Aurelio Gambuta  
Engr. Manuel Boholano  
Engr. Gregorio Sayson  
Engr. Edilberto Ativo  
Engr. Edwin T. Vallejos  
Engr. Pianicita Castulo  
Mr. Edgar Solis  
Mr. Joel T. Maloloy-on  
Ms. Angeles Enoc  
Engr. Abraham Clarin  
Arch't. Ariel Angalot  
Engr. Elpedio Magante  
Hon. Josel E. Trabajo

○ **WATER**

**Sub-sector Coordinator**

NIA Provincial Office  
Bohol Water Utilities Inc. (BWUI)  
Bohol Water Utilities Inc. (BWUI)  
Tagbilaran City Waterworks System (TCWS)  
NIA Regional Office  
Bohol Integrated Water Resource Board (BIWRB)  
GTZ LTA – Bohol

**ENGR. HERMILO B. ARCAYA**  
(BIWRB/PPDO)

Engr. Olimpio Galagala Jr.  
Engr. Romeo Robles  
Engr. Emigdio Acierto  
Engr. Willington Pilongo  
Engr. Modesto Membreve  
Engr. Maurito Lim  
Engr. Vince Delector

○ **POWER**

**Sub-sector Coordinator**

National Grid Corporation of the Philippines (NGCP)  
SPC Island Power Corp. (former NPC)

**Engr. Eulogio Signe**

Bohol Light Company, Inc. (BLCI)  
Engr. Giuseppe Lomaad  
Engr. Wilfredo Sinay

BOHECO I  
BOHECO II  
Chairperson, Public Utilities & Franchises Com.

Engr. Carlos Itable  
Engr. Eugenio Tan  
Hon. Alfonso R. Damalero

○ **TELECOMMUNICATIONS**  
***Sub-sector Coordinator***

Telecommunication Office (TELOF)  
Bohol Law Enforcement Com. System (BLECS)  
Phil. Long Distance Tel. (PLDT)  
Phil. Long Distance Tel. (PLDT)  
Globelines  
Cruztelco  
Bohol Field Office NTC  
Philippine Postal Corporation District I  
Philippine Postal Corporation District II  
Chocolate Hills Amateur Radio League, Inc. (CHARL)

**Ms. Deliah Melda Tirol Magno**  
Bohol Information & Communication  
Technology Council (BICTC)  
Engr. George Lorin  
Engr. Mario Batoy  
Engr. Erwin Rubi  
Engr. Noel Alagon  
Ms. Maria Celia Golosino  
Mr. Ronson R. Escora  
Engr. Dennis C. Rocamora  
Mr. Rey Manungas  
Mr. Bernardo Margate  
Mr. Gerald Marmito

## **DEVELOPMENT ADMINISTRATION SECTOR TECHNICAL WORKING GROUP**

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**Chairperson**  
**Vice Chairperson**

**Mr. Romeo S. Teruel**  
**Dr. Felino Columnas**

**Sub-sectors:**

○ **PUBLIC FINANCE**

***Sub-sector Coordinator***

Provincial Assessor's Office (PAssO)  
Provincial Budget Office (PBO)  
Provincial Accountant's Office (PAccO)  
Provincial General Services Office (PGSO)  
SP- Committee on Appropriations  
SP – Committee on Government Property ,  
Enterprises and related Undertakings  
SP – Committee on Ways and Means

**Mr. Eustaquio A. Socorin**

Mr. Edgardo P. Orig  
Ms. Valeria M. Orig  
Ms. Joseth J. Celocia, CPA  
Engr. Rosalinda B. Yu  
Hon. Julius Caesar F. Herrera  
  
Hon. Amalia R. Tirol  
Hon. Bienvenido C. Molina

○ **LOCAL GOVERNANCE**

***Sub-sector Coordinator***

Governor's Office (GO)  
Vice Governor's Office (VGO)  
Sangguniang Panlalawigan Secretariat (SP-Sec)  
Human Resource Management and  
Development Office (HRMO)  
Provincial Library and Information Center (PLIC)  
Barangay Affairs Office – (BA-GO)  
Prov'l Planning and Dev't Office (PPDO)

**Ms. Aepiril Maita C. Palo**

Gov. Erico B. Aumentado  
Vice-Gov. Julius Caesar F. Herrera  
Mr. Bonifacio Quirog  
  
Mr. Romeo S. Teruel  
Ms. Erlinda Rule  
Mr. Joseph Lemuel Camacho  
Atty. John Titus J. Vistal

Department of the Interior and Local  
 Government (DILG)  
 SP – Committee on Good Government  
 SP – Committee on General Resolutions  
 and Ordinances  
 SP – Committee on Personnel and  
 Related Policies  
 SP – Committee on Youth and Sports  
 SP – Committee on Barangay Affairs  
 Bohol Alliance of Non-Government  
 Organizations (BANGON)  
 Bohol Officials’ Ladies Foundation, Inc. (BOLFI)  
 Bohol Association of Women in  
 Government Service (BAWIGS)  
 Integrated Sports Development  
 Organization, Inc. (ISDOI)  
 Bohol Goodwill Volunteers, Inc. (BGVI)  
 Bohol Provincial Employees League

Ms. Rustica N. Mascariñas  
 Hon. Jose E. Veloso  
  
 Hon. Cesar Tomas M. Lopez  
  
 Hon. Josil E. Trabajo  
 Hon. Jane Censoria Cajés  
 Hon. Concepcion Lim  
  
 Ms. Aepril Maita C. Palo  
 Hon. Amalia R. Tirol  
  
 Ms. Florencia L. Uy  
  
 Mr. Nemesio Monton  
 Mr. Bonifacio Quirog  
 Dr. Felino Columnas

○ **JUSTICE & SAFETY**

***Sub-sector Coordinator***

**Hon. Ma Fe C. Lejos**

Provincial Legal Office (PLO)  
 SP – Committee on Justice and Human Rights  
 SP – Committee on Peace and Order  
 Philippine National Police (PNP)  
 Philippine Atmospheric, Geophysical and  
 Astronomical Services Administration  
 (PAG-ASA)  
 Philippine Coast Guard (PCG)  
 703 Maritime Police Station  
 Parole and Probation Adm -Bohol Office 1  
 Parole and Probation Adm-Bohol Office 2  
 Office of the Civil Defense  
 Bureau of Fire Protection  
 Philippine Institute of Volcanology and  
 Seismology (PhiVolcS)  
 802<sup>nd</sup> Army Brigade  
 Provincial Prosecutor’s Office  
 Public Attorney’s Office  
 Bohol District Jail (Formerly BDRC) – BJMP  
 Provincial Peace and Order Council  
 Provincial Disaster Coordinating Council  
 Philippine National Red Cross

Atty. Handel Lagunay  
 Hon. Aster L. Piollo  
 Hon. Ma. Fe Camacho-Lejos  
 P/Supt. Edgardo C. Ingking  
  
 Mr. Narciso Cantor  
 L/Cdr. Luisito S. Sibayan  
 SPO2 Roberto L. Dinco  
 Mr. Ricardo M. Abucejo  
 Mr. Raquelito G. Rollan  
 Ms. Florenda Gaviola  
 F/CInsp. Pepe G. Rebusa  
  
 Engr. Jose Eucl Talisic  
 Col. Alan R. Luga, INF(GSC) PA  
 Atty. Macario I. Delusa  
 Atty. Godfrey T. Tubo  
 J/Supt. Felixberto S. Jagurin, Jr.  
 Gov. Erico B. Aumentado  
 Lt. Col. Raul Mendez (Ret.)  
 Ms. Nenita B. Briones

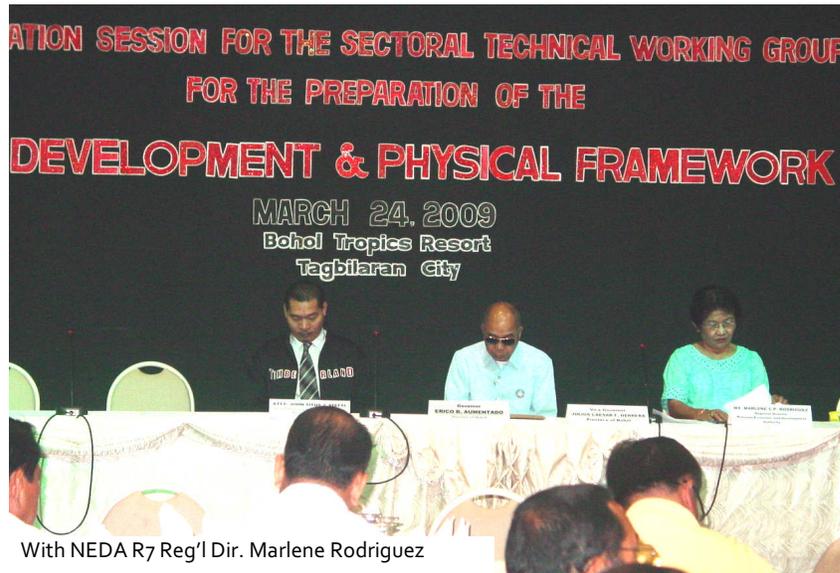


## PHOTO DOCUMENTATION

Preparation of the Provincial Development and Physical Framework Plan  
(PDPFP) 2010-2015

Orientation Session for the Sectoral TWG for Preparation of the Provincial Development and Physical Framework Plan  
24 March 2009

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With NEDA R7 Reg'l Dir. Marlene Rodriguez



**Initial Meeting of Sectoral Technical Working Groups (STWGs)  
for the Preparation of the PDPFP 2010-2015  
24 March 2009**



**Social Development Sector**



**Environment Management Sector**



**Development Administration Sector**

**Economic Development Sector**



**Infrastructure Development Sector**

## Subsequent STWG Meetings

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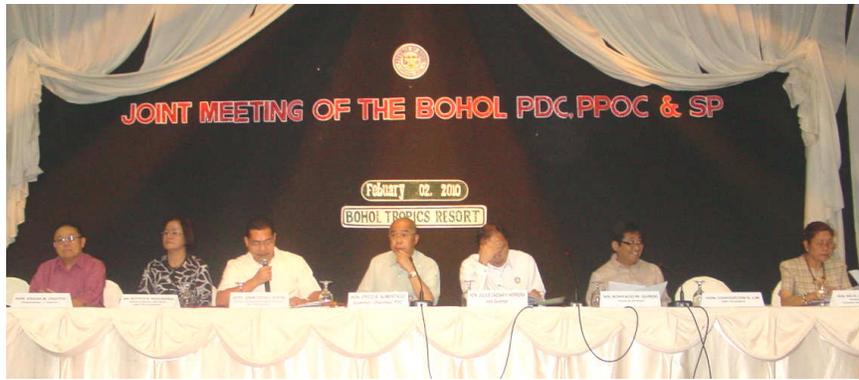


## Consultation with NEDA Technical Staff

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## Approval and Adoption of the PDPFP



PDPFP presentation  
by Atty. Vistal, PPDC





The Bohol PDPFP 2010-2015 consists of:

Volume 1 (Main Report)

Volume 2 (Prov'l Dev't Investment Plan-PDIP)

Volume 3 (Maps)

Volume 4 (Sectoral Plans)

For inquiries, please contact:

Provincial Planning & Development Office (PPDO)  
Capitol Compound, Tagbilaran City