



PRNDP

Provincial Road Network Development Plan
PROVINCE OF BOHOL



FIRST EDITION | MARCH 2010



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List of Abbreviations

ADT	Average Daily Traffic
AusAID	Australian Agency for International Development
BAC	Bids and Awards Committee
BEMO	Bohol Environmental Management Office
CB	Capability Building
CBR	Cost Benefit Ratio
COMET	Community Monitoring and Evaluation Team
DILG	Department of Interior and Local Government
DPWH	Department of Public Works and Highways
ERR	Economic Rate of Return
eTRACS	Electronic Tax Assessment Computerized System
GIS	Geographic Information System
GSO	General Services Office
HNU-CLG	Holy Name University – Center for Local Governance
IAS	Internal Audit System
ICT	Information and Communications Technology
JMC	Joint Memorandum Circular
LCE	Local Chief Executive
LGDP	Local Governance Development Program
LGUMET	Local Government Unit Monitoring and Evaluation Team
LPRAP	Local Poverty Reduction Action Plan
MBC	Management by Contract
ODA	Official Development Assistance
PAccO	Provincial Accountant’s Office
PAHRDF	Philippines-Australia Human Resource Development Facility
PAssO	Provincial Assessor’s Office
PAWRP	Provincial Annual Works Reform Program
PBO	Provincial Budget Office
PDC	Provincial Development Council
PDPFP	Provincial Development Physical Framework
PEO	Provincial Engineer’s Office
PGBh	Provincial Government of Bohol
PLPEM	Provincial and Local Planning and Expenditure Management
PMET	Project Monitoring and Evaluation Team
POMET	Provincial Office Monitoring and Evaluation Team
PRMF	Provincial Road Management Facility
PRNDP	Provincial Road Network Development Plan
PRSPMR	Provincial Road Sector Planning and Management Review
PTO	Provincial Treasurer’s Office
RPTIS	Real Property Tax Information System
SRF	Special Road Fund
TWG	Technical Working Group
VFM	Value for Money

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Executive Summary

The Bohol Provincial Road Network Development Plan (PRNDP) is a five-year (2009-2014) development plan for the sustainable development and management of road networks in the province. The preparation of the first edition of the PRNDP is assisted by the Philippines Provincial Road Management Facility (PRMF), an Australian Government AID initiative in partnership with the Department of Interior and Local Government (DILG). PRMF is an institutional reforms and governance program using the road sector as an entry point.

The PRNDP is a planning tool that supports the efforts of provincial governments to increase economic activities and improve public access to infrastructure and services. Sustainable development of road networks includes prioritising road development programs over a rolling five year period through a participatory process involving various community stakeholders from the private and business sectors, national government agencies as well as key provincial government departments and offices. The PRNDP targets rehabilitation and sustainable maintenance of provincial roads on an annual basis and is supported by multi-year budgeting and expenditure management, underpinned by a capacity building program to improve skills, processes and systems in road development and management.

This document is divided into three major parts – Rationale and Context (covering Chapters 1 to 4), Road Condition Data, Issues, and Strategies (Chapters 5 to 6), Road Prioritisation, Investments and Implementation (Chapters 7 to 12).

Rationale and Context

The Australian Agency for International Development (AusAID) has entered into an agreement with the Government of Philippines (GOP) to support the Southern Philippines Road Maintenance Program (SPRMP). A specific facility under the SPRMP is the Philippines Provincial Roads Management Facility (PRMF). The Province of Bohol has been identified as one of the initial seven provinces assisted by PRMF, an Australian Government/ AusAID Initiative implemented by the Department of Interior and Local Government (DILG).

Bohol is located at the central part of the Philippines and 556.16 nautical miles away from Manila. The Province is the 10th largest island in the Philippines covering a total land area of 4,117.26 square kilometres or 411,726 hectares. Bohol is administratively divided into 47 municipalities, 1 city and 1,109 barangays. It is composed of a mainland and 81 islands and islets with an estimated coastline of 654 kilometres.

Bohol's natural assets include 1,700 Chocolate Hills, 14,000 hectares of mangrove ecosystem and more than a hundred fish sanctuaries and caves. Bohol's culture is a rich blend of indigenous and external culture influences. Bohol is noted for an array of local foods and delicacies, well-made handicraft, and well-preserved historical landmarks that make the province an eco-cultural tourism attraction.

In 2007, the Province had a total population of 1,230,110 with 1.06% Annual Population Growth Rate. Results of the Poverty Database and Monitoring System (PDMS) of the Provincial Government reveal that Bohol has 224,283 households with an average family size of 5 persons. Bohol's population is predominantly young with most of its population belonging to the younger age groups.

Agricultural remains the biggest sector in the province in terms of working population and land use. The total land area devoted to agriculture use is 184,874 hectares or roughly 45% of the total land area of the province. Fishing is the second main source of income and alternative livelihood of the people. Bohol has 30 coastal municipalities, wherein 33% of the population is directly dependent on fishing.

Sustainable road management and maintenance is at the core of Bohol's development agenda. The Province of Bohol envisions itself as "a prime eco-cultural and agricultural-tourism destination and a strong agriculture-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." Its mission is "to continuously enhance its social, economic, cultural, political and environmental resources through effective collaboration of stakeholders for increased global competitiveness." To achieve the vision and fulfil its mission, the province identified three major strategies. These are green agricultural-based economic development, eco-cultural tourism, and public-private partnership.

The integrated spatial vision of Bohol identifies key thematic areas of growth in terms of tourism, agriculture, trade and industry. The spatial vision is consistent with the current development trends in the province and the presence of adequate infrastructure facilities is needed. The primary economic growth drivers of the province are agriculture and tourism, two development areas that require good roads and other support infrastructure.

Road Condition, Issues, and Strategies

The road network in Bohol has a total road length of 5,948 kms, of which 10% is classified as national road, 16% provincial roads, 1% city roads, 5% municipal and 68% barangay roads. Entire road network is composed of 3% asphalt, 18% concrete, 56% gravel and 23% earth. There are 8,869.88 linear meters of bridges within the road network in the province, of which 67% are concrete, 12% are steel, 0% bailey and 11% are timber bridges.

The road network in the province consists of the circumferential road along the coastline and in the interior road networks that connect the interior municipalities. The Tagbilaran Eastern Road (TER) connects Tagbilaran to Ubay via Jagna while the Tagbilaran Northern Road (TNR) completes the loop from Ubay to Tagbilaran via the northern town of Tubigon. The Loay Interior Road (LIR) to Trinidad and the (Junction Dat-an) Carmen-Sierra Bullones-Pilar-Alicia roads cut across central Bohol through the interior towns. A road that connects to the nautical highway is the Tubigon-Sagbayan-Carmen-Sierra Bullones-Jagna Port to Port Road that is currently undergoing repair and improvement. This road which connects the

northern town of Tubigon to the eastern town of Jagna traverses through the interior municipalities passing through Carmen in central Bohol.

The Municipality of Pres. C. P. Garcia, the only island municipality in the province, is crisscrossed by a network of inland roads, in which the major ones lead to the feeder ports that connect the municipality to the mainland. The Panglao Island Road (PIR), on the other hand connects the Panglao Island, where most of the tourism establishments are located, to the capital city of Tagbilaran. These major distribution road networks of the province are expected to enhance eco-cultural tourism and agro-industrial development activities.

Based on the results of the most recently conducted provincial road inventory in February 2010, there are 165 provincial road sections in Bohol. Maintenance and management of these road segments are under the Provincial Engineer's Office under four management units. The road inventory, which was done in three weeks time, revealed that ten road sections are considered bad, 28 are poor, 55 sections are classified as fair while only 72 sections are classified as good roads.

The road inventory data, though done within a short duration of time, provided vital information shared to stakeholders during the Stakeholder Consultation for Road Network Priorities, an important step in the preparation of the PRNDP. The consultation workshops surfaced a number of issues related to roads management.

Firstly, road planning and prioritization is led by the Provincial Planning and Development Office (PPDO) in collaboration with PEO that simply provides a roads list which prove insufficient as basis for planning and prioritization. Road traffic data is already five years old and road condition assessment has not been made since 2007. Furthermore, there are no clear criteria for the prioritization of roads and integrated spatial planning processes are still inadequate to connect roads to economic and social services, a skill that needs to be built into the PEO and PPDO.

Secondly, road segments to be improved or rehabilitated are decided annually by the Local Chief Executive in consultation with the Provincial Engineering Office. To ensure sustainable roads management, there is a need for a multi-year investment programming and budgeting for provincial roads. Decisions on road segments to be improved or rehabilitated are contingent on the availability of funds and are sometimes made in the second or third quarter of the fiscal year. In effect, project cycle management processes leave much to be desired and are occasionally abbreviated to meet with time schedules.

Thirdly, one of the often-cited reasons for the inadequate road maintenance is insufficiency of funds. Provincial Engineer's Office claims that it lacks the technical personnel, road equipment and service vehicles as the funds are hardly enough to upgrade, rehabilitate and maintain provincial roads. Also, roads programming is hampered by low level of computer literacy and the lack of ICT/GIS facilities at the PEO.

Fourthly, the PEO engineers admitted that not much attention is given to ensuring road safety. The maintenance engineers are aware that there are laws and rules on road safety

but these are not consciously considered into road designs, except in extreme cases when ravines are 10 meters deep. Also, PEO stated that road safety signs are lacking and education as well as information on road safety for communities is not undertaken.

Finally, roads management is not integrated and comprehensive and was viewed in the past as an exclusive of the Provincial Engineer's Office. Revenue – generation is not linked with road priorities. Plans and budgets for roads do not match, thus PEO engineers complain that they plans for road network management however these plans are not supported with budget allocations. The different agencies in the provincial government have not had an opportunity to sit down together and plan for roads, and coordinate for sustainable road management and improved road service delivery systems

The Provincial Road Vision and Strategies

The Provincial government of Bohol envisions “**sustainable and safe roads managed by capable bureaucracy and empowered citizenry for increased economic and social benefits to the Boholanos**”. Towards this end, the provincial government of Bohol will embark on multi-year road network development strategies that will include the following:

1. an updated road condition survey and network inventory for better decision-making;
2. road planning and prioritization using selection criteria in consultation with stakeholders;
3. investment programming for provincial roads including careful planning for revenues and allocations;
4. budgeting and public expenditure management to ensure cost –effective road management and service delivery;
5. strengthening of the monitoring and evaluation and internal control in the road sector and engaging the participation of communities and the private sector; and
6. continuous human resource and capacity development of service providers for better road management.

Road Prioritisation, Investments, and Implementation

From the list of 165 provincial road sections, 68 road segments were identified based on the six selected criteria in road prioritisation. These were ranked according to degree of importance after which respective weight was assigned to each criterion. The criteria for prioritisation included Access and Connectivity (30%), Traffic Volume (20%), Road Condition (20%), Poverty and Peace and Order Situation (10%), Population and Settlement (10%), and Environmental Condition (10%).

Based on the criteria above, a total of 33 road sections were ranked by the workshop participants. A second prioritization tier was conducted by a technical team coming from the PEO and PPDO which further gave consideration of funding requirements, a total of 13 roads were prioritized for funding under the PRNDP – 6 will be funded by PRMF and another 5 from the 20% development fund of the province.

Three types of funding sources were considered: (1) PRMF Funding from both the base fund and the incentive fund; (2) 20% development fund; and (3) Official Development Assistance (ODA) and other sources like congressional support fund

The table below summarizes all investment project and programs in the PRNDP:

PRNDP Investment Areas	Types of Work	Total Investment Requirements (in millions of pesos)					Total Investment Requirements (2010-2014)
		2010	2011	2012	2013	2014	
I. Roads	Rehabilitation	192.57	109.20	104.39	133.32	30.05	569.53
	Upgrading	136.80	68.25	124.20	26.68	130.00	485.93
	Maintenance	0.00	3.67	21.82	16.97	60.39	102.86
Sub-Total (Roads)		329.37	181.13	250.41	176.97	220.44	1,158.32
II. Bridges and Culverts	Upgrading	0.00	15.75	33.00	4.62	0.00	53.37
Grand Total (Roads, Bridges, Culverts)		329.37	196.88	283.41	181.59	220.44	1,211.68

1. Introduction

1.1 Context and Rationale

The Bohol Provincial Road Network Development Plan (PRNDP) is an integrated five-year (2009-2014) development plan for the sustainable development and management of road networks in the province. It is a component of the Provincial Road Management Facility (PRMF), an initiative of AusAID in partnership with the Department of Interior and Local Government (DILG) which seeks institutional reforms and governance using the road sector as an entry point.

The PRNDP is a planning tool that supports the efforts of provincial governments to increase economic activities and improve public access to infrastructure and services. A sustainable development of the road network is facilitated by prioritising road development activities over a rolling five year period through a participatory process, involving various community stakeholders from the private and business sectors, national government agencies as well as key provincial government departments and offices. It targets rehabilitation and sustainable maintenance of provincial roads on an annual basis and is supported by multi-year budgeting and expenditure management, underpinned by a capacity building program to improve skills, processes and systems in road development and management.

The PRNDP is informed by:

- The objectives of the Provincial Development Physical Framework Plan (PDPFP) which sets out the strategic directions for development within the Province. The PRNDP will support the attainment of the goals and objectives in the PDPFP by developing the road transport network according to Provincial development priorities.
- The goals and objectives of the PRMF which aim to increase local economic activity and improve public access to infrastructure and services.
- The Provincial Road Sector Planning and Management Review (PRSPMR) which identifies gaps in capacity for the Provincial Government to support and underpin the requirements of sustaining a road network development program, including maintenance and rehabilitation. This examines planning, budgeting, skills, systems, linkages and services required to perform the necessary functions.
- The current condition and performance of the road network and road development activities occurring at the national and local levels, including those being developed with the assistance of other donors (also included as part of the PRSPMR).

- The available funds for new road works, road rehabilitation and road maintenance, including bridge construction and supporting infrastructure.

1.2 Preconditions

For PRNDP to successfully develop to meet specifications and expectations, it will require:

- A Provincial Development Physical Framework Plan (PDPFP) that describes key development strategies and transport priorities.
- A Provincial Road Sector Planning and Management Review (PRSPMR) that identifies inadequacies in current systems, skills and processes to service road infrastructure effectively.
- A road inventory and detailed map that identifies the extent, use, connectivity and condition of the road network.
- Maps that show at a minimum economic activity, population centers and demographics, land use types, landscape features, terrain, hydrology, and environmentally sensitive areas.
- Local road design guidelines that provide clear instruction on minimal acceptable road design standards for estimating costs of road development options.
- A process guide, survey tools and templates to guide information gathering and the development of the plan.
- A designated and committed working group with expertise to develop all components of the plan and facilitators to guide its development.
- A champion to ensure it is approved by the Governor and presented to the Provincial Development Council (PDC) for ratification and approval.

2. Goals and Objectives

In support to Bohol's vision of a prime eco-cultural and agricultural tourism destination and a strong agricultural-based green economy, PRNDP envisions sustainable and safe roads managed by capable bureaucracy and empowered citizenry for increased economic and social benefits to the Boholanos. Its goal is to

develop a sustainable provincial road network by prioritizing and funding road development activities over a five year period.

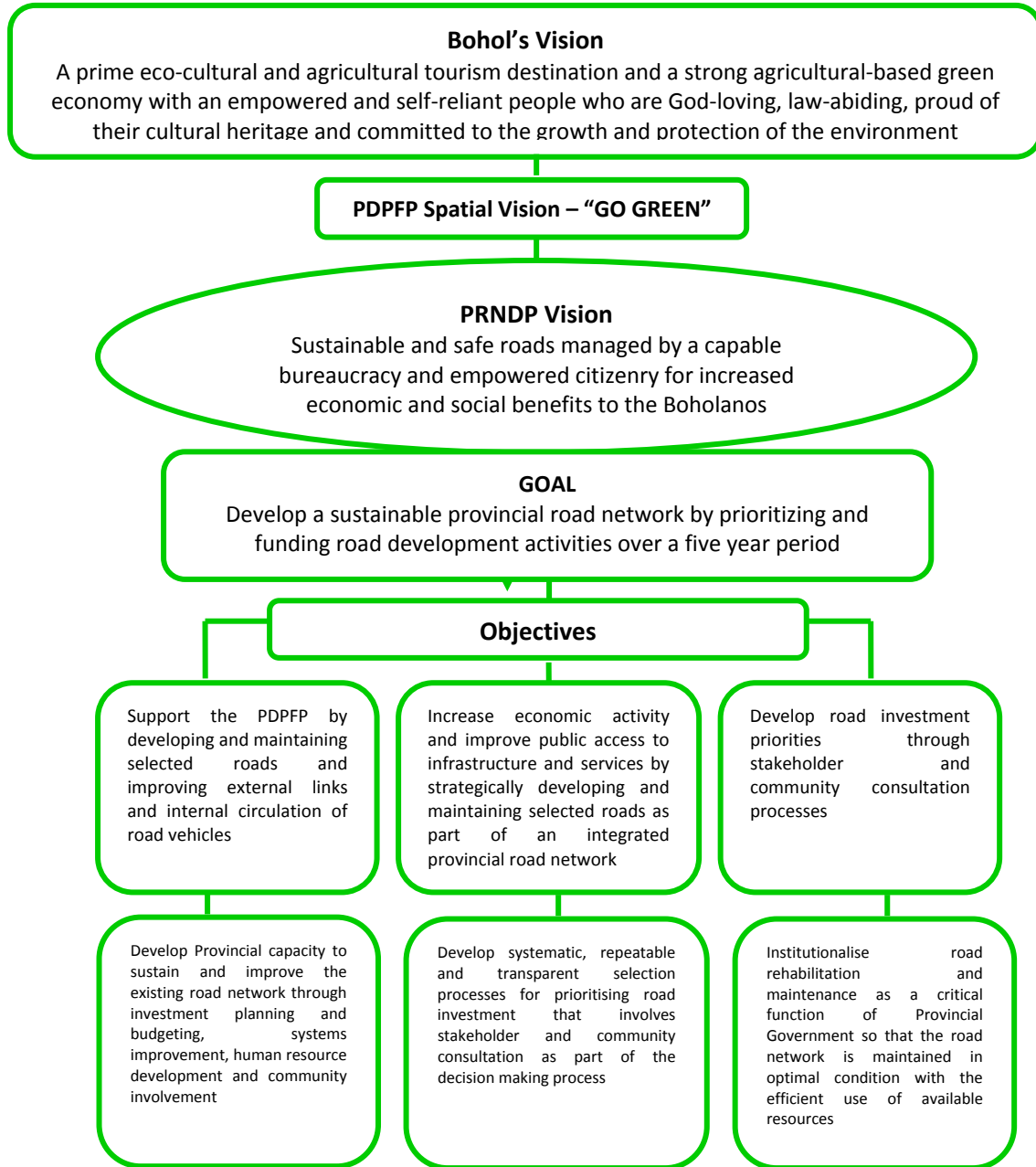


Figure 1 PRNDP Vision Consistent with Bohol's Vision

3. Scope

3.1 Extent

The PRNDP is a five year road development plan from 2010 to 2014 designed in support to the PDPFP. It contains the following:

- Identified provincial road work priorities consistent with and in support of the PDPFP.

- A process for the selection and prioritisation of provincial road investment that is systematic, repeatable, transparent and inclusive. It describes the selection criteria and considers issues such as accessibility to services, contribution to economic activity, environmental protection, building social capital, peace and conflict issues and gender equity.
- An updated roads inventory that details road condition, including sections and specifications for rehabilitation, upgrading and maintenance.
- Identified capital works required to underpin the provincial road network, including but not limited to, bridges, slope protection, drainage, road safety, disability access etc.
- A revenue and expenditure plan over the five year life of the plan. The PRNDP will identify funding sources for each activity in the plan.
- Identified service delivery mechanisms and procurement requirements to implement the plan.
- A framework for monitoring and evaluation of the implementation of the plan on an annual basis, including a review of previous activities and priorities carried forward.
- A capacity development program addressing organisational issues, human resource development, systems and processes, in order for the Provincial Government to implement the plan efficiently and effectively.

The PRNDP passed through the following series of activities to meet all specifications to quality standards in the preparation of the plan and the implementation of the recommended works and capacity building program.

Table 1 PRNDP Schedule of Activities

Schedule	Activity	Remarks
7-8 Dec 2009	Provincial Road sector Planning and Management Review (PRSPMR) and Institutional Assessment	
7 Jan 2010	TWG-PRNDP and TWG-PAWRP Orientation	Understanding and appreciation of PRNDP roles
14 Jan	Orientation Meeting with the Project Monitoring and Evaluation (PMET) Team	
15 Jan	Orientation Meeting with the Bids & Awards Committee (BAC)	
22 Jan	Road Sector Stakeholders' Summit	Stakeholder issues and vision of roads
8-31 Jan	Road Traffic Count by PEO	Data on average daily traffic (ADT)
1 Feb	Orientation to PRMF and PRNDP to Holy Name University (HNU)- Center for Local Governance (CLG) Team	

2-3 Feb	Road Inventory Training	Refresher course on how to conduct road condition survey
4-5 Feb	GIS/ICT Rapid Assessment	GIS/ICT capacity assessment of 20 provincial offices/departments
5 Feb	PEO Enumerators Orientation Training	12 teams from PEO at 4 in a team plus 1 from the HNU –trained/oriented
8-12 Feb	Conduct of Road Condition Survey	Updated data on road condition of 167 road sections concentrating on primary roads (focus areas of the PRNDP)
9 Feb	Environmental Management Systems Assessment	Capacity assessments for EMP monitoring
9-11 Feb	PRNDP Formulation Workshop in Manila	Trained core group who will lead in the preparation of the PRNDP
10 Feb	SCALOG and LGPMS Orientation	Orientation of provincial government departments and offices on tools for competency assessment and performance management.
	Road condition data tabulation and encoding by a composite team of PEO and HNU encoders	
12 Feb	Procurement Orientation Workshop	Attended by designated PRMF representatives to the PRMF BAC
14 Feb	Meeting with Governor	Discuss and decide on: a) Internal Audit Department as separate department b) ICT/GIS unit as separate office with upgraded staff positions and salaries c) Core Provincial Team to write the PRNDP
15-17 Feb	PPDO GIS and HR IT units prepare base maps of road networks and geographic features for discussion and analysis	
18-19 Feb	Stakeholder Consultation for Road Network Development Priorities	18 – Stakeholder Consultation 19 PMT PRNDP Priority Development Workshop
24 Feb	Project Monitoring and Evaluation Workshop for PRNDP	PMET drafts the M and E strategy, framework and plan for PRNDP
25-26 Feb	Write shop for PRNDP	
28 Feb	Draft Submission	
1 Mar	Meeting of PMT and Governor to review and approve the Plan	PRNDP Review and Approval by Governor Erico B. Aumentado
4 Mar	Submission of the Plan to PRMF Manila	

3.2 Limitations and Assumptions

The first edition of the PRNDP has been produced within a limited timeframe between January and March 2010 (2 months). This limited the ability to compile detailed road inventory data and effectively use it to undertake detailed analysis and assessment of road condition. The Province has thus initially worked with currently available information and targeted detailed surveys in core areas.

There has been limited time to undertake accessibility and proximity analyses using quantitative data such as traffic volume, modes, and origin/destination, yet, the provincial government of Bohol was able to produce a vital volume of data relevant to roads assessment and management.

The initial costs of each road development package have been estimated based on previous road rehabilitation and maintenance contracts.

The formulation and development of the Bohol PRNDP is capacity development in itself as this is the first time that the provincial government went into this road network development planning activity. A series of workshops were held to orient staff on the PRNDP using local facilitators and development guidelines. The number of workshops and activities were decided in consultation with local counterparts. A spatial planning workshop has earlier been facilitated involving various stakeholders under the auspices of the Local Governance Development Program (LGDP), also an Australian Government, AusAID initiative. The spatial planning done in connection with the PDPFP produced spatial maps which were later used in the formulation of the PRNDP. The output maps generated from this workshop significantly contributed to the bulk of information used during the Stakeholders' Consultation workshop held in 18-19 February 2010 which was intended for the selection processes and consultation to reach consensus on the selection of road priorities.

The PRNDP requires approval by the Governor in order to proceed to the development of the Provincial Annual Works and Reform Program (PAWRP), Annual Capacity Building Plan (CBP) and Annual Physical Works Program (APWP).

4. Profile of the Study Area

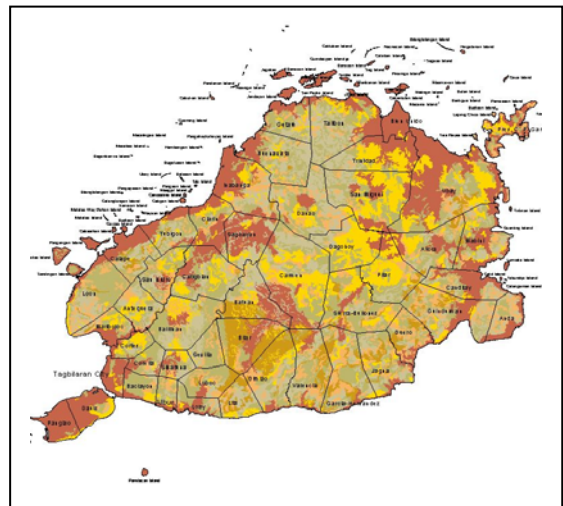
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Bohol's natural assets include 1,700 Chocolate Hills, 14,000 hectares of mangrove ecosystem and more than a hundred fish sanctuaries and caves. Bohol's culture is a rich blend of indigenous and external culture influences. Bohol is noted for delectable delicacies, well-made handicraft, and well-preserved historical landmarks that make the province an eco-cultural tourism attraction.

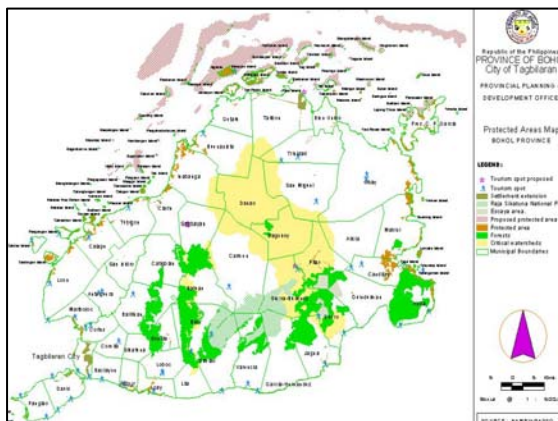
4.1 Physical, Environmental and Geographical Profile

Bohol's terrain is variable - nearly flat at the plains, to low rolling/moderate to very steep sloping with 5 to 50-meter high cliffs in the Sierra Bullones limestone formation (PPDFP, 2010).

The more rugged terrain is found in the southern part of the province (see Map 1), although the Ubay volcanic rocks and Boctol *serpentinite* in the north and northeast are of moderate/ rugged slopes in most areas. The central valley is moderately steep.



Map 1 Slope Map of Bohol (PPDFP 2010)



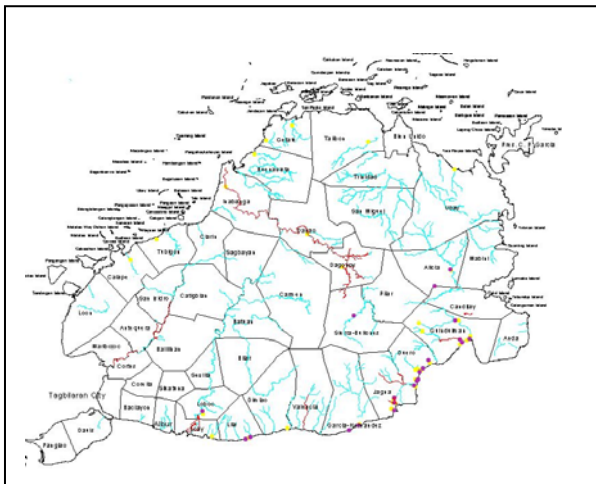
Map 2 Location of Protected Areas in Bohol

The province has six slope ranges from level to very steep. Level to nearly level areas is mainly located along the coast and the 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)

It is important to note that Bohol has 16 protected areas under the NIPAS Act with presidential proclamations. Most of these are situated in the northeast part of the province (see Figure 2).

Based on the distribution of rainfall during the year, Bohol's climate as classified by PAG-ASA belongs to Corona's 4th Type, characterized by rainfall more or less evenly distributed throughout the year. Intensification of the southwest monsoon usually occurs during the months of July to October. The rainfall varies from about 1,200 mm/yr around the coast to slightly more than 2,200 mm/yr in the mountainous areas in the province. Based on the climatological records of Tagbilaran City weather station, the province has an annual average of 161 rainy days. Average rainfall and trend 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.

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



Map 3 Hazard Map - Flood Prone Areas

Bohol, being an island province is vulnerable to natural disasters e.g. drought, storm surges, tsunami, flooding, earthquake, tropical cyclones and landslide. Earthquakes have been felt in Bohol but only an average of one perceptible shock is reported each year. Majority of the coastal zones in the Province of Bohol are highly susceptible to storm surges and liquefaction hazard.

4.2 Socio-Economic Profile

In 2007, the Province has a total population of 1,230,110 with 1.06% Annual Population Growth Rate. Results of the Poverty Database and Monitoring System (PDMS) of the Provincial Government reveal that Bohol has 224,283 households with an average family size of 5 persons. Bohol's population is predominantly young with most of its population belonging to the younger age groups. 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

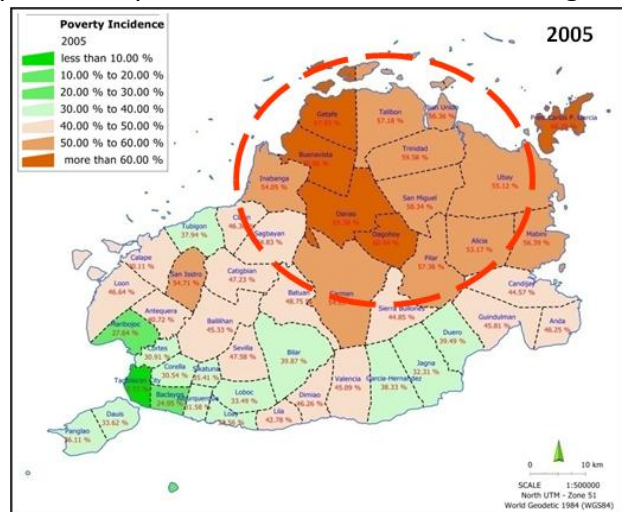
with 12.1 percent each. The dependency ratio of the province is 54%, as such, 54% of the population are either under 15 or over 65 years old).

Agriculture remains the biggest sector in the province in terms of working population and land use. The total land area devoted to agriculture use is 184,874 hectares or roughly 45% of the total land area of the province. Fishing is the second main source of income and alternative livelihood of the people.

Bohol has 30 coastal municipalities, wherein 33% of the population is directly dependent on fishing. Livestock and poultry industry is also a major contributor in the overall progress and development of Bohol. Among the continuously produced agricultural-based products that provide significant economic benefits to the Boholanos and are among the leading traded items in the province are handicraft, prawn, seaweeds, woven raffia, rice, banana, cattle, hog, fish and copra.

Average income of a Boholano family is P77, 291.00 in year 2000, based on the latest available provincial disaggregation of the Family Income and Expenditure Survey (FIES 2000). In the latest Human Development Report¹, Bohol ranked 41st among 77 provinces in terms of human development, placing it in the upper half per inter-provincial comparison with middle human development.² Over the years, the province's HDI³ has been steadily improving from 0.531 in 1994 to 0.544 in 2003.

Poverty incidence in Bohol significantly dropped by more than half in 2003 compared in year 2000. However, in 2006, NSCB reported an increase in poverty incidence in Bohol of almost 10% or an equivalent increase by 26,401 families.



Map 4 Poverty Map of Bohol

Poverty incidence in 2006 in Bohol was placed at 38.8% (92,354 families), higher than the regional and national levels. Poverty is still concentrated in the northeast part of Bohol, more particularly in the second congressional and a portion of the third congressional district.

Based on the Functional Literacy, Education, and Mass Media Survey, Bohol's 2003 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. Regarding health,

¹ Philippine Human Development Report: 2005, United Nations Development Programme (UNDP)

² based on three basic human dimensions, namely, 1) longevity (Life Expectancy), 2) knowledge (Educational Attainment) and 3) decent standard of living (Per Capita Income)

³ HDI – Human Development Index; measures average achievement in human development in the 3 basic human dimensions

decreases are noted for Infant, Child and Maternal Mortality Rates (MMR) in 2008 compared to the year 2000. Incidence of malnutrition among newborns also dropped by 11 percentage points in 2008 compared to the year 2000.

4.3 Existing Land Use and Economic Activity

The province of Bohol has five major land uses, the agricultural land, grassland/shrubland, woodland, wetland and miscellaneous land, which include built-up areas, reservoirs and mine sites. Almost one-half of the province total land area is covered by grassland/shrubland, while one-third of its total area is utilized for agricultural activities.

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% (Bohol Ecological Profile, DENR 1992).

The economy of Bohol is largely agricultural-based with agricultural activities focused on the cultivation of food crops. While the economy of the province is predominantly small-scale agriculture, home-based industries, mostly of the micro and cottage types, also play a great deal of contribution. Tourism is another industry, which is increasingly gaining influence on the province's economy.

The province of Bohol is a growing favorite destination not only of domestic but also of foreign tourists. Tourism industry has become a major element for the economic growth in Bohol. Tourism investors and service providers have seen the industry's promising conditions and its potentials for further development.

4.4 Development Trends and Growth Areas

The Province of Bohol envisions itself as "a prime eco-cultural and agricultural-tourism destination and a strong agricultural-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." Its mission is "to continuously enhance its social, economic, cultural, political and environmental resources through effective collaboration of stakeholders for increased global competitiveness."

To achieve the vision and fulfil its mission, the province identified three major strategies. These are green agricultural-based economic development, eco-cultural tourism, and public-private partnership.

This development framework is best seen in Figure 2.

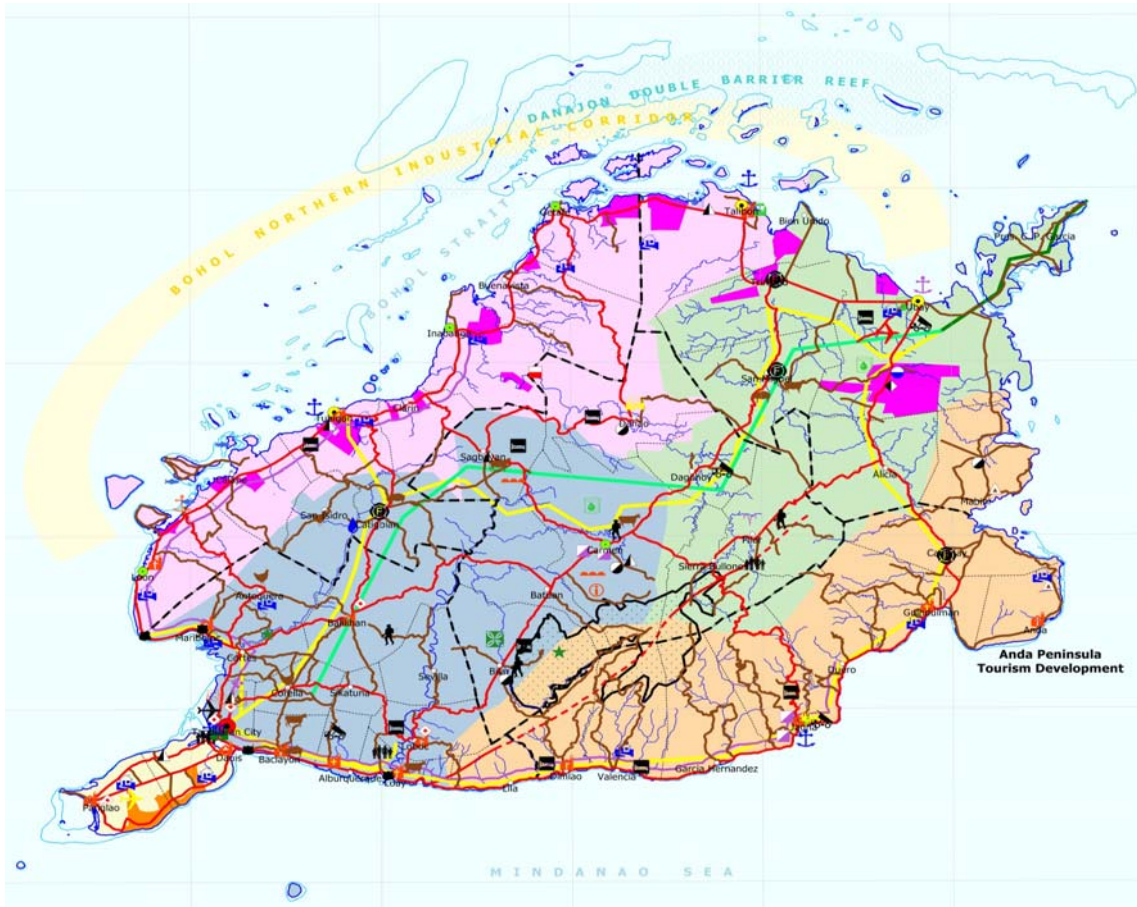
Overarching Development Framework



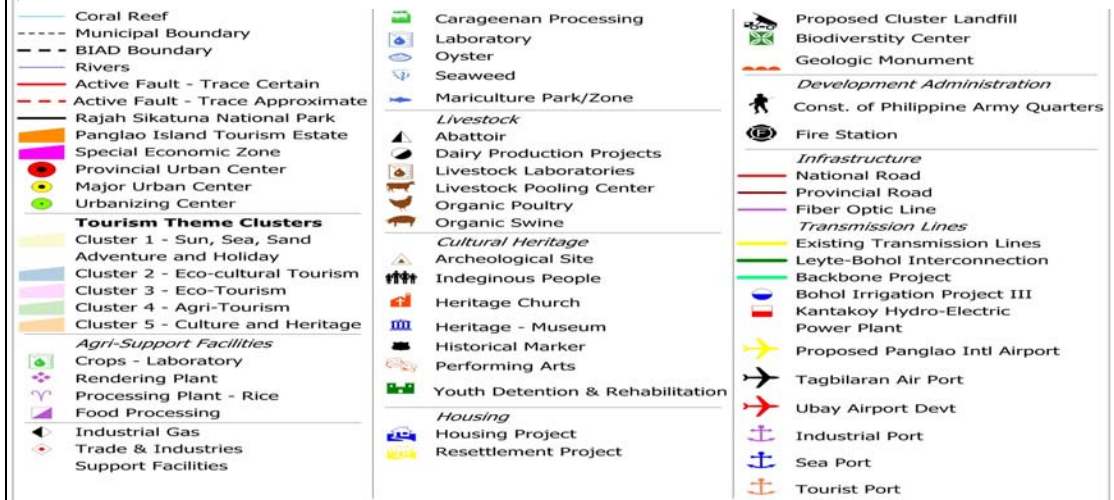
Figure 2 Overall Development Framework of Bohol

The integrated spatial vision of Bohol, indicated in Figure 6 identifies key thematic areas of growth in terms of tourism, agriculture, trade and industry. The spatial vision is consistent with the current development trends in the province and the presence of infrastructure facilities needed.

It must be mentioned that the primary economic growth drivers of the province are agriculture and tourism.



Map 5 Bohol's Integrated Spatial Vision



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 Anda and Danao

have become increasingly popular as alternative tourism sites; the former specializing in adventure tourism while the latter focused on eco-tourism as distinguishing marks.

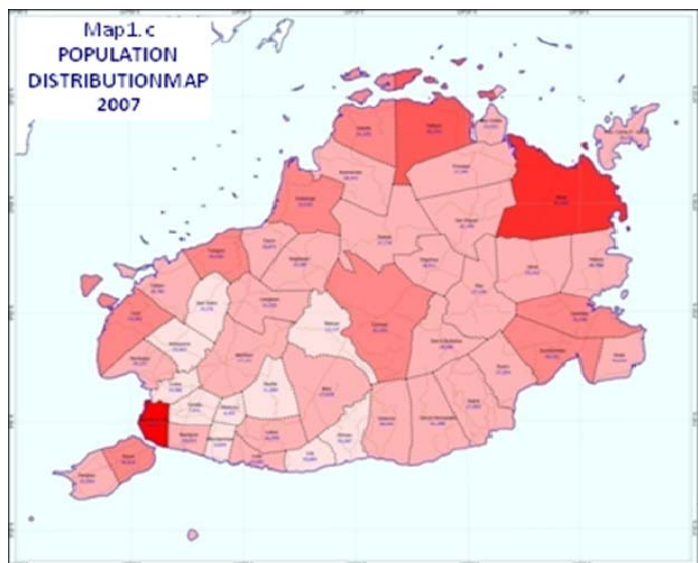
The province intends to disperse economic growth activities to spread benefits to the people in the different areas of the province. In terms of industry, for special economic zones are planned along the northeast part adjacent to the island of Cebu. Tourism activities, on the other hand are planned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

4.5 Transport Infrastructure and Traffic Characteristics

4.5.1 Population Centers and Transport Hubs

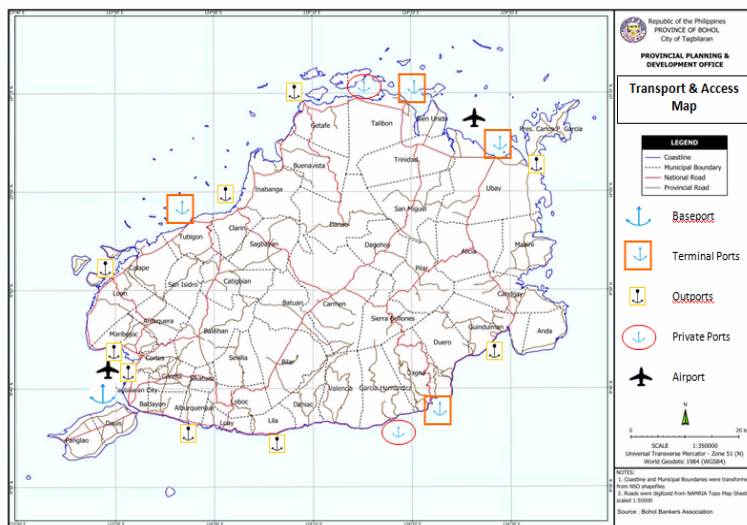
Bohol Province has a total population of 1,230,110 as of the census in 2007. From only 592 thousand residents in 1960, the population had almost doubled after 47 years. The results from the 2007 Census of Population show that Bohol's population increased by 90,980 persons. The 2007 population is larger by 8.0 percent compared to the census count of 1,139,130 persons in May 2000. The provincial 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. Meanwhile, the top ten municipalities of Bohol with the largest settlements accounted for about 40 percent of provincial population.



Map 6 Population Distribution Map

The towns of Corella and Sikatuna had the smallest population size accounting only for a total of 1.0 percent of Bohol's population. As indicated in the map above, apart from Tagbilaran City, the northeast municipalities records the highest population, more particularly the towns of Ubay, Talibon and Inabangay. These towns, along with Tubigon and Jagna, also among the most populated, are considered migration entry points as these towns have, or are near to passenger seaport terminals.



Map 7 Transport and Access Map

Seaports are evenly distributed in strategic locations in the province. The base port is in Tagbilaran while terminal ports are located in the municipalities of Tubigon, Jagna, Talibon, and Ubay. There is only one airport currently operational, the Tagbilaran City Airport while another one is located in Ubay. Only the Tagbilaran airport handles commercial and passenger traffic.

4.5.2 Services and Economic Activities

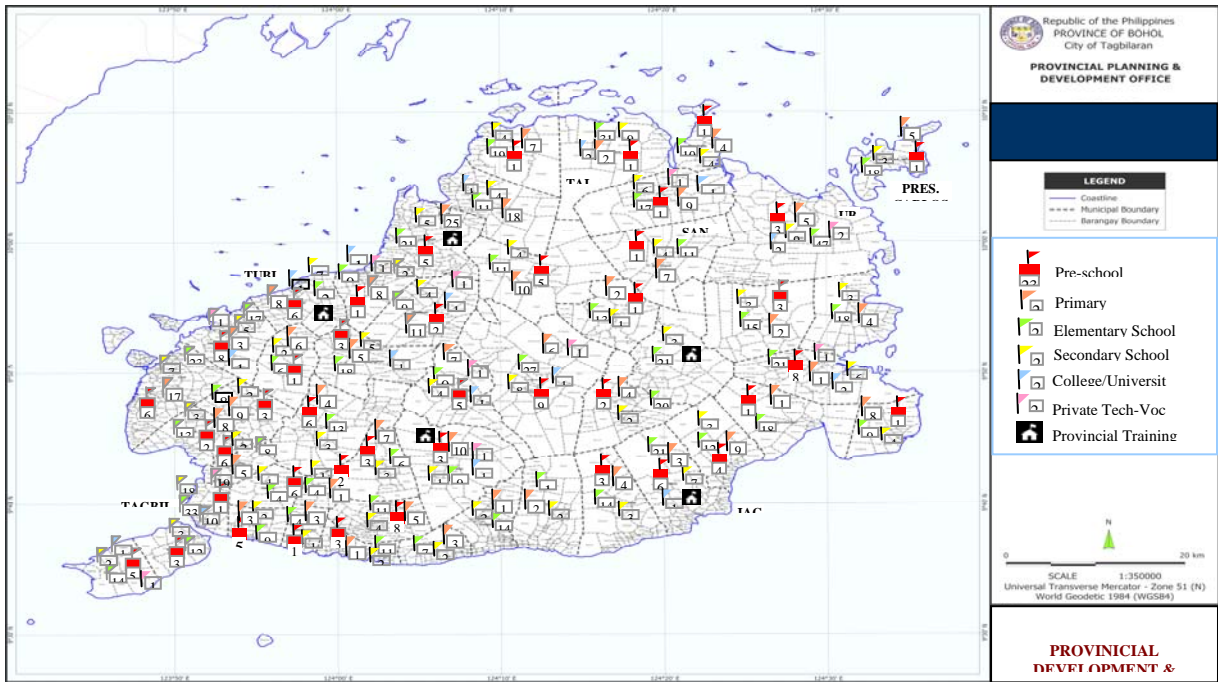
A number of schools provide education to the school-going age population of Bohol. For basic education, public schools provide more access to the school-going age population of the province with its 267 pre-schools, 988 primary/elementary schools and 193 secondary schools spread strategically all over Bohol.

About 35 technical-vocational (tech-voc) schools provide skills trainings to the unemployed and the underemployed through training programs for pre-employment, skills upgrading, and productivity enhancement.

Several other schools also offer tech-voc courses in the province in partnership with the government thru the Technical Education and Skills Development Authority (TESDA). Aside from the five (5) Provincial Training Centers (PTC) run by TESDA, a number of schools, both public and private are offering technical-vocational courses in Bohol.

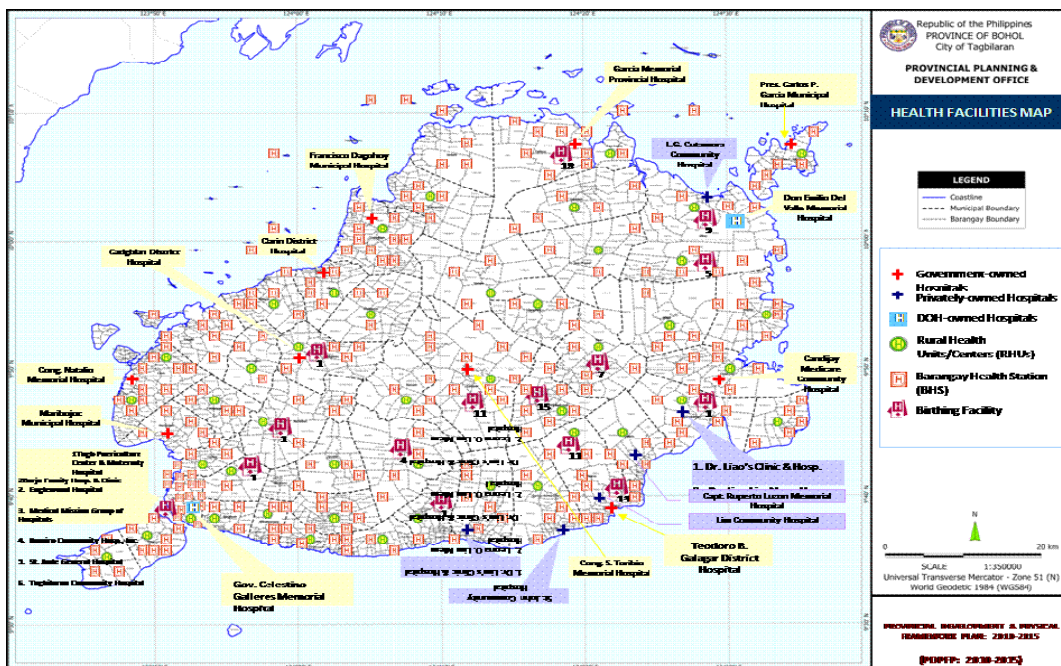
In the past years, a number of graduates in various Technical- Vocational Education Training (TVET) programs were produced. In Bohol, such programs had produced 39,006 graduates in 2006, 34,501 in 2007 and 6,644 graduates in 2008. So far, 418,588 graduates were tracked by TESDA to be employed locally and abroad.

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.



Map 8 Education Facilities Map

There are 32 hospitals, 19 of which are private and 2 government infirmaries in the province. It has to be noted that most of these service facilities are located in the eastern portion of the province and in the coastal areas. Only two hospitals are located in the central part of the island, prohibiting access to these communities to quality health care. There are, however, 53 municipal health centers, one each for the 47 municipalities and 1 city, and three other additional health centers for 3 municipalities. Only 22 of the rural health units are accredited by the Philippine Health Insurance Corporation.



Map 9 Health Facilities Map

Regarding trade, service and industry, there are at least five municipalities with big investment volumes. These are the municipalities of Ubay, Talibon, Tubigon, Jagna and Panglao. Four of these municipalities are situated in the terminal ports with trading as a high activity component in the economic landscape, except for Panglao, which primary business activity is on tourism. The capital city of Tagbilaran also reports the highest volume of registered businesses and capital investment. The town of Carmen located at the centre of the island can be considered a trade hub of the area, necessitating better interconnectedness among its adjacent municipalities.

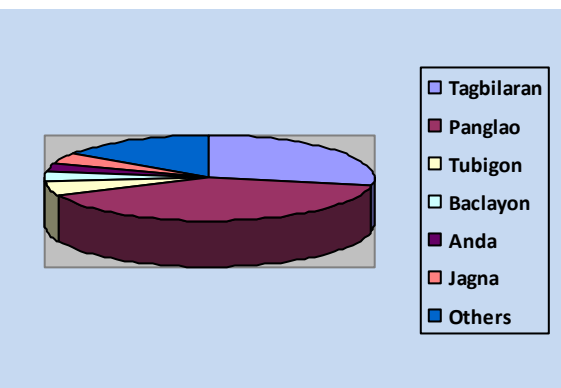
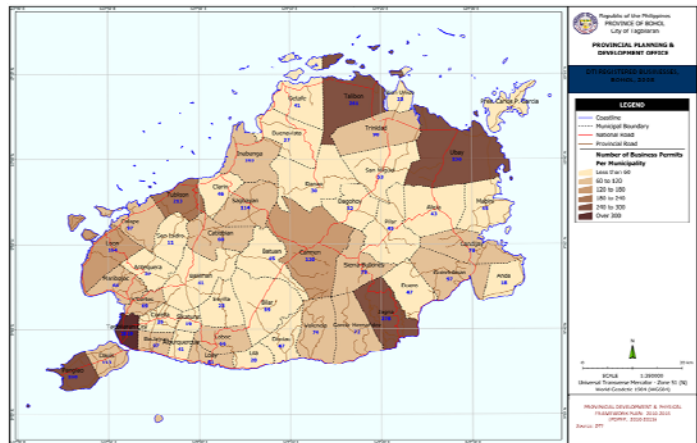
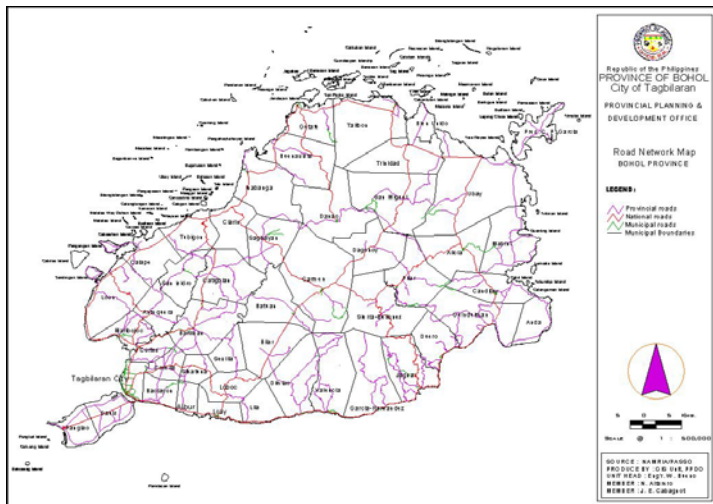


Figure 3 Accommodation Establishments

Tourism-related establishments are concentrated largely in the city capital of Tagbilaran and the island of Panglao. Figure 12 shows municipalities that offer accommodation facilities are mostly located in Tagbilaran, Panglao island (comprised of the municipalities of Dausi and Panglao) and Baclayon while a few are in the terminal seaport towns of Tubigon and Jagna. A growing tourism destination is the town of Anda in the northeast.

4.5.3 Provincial Roads and Access



The road network in the province consists of the circumferential road along the coastline and in the interior that connects the interior municipalities. The Tagbilaran Eastern Road (TER) connects Tagbilaran to Ubay via Jagna while the Tagbilaran Northern Road (TNR) completes the loop from Ubay to Tagbilaran via the northern town of

Map 11 Road Network Map

Tubigon. The Loay Interior Road (LIR) to Trinidad and the (Junction Dat-an) Carmen-Sierra Bullones-Pilar-Alicia roads cut across central Bohol through the interior towns. Part of the nautical highways, repair and improvement of the Tubigon-Sagbayan-Carmen-Sierra Bullones-Jagna Port to Port is on-going. This road which connects the northern town of Tubigon to the eastern town of Jagna traverses through the interior municipalities passing through Carmen.

The island Municipality of Pres. C. P. Garcia is crisscrossed by a network of inland roads, in which the major ones lead to the feeder ports that connect the municipality to the mainland. The Panglao Island Road (PIR), on the other hand connects the island, where most of the tourism establishments are located, to the capital city of Tagbilaran. These major distribution road networks of the province are expected to promote the eco-cultural tourism and agro-industrial development.

The road network in Bohol has a total road length of 5,948 kms. of which 10% is classified as national road, 16% provincial roads, 1% city road, 5% municipal and 68% barangay roads. Total road length of the whole province with an average increased of 3.4% every year. Entire road network is composed

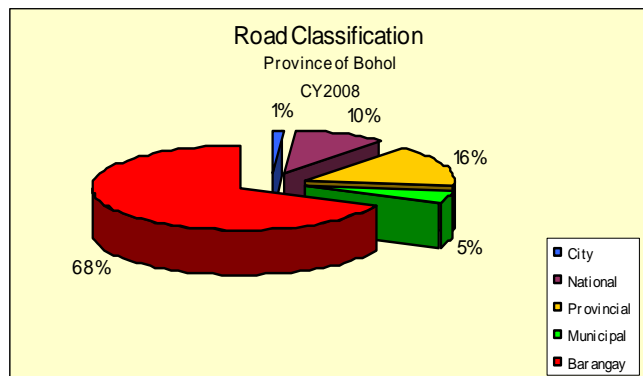


Figure 4 Road Classification

of 3% asphalt, 18% concrete, 56% gravel and 23% earth. There are 8,869.88 linear meters of bridges within the road network in the province of which 67% are concrete, 12% are steel, 0% bailey and 11% are timber bridges.

The table below summarizes the major provincial roads in Bohol and their significance to social and economic services.

Table 2 Major Provincial Roads in Bohol

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 agriculturalcultural areas
Antequera-Balilihan via Dorol Road (RC = Fair)	1	Antequera, Balilihan	Water Falls, agriculturalcultural 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

Road Name	Class	LOCATION	CONNECTIVITY
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-Corella Road	2	Baclayon, Corella	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 Hernadez	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
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

Road Name	Class	LOCATION	CONNECTIVITY
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

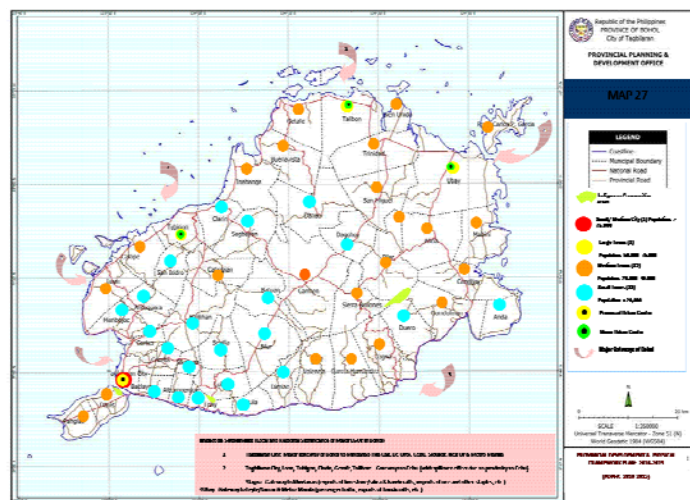
4.5.4 Traffic Characteristics

4.5.4.1 Settlements and Traffic

Most of the densely populated areas in the province are the northeast towns located in the second and third congressional districts. Expectedly, passenger traffic in these areas are observed as moderate to high, compared to the towns near the city of Tagbilaran, considered a provincial urban center.

The towns of Ubay and Talibon in the northeast, and Tubigon in the north, are considered minor urban centers with population density ranging from 400 to 1000 people per square kilometre.

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 in the ensuing years.



Map 12 Human Settlements Map

4.5.4.2 Vehicles and Traffic

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

Table 3 Vehicle Registrations - Total Bohol (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%

4.5.4.3 Tourism and Traffic

Tourism has significant implications on traffic, especially from and between sea and airports. In the table below, we can see the summarized passenger traffic for 2008, for both air and sea ports:

Table 4 Passenger Traffic - 2008

	Passengers	Flights/Shipcalls
	Incoming	
Air Transport	203,340	1,651
Marine Transport	3,433,516	16,603

As indicated in Table 4, passenger traffic in Bohol is quite heavy, with an average of 9,963 passengers per day. This has significant implications on road use as connectivity as passengers from these ports of entry need transport services to their points of destination. More than 60% of this volume of passengers are tourists that travel through the tourism destinations and make use of the following popular routes – Tagbilaran-Carmen-Panglao, Tagbilaran-Panglao, Tubigon-Sagbayan-Carmen, Tagbilaran-Loboc, among others. A few of the frequented routes from visitors from Mindanao make use of Jagna-Carmen-Panglao routes.

Among provincial roads, an initial table indicating traffic volume of 35 major provincial roads is shown below, as a result of the roads condition survey conducted by PEO from February 8-15, 2010, after undergoing a two-day training and hand-on practicum on road inventory and road condition survey.

Table 5 Traffic Volume Data of Provincial Core Road Network

Road Name	Class	Length (km)	Traffic	
			VPD	%Heavy
Dauis-Panglao via Biking Road		(R)	250	-
Jct.(LIR)-Mahayag-Danao Road	1	16	163	2
Catigbian-Canmano Road	1	14	109	-
Tagbilaran(Ubos)-Tutolan(Dauis) Road			(RC = Good)	
Inabanga-Sagbayan via Lapacan-Magtangtang Rd.	2	9	69	-
Pob.-San Francisco Road, Talibon	2	6	109	-
Pob.(Sagbayan)-Sagbayan Sur-Kabasakan Road	1	5	99	-
Balilihan-Janopol-Batuan Road (Balilihan Side)			(RC = Fair)	
Antequera-Catigbian via San Isidro Road	2	18	91	2
Pob.-Bonot-Bonot-Tiguman-Overland Road	2	9	45	-
Catigbian-Clarin via Bogtongbood Road	2	8	74	-
Tajang-Sandingan Road	2	10	90	-
Calape-Pangangan Road	1	16	417	-
Pob.(Inabanga)-Lawis Road	2	6	43	-
Jct. (LIR)-Mahayag-Katipunan Road(San Miguel Side)	2	3	65	3
Alegria(Catigbian)-Baang-Jagbuaya-Janopol Road	2	8	63	-
Dimiao-Oac-Billar Road	1	18	93	-
Rizal(Catigbian)-San Isidro Road	2	3	91	-
Cabulao-Ondol (Mabini)-Union (Ubay) Road(Ubay Side)	1	15	61	-
Corella-Balilihan Road	1	10	98	1
Jct. (TER)-Guindulman-Anda-Badiang Road	1	24	152	-
Carmen-Vallehermoso Road	2	7	93	-
Tinago-Bingag Road	1	2	93	-
Dagohoy-Caluasan Road	2	6	112	2
Baclayon-Corella Road	2	8	43	1
Jct.(TER)-Pob.(Valencia)-Anoyon-Omjon Road	2	16	99	2
One Way Traffic, Inabanga	2	0	43	-
Albuquerque-Sikatuna Road	1	10	250	3
Balilihan-Janopol-Batuan Road (Batuan Side)			(Fair)	
San Miguel-Bayongan-Bulilis-Mabuhay(Ubay) Rd	2	17	43	2
Guadalupe-Monte Video Road	2	6	93	-
Tinago-Biking Road	2	2	99	-
Cogtong (Candijay)-Panas-Pangpang-Badiang Road	1	6	43	-
Antequera-Balilihan via Dorol Road	1	12	92	1
Jct.(TER)-Guindulman-Catungawan-Mayuga-Lombog-Lundag	2	15	61	-
Pob.(Catigbian)-Ambuan-Sagasa(Balilihan) Road	2	11	56	-
Jct. (LIR)-Mahayag-Katipunan RoadAlicia Side)	2	7	65	3
Sagbayan-Danao Road				
Garcia Hernandez-Tabuan-Datag Road	2	19	98	1

4.5.5 Traffic Impacts

The spatial vision of the province as indicated in the preceding pages and the current economic and social condition of people and communities impact on traffic and roads through the following foreseen transmission 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, 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 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 motorcycle, 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 – 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 roads become more accessible.** 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 when realized.

5. Road Network Assessment

This section relies on the road inventory data (See Appendix _) to identify and summarize the road condition and known road issues and investments of provincial roads. After the Road Inventory Training Workshop attended by all PEO engineers, a Road Network Inventory Survey was conducted from 8-12 February 2010 to collect the information necessary to adequately describe the roads in the network. From this, an inventory is drawn with a list of road names with their properties such as surface type and corresponding length and width. It provides the basis for deciding which road segments are in urgent need of rehabilitation, upgrading or maintenance.

5.1 Road extent

Bohol’s road network has a total road length of 5,948 kilometers. Eleven (11) per cent is classified as national roads, that is managed by DPWH; 15% are provincial roads, managed by the Provincial Government; 5% are municipal roads, managed by the municipal governments, 1% are city roads managed by the City Government and a large chunk are barangay roads, comprising 68% or more than half of the entire road network of the province. The total road length of the province increases yearly at an average rate of 3.4%.



Map 13 Province of Bohol Road Network Map

The road network in Bohol based on administrative classification is shown in Table 6.

Table 6 Administrative Road Classifications

Classification	Responsible Agency	%
National Road	DPWH-National	11
Provincial Road	Provincial Government	15
City Road	City Government	5
Municipal Road	Municipal Government	1
Barangay Road	City/Municipal Government	68

The following are the roads comprising the major and key provincial roads contained in the PDPFP. These roads are included in the PDPFP, reviewed and selected using participatory and consultative processes involving public and private stakeholders as

well as technical working groups from the Provincial Development Committee, Infrastructure Development Sector Committee.

Table 7 Major and Key Provincial Roads in the PDPFP

1. Tinago-Biking Road	35. One Way Traffic, Inabanga
2. Tinago-Bingag Road	36. Inabanga-Sagbayan via Lapacan- Magtangtang Rd.
3. Corella-Balilihan Road	37. Pob.-Bonot-Bonot-Tiguman-Overland Road
4. Sikatuna-Balilihan via Badiang Road	38. Jct.(LIR)-Mahayag-Danao Road
5. Baucan(Balilihan)-Cambague(Sevilla) Road	39. Pob.-San Francisco Road, Talibon
6. Antequera-Balilihan via Dorol Road	40. Dagohoy-Caluasan Road
7. Pob.(Catigbian)-Ambuan-Sagasa(Balilihan) Road	41. San Miguel-Bayongan-Bulilis-Mabuhay(Ubay) Rd
8. Rizal(Catigbian)-San Isidro Road	42. Jct.(Soom)-Humay-Humay Road
9. Candumayao-Cabanugan Road	43. Gabi Seed Farm, Ubay
10. Antequera-Catigbian via San Isidro Road	44. Popoo-Tugas Road
11. Libertad-Cabanugan Road	45. Pitogo-Aguining Road
12. Maribojoc-Pagnitoan Candavid-Tabuan Basak Road	46. Cabulao-Ondol (Mabini)-Union (Ubay) Road(Ubay Side)
13. Tajang-Sandingan Road	47. Jct. (LIR)-Mahayag-Katipunan Road(San Miguel Side)
14. Calape-Pangangan Road	48. Jct. (LIR)-Mahayag-Katipunan RoadAlicia Side)
15. La Paz (Cortes)-Cabaguan-Lourdes-Corella Road	49. Cabulao-Ondol (Mabini)-Union (Ubay) Road(Mabini Side)
16. Abatan-Agahay-Busao-Toril-Aghao Road	50. Kaporsing-Abaca-San Roque Road, Mabini
17. Baclayon-Corella Road	51. Jct.(TER)-Mabini-Cabulao-Lungsodaan-Pook Road
18. Baclayon-Corella via Tunga Road	52. Sta. Cruz-Minol-Banlas-Tambo Road
19. Alburquerque-Sikatuna Road	53. Pilar-Bagacay Road
20. Garcia Hernandez-Tabuan-Datag Road	54. Pilar-Inaghuban Road
21. Canmanico-Anonang Road	55. Bagumbayan-Estaca Road
22. Jct.(TER)-Pob.(Valencia)-Anoyon-Omjon Road	56. Lungsodaan (Candijay)-Tambongan(Sierra Bullones) Rd
23. Dimiao-Oac-Bilar Road	57. Jct. (TER)-Guioang-Cogtong Road
24. Road to Clarin Health Resort	58. Jct. (TER)-Candijay-Cogtong Road
25. Tiguis-Calvario(Lila)-Cambanse(Loboc) Road	59. Cogtong (Candijay)-Panas-Pangpang-Badiang Road
26. Jct. (LIR)-Quinoguitan-Sevilla-Janopol Road	60. Jct. (TER)-Guindulman-Anda-Badiang Road
27. Guadalupe-Monte Video Road	61. Jct.(TER)-Guind.-Catungawan-Mayuga-Lombog-Lundag Rd.
28. Carmen-Vallehermoso Road	62. Cabantian -Cansiwang-Mayuga Road
29. Buenos-Aires-Nueva Vida-Monte Hermoso Road	63. Pob.-Casbu-Circumferential Road
30. Catigbian-Canmano Road	64. Itum-Duay-Payao Road
31. Alegria(Catigbian)-Baang-Jagbuaya-Janopol Road	65. Jagna-Cabungaan-Lonoy Road
32. Catigbian-Clarin via Bogtongbood Road	66. Jct. (TER)-Bunga Mar-Kinagbaan-Balili Road
33. Pob.(Sagbayan)-Sagbayan Sur-Kabasakan Road	67. Jct. (Jagna-Sierra Bullones) Malbog-Calabacita Road
34. Pob.(Inabanga)-Lawis Road	68. Jct. (Jagna- Sierra Bullones)-Abachanan Road

5.2 Road Classification

The provincial roads are the mandates of the Provincial Government administered by the PEO. Bohol has a total of 870.574 kilometers of provincial roads. These provincial roads are classified into primary, secondary, and tertiary. After having some roads converted to national roads, 165 sections remained. Secondary roads are the longest.

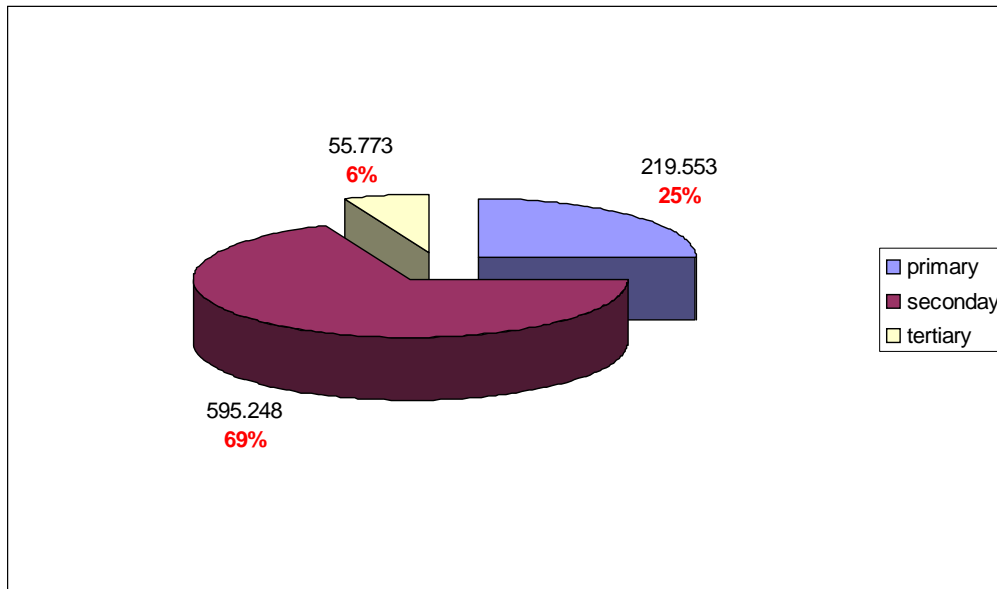


Figure 5. Provincial Roads by Classification

The criteria for classifying provincial roads are as follows:

- Class 1 (Primary) – Average daily traffic of more than 75 both ways, major collector roads between population centers, connects national roads airport or ferry docks, preferably with all weather surface.
- Class 2 (Secondary) – Traffic ranges from 25-75 normally serving feeder roads, connecting Class 1 roads or perhaps national highways, although some interruptions may be acceptable in the worst weather
- Class 3 (Tertiary) – Traffic expected to be less than 25 ADT providing a mainly local service and although an all weather surface is desired, some class 3 roads will become impassable sometimes

In terms of road pavement type, most of the provincial roads are gravel roads. The entire road network is composed of 3% asphalt, 18% concrete, 56% gravel and 23% earth.

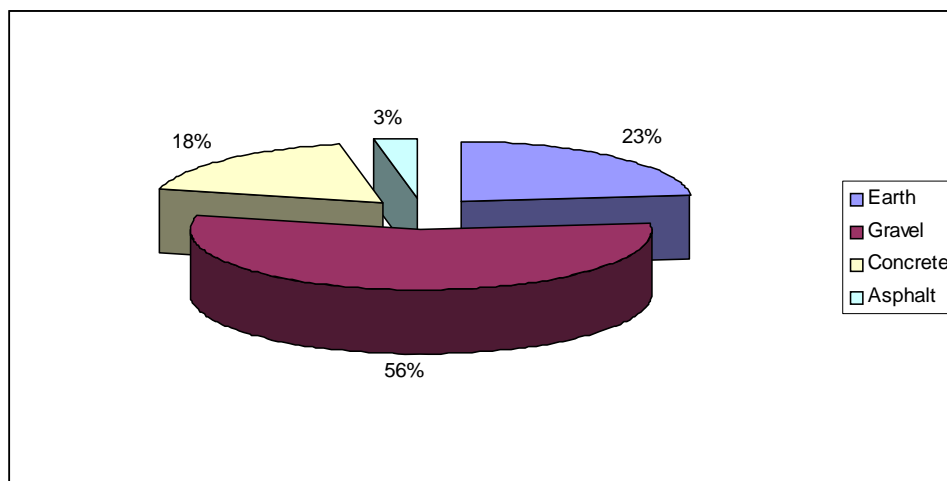
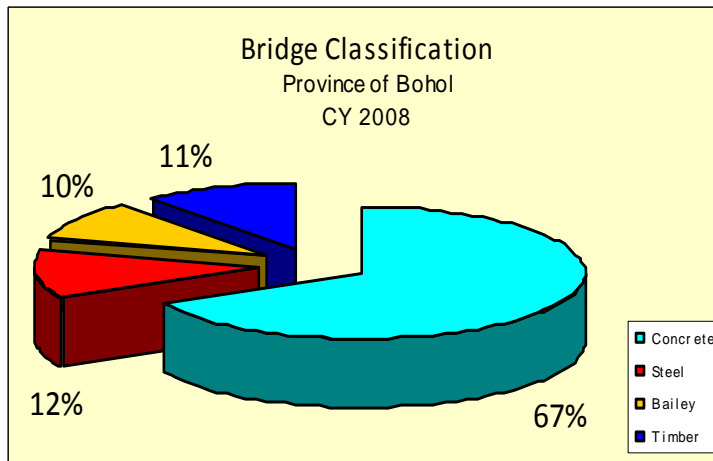


Figure 6 Provincial Roads by Pavement Type

The maintenance of provincial roads is undertaken by the PEO under four management units.

Table 8 Summary of Provincial Roads

Revised as of December 31, 2009							
Management Unit	LENGTH BY PAVEMENT TYPE			TOTAL ROAD LENGTH (km)	Bridge Km.	Bridge (lm)	TOTAL (km)
	Concrete (Km.)	Asphalt (Km)	Gravel (Km.)				
I	40.402	7.058	173.300	220.760	0.371	371.000	221.131
II	28.805	6.555	165.273	200.633	0.368	368.00	201.001
III	42.659	1.316	176.463	220.438	0.426	426.00	220.864
IV	42.886	0.582	185.275	228.743	0.432	432.00	229.175
TOTAL	154.752	15.511	700.311	870.574	1.597	1,597.00	872.171



Bridges also play a big role in supplementing roads in providing access and transport of people and commodities. Bohol maintains a total of 86 bridges. There are 8,869.88 linear meters of bridges within the road network in the province of which 67% are concrete, 12% are steel, 0% bailey and 11% are

timber bridges.

Figure 7 Bridge Classification

Temporary bridges such as bailey and timber comprise 21% which are already in bad condition and impassable to traffic due to poor maintenance and mostly are substandard. Some of the short span temporary bridges were converted to box culverts. There are also box culverts and bailey bridges from the national government which were converted to RCDG.

Table 9 Types of Bridges by Management Unit

Management Unit	TYPE OF BRIDGES								TOTAL	
	PERMANENT				TEMPORARY					
	Steel		Concrete		Bailey		Timber		No.	Length (m)
No.	Length (m)	No.	Length (m)	No.	Length (m)	No.	Length (m)			
I	6	200.00	2	32.00	6	87.00	5	52.00	19	371.00
II	4	132.00	8	176.00	5	60.00	-	-	17	368.00
III	4	115.00	6	140.00	8	106.00	5	65.00	23	426.00
IV	5	140.00	7	148.00	3	48.00	12	96.00	27	432.00

5.3 Road Condition

5.3.1 Roads Inventory

Using the guidelines for conducting a Road Condition Survey, 12 teams of PEO personnel went on field and observed the general condition of the provincial roads. The road condition survey gathered information needed to identify: a) roads which require minor or routine maintenance and immediate expenditure, b) roads which need no immediate maintenance and therefore no immediate expenditure, c) roads which require preventive maintenance activities such as asphalt overlay, seal, etc., and d) roads which need major rehabilitation or reconstruction.

Procedure

The General Survey Method for the visual road condition survey is as follows:

- a) At the beginning of the road
 - The beginning of the road is usually located at the intersection with other road(s). Indicate the intersecting road name and orientation.
 - Write down the KM stationing at the beginning of the road. When KM stationing at the beginning of the road is not known, make it Km 0+000.

- b) Observation Method
 - Pavement conditions, existence of side ditches and their type, cross section type, and other information which are required in the Road SHEET-1 shall be observed by riding on a slow moving vehicle running at about 10-20 km/hr.
 - You shall stop at every 200 m in case of PCC and AC pavement, and at every 500 m in case of gravel road and record observed condition on the Road SHEET-1. For every pavement distress/damage, there is a corresponding letter assign to it as shown in section 4. The letter will be drawn in specific locations of the road in Road SHEET-1.
 - Distance shall be measured by an odometer equipped in a portable GPS device.
 - After recording observed conditions on the Road SHEET-1, you shall re-set a portable GPS device, then continue the survey to observe conditions on the next 200 m (or 500 m) section.
 - When a pavement type or width and/or shoulder type or width is changed, you shall measure width and indicate location of such change on the Road SHEET-1.
 - When you find a pipe-culvert and/or box-culvert, location of a culvert shall be indicated on the Road Sheet No.1 including size of pipe/box culvert.
 - Intersecting national/provincial road shall be indicated on the field survey Road Sheet No.1. Name of an intersecting road and its destination shall be indicated.
 - Observed slope failure and flood section shall also be indicated on the Road SHEET-1.

- c) Measurement of Pavement Width and Shoulder Width
 - At the beginning of the road, pavement width and shoulder width shall be measured and recorded on the Road SHEET-1 together with the type of pavement and type of shoulder.
 - Whenever pavement type and/or width and shoulder type and/or width are changed, these shall be recorded on the Road SHEET-1.

5.3.2 Road Condition Classification

The PEO adopted ratings of the road's overall condition based on the general condition and extent and severity of distress. It used a scale of A to D, with A being very good and D being poor in rating road condition. The road condition classification used by the PEO is shown in the table below.

Table 10 PEO Road Condition Classification

Average Surface Condition	Rating	Remarks
Good	A	<ul style="list-style-type: none"> ○ Graded with cut and fill areas ○ Crown present ○ Ditches and culverts may be present ○ Comfortable ride over 40 kilometers per hour is possible ○ No significant ruts or potholes ○ Sandy or stable surface material ○ Access normally available in all weather conditions ○ No improvement needed
Fair		<ul style="list-style-type: none"> ○ May have some limited grading ○ Crown or drainage ○ Slight running, less than 75mm deep ○ Very few potholes, little wash boarding ○ Comfortable ride at 25-35 kilometers per hour ○ Good access and stable surface except in severe weather or unusual conditions ○ Routine maintenance or spot grading helpful
Poor		<ul style="list-style-type: none"> ○ Road follows terrain. No ditches. Loose surface soil. Moderate ruts. Comfortable ride at 15 kilometers per hour ○ Road not graded with cuts or fill areas ○ Little or no crown ○ Limited or no ditches or culverts ○ Ruts may be very common, some over 150 mm deep ○ Occasional potholes and uneven surface conditions ○ Ride usually requires speeds under 15 kilometers per hour ○ Access may be limited during and after rain ○ Significant grading required to improve drainage, repair ruts and potholes, and improve road condition
Bad		<ul style="list-style-type: none"> ○ Very poor surface and driving conditions ○ Recreational trail, limited use ○ Severe rutting and/or extensive potholes ○ Surface condition often limits speed to less than 15 kilometers per hour ○ Access for cars and trucks may be restricted for extensive periods of time ○ Reconstruction needed to provide improved access, repair severe distress, and improve road to good condition

5.4 Road Investments

All of the arterial/primary roads throughout the province have been upgraded as part of the Bohol Circumferential Road Improvement Project (BCRIP) I and II which was implemented with financial assistance extended by the Japan Bank for

International Cooperation (JBIC). The Loay Interior Road (LIR) to Trinidad and the (Junction Dat-an) Carmen-Sierra Bullones-Pilar-Alicia road have almost been completed. Part of the nautical highways, repair and improvement of the Tubigon-Sagbayan-Carmen-Sierra Bullones-Jagna Port to Port are on-going. The proposed Bohol Circumferential Road Improvement Projects, Phase III (BCRIP III) are expected to be implemented next year. Repair and improvement of Bohol's Tourism Highways are on-going which are implemented by the Department of Public Works and Highways and Provincial Engineer's Office. These major distribution road networks are expected to promote the eco-cultural tourism and agro-industrial development of the province.

Under the President's Bridge Program (PBP), a UK-Austrian assisted project, temporary and dilapidated bridges undertaken by the Provincial Government through the Provincial Engineer's Office were replaced with cost-effective permanent steel structures providing crucial links to spur economic activities in the rural areas. Of the total length, 20% or 1,839 linear meters are under the jurisdiction of the Provincial Government.

The feasibility study for the Bohol-Cebu Multi-access Friendship Bridge Project located in Getafe to Cordova, Cebu is on-going. This project is expected to provide a major breakthrough in providing a convenient, fast, safe, stable and reliable mode of transportation and will serve as an access mode for the conveyance of excess water from Bohol to Cebu and, in return, excess power from Cebu to be transmitted to Bohol to serve as additional power support for the province. It also supports the Provincial Government's thrust of developing the northern corridor of the province as an industrial zone; develop the economic centers and human settlements and opens up new economic entry points that will strengthen its tourism and agriculture industries.

The Provincial Road Management Facility (PRMF) is one of the AusAID's aid programs for Bohol. The said facility seeks to increase economic growth and improve public access to infrastructure and services in the province. Facility activities include rehabilitation and maintenance of 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.

The PEO also allocated the amount of P84 M in 2009 for the Road Upgrading (concreting and asphaltting) with a total length of 9.12767 kms. Its management units conducted routine and periodic repair and maintenance of provincial roads despite damages caused by continuous heavy rains and outdated equipment.

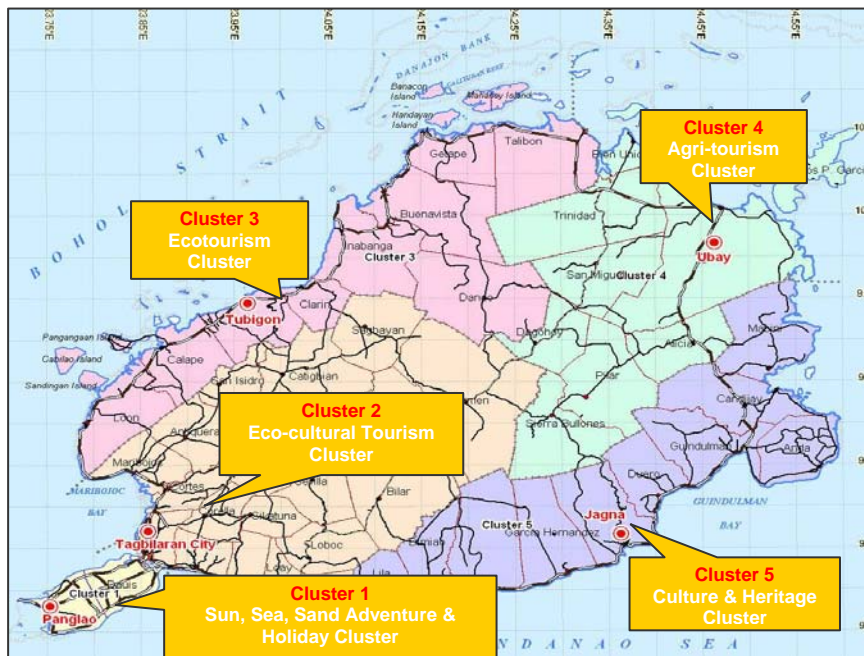
5.5 Accessibility

Increasing demand for Bohol's resources is likely to create issues that pose challenges to the provincial road network development. Some known access

problems are affecting disadvantaged sectors like children, women and the disabled who find social services, economic centers and areas for business inaccessible.

Roads development essentially affects access to social facilities such as schools and health center. An improved road network also increases connectivity to economic facilities, agricultural areas, community-based livelihood (cottage industries) and lessens costs in transporting products from farm to the market.

The province has seen the establishment of special economic zones as critical to the generation of investments in light manufacturing and agro-industries. The northern corridor of Bohol was identified as the zone for industrial development in the province. Panglao Island is also identified as a tourism ecozone under a Presidential Proclamation and will be the future site of the Panglao Bohol International Airport.



Map 14 Proposed Bohol Tourism Cluster

The Bohol Tourism Master Plan establishes the tourism commonalities among Bohol's municipalities and seeks to develop their potential tourism sites by means of the clustering strategy.

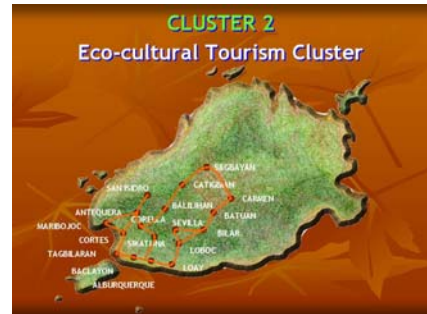
Map 15 Tourism Cluster 1

The Sun, Sea, Sand Adventure and Holiday Cluster (Special Activities Cluster), may be packaged as The Panglao-Pamilacan Islands Experience featuring the island-open sea experience inclusive of diving and whale and dolphin watching tours



Map 16 Tourism Cluster 2

The Eco-cultural Tourism Cluster, may be packaged as the Tagbilaran City-Loboc-Carmen-Maribojoc Experience



Map 17 Tourism Cluster 3

The Ecotourism Cluster may be packaged as The Northwestern Bohol Experience features 9 municipalities, island group of Loon, Calape and the Danajon Double Reef



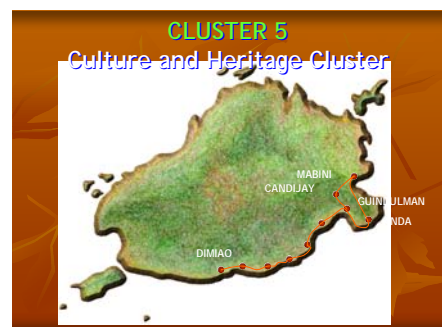
Map 18 Tourism Cluster 4

The Agri-Tourism and Heritage Cluster, may be packaged as the Northeastern Bohol Experience



Map 19 Tourism Cluster 5

The Culture and Heritage Cluster may be packaged as the Southeastern Bohol Experience



These areas have been identified as suitable for development, therefore, needing roads access to facilitate and spur economic activity. Major distribution road networks of the province are expected to promote

agro-industrial development and eco-cultural tourism. However, access problems in certain areas are highlighted in the following:

- **Protection Land Use.** Certain portions of the province's land area are restricted by law from productive use. These areas fall under the category of protection land, which are identified as portion of land and water set aside by reason of their unique physical and biological significance and managed to enhance biological diversity. They are to be protected against destructive human exploitation. The Province of Bohol has a total of 75,766 hectares under protection land. All development within these areas shall follow the provisions and regulations under NIPAS Law or Republic Act 7586. Access problems may arise in the promotion and protection of Bohol's water sources, wildlife resources, ecologically and scientifically significant natural areas, outstanding scenic views and sites, historic areas, sites, structures and objects and cultural areas, and parks and recreation. The same constraints may ensue in the pursuit of preserving and improving potential recreational and other open spaces in both rural and urban environments with the establishment of the continuity of scenic views, buffer areas, wildlife and natural habitat and associated natural environments.

- **Environmental Quality.** 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 of urban development such as increased road works may significantly alter the ecological balance, be detrimental to human health, or compromise the beauty and tranquility of the natural environment.

- **Disaster Risk Reduction/Hazard.** 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 such as road development can aggravate exposure and impact of hazards including climate change like sea-level rise, storm surges, among others.

5.1 Road Development Issues

Issues and concerns were raised during the Stakeholders' Consultation Workshop particularly citing issues and concerns hindering the effective function of the PEO as regards road service delivery, to wit:

- Insufficient funds to sustainably maintain the provincial roads
- Political concerns and biases affecting the prioritization of road development
- Insufficient number of permanent personnel at the PEO
- Inadequate road equipment and outmoded service vehicles
- Low computer literacy and current computers not equipped with IT programs and facilities useful to road development projects
- Absence of cost standards in overall estimation, leading to frequent need to reversion
- Absence of cost standard for labor component by contractor
- Use of project fund for specific activities not strictly followed
- Lack of planning, forecasting, and consultation
- Presence of favored and sometimes incompetent contractors
- "Fiesta syndrome", road development works are most visible during fiesta
- Absence of community participation
- Lack of proper monitoring and supervision during implementation
- Lack of monitoring and evaluation mechanism and logistical support thereto

Road Safety and Cross Cutting Issues

The PEO engineers admitted that not much attention is given to ensuring road safety. The maintenance engineers are aware that there are laws and rules on road safety but these are not consciously factored into road designs, except in extreme cases when ravines are 10 meters deep. Also, PEO stated that road safety signs are lacking and education as well as information on road safety for communities is not undertaken. PEO envisions correcting these gaps by placing appropriate road safety signs and coming up with a road safety manual to be used in community education and information.

6. Road Network Development Strategy

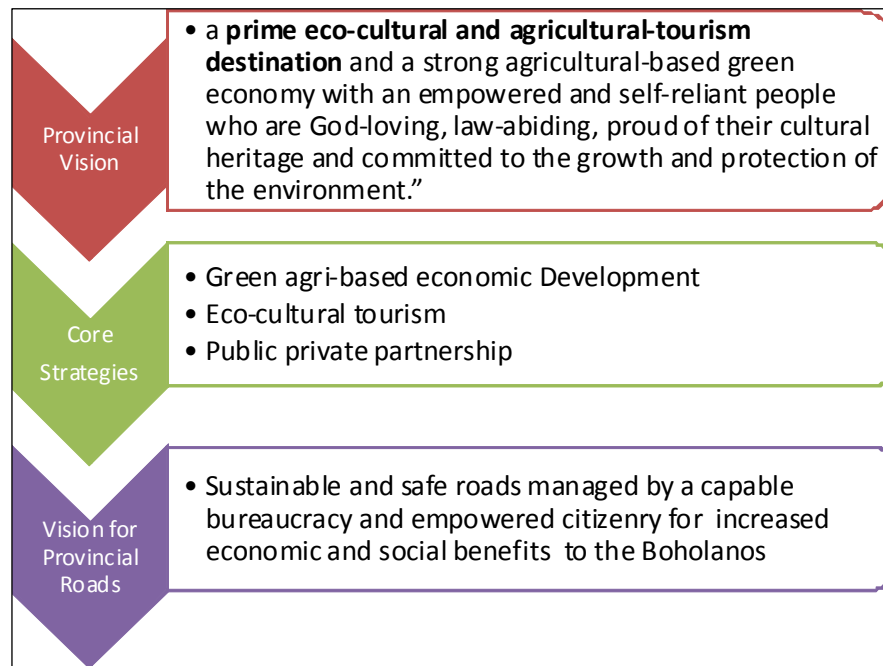


Figure 8 Provincial Vision, Core Strategies and PRNDP Vision

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 direction 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 government envisions 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 will embark on a multi-year road network development strategy that will 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

6.1 Priority Road Selection Strategy

The core principles of the priority road selection strategy are transparency, stakeholder participation, and relevance to provincial goals.

- **Transparency.** Selecting the priority roads for maintenance, upgrading, or rehabilitation requires a transparent process. Setting the criteria, assigning points to each selection criteria, and the process of ranking should be done in a transparent manner so as to clear doubts and confusions as well as ensure that politicking and unfair advantage are avoided.
- **Stakeholder Participation.** It must be ensured that relevant stakeholders in the management and maintenance of roads are consulted in the process of selecting priority roads. Local government units, non-government organizations, national government agencies, academia, among others. Wider stakeholder engagement means better appreciation of the situation to allow a more meaningful and strategic ranking exercise.
- **Relevance to provincial goals.** While there is a criteria to be agreed upon by stakeholders, it is important that an overarching consideration is the relevance of the prioritization exercise to the goals of the provincial government.

In carrying out the prioritization strategy, the province ensures an updated road condition survey and network inventory as a primary basis for road prioritization. This is led by the PEO in close coordination with the PPDO. Secondly, the database mentioned above will be processed to come up with a list of road and their characteristics (e.g. traffic count, connectivity, among others).

Secondly, a stakeholder's workshop is convened to ensure a participatory process in road prioritization, and ward off the risks of politicization of the ranking process and to ensure coverage of different perspectives. In the stakeholder's workshop, the criteria will be defined by the participants as well as the corresponding weights and points in the prioritization matrix. At present, criteria identified is composed of access and connectivity (30 points), traffic volume (20 points), road condition (20 points), population and settlement (10 points), peace and order (10 points), and environmental consideration (10 points). A second tier prioritization was done by the technical team using the criteria of availability of local funding, technical details on surface condition, traffic volume, and road class, and connectivity.

6.2 Road and Asset Management Strategy

The Provincial Government of Bohol no longer sees the need for additional road construction. Its main thrust this time is sustainable maintenance of provincial roads as well as upgrading and rehabilitation for those which needs attention. Upgrading and rehabilitation, in this case, will still be dependent on the road prioritization workshop. It is also to be noted that in maintenance of provincial roads, the

Provincial Government elects to ensure that the whole road section of prioritized roads will be completed to ensure greater impact than working on specific patches.

There are five core strategies for road and asset management:

- **Sustained stakeholder participation** – The past experience of Bohol suggests that participation of several stakeholders in the management and maintenance of roads results to greater ownership and better use of road networks. This means that the community, non-government organizations, people’s associations, contractors, and the private sector is involved in the planning, implementation, monitoring, and evaluation of road and road projects.
- **Cost effective and efficient road management systems** – The Provincial Government of Bohol finds the most strategic means of road management – more particularly in maintenance. Towards this end, it may be necessary to study the modes of service delivery to find the most effective road maintenance arrangement with the least cost but without sacrificing work quality. In this case, transparency and accountability needs to be ensured.
- **Increasing user engagement in the management and maintenance of roads** – it has been a realization of the provincial government that effective maintenance of roads is not the business of government alone. Strategic means are to be formulated to engage road users through public information campaigns that focus on awareness, appreciation, and saliency of user participation in the management of road and road networks.
- **Convergence of government offices (national and local) in addressing road network development concerns** – It is only through the PRMF project that several stakeholders concerned with ensuring sustainable road management and maintenance gathered together to discuss various concerns on road management and strategize on ways forward. This initiative started must be continued including the cost-sharing mechanisms already practiced, inter-agency monitoring and evaluation, and resource generation.
- **Asset care for more productive and longer useful life** – The Provincial Government of Bohol needs to maintain well its current fleet of road maintenance equipment and maximize their productive use. A descriptive inventory of current road management assets will be undertaken to assess asset condition and ensure timely maintenance. In the current set-up of the provincial government of Bohol, road maintenance assets are in the custody of the Provincial Motor Pool Office (PMMO), which is a separate department distinct from the Provincial Engineer’s Office. This arrangement needs to be reviewed to ensure not only proper care but optimal use of heavy equipment.

6.3 Revenue and Expenditure Management Strategy

The revenue and expenditure management strategy consists of three major strategic themes – revenue maximization for road benefit, and road expense control, and establishment of a special fund for provincial roads.

6.3.1 Revenue maximization

Revenue maximization means that the Provincial Government of Bohol should find means by which it will be able to maximize its revenue sources to allow a bigger pie from which road maintenance funds will be sourced. This will include, among others, the profitable use of productive assets (e.g. review of rental contracts) and idle lots, incentive-based financial management systems for government-owned hospitals, review of quarry revenue provisions and monitoring of extraction activities.

6.3.2 Expense Control

Regarding road expense control, this involves the creation of a price index for government contracts involving road maintenance and management, institutionalization of the internal audit system for effective road audit system, establishment of an inspection and acceptance team that would conduct interim inspection of road projects, conduct of annual budgeting, and review of charges to provincial retention funds.

6.3.3 Establishment of Special Road Fund

Finally, the Provincial Government sees the need to establish a Special Road Fund to serve as an initial sustainability fund to replace the PRMF investments on provincial road management when PRFM project folds up. The Local Finance Offices should agree on a certain percentage (10% or greater) to be sourced from the locally generated revenue which will be accounted as Special Road Fund. The Special Road Fund will be created in order to have an additional available funding for road projects. This will be accounted as a trust liability (retention fund) of the General Fund or as a Trust Fund. This will also be the fund to which the equivalent amount of incentives received by provincial government from PRMF will be deposited.

6.4 Capacity Development Strategy

The Provincial Government of Bohol's primary capacity development strategy is knowledge management and learning which involves four core approaches.

- **Regular profiling of PGBh employees including the periodic assessment of training needs.** The Human Resource Management and Development Office (HRMDO) with the Training and Management Development Team (TDMT) comprising representatives from the different offices of the PGBh is

conducting (on-going) training needs assessment (TNA) of the employees of all offices. The offices related to road sector were prioritized in the conduct of TNA. The results of this regular assessment become the basis for assessing competency gaps and needs that will be the core reference for capacity building programs.

- **Customer-responsive and objective-oriented capacity building program.** Capacity building programs need to be responsive to needs of CB customers while at the same time mindful of the core objectives of the organization. This means that the human resource development program will be matched against organizational development goals to ensure that CB activities meet both individual and organizational needs.
- **Information learning and sharing for enhanced management and service delivery.** The Provincial Government of Bohol has developed the following systems, aimed at enhancing its service deliveries: Human Resource Management Information System (HRIS), Financial Management Information System (FMIS), Agricultural Information System (Agri IS), Electronic Tax Assessment Computerized System (e-TRACS), Real Property Tax Information System (RPTIS), etc. however, these systems are lodged to the offices concerned. Linkages of these systems to other offices were not developed which could facilitate the processing of documents and could help hasten the decision making of the leaders and the management. A similar initiative must also be done regarding personnel expertise sharing among the different offices of the Provincial Government of Bohol. Current expertise needs to be matched against identified needs so that a knowledge-sharing mechanism can be designed to ensure that CB activities will have spread effects across departments.
- **Inclusion of knowledge application parameters to the performance evaluation of employees.** To ensure application of learning in the CB programs conducted, knowledge application parameters need to be incorporated to the performance evaluation systems of employees.

6.5 Service Delivery Strategy

The primary mandate of the PEO is the maintenance of provincial roads. Due to lean structure and insufficient equipment, it is but necessary that a management by contract (MBC) arrangement will be implemented to ensure a more cost-efficient and effective road monitoring and maintenance.

The MBC is a preferred method both by the Internal Audit Service and the Provincial Accountant's Office because of its effectiveness and the relative low cost of the process as compared to force account procedures (where government conducts maintenance on its own). Several papers have been written on the efficacy of contracting as a mode of service delivery (Andreski et al 2006, Burningham and Stankevich 2005) but there is reluctance on the part of the Provincial Government to use this mode.

6.6 Monitoring and Evaluation Strategy

The monitoring and evaluation strategy is couched on the objectives of the PRNDP. There are three important aspects of this strategy:

- To establish baseline information on the condition of the project area particularly the physical and social condition of the project sites as well as the status capacity levels of selected PGBh offices involved in road network development;
- To develop and make operational an effective data collection system from the partners and direct implementers of the PRNDP;
- To establish an efficient feed backing mechanism on the developments of PRNDP to the partners and implementers for information and management action

The PRNDP needs to be complemented by a Monitoring and Evaluation Framework that is anchored on the following strategies:

- A lasting, sustainable and institutionalized monitoring and evaluation system that is anchored on an office that spearheads and orchestrates all monitoring and evaluation activities of the province.
- The M&E Framework that has clear focus and covers the whole hierarchy of objectives emanating from national and regional development goals to the provincial development goals as enshrined in the PDPFP.
- The framework also that follows a logical framework analysis that covers the outcomes, benefits, and impact attributable to PRNDP. While its scope is comprehensive, the data it covers are limited to what is needed by the stakeholders and decision makers – making the M&E manageable and implementable.
- A set of monitoring tools and techniques to generate information to measure development results and link these to the overall development framework of the Province of Bohol.
- A roads infrastructure monitoring system that is linked with other development sectors and compatible with existing management information systems of the provincial government.
- Community engagement and active involvement in the monitoring and evaluation of road services delivery and actual road works.
- Continuous process improvement and capacity building of provincial government departments, offices and personnel linked with and influencing the road sector.

7. Road Development Prioritization

This section details the range of criteria in evaluating how roads will be prioritised for investment programming. These were developed by the Provincial Government during the Stakeholders' Consultation Workshop where agreement was reached as to the weight assigned to each criterion.

Road selection and prioritization prior to PRNDP was almost like a sole prerogative of the local chief executive. The Provincial Engineering Office prepares a road list based on some road inventory data and provides this list to the Local Chief Executive who determines what roads to prioritize and fund.

7.1 Selection Criteria

The Bohol Provincial Road Network Development Plan engages communities in the process of identifying a set of selection criteria for determining road priorities. In this manner, road prioritization can be more strategic and less vulnerable to external influences like political considerations.

The list of detailed indicators is informed by an indicative road selection criteria assessed not in isolation but based on a model of the integrated road network which took into account the weak links in national roads and municipal roads. The PRNDP process suggested indicative selection criteria as follows:

Economic- Related Factors

- High volume use or increases potential for high volume by linking two main roads to improve travel times – reduces vehicle operating costs
- Increases access of workforce to employment centers
- Increases access to economic activity – commercial/retail and industrial centers
- Links production areas to markets
- Increases access to ports and transport hubs – links transport terminals/hubs
- Proximity to growth centers and population centers
- Improves access to tourism assets

Social Benefits

- Increases access to health services
- Increases access to education services
- Provides emergency access to remote areas for emergency evacuation
- Increases access to public transport
- Improves employment opportunities for the poor and disadvantaged
- Improves access to cultural and community assets; builds social capital
- Improves access to recreational activities
- Improves road safety

Environmental Considerations

- Avoids environmentally sensitive areas such as wetlands or sensitive habitats
- Avoids impacting on protected areas
- Minimises impact on culturally sensitive areas
- Avoids natural and human induced hazards – flood areas, landslides, coastal surges, conflict

Physical Factors

- Inaccessible terrain
- Steep slopes
- Restricted by geographical barriers – gullies, rivers, etc.
- Costly drainage issues and potential for creating flood problems

Legal Considerations

- Avoids right of way issues and potential compensation claims
- Avoids displacement of communities
- Avoids impacts on indigenous values and communities
- Avoids over access and easements
- Avoids tree and vegetation clearance

Road Classification and Condition

- Meets functional classification of a Provincial Road
- Gravel (PRMF requirement)
- Condition acceptable for rehabilitation and maintenance – costs commensurate with benefits delivered

These suggested indicative ideas primed participants to identify relevant criteria to be used to review core provincial roads. A criteria identification process generated the following stakeholder-agreed set of six criteria enumerated below:

Table 11 Road Prioritization Criteria

Criteria	Weight (%)
Access and Connectivity	30
Traffic Volume	20
Road Condition	20
Population & Settlement	10
Poverty and Peace & Order Situation	10
Environmental Consideration	10
TOTAL	100

The guide in scoring each road section using the agreed criteria and weight was further refined as follows:

- a. Access & Connectivity (30%) – the better the road section’s access and connectivity, the higher the rating
- b. Traffic Volume (20%) – the higher the traffic volume, the higher the rating
- c. Road Condition (20%) – the poorer the road condition, the higher the rating
- d. Poverty and Peace & Order Situation (PPOS) – the higher poverty and the more peace & order concerns, the higher the rating
- e. Population & Settlement – the bigger the population, the higher the rating
- f. Environmental Considerations – the more environmental concerns, the lower the rating.

7.2 Selection Process

The provincial government used a two-tiered approach in road selection. The first level of prioritization involved stakeholders reviewing, rating and ranking about 68 key/major road segments in the PDPFP (out of a total of 168 provincial road sections), using an agreed set of criteria and weights per criteria. This process generated the core road network. The second level prioritization was used to select the road projects to be funded in the PRNDP.

Selection Criteria for Core Road Network

From the list of about 68 key and major provincial roads included in the PDPFP, a core road network was identified based on the six selection criteria clusters agreed during a consultative workshop attended by about 85 public and private sector community stakeholders.

Initially 12 selection criteria clusters were agreed but these were short-listed to six criteria as can be seen in Table xx. The 12 criteria clusters were ranked according to degree of importance after which respective weight was assigned to each criterion. Some of the 12 selection criteria clusters were grouped to bring down the total number of stakeholder-agreed selection criteria to six.

When the selection criteria and weights were agreed by stakeholders, a long process of rating and ranking of about 68 road sections followed. This generated about 35 road sections which now form part of what is called the Core Road Network of Bohol Province. The table below shows the results of the process of short-listing selection criteria from 12 to 6.

Table 12 Selection Criteria for Core Road Network

Criteria	Consideration	Weight (%)	Rating Guide
Access and Connectivity	<ul style="list-style-type: none"> • access and connectivity to barangay, municipal and national roads and 	30	The better the road section’s

Criteria	Consideration	Weight (%)	Rating Guide
	<ul style="list-style-type: none"> bridges • connectivity to roads leading to tourism sites and tourism potentials • connectivity to social facilities such as schools, health centers, ports, and other public service facilities • connectivity to economic facilities such as community based livelihood centers (cottage industries) • connectivity in agricultural areas such as farm-to-market roads • security of road users • consistent with LGU priority as indicated in their development plans that also considers potential roads for future development 		access and connectivity, the higher the rating
Traffic Volume	<ul style="list-style-type: none"> • traffic volume • usability of roads 	20	The higher the traffic volume, the higher the rating
Road Condition	<ul style="list-style-type: none"> • road condition • road classification (primary roads) • physical and legal condition such as geographical terrain and right of way 	20	The poorer the road condition, the higher the rating
Population & Settlement	<ul style="list-style-type: none"> • poverty incidence • peace and order considering insurgency/conflict-affected areas 	10	the higher poverty and the more peace & order concerns, the higher the rating
Poverty and Peace & Order Situation	<ul style="list-style-type: none"> • population density • population settlements 	10	the bigger the population, the higher the rating
Environmental Consideration	<ul style="list-style-type: none"> • road rehabilitation and maintenance of potential underground water supply and/or abundant water supply • presence of protected areas • environment (far from protected area) 	10	the more environmental concerns, the lower the rating
TOTAL		100	

“Access and Connectivity” registered as the top criterion with a weight of 30%. Participants agreed that it is of utmost importance not only because of its wide scope of concern but also that provincial and national roads need to be interconnected.

Both “Traffic Volume” and “Road Condition” were assigned equal weights of 20%. While these two came in second, proponents for “Traffic Volume” reasoned that it

should be given more weight as it is but logical to prioritize roads which have more users. Proponents for “Road Condition” countered that people tend to use more roads in good condition. The definition of “Road Condition” was also clarified as it may include such concerns as right of way and geographical terrain. “Poverty and Peace & Order Situation” was also proposed to be ranked second since roads would not have high traffic volumes if there are peace & order problems like insurgency. This justification was dismissed with a statement that peace & order situation in Bohol is not very alarming.

All three criteria: “Population and Settlement”, “Poverty and Peace & Order Situation,” and “Environmental Consideration” followed with a weight of 10%. The last two criteria were ranked last as these are cross-cutting criteria.

Different road projects were also looked into in terms of economic returns these would yield to the province. This was supported with a suggestion to employ Cost/Benefit Ratio (CBR) or Economic Rate of Return (ERR) as an evaluation tool for road prioritization. Further comment suggested that a more serious CBR/ERR analysis may be done in the next round of PRNDP when pertinent and accurate data are already available.

With the criteria selected, assignment of ratings of the 68 different road projects followed. An opportunities map from the PPDO was provided to the participants to guide them in the rating assignment. The PEO engineers were asked to spread out so they can assist the participants in this task.

Second-level Prioritization

A total of 35 road segments were ranked by the workshop participants. But the list eventually narrowed down to 33 as two of the 35 road sections were fused into one, Jct. (LIR) – Mahayag, Katipunan Road (San Miguel side) and Jct. (LIR) – Mahayag – Katipunan Road (Alicia side) while the One way Traffic Inabanga was no longer considered as priority as it already has a funding allocation. For the purpose of road project prioritization, a technical team coming from the PEO and PPDO further checked the feasibility of the selection for funding allocation. The following considerations were factored in with the second-tier prioritization such as:

- **Avoiding redundancy.** The same 34 roads were considered but re-checked because some roads included have already funding allocations.
- **Ensuring clearer connectivity.** Some participants in the workshop did not really have familiarity or full knowledge of the roads assessed as regards their connectivity with national and municipal roads.
- **Giving primacy to access to facilities and development centers.** More weight is given, for example, to Mahayag-Danao road segment as it is a

gateway to the eco-adventure site promoted by the provincial government.

- **Technical consideration.** Bad roads are a no.1 priority (technically) as PRMF considers gravel roads.

Table 13 Prioritization of Road Projects based on Core Road Network

Road		Criteria (second-level)										
		With local funding (2010) 5pts	Surface Condition 25 pts			Traffic Volume 20 pts			Road Class 20 pts		With Connectivity (access to tourist sites, municipalities, etc) 30 pts	Total 100 pts
Bad/Poor	Fair		Good	Low	Medium	High	Primary	Secondary				
(Weight)		5	25	15	10	5	10	20	20	10	30	
1	Jct.(LIR)-Mahayag-Danao Road	5	25					15	20		30	95
2	Cogtong (Candijay)-Panas-Pangpang-Badiang Road	0	25			5			20		30	80
3	Catigbian-Canmano Road	1			10			20	20		25	76
4	Dimiao-Oac-Bilar Road	1	25			5			20		25	76
5	Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	0					10		20		30	75
6	Antequera-Catigbian via San Isidro Road	5					10			10	30	70
7	Inabanga-Sagbayan via Lapacan-Magtangtang Rd.	2			10			20		10	25	67
8	Pob.-Bonot-Bonot-Tiguman-Overland Road	1	25				10			10	20	66
9	Pob.(Sagbayan)-Sagbayan Sur-Kabasakan Road	1						20	20		5	61
10	Jct. (LIR)-	1	25				5			10	20	61

Road		Criteria (second-level)										
		With local fundi	Surface Condition 25 pts			Traffic Volume 20 pts			Road Class 20 pts	With Connectivity (access to	Total 100	
	Mahayag-Katipunan Road(San Miguel-Alicia)											
11	Tinago-Bingag Road	0	25			5			20		10	60
12	Jct. (TER)-Guindulman-Anda-Badiang Road	0			10		10		20		20	60
13	Antequera-Balilihan via Dorol Road	0		15		5			20		20	60
14	Calape-Pangangan Road	3			10		10		20		10	53
15	Corella-Balilihan Road	5			10	5			20		10	50
16	One Way Traffic, Inabanga	0	25			5				10	10	50
17	Albuquerque-Sikatuna Road	0		15		5			20		10	50
18	Jct.(TER) Guindulman-Catungawan-Mayuga-Lombog-Lundag Road	0		15		5				10	20	50
19	Pob.-San Francisco Road, Talibon	1		15				15		10	5	46
20	San Miguel-Bayongan-Bulilis-Mabuhay(Ubay) Rd	1			10	5				10	20	46
21	Tajang-Sandingan Road	0		15			10			10	10	45
22	Carmen-Vallehermoso Road	0		15			10			10	10	45
23	Guadalupe-Monte Video Road	0	25			5				10	5	45
24	Pob.(Catigbian)-Ambuan-Sagasa(Balilihan) Road	0	25			5				10	5	45

Road		Criteria (second-level)										Total 100
		With local fundi	Surface Condition 25 pts		Traffic Volume 20 pts			Road Class 20 pts		With Connectivity (access to		
25	Pob.(Inabanga)-Lawis Road	1		15			10			10	5	41
26	Dagohoy-Caluasan Road	1		15		5				10	10	41
27	Catigbian-Clarín via Bogtongbood Road	0		15			10			10	5	40
28	Rizal(Catigbian)-San Isidro Road	0	25			5				10	0	40
29	Baclayon-Corella Road	0		15		5				10	10	40
30	Jct.(TER)-Pob.(Valencia)-Anoyon-Omjón Road	0		15		5				10	10	40
31	Tinago-Biking Road	0		15		5				10	10	40
32	Sikatuna-Balilihan via Badiang Road	0		15		5				10	10	40
33	Alegria(Catigbian)-Baang-Jagbuaya-Janopol Road	1		15		5				10	5	36
34	Garcia Hernandez-Tabuan-Datag Road	0			10	5				10	10	35

7.3 Final Road Development Priorities

Below is a summary matrix and ranking of road segments selected as priorities with estimated cost.

Table 14 Road Segments Selected as Final Road Priorities

Name of Program/Project	Fund Source	Implementing Agency	INVESTMENT REQUIREMENT (in Million Pesos)					
			2010	2011	2012	2013	2014	Total
I. ROADS								
A. Rehabilitation								
1 Jct.(LIR)-Mahayag-Danao Rd	PRMF-BF	PEO	28.684					28.68
	PGB C'part	PEO	35.143					35.14
2 San Isidro-Catigbian via Caimbang Road	PRMF - BF	PEO	25.462					25.46
3 Cogtong (Candijay)-Panas-Pangpang-Badiang Road	PRMF-BF	PEO		23.541				23.54
	PGB C'part	PEO		2.825				2.83
4 Inabanga-Sagbayan via Lapacan-Magtangtang Road	PRMF - BF	PEO		4.242				4.24
	PGB C'part	PEO		0.510				0.51
	PRMF - IF	PEO		23.068				23.07
	PGB C'part	PEO		2.768				2.77
5 Dimiao-Oac-Bilar Road	PRMF - BF	PEO		9.836	17.464	9.048	1.240	37.59
	PGB C'part	PEO		1.180	2.096	1.090	0.150	4.52
	PRMF - IF	PEO		7.690	27.861		5.448	41.00
	PGB C'part	PEO		0.923	3.343		0.654	4.92
	20% DF	PEO		14.830				14.83
6 Cabulao-Ondol(Mabini)-Union (Ubay) Road (Mabini - Ubay Road)	PRMF - BF	PEO			16.557	22.411		38.97
	PGB C'part	PEO			1.987	2.690		4.68
	PRMF - IF	PEO		4.242	6.446	29.80	15.28	55.77
	PGB C'part	PEO		0.509	0.774	3.580	1.830	6.69

Name of Program/Project	Fund Source	Implementing Agency	INVESTMENT REQUIREMENT (in Million Pesos)					
			2010	2011	2012	2013	2014	Total
7 Catigbian-Canmano Road	20% DF	PEO		2.110				2.11
8 Pob. Bonot-Bonot-Tiguman-Overland Road	20% DF	PEO		3.240		34.70		37.94
9 Pob.(Sagbayan)-Sagbayan Sur-Kabasakan Road	20% DF	PEO				22.56		22.56
10 Jct. (LIR) - Mahayag - Katipunan Road (San Miguel - Alicia)	20% DF	PEO				7.440		7.44
11 San Miguel-Bayongan-Bulilis-Mabuhay(Ubay) Road	20% DF	PEO	4.500					4.50
12 Pob.(Inabanga)-Lawis Road	20% DF	PEO	5.000					5.00
13 Alegria(Catigbian)-Baang-Jagbuaya-Janopol Road	20% DF	PEO	1.890					1.89
14 Abatan-Agahay-Busao-Toril (Maribojoc) Road	20% DF	PEO	3.000					3.00
15 Popoo-Tugas (Pres. Garcia) Road	20% DF	PEO	3.000					3.00
16 Mabini-Cabulao-Lungsodaan-Pook Road	20% DF	PEO	4.000					4.00
17 Tiguis-Calvario (Lila)-Cambanse (Loboc) Road	20% DF	PEO	3.000					3.00
18 Jct (TER) Soom-Humayhumay Road	20% DF	PEO	2.500					2.50
Sub-total (Rehab)			192.57	109.20	104.39	133.32	30.05	569.53
B. Upgrading								-

Name of Program/Project	Fund Source	Implementing Agency	INVESTMENT REQUIREMENT (in Million Pesos)					
			2010	2011	2012	2013	2014	Total
1 San Isidro-Catigbian via Caimbang Road	20% DF	PEO		31.59				31.59
2 Inabanga-Sagbayan via Lapacan-Magtangtang Road	20% DF	PEO	10.50					10.50
3 Dimiao-Oac-Bilar Road	20% DF	PEO	3.000					3.00
4 Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	20% DF	PEO		8.300	5.000	26.68		39.98
5 Catigbian-Canmano Road	20% DF	PEO	3.000		29.81		25.00	57.81
	ODA/ Other Sources	PEO	10.270					10.27
6 Pob.Bonot-Bonot-Tiguman-Overland Road	20% DF	PEO			9.190			9.19
7 Pob. (Sagbayan) Sagbayan Sur Kabasakan Road	20% DF	PEO	3.000					3.00
8 Jct. (LIR) - Mahayag - Katipunan Road (San Miguel - Alicia)	20% DF	PEO	3.000					3.00
9 Tinago-Biking Road	ODA/ Other Sources	PEO	14.94					14.94
10 Tinago Bingag Road	20%DF	PEO		14.18				14.18
11 Jct. (TER)-Guindulman - Anda - Badiang Road	20% DF	PEO		14.18				14.18
12 Antequera-Balilihan via Dorol Road	20% DF	PEO			33.000			33.00

Name of Program/Project	Fund Source	Implementing Agency	INVESTMENT REQUIREMENT (in Million Pesos)					
			2010	2011	2012	2013	2014	Total
13 Calape-Pangangan Road	20% DF	PEO	8.250					8.25
14 Corella-Balilihan Road	20% DF	PEO					33.00	33.00
15 Albuquerque-Sikatuna Road	20% DF	PEO					36.00	36.00
16 Jct.(TER) Guindulman-Catungawan-Mayuga-Lombog-Lundag Road	20% DF	PEO					36.00	36.00
17 Pob.-San Francisco Road, Talibon	20% DF	PEO	3.500					3.50
18 Dagohoy-Caluasan Road	20% DF	PEO	3.500					3.50
19 La Paz (Cortes)-Cabaguan-Lourdes (Corella) Road	20% DF	PEO	3.500					3.50
20 Canmanico-Anonang Road, Valencia	20% DF	PEO	2.000					2.00
21 Baclayon-Corella Road via Tunga Road	20% DF	PEO	3.00					3.00
22 One-way Traffic Inabanga Road	20% DF	PEO	3.00					3.00
23 Jct (Jagna-Sbullones) Malbog-Calabacita Road	20% DF	PEO	3.00					3.00
24 Lungsodaan (Candijay)-Tambongan-Sbullones Road	20% DF	PEO	3.650					3.65
25 Catigbian-Clarín via Bogtongbood Road	ODA/ Other Sources	PEO	49.69					49.69
26 Jct. (TER)-Valencia)-Anoyon-Omjón	ODA/ Other Sources	PEO			47.20			47.20

Name of Program/Project	Fund Source	Implementing Agency	INVESTMENT REQUIREMENT (in Million Pesos)					
			2010	2011	2012	2013	2014	Total
Sub-total (Upgrading, 20% DF)			136.80	68.25	124.20	26.68	130.00	485.93
C. Maintenance								
1 Jct.(LIR)-Mahayag-Danao Rd	PRMF-BF	PEO		0.500	5.148	1.317	13.400	20.37
	PGB C'part	PEO		0.060	0.618	0.160	1.610	2.45
	PRMF-IF	PEO		0.700	7.135			7.84
	PGB C'part	PEO		0.080	0.856			0.94
2 San Isidro-Catigbian via Caimbang Road	PRMF-BF	PEO		0.530		0.579	5.892	7.00
	PGB C'part	PEO		0.064		0.070	0.707	0.84
	PGB RMF	PEO			5.401			5.40
3 Cogtong (Candijay)-Panas-Pangpang-Badiang Road	PRMF-BF	PEO			0.493	5.028	5.381	10.90
	PGB C'part	PEO			0.060	0.603	0.646	1.31
4 Inabanga-Sagbayan via Lapacan-Magtangtang Road	PRMF-BF	PEO			0.089	0.906	0.097	1.09
	PGB C'part	PEO			0.011	0.109	0.012	0.13
	PRMF-IF	PEO			0.493	4.926	0.527	5.95
	PGB C'part	PEO			0.058	0.591	0.063	0.71
5 Dimiao-Oac-Bilar Road	PRMF-BF	PEO			0.206	0.300	5.870	6.38
	PGB C'part	PEO			0.025	0.040	0.704	0.77
	PRMF-IF	PEO			0.161	0.280	8.703	9.14
	PGB C'part	PEO			0.019	0.033	1.044	1.10
	20% DF	PEO		0.300				0.30

Name of Program/Project	Fund Source	Implementing Agency	INVESTMENT REQUIREMENT (in Million Pesos)					
			2010	2011	2012	2013	2014	Total
6 Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	PRMF - BF	PEO					8.082	8.08
	PGB C'part	PEO					0.970	0.97
	PRMF-IF	PEO			0.090		4.320	4.41
	PGB C'part	PEO			0.011		0.518	0.53
	PRMF-IF	PEO					0.719	0.72
	PGB C'part	PEO					0.086	0.09
	PGB-RMF	PEO				1.040		1.04
7 Catigbian-Canmano Road	20% DF	PEO		0.530				0.53
	ODA/ Other Sources	PEO		0.910	0.950	0.990	1.040	3.89
Sub-total (Maintenance)			0.00	3.67	21.82	16.97	60.39	102.86
Total (Roads)			329.37	181.13	250.41	176.97	220.44	1,158.32

8. Sequencing of Road Development Investment

8.1.1 Resources and Constraints

Like other local government units, the Provincial Government of Bohol relies on fund transfers from the national office, local taxes and fees, congressional funds, and other Official Development Assistance (ODA) as sources of funds for development projects.

The Province of Bohol and all its component municipal local government units pursue increases in local revenues for more stable and efficient fund generation. Fiscal transfers from central government called internal revenue allotment (IRA) are not sustainable as LGUs do not have control over the “rise and fall” of these resources. For development programs, like road development to get multi-year funding resources, it become imperative to design strategies to enhance collection of local revenue taxes and fees.

For the Provincial Government of Bohol, revenues have been increasing for the past years. Over the five-year period from 2004-2008, the Provincial Government’s revenues rose from P588 Million to P883 Million, posting an increase of 46% or an average yearly exponential increase of 9.9%.

Table 15 Sources of Revenues - Provincial Government of Bohol

Income Classification	2007		2008	
Local Revenues	93,872,434.74	12%	116,165,534.28	12%
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%
Internal Revenue Allotment	700,498,056.00	88%	826,553,857.66	88%
TOTAL	794,370,490.74	100%	942,719,391.94	100%
* Refers to the Beginning Balance that is utilized from Annual Surplus of the previous year. Source: Provincial Budget Office				

However, the resource profile of the province indicates that it is still 88% dependent on the Internal Revenue Allotment. The table above based on 2007 and 2008 records shows that while revenues in terms of absolute figures are increasing, the revenue composition hardly changed. It can be observed that local revenue sources remained to be just the secondary

source of income, accounting only to 7 to 8%. The movements of these revenues were also erratic as they increased and decreased irregularly throughout the last five years.

For real property tax, the Provincial Government has continued to conduct real property tax campaign to inform and motivate land owners to pay their taxes. The intention of this effort, however, is affected by the implementation of the General Revision of Real Property Tax Assessment and the level of support provided by the local chief executives in the collection of taxes based on the new schedule of fair market values of real properties in their locality. The conduct of these tax campaigns are also considered by some, as costly, noting on the level overhead costs attached to these campaigns at the barangays. The campaign's effectiveness is also questioned with the significant number of delinquent taxpayers. From 2004 to 2007, real property tax collection just had a meager average annual increase of 2.6. This, however, significantly improved in 2008, when tax collection increased by 29% due to the general revision of real property tax assessment and the subsequent collection of related taxes.

On the other hand, the Provincial Government is also collecting other taxes such as franchise tax, taxes on delivery vans and sand gravel extraction fees. These other taxes, however, are generally decreasing from year 2005 to 2008. Its share to the total annual coffers of the Provincial Government averaged to only 1%.

Business fees and licenses are collected by the Provincial Government from the operation of its Provincial Capitol Office spaces, the Bohol Cultural Center, the Carlos P. Garcia Sports Complex and other sports facilities. Fees are also collected from various services provided. The revenue sources, however, only account to 2% of the total revenues and are generally fluctuating for the past 5 years.

The operation of the 10 devolved hospitals in the province also provided the Provincial Government with revenues. For the past four (4) years, these revenues have been increasing with an average annual growth of 8.3%. While the operation of these hospitals have been considered a very important social responsibility and service to the province, their financial inflows only accounts to 2% of the total revenues of the Provincial Government.

In terms of public finance, the following are the significant issues identified and are contained in the Provincial Road Sector Planning and Management Review report.

8.1.2 Strategies to Address Prioritized Concerns

The following strategies are seen as important measures to address the concerns indicated above:

- **New financial policies to be adopted to close the gap between revenues and expenditures.** To encourage revenue generation/savings from the departments, a percentage of income/savings they will generate will be added to their appropriation

in the following year. Offices must be innovative and must provide recording of these transactions as basis for the additional appropriation the following year. This is in lieu of the establishment of Revolving Funds or Trust Funds and will promote proper matching of revenue with appropriation.

- **Develop a scheme to monitor and maximize revenue from Extraction Tax.** One of the revenue related to road maintenance is the Extraction Tax which was previously called Sand and Gravel Tax. The province should develop a scheme where auditors will determine the actual volume extracted from quarry sites with the discrepancy being billed to the permittee. Coordination between DPWH, PEO and municipalities as to volume of sand and gravel used in the infrastructure projects (found in the Program of Work) is necessary. Political intervention should be discouraged.
- **Make government-hospitals profitable and sustainable.** One of the sources of revenue of the Provincial Government is coming from the 10 District Hospitals and this represents 27% of the locally generated revenues. These District Hospitals are currently managed by the Chief of Hospital who has only the health service in perspective (he being a doctor). Each hospital must have an administrator that will look into its performance (financially and management wise) and eventually change the mindset of its management with consideration on Value for Money principle.
- **Implement e-TRACS.** The implementation of Enhance Tax Revenue Assessment and Collection System (e-TRACS) in the different municipalities will facilitate tax computation and collection. About ten municipalities are ready for introduction of e-TRACS and have prepared their own counterpart contribution, according to the Provincial Treasurer.
- **Sustain the coordination mechanism for road development and management started through the PRMF.** The linking of the Financial Offices (PBO, PAccO, PTO and GSO) thru the Financial Management Information System (e-NGAS, e-budget and e-TRACS) will make time financial reports which can help elected officials in their financial decision-making and in prioritizing projects and services.
- **Maximize use of productive assets of the Provincial Government through strategic and profitable arrangements.**
 - Provincial Government facilities should not be offered for free nor should it be given at P1 per annum. Management should have an internal policy that it should be offered at a cost. Provincial Government facilities (i.e. tennis courts, swimming pool, GASA, conference rooms) should be rented out with rates updated to commensurate the improvement of the facilities and based

on current market value. Provincial Government Guest rooms (cottages near the mansion) should be developed and converted to low cost transient rooms which should command a fee.

- Idle lots of PGB should be rent out instead of offering it for free (LTO and other properties). Since the province encounters problems in evicting them from the property, it is recommended that they will have to sign a contract to rent the lot.
- Use and occupancy of GASA House of Pasalubong, Swimming pool (CPG Oval), commercial spaces and other assets of the Provincial Government should be reviewed and evaluated as to usefulness/utilization and revenue generation. Review Memorandum of Agreements and contracts of these assets to determine and ensure that the Provincial Government has a fair share of the income or revenue.
- The Provincial Government has a Joint Venture with SALCON on the operation of the utilities (Light and Water) and it has a Memorandum of Agreement on the management of the Chocolate Hills Complex. The Provincial Government should actively participate in the operation of these businesses as the Province is part owner.
- Make guidelines for the rental of equipments at the Motor Pool to ensure that Motor Pool Office will have income or revenue for the payment of the loan for equipment. Even if it is by Administration, PEO should pay rental.
- **Strictly implement controls over disbursements.**
 - Auditing of roads – make the audit charter responsive to the need for better road procedure in road expenditure management – one chapter devoted to the audit of roads
 - Inspection and Acceptance team – strengthen to include projects that are still on-going. Inspection of projects should be done even when project is not yet finished.
 - Create a Provincial Monitoring Team on Projects and Programs of the Provincial Government with PPDO as chairman, Budget, Accounting, and GSO as members. A monitoring tool will be designed which will reflect the project or program, Expected Outs, Period of Implementation, status of implementation, facilitating and hindering factors and remarks (tentative tool format) integrate this with the budget concept of Financial and Physical Performance Evaluation Form.
 - Strengthen planning and budgeting process of departments with strategic planning done during the first quarter of each year in preparation for the

Annual Investment Plan which will be the basis for budget preparation in July to December for the succeeding year.

- Evaluate expenses charged to Retention Funds for possible increase or decrease of office appropriation due to the availability of the Retention Fund.
- Reduce the current procurement period thru computerization of the procurement process and observance of the Citizen’s Charter of each office
- Develop a price index for expenditures as basis for budgeting and procurement in order to prevent irregular, unnecessary, extravagant, extraordinary and unconscionable transactions. This will be updated every two years to consider price escalation.

8.2 Funding Sources

The table below summarizes the funding sources for road management in consideration of the PRMF project:

Table 16 Summary of Sources of Funds: 2010 - 2014

	2010	2011	2012	2013	2014
Sources of Funds:					
IRA - 20% Development Fund (40%)	82,788,500.00	105,000,000.00	110,000,000.00	120,000,000.00	130,000,000.00
Share of the 80% for the departments and programs	117,800,000.00	90,000,000.00	100,000,000.00	110,000,000.00	120,000,000.00
Locally Generated (Note 1):					
Real Property Tax		1,740,000.00	1,740,000.00	1,740,000.00	1,740,000.00
Extraction Tax		50,000.00	50,000.00	50,000.00	50,000.00
Annual Fixed Tax on Delivery Trucks or Van		100,000.00	100,000.00	100,000.00	100,000.00
Tax on Transfer of Real Property Ownership		150,000.00	150,000.00	150,000.00	150,000.00
Other Sources of Locally Generated Income		3,000,000.00	3,000,000.00	3,000,000.00	3,000,000.00
Grants and Donations (Local and Foreign)					
PRMF Funds	40,000,000.00	40,000,000.00	40,000,000.00	40,000,000.00	40,000,000.00
Total Sources of Funds	240,588,500.00	240,040,000.00	255,040,000.00	275,040,000.00	295,040,000.00

8.3.1 PRMF Base Funds

The Province of Bohol will receive an allotted annual amount of AUD 1,000,000 from the PRMF Project. With a projected exchange rate of Php40 per 1AUD, the peso equivalent of Php40 million per year will be used for provincial road rehabilitation and maintenance as well as capability building activities.

8.3.2 Performance Incentive Fund

The PRMF has a built-in incentive structure in its project management design to award performing local government units. The performance funds are composed to two components – tied grant and untied grant. Tied grant is based on a set of PRMF performance criteria that involves internal control systems, human resource management and development, development of multi-year budgets linked to provincial plans, and contracting out of road services. On the hand, untied grant will be given based on the level of effort that the provincial government exerts to generate local revenues.

If the provincial government of Bohol will be able to meet the PRMF performance indicators every year, it will receive approximately Php40 million per year for the next five years. This amount, however, is not factored into the budgeting framework used in this PRNDP as this is not certain to be received. If and when Bohol will be able to meet performance standards and qualify to receive incentive funds, this will be favourable to the provincial government as this would free resources for use in non-prioritized road and networks.

8.3.3 Development Fund

Forty percent (40%) of the 20@ provincial development fund will be allotted for the maintenance of provincial infrastructure. For 2010 and onwards, this amount will be allotted to the maintenance of provincial roads. Out of the remaining 80% of the total provincial budget, PEO will receive approximately Php100-120 million in the next five years. The 20% development fund will increase over time as a function of the increase in IRA.

Table 17 Total Funds to Roads from the 20% Development Fund

	2008	2009	2010
TOTAL 20% Development Fund for the year (in Php millions)	160,084,769	177,492,764	203,045,679
Allocation for ROADS	84,000,000	84,000,000	95,725,000
%	52.47%	47.32%	47.14%

Source: PPDO, 2010 January

8.3.4 Special Road Fund

The Local Finance Offices will allocate a certain percentage (10% or more) to be sourced from the locally generated revenue which will be accounted as Special Road Fund. The Special Road Fund will be created in order to have an additional available funding for road projects. This will be accounted as a trust liability (retention fund) of the General Fund or as a Trust Fund. This SRF will need a legislative action on the part of the provincial and municipal governments.

8.3.5 Other Donor Funds

For 2010, the Provincial Government of Bohol does not anticipate donor funds for the rehabilitation and upgrading of roads and bridges except for the Presidential Bridge Program of the Austrian-assisted Bridge Projects. The project amount covering the improvement of 26 bridges is Php162 million pesos.

8.4 Sequence of Road Development

The succeeding page shows the summary of investments for the PRMF project and those that will be funded through the 20% development fund.

Table 18 Road Development Projects for PRMF Assistance

PROVINCIAL ROAD NETWORK DEVELOPMENT PLAN: 2010-2015						
BOHOL PROVINCE						
PRMF Funded Project						
				For Rehab Cost	For Maintenance Cost	Total Cost
1	Rehabilitation of Jct.(LIR)-Mahayag-Danao Road	14.316	PRMF		4,259,424.00	4,259,424.00
2	Rehabilitation of Antequera-Catigbian via San Isidro Road	18.481	PRMF	65,420,200.00	6,689,623.39	72,109,823.39
			PGB	9,998,000.00		9,998,000.00
3	Rehabilitation of Cogtong (Candijay)-Panas-Pangpang-Badiang Road	5.605	PRMF	24,150,000.000	515,660.000	24,665,660.00
			PGB	4,972,000.000		4,972,000.00
4	Rehabilitation of Dimiao-Oac-Bilar Road	17.834	PRMF	22,352,000.00	467,360.00	22,819,360.00
			PGB			
5	Rehabilitation of Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	9.997	PRMF	35,995,000.00		35,995,000.00
			PGB	4,991,000.00		4,991,000.00
				167,878,200.00	11,932,067.39	179,810,267.39
*	Assumption: 5% escalation cost per year starting 2nd year					

The sequence of roads programming and capability building

Table 19 Road Development Projects from the 20% Development Fund: 2010-2015

PROVINCIAL ROAD NETWORK DEVELOPMENT PLAN: 2010-2014				
BOHOL PROVINCE				
20% DF FUNDED PROJECTS:				
		L = km.	Project length	Cost
A. Roads				
1	Concreting of Catigbian-Canmano Road	6.220	0.500	64.415
2	Concreting of Calape - Pangangan Road	5.287	0.825	59.563
3	Raising of grade along Inabanga - Lawis Road	4.523	1.250	20.056
4	Raising of grade along Abatan-Agahay-Busao-Aghao-Toril Road	8.769	-	3.000
5	Soil Stabilization of gravel road at Popoo-Tugas Road	12.420	-	3.000
6	Asphalting of La Paz(Cortes) -Cabaguan-Lourdes-Corella Road	6.215	-	3.500
7	Concreting of Canmanico-Anonang Road	4.135	-	2.000
8	Concrete paving of Sagbayan-Sagbayan Sur-Kabasakan Road	5.360	0.300	3.000
9	Raising of grade at Mabini-Cabulao-Lungsodaan-Pook Road	4.510	-	4.000
10	Asphalting of Jct. (LIR) Mahayag-Katipunan Road	10.315	0.500	37.500
11	Soil Stabilization of Tiguis-Calvario(Lila)-Cambance (Loboc) Road	8.245	-	3.000
12	Asphalting of Dagohey-Caluasan-Estaca-Bagumbayan Road Road	9.788	0.580	22.627
13	Soil Stabilization of San Miguel-Bayongan-Bulilis (Ubay) Road	17.443	17.443	4.500
14	Asphalting of Inabanga-Sagbayan via Lapacan Road, and Construction of Magkaya Box Culvert	8.025	1.750	52.195
15	Asphalting of San Franciso Road, Talibon	4.957	0.830	3.500
16	Asphalting of Baclayon - Corella via Tunga Road	4.376	0.500	3.000
17	Asphalting of One Way Traffic Inabanga Road	0.335	0.335	3.000
18	Soil Stabilization of Dimiao-Oac-Bilar Road	17.834	17.834	3.000
19	Soil Stabilization of Jct.(TER)-Soom-Humayhumay Road	3.305	3.305	2.500
20	Soil Stabilization of Alegria-Baang-Jagbuaya-Hanopol Road	7.976	7.976	1.189
21	Asphalting of Jct(Jagna-SB)-Malbog-Calabacita Road	9.110	0.500	3.000
22	Concreting of Lungsodaan-Tambongan Road, Candijay	4.593	0.435	54.246
23	Asphalting of Pob.-Bonot-Bonot-Tiguman-Overland Road	9.150	9.150	61.590
24	Asphalting of Tinago-Bingag Road	2.250	2.250	14.175
Sub-total		175.141	66.263	431.56

Table 20 Bridges Development Projects from the 20% Development Fund: 2010-2015

B. Bridges	lm	lm	
CONVERSION OF TEMPORARY BRIDGES INTO PERMANENT			
1 Hibunawan Bridge (Mahayag-Danao Road)		20	21.00
2 Buko-buko sa Anay Bridge (Mahayag-Danao Road)		15	15.75
3 Pasanan Bridge (Cabulao-Ondol-Union Road)		15	15.75
4 Caimbang Bridge (Antequera-Catigbian via San Isidro)		30	33.00
5 Curimo Bridge (Dimiao-Oac-Bilar Road)		20	24.00
6 Conversion of Short-span Bridges into Box Culvert			
6.1 Guindulman - Anda - Badiang Road			
6.1.1 Suba Bridge	5	5	0.840
6.1.2 Talisay Bridge	5	5	0.840
6.1.3 Alang-alang Bridge	5	5	0.840
6.1.4 Badiang Bridge	5	5	0.840
7 La Paz(Cortes)- Lourdes-Cabaguan Road			-
7.1..1 La Paz Box Culvert	5	5	0.840
8 Kaporsing - Abaca Road			-
8.1.1 Abaca Bridge	5	5	0.840
9 Alegria -Baang - Jagbuaya - Janopol Road			-
9.11 Jagbuaya Bridge	4	4	0.840
10 Catigbian - Clarin via Bogtongbod Road			-
10.1 Cabog Bridge	5	5	0.840
Sub Total			116.22

From the 20% Development Fund for road upgrading, rehabilitation and bridges development, the following is the total outlay.

- Roads upgrading and rehabilitation - Php 431.56M
- Bridges Development - Php 116.22M

TOTAL FINANCIAL RESOURCES NEEDED - PHP 547.78

Table 21 Multi-Year Revenue Generation and Budget Management for the Road Sector

	2010	2011	2012	2013	2014
Sources of Funds:					
IRA - 20% Development Fund (40%)	82,788,500.00	105,000,000.00	110,000,000.00	120,000,000.00	130,000,000.00
IRA - Remaining 80% for the different Office Budgets and Programs	117,800,000.00	90,000,000.00	100,000,000.00	110,000,000.00	120,000,000.00
Locally Generated (Note 1):					
Real Property Tax		1,740,000.00	1,740,000.00	1,740,000.00	1,740,000.00
Extraction Tax		50,000.00	50,000.00	50,000.00	50,000.00
Annual Fixed Tax on Delivery Trucks or Van		100,000.00	100,000.00	100,000.00	100,000.00
Tax on Transfer of Real Property Ownership		150,000.00	150,000.00	150,000.00	150,000.00
Other Sources of Locally Generated Income		3,000,000.00	3,000,000.00	3,000,000.00	3,000,000.00
Grants and Donations (Local and Foreign)					
PRMF Funds	42,000,000.00	42,000,000.00	42,000,000.00	42,000,000.00	42,000,000.00
Total Sources of Funds	242,588,500.00	242,040,000.00	257,040,000.00	277,040,000.00	297,040,000.00
Fund Allocation:					
PEO Total Budget -PS and MOOE (Note 2)	82,200,000.00	90,000,000.00	100,000,000.00	110,000,000.00	120,000,000.00
Priority Roads not funded by PRMF	82,788,500.00	105,000,000.00	110,000,000.00	120,000,000.00	130,000,000.00
PRMF Funds for Gravel Roads	42,000,000.00	42,000,000.00	42,000,000.00	42,000,000.00	42,000,000.00
PRMF Counterpart (Note 3)	35,600,000.00	5,040,000.00	5,040,000.00	5,040,000.00	5,040,000.00
Total Fund Allocation	242,588,500.00	242,040,000.00	257,040,000.00	277,040,000.00	297,040,000.00

9. Service Delivery Investment

Bohol is lauded as a pioneer in the participatory visioning process for the LGU and its stakeholders. This same approach has been applied throughout the PDPFP planning process as well as in the formulation of Bohol’s PRNDP. Roads governance is a new dimension introduced into the entire provincial government of Bohol and not just with the provincial engineering office. The attainments of institutional reforms in roads governance calls for capacity development of provincial departments and offices directly linked to the road sector.

Improving service delivery for roads involves the following LGU offices: Office of the Provincial Governor, Provincial Engineer’s Office, Project Monitoring Committee, Provincial Planning & Development Office, Provincial Budget Office, Provincial Treasurer’s Office, Bids & Awards Committee & Secretariat, and Human Resource Management Office.

During the Provincial Road Sector Planning and Management Review Workshop, provincial offices linked to road service delivery revisited their functions and attempted to establish their linkages and influences into the road sector, as follows:

Table 22 Provincial Government Offices and their Influence to Road Service Delivery

Office /Group	Brief Function	Influence to Road Services delivery
PEO	<ul style="list-style-type: none"> • Maintenance of roads/bridges • Special project implementer • Infrastructure development • LGU technical assistance 	<ul style="list-style-type: none"> ▪ Road classification ▪ Prioritization of road improvement act. ▪ Good road design ▪ Road safety enhancement ▪ Road network monitoring
PPDO	<ul style="list-style-type: none"> ▪ Proposal for approval by PDC of road ▪ Development budget under 20% DF as submitted by PEO ▪ Monitoring and evaluation thru PEO’s year-end report ▪ Maintenance of GIS database for socio economic planning 	<ul style="list-style-type: none"> ▪ Directly influences the extent/coverage of road maintenance/improvement ▪ Potentially improves conduct of road services in subsequent years ▪ GIS MAPS can be used by PEO for road network planning
PTO	<ul style="list-style-type: none"> ▪ Fund Custodian 	<ul style="list-style-type: none"> ▪ Paid claims to suppliers and contractors
PBMO	<ul style="list-style-type: none"> ▪ Budget Management ▪ Budget Control / E-Budget System 	<ul style="list-style-type: none"> ▪ Review Projects within AIP ▪ Check counterpart funds for PRMF Proj. ▪ Review the Project Procurement Management Plan (ASPP, AEPP)
PAssO	<ul style="list-style-type: none"> ▪ Take charge in appraisal and assessment of all real properties in consistent to all IB laws, rules and regulations ▪ Install/maintain a system of tax mapping ▪ Prepare schedule of fair market values of all kinds of real property in the province 	<ul style="list-style-type: none"> ▪ Cancellation of no longer existing tax declaration ▪ Upgrade schedule of fair market values of all real properties ▪ Appraise new structures erected along the new road
PAccO	<ul style="list-style-type: none"> ▪ Provide accounting and audit of disbursing services 	<ul style="list-style-type: none"> ▪ Audit infra disbursements (vouchers / payroll and book keeping of transactions)
IAS	<ul style="list-style-type: none"> ▪ Conduct of operations and financial Audit : ▪ appraisal of procedures and related matters ▪ verification and analysis of financial and operations data ▪ verifying extent of compliance of internal control procedures, rules and regulation ▪ functions of protective nature prevention of fraud/dishonesty and special investigations 	<ul style="list-style-type: none"> ▪ Review of cost estimates and computations ▪ Completeness of documents

Office /Group	Brief Function	Influence to Road Services delivery
BEMO	<ul style="list-style-type: none"> ▪ ECC compliance monitoring ▪ Highway greening ▪ Biodiversity conservation ▪ Determining the volume of mineral resources for infra development ▪ Facilitate Insurance of gratuitous Permit 	<ul style="list-style-type: none"> ▪ Slope stabilization ▪ Enhance road stability ▪ Erosion reduction
HRMDO	HR management and development	<ul style="list-style-type: none"> ▪ KSA enhancement ▪ Performance monitoring

Capacity development requirements are identified and discussed to explain the roles, capacities, gaps and strategies of each office involved in improving service delivery for roads.

9.1 Capacity Development Requirements

9.1.1 Organizational Development

The Provincial Government of Bohol is a recipient of capacity building interventions in its partnership with the Philippines - Australia Human Resource Development Facility (PAHRDF). Several employees were recipients of these capability building programs. However, said programs focused more on agriculture, human resources, tourism and economic enterprise. Only one intervention has been identified for the road sector and only one employee of the PEO was sent to training. Despite these interventions, there are still gaps identified within the offices of the provincial government of Bohol.

9.1.2 Human Resource Development

The Provincial Government has a total of 1,234 permanent employees including 15 elected officials, 9 co-terminus and 299 casual plantilla. The staff inventory of the offices related to sector focused on a Competency Assessment in two areas: the Core Competencies which include Planning, Organizing, Leading and Controlling skills, and the area on Technical Competencies include Road Network Management, Materials and Quality Control, Project Planning and Design, Project Implementation and Road Maintenance. Part of his presentation was the strengths and weaknesses of the offices as well as their training needs.

The Human Resource Management and Development Office (HRMDO) with the Training and Management Development Team (TDMT) comprising representatives from the different offices of the PGBh is conducting (on-going) training needs assessment (TNA) of the employees of all offices. The offices related to road sector have been prioritized in the conduct of TNA. Competency gaps and needs have been identified.

The TNA reveals that most of the staff in the offices are in the age bracket of 51 years and above, a good number of them have post graduate education. Generally,

they are rated “Good” or “Very Good” in both the Core and Technical Competencies. It was noted that there are more strengths than weaknesses reported, and among the strengths mentioned are teamwork, innovativeness, competence and their willingness to be trained. There are training needs identified from each of the offices which the staff believed can equip them more with their performances to support the project.

In addition, during workshops conducted with representatives from the different offices involved in the road sector, the gaps and competency needs were identified and validated, as follows:

- Trainings attended are not aligned to functions
- Lack of coordination between planning and budgeting
- Advance technologies not applied in roads development and maintenance
- Lack of Information Technology literacy
- Lack of appropriate equipment and facility
- Reassignment of employees after the training
- Learning where not applied in the workplace
- Community and stakeholders were not included in the selection of participants
- Lack of Knowledge in the operation of e-NGAS
- Inconsistent interpretation of accounting rules and regulation
- Delayed retrieval/loss of documents
- Lack of awareness of road users on road policies

Capacity developments identified to address gaps are the following:

1. Training on e-NGAS
2. Basic Computer Training
3. Advance Computer Training
4. Training on Real Property Assessment and Appraisal
5. Orientation on JMC No. 1 series of 2007
6. Orientation/Workshop on PLPEM
7. Training on accounting rules and regulations
8. Training on Financial Analysis and Projection
9. Project Monitoring and Evaluation
10. Communication Skills
11. Updates of treasury laws, judicial and civil remedies and environmental laws
12. Records Management Training
13. Environmental Impact Assessment
14. Community Organizing
15. Basic Internal Auditing
16. Basic Internal Control Concepts
17. Training on Operations Audit
18. Training on Risk Based Audit Approach

19. Fraud Awareness Detection and Prevention
20. Technical Writing
21. Skills Training on Geographic Information System (GIS)
22. AUTOCAD
23. Skills Training on Monitoring and Evaluation
24. Values Clarification
25. Contract Management
26. Orientation on Road Policies, Laws and Rules
27. Training on Change Management with focus on Business Processes Improvement
28. Project Management and Development
29. Trainers Training on Organizational Development
30. HR Planning and Forecasting
31. Refresher Course in the conduct of Training
32. Re-Orientation seminar on BAC policies, standards and procedures
33. Community Involvement Training

9.1.3 Systems Development

The Provincial Government of Bohol has developed the following systems, aimed at enhancing its service deliveries: Human Resource Management Information System (HRIS), Financial Management Information System (FMIS), Agricultural Information System (Agri IS), Electronic Tax Assessment Computerized System (e-TRACS), and Real Property Tax Information System (RPTIS). However, these systems are lodged in the offices concerned. Linkages of these systems to other offices are not developed which could facilitate the processing of documents and could help hasten the decision making of the leaders and the management. Some of the capacity development requirements identified to address gaps in systems include:

- Development of linkages on the e-NGAS to other finance offices
- Development and establishment of on-line reporting system
- Enhancement of HRIS
- Document Tracking System

Financial Management System

The financial management system of the Provincial Government Bohol is not without deficiencies however, notable are its strengths some of which include: Budget preparation is generally orderly and systematic; Documentation of disbursements for procurement of materials and infrastructure projects can be relied upon in terms of completeness and regularity; There is initial initiative in the creation of a separate internal audit unit; Collaboration between the executive and legislative departments are generally functional and operational and; the ongoing re-engineering process indicates the desire to streamline the organization and make it more cost-efficient.

Geographic Information System (GIS)

The PPDO has a GIS Unit Head with two support staff. The IT unit has 3 staff for programming and system, 6 for systems analysis, 4 for systems administration and one trained GIS staff. There are still no updated GIS maps for provincial roads as the GIS Team of PPDO still needs road data from the PEO on the coordinates and specifics of the provincial road network.

The IT unit of the HRMDO has developed and is now administering these systems: (a) RPTIS (real property tax information system); (b) LPRAP (local poverty reduction action plan); (c) FMIS (Financial management information system); (d) HRIS (human resource information system); (e) Electronic Tax Assessment Computerized Systems (e-TRACS) (for the treasury office); (f) an agriculture databank including soil mapping and (g) an infrastructure databank concentrated on roads and bridges.

During the review and assessment workshops conducted with provincial participants, the following GIS/IT needs surfaced in order to produce specific outputs required in each provincial department or office:

Table 23 Expressed GIS/IT Needs by Provincial Departments/Offices

Office/Group	IT / ICT NEEDS	Specific Outputs to be
Entire PGBh	<ul style="list-style-type: none"> ✓ For the PGBh as a whole: Hardware and custom-designed software to network all departments/offices 	<ul style="list-style-type: none"> • E-GOVERNANCE SYSTEM (for the PGBh as a whole)
PEO	<ul style="list-style-type: none"> ✓ AUTOCAD Training and Equipment ✓ GPS / GIS Hardware and Software training 	<ul style="list-style-type: none"> • Provincial road network map • Digitized roads design • Updated road inventory and road condition data • Prompt and timely road completion reports
PPDO	<ul style="list-style-type: none"> ✓ Software, hardware, and appropriate technical training ✓ MS Project Office ✓ Monitoring and Evaluation Systems 	<ul style="list-style-type: none"> • Enhanced GIS capability for socio-economic and infrastructure planning • Preparation of Provincial Atlas • Project management system • Project monitoring and evaluation systems
PTO	<ul style="list-style-type: none"> ✓ e-TRACS roll out to 46 Municipalities (including Hardware) ✓ Computerized System Linking Budget, Accounting and Treasury 	<ul style="list-style-type: none"> • Financial report of PBMO, PAccO, and PTO Digitized / networked in LAN • Computerization of Real Property Assessment Billing and Collection System • Computerization of Business Permits and Licensing System in all municipalities in the province
PBMO	<ul style="list-style-type: none"> ✓ Computerized and networking System Linking Budget, Accounting and Treasury 	<ul style="list-style-type: none"> • Financial report of PBMO, PAccO, and PTO Digitized / LAN
PAccO	<ul style="list-style-type: none"> ✓ Computerized and networking System Linking Budget, Accounting and Treasury 	<ul style="list-style-type: none"> • Financial report of PBMO, PAccO, and PTO Digitized / LAN
PAssO	<ul style="list-style-type: none"> ✓ G.I.S. equipment, software, and capability training 	<ul style="list-style-type: none"> • complement the RPT IS • e-TRACS will contribute to revenue generation of the province

Office/Group	IT / ICT NEEDS	Specific Outputs to be
IAS	<ul style="list-style-type: none"> ✓ Computerized and networking system Linking Budget, Accounting and Treasury with IAS 	<ul style="list-style-type: none"> • Access to financial records for internal audit purposes
BEMO	<ul style="list-style-type: none"> ✓ Softwares and Hardware (PC) ✓ GPS ✓ Training of BEMO GIS Staff for GIS to generate environment – related data like hazard maps, flood prone areas useful for roads planning and designs 	<ul style="list-style-type: none"> • Digitized environmental management system • GIS-based map of all quarry sites, heritage sites, NIPAS, and other environmental critical areas • EMP Monitoring System
HRMDO	<ul style="list-style-type: none"> ✓ Gigabit Switches for Network backbone ✓ Servers (Microsoft ISA, Proxy server database) ✓ Gigabit Interface Cards ✓ Microsoft windows servers ✓ Server for our payroll system ✓ Training on Computerization of PMS-OPES 	<ul style="list-style-type: none"> • cm • Computerized PHS-OPES

9.1.4 Revenue Enhancement

The Provincial Budget Office allocates budgets for roads based on the 20% development fund and the General Fund. For 2010, Bohol has a budget of about P95M for roads improvement from the 20% development fund and a road maintenance budget of P29M from the General Fund. However, multi-year investment planning and programming for the road sector is still an area for improvement to be compliant with NEDA’s Provincial and Local Planning and Expenditure Management (PLPEM). Expenditure management for provincial roads is decided upon by the Governor, upon recommendation of PEO, in the absence of a multi-year plan. There is also a need for the SP to act on the budget with dispatch so that budget approval is early, following the Joint Memorandum Circular (JMC).

During the review and assessment workshops, the following were seen by participants as weaknesses in revenue generation and public expenditure management identified by participants during the review and assessment workshops are found below:

- Value for money is not yet translated into tangible cost accounting practices which are auditable; in brief, VFM has no tangible results
- Inconsistent audit requirements
- No tools yet to specifically manage public expenditure in roads sector
- There is no biennial performance reports submitted to LFC
- There is no monitoring / evaluation tools for public expenditure management by each department
- Non-establishment of audit operational control procedures and non-formulation of internal auditing manual
- As regards budget for roads maintenance and rehabilitation allotted there is an allocation from the General Fund(P24M in 2009 and P29M in

2010), however, this is for fuel only; there is a need to look at the itemized budget and expenses need to be itemized for salaries, materials, equipment use, fuel); there are 105 personnel for road rehab/maintenance; the account code is only road rehabilitation/maintenance

- no basis for a five year expenditure plan because no PRNDP ; there is a road listing in the Medium-Term Development Plan but if the road is not the priority of the governor (prioritization is dependent on the LCE); the plan is not followed.
- Road works estimate or costing on a per kilometer basis is not done
- There is a budget monitoring system but information dissemination is missing
- Monthly balances ought to be shared with other departments, however offices are not linked and networked so that information can be shared and accessed

There are still a number of municipalities which are not tax-mapped and that real property tax assessment of most municipalities in Bohol is not digitized and computer-assisted. Generation of local fees and revenues in the province remains steady at 8-10% annually, compared with the desired goal of 15-20%. Self-generated provincial fee and tax revenue is then very important to support an expanded infrastructure maintenance allocation.

There is also not much monitoring of the physical accomplishments of plans to complement the financial monitoring of expenditures done at the Budget Office to tighten plan-budget links. An activity-based budgeting instead of bulk budgeting, as is practiced, especially in roads works is desired.

Thus, for a sustainable implementation of the capability development programs and to ensure that these programs would lead to the efficient and effective delivery of road services, the following strategies were identified:

Capacity Development Strategies

- Sending right people to training (function and performance based)
- Conduct of re – echo (sharing of information)
- Conduct of periodic Training Needs Assessment
- Conduct of regular training
- Progressive conduct of CD intervention
- Application of learning to workplace (Inclusion of REAP to performance ratings)
- Inclusion of stakeholders in capacity development
- Enhancement of IT systems
- Linkage of systems to other offices
- Planning, budgeting, performance and monitoring linkages

- Application of advance technologies (Provision of appropriate equipment and facility)
- Strict and sustainable (continuing) monitoring and evaluation of trainees
- Centralization of budget and conduct of capability building programs

9.2 Investment by Activity and Year

The capability building investment programming matrix can be seen in Section 11, Investment Program Summary.

10. Implementation Plan and Schedule

This section describes how the Bohol PRNDP will be implemented, the service delivery mechanisms employed and the implementation schedule.

10.1 Road Network Development

10.1.1 Strategic Approach to Implementing Road Development

In the management and maintenance of provincial roads, the strategic approaches used by the Bohol Provincial Engineering in implementing road development include both force account and contracting out. Road rehabilitation and road upgrading or road improvement work are mostly done by contracting out. However, routine and periodic road maintenance is undertaken mostly by administration.

- *Management by Administration (In-House or Force Account)*

This type of roads management services is viewed by provincial government personnel as more beneficial to labourers as compensation is fair and equitable compared with what contractors provide. Beside, management by force account generates local employment for this accommodates many political protégés, a practice that suits the needs of political leaders. The Bohol Provincial Government owns a fleet of newly acquired heavy equipment. Road works by administration allows for rental of heavy equipment which is part of province's cost recovery scheme.

- *Management by Contracts ("Contracting Out")*

The key offices related to the road sector are aware that "contracting out" road works is less costly, results in better quality of work, speedy completion of projects and can generate employment of skilled workers hired by the private sector. With contracting out, the role of PEO can be more focused on providing construction supervision. A loophole is also identified in this scheme, when there is collusion between the construction supervising engineer and the private contractors.

The following strategies are seen as helpful in implementing sustainable management of roads for rehabilitation and maintenance work:

1. **Contracts supervision.** This is critical to ensure strict monitoring of road projects at all phases of implementation.
2. **Monitoring and evaluation** The Project Monitoring and Evaluation Team before, during and after road project implementation. Clear indicators of performance management need to be understood and agreed by both the construction supervising engineer and the private contractors to make sure that there is no collusion.

3. **Community Engagement** Involvement of communities supports government's efforts for sustainable management and maintenance of roads. Communities can help provide feedback on quality of roads and can monitor implementation of road projects.
4. **Adherence to standards** Local chief executives must respect and live up to the standards of roads engineering to ensure high quality of completed road projects and value for money. Roads service delivery needs to be free from any political connotation.
5. **Transparent procurement process** When contracting out is the option taken, procurement of contractors must transparent and selection is thorough, unbiased and objective. No sub-contracting should be allowed and the capacity of the contractor to handle the road project should be thoroughly assessed.
6. **Good mix of force account and contracting out** The Bohol Provincial Government needs to maintain a good mix and balance between management by force account and contracting out in roads management, especially in roads maintenance to determine overtime, which is scheme is cost efficient over time.

Table 24 Service Delivery Mechanism for Roads Rehabilitation and Maintenance

				Rehabilitation	Maintenance	Total Cost	Service Delivery Mechanism
				Cost	Cost		
1	Rehabilitation of Jct.(LIR)-Mahayag-Danao Road	14.316	PRMF		4,259,424.00	4,259,424.00	contracting out
2	Rehabilitation of Antequera-Catigbian via San Isidro Road	18.481	PRMF	65,420,200.00	6,689,623.39	72,109,823.39	contracting out
			PGB	9,998,000.00		9,998,000.00	contracting out
3	Rehabilitation of Cogtong (Candijay)-Panas-Pangpang-Badiang Road	5.605	PRMF	24,150,000.000	515,660.000	24,665,660.00	contracting out
			PGB	4,972,000.000		4,972,000.00	contracting out
4	Rehabilitation of Dimiao-Oac-Bilar Road	17.834	PRMF	22,352,000.00	467,360.00	22,819,360.00	contracting out
			PGB				
5	Rehabilitation of Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	9.997	PRMF	35,995,000.00		35,995,000.00	contracting out
			PGB	4,991,000.00		4,991,000.00	contracting out
				167,878,200.00	11,932,067.39	179,810,267.39	

* Assumption: 5% escalation cost per year starting 2nd year

10.1.2 Physical Works Program

Road maintenance work will involve three levels of work: (1) preparation of the program of works; (2) tendering process; and (3) actual maintenance work. It is planned that the preparation of the program of work will begin on the second

quarter of each year and the tendering process will be done in the third quarter so that the maintenance work can be done in the fourth quarter of each year and could be continued in the first quarter of the succeeding year.

Table 25 Implementation Schedule for Roads and Bridges Projects in the PRNDP

Project Name	Project Length (KM)	Type of Work	Project Cost (Php M)	Total Project Cost (Php M)	Fund Source	2010		2011		2012		2013		2014		2015			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2
A.) ROADS																			
1 Rehabilitation & Maintenance of Jct. (LIR)-Mahayag-Danao Road	14.316	Rehab	63.827	84.192	PRMF-BF														
	14.316	Maint.	20.365		PGB c'part														
2 Maintenance of San Isidro - Catigbian via Caimbang Road	6.295	Rehab	25.462	25.992	PRMF-BF														
	6.295	Maint.	0.53		PRMF-BF														
3 Cogtong(Candijay)-Panas-Pangpang-Badiang Road	5.605	Rehab	23.55	34.452	PRMF-BF														
	5.605	Maint.	10.902		PRMF-BF														
4 Asphaltting of Inabanga-Sagbayan via Lapacan-Magtantang Road and Construction of Magkaya Box Culvert	1.750	Asphaltting	5.000	10.500	20% DF														
		Asphaltting Const. of Box	4.500		20% DF														
Rehabilitation and Maintenance of Inabanga-Lapacan-Magtantang Road	5.492	Rehab	23.068	28.636	PRMF-IF														
	1.010	Rehab	4.242		PRMF-BF														
5.492	Maint.	5.568	PRMF-IF																
1.010	Maint.	1.092	PRMF-BF																
5 Cabulao-Ondol(Mabini)-Union(Ubay) Road	12.137	Rehab	44.808	44.808	PRMF-IF														
	8.635	Rehab	38.967		PRMF-BF														
	8.635	Maint.	8.082		PRMF-BF														
	13.113	Maint.	0.418		PRMF-IF														
	2.475	Maint.	3.427		PGB RMF														
6 Dimiao-Oac-Bilar Road	9.298	Rehab	35.551		PRMF-IF														
	8.536	Rehab	15.860		PRMF-BF														
	11.168	Maint.	1.225		PRMF-IF														
	11.928	Maint.	6.376		PRMF-BF														
7 Catigbian-Canmano Road	0.502	Rehab	2.11	60.450	20% DF														
	7.718	Concreting	57.810		20% DF														
	0.502	Maint.	0.530		20% DF														

Legend:

- Detailed Engineering
- Tendering
- Construction
- Rehabilitation
- Maintenance

Road rehabilitation entails additional level of work compared with road maintenance. This will include (1) preparation of detailed engineering designs; (2) preparation of program of work and cost estimates; (3) tendering process; (4) actual road rehabilitation; and (5) construction supervision. Road designs and program of work can be done in the first quarter. Tendering can be done in the second quarter and actual road rehabilitation work and construction supervision can be done within the last two quarters of each year. This can be seen in the tables below.

Table 26 Multi-Year Roads Programming for Rehabilitation and Maintenance for PRMF

Road Name	Road Length L = kms.		Fund Source	1st YEAR PRNDP			2nd YEAR PRNDP			3rd YEAR PRNDP			4th YEAR PRNDP			5th YEAR PRNDP																
	Total Gravel Length	Total Project Length		Upgrading	Rehab	Maintenance	Upgrading	Rehab	Maintenance	Upgrading	For Rehab	For Maintenance	Upgrading	Rehab	Maintenance	Upgrading	Rehab	Maintenance														
				KM (in Million Pesos)	COST (in Million Pesos)	COST (in Million Pesos)	KM (in Million Pesos)	COST (in Million Pesos)	COST (in Million Pesos)	KM (in Million Pesos)	COST (in Million Pesos)	COST (in Million Pesos)	KM (in Million Pesos)	COST (in Million Pesos)	COST (in Million Pesos)	KM (in Million Pesos)	COST (in Million Pesos)	COST (in Million Pesos)	KM (in Million Pesos)	COST (in Million Pesos)	COST (in Million Pesos)											
1 Jct.(LIR)-Mahayag-Danao Rd	14.316	14.316	PRMF-BF	6.000	28.684				6.000	0.50				6.000	5.148			14.316	1.317			14.316	13.400									
			PRMF-BF							R					PR (6 kms.)				R					PR								
			PGB C part	8.316	35.143																											
			12%PGB C part								0.06					0.618									1.61							
			PRMF-IF								8.316	0.70				8.316	7.135															
2 San Isidro-Catigbian via Caimbang Road	6.295	6.295	PRMF-BF	6.295	25.462				6.295	0.53																						
			12%PGB C part							0.06																						
			PRMF-BF																6.295	0.579				6.295	5.892							
			12%PGB C part																R	0.07				PR	0.707							
			PGB RMF													6.295	5.40															
3 Cogtong (Candijay)-Panas-Panggang-Badiang Road	5.605	5.605	PRMF-BF					5.605	23.541					5.605	0.493			5.605	5.028				5.605	5.381								
			12%PGB C part							2.825					R	0.06			PR	0.603				R	0.646							
4 Inabanga-Sagbayan via Lapacan-Magtangtang Road	6.502	1.010	PRMF-BF					1.010	4.242					1.010	0.089			1.010	0.906				1.010	0.097								
			12%PGB C part							0.51					R	0.01			PR	0.11				R	0.012							
			5.492 PRMF-IF						5.492	23.068						5.492	0.48			5.492	4.926				5.492	0.527						
5 Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	20.772	8.635	PRMF-BF											3.763	16.557			4.872	22.41					8.635	8.082							
			12%PGB C part																	1.987					PR	0.97						
			12.137 PRMF-IF						1.010	4.242					1.465	6.446	1.010	0.09		6.478	29.80				3.184	15.28	4.615	4.320				
			12%PGB C part							0.509						0.774	R	0.011			3.58					1.83	PR	0.518				
			2.475 PGB RMF																								7.488	0.719				
6 Dimiao-Oac-Bilar Road	17.834	8.536	PRMF-BF					2.342	9.836					3.969	17.464	2.342	0.206		1.967	9.048	3.315	0.30			0.258	1.24	6.271	5.870				
			12%PGB C part							1.180						2.096	R	0.025			1.09	R	0.04			0.15	PR	0.704				
			9.298 PRMF-IF						1.831	7.690					6.332	27.861	1.831	0.161				0.309	0.28			1.135	5.45	9.298	8.703			
			12%PGB C part							0.923							3.343	R	0.019				PR	0.033			0.65	PR	1.044			
Total	71.324	71.324		0	0	20.611	89.29	0	0	0	0	17.290	81.33	20.611	1.94	0	0	15.529	76.53	37.901	20.86	0	0	13.317	68.609	38.817	15.98	-	4.577	24.61	69.025	59.35

10.2 Capacity Development

10.2.2 Strategic Approach to Implementing Capacity Development

The Human Resource Management and Development Office (HRMDO) implements the capability building programs of the provincial government. Trained under the auspices of the Philippines-Australia Human Resource Development Facility (PAHRDF), HRMDO has conducted a training needs assessment to enhance the Human Resource Management and Development Plan developed in 2006 with PAHRDF assistance. The following strategic approaches will facilitate the implementation of capacity development:

- *Matching Trainings with Needs*

Trainings and capability building programs are need-based, demand-driven and performance-linked. Trainings require participants to prepare a re-entry action plan to implement changes in behaviours of individuals as well as in the practices of offices and departments to ensure transformation at all levels. A training needs assessment is constantly updated to make sure that training and development needs are current and relevant.

- *Workplace Approaches*

Because trainings match the needs of departments and their personnel, training component requires direct application to workplace situations.

- *Multi-Year Budgets for Capacity Development*

Training Although the HRMDO develops the training plan and assist each department in the implementation of their departmental training programs, budgetary allocations are by departments. This assures the implementation of the training program and enables departments to undertake their own training programs and even attend out-of-town training activities where the provincial government is invited.

- *Service Pay-back*

Provincial employees who are allowed to join in international and long-term trainings are required to render mandatory services to pay back months and years of formal training and education. This is also to ensure return of scholars to the provincial government and introduction as well as application of new technologies and innovations.

- *Continuing training and education*

The provincial government is aware that employees exposed to trainings have increased their professional skills and expertise and have become more competitive and in-demand. Capacity loss is expected through transfers of trained employees to better job opportunities, migration to other countries and personnel promotions and movements. In this regard, replenishment of capacity loss can only be done through continuing training.

10.2.3 Schedule of Services

Table 27 Capacity Development Interventions Matrix

Capacity Development	No. of Participants	Duration	Training Completion	Service Mechanism
FINANCIAL RELATED INTERVENTIONS				
1. Training on e-NGAS	15	15 days (10 days – classroom; 5 days – practicum)	August 2010	Out-sourced
2. Training on Real Property Assessment & Appraisal	10	10 days	Feb. 2011	Out-sourced
3. Orientation/Workshop on JMC No. 1, series of 2007 and PLPEM	114	8 days (2 days per batch)	15 August 2010	In-house
4. Training on Accounting and Auditing Theories, Concepts and Principles <ul style="list-style-type: none"> ☛ Accounting Rules & Regulations ☛ Financial Analysis & Projections ☛ Basic Internal Auditing ☛ Basic Internal Control Concepts ☛ Operations Audit ☛ Risk-Based Audit Approach ☛ Fraud Awareness, Detection and Prevention 	20	10 days	Feb. 2011	In-house
5. Orientation on the Updates of Treasury Laws, Judicial and Civil Remedies Laws	15	3 days	Mar 2011	Out-sourced
INFORMATION TECHNOLOGY INTERVENTIONS				
1. Basic Computer Training	15	5 days (3 days Theory; 2 days Practicum)	Jan 2011	In-house
2. Advance Computer Training	15	5 days (3 days Theory; 2 days Practicum)	Jan 2011	In-house
3. Skills Training on Geographic Information System (GIS)	15	15 days (10 days Theory; 5 days Practicum)	Feb 2011	Out-sourced
4. Skills Training on AutoCAD, other related software and equipment for road design and cost estimates	15	15 days (10 days Theory; 5 days Practicum)	30 Nov. 2010	Out-sourced
SYSTEMS DEVELOPMENT				

Capacity Development	No. of Participants	Duration	Training Completion	Service Mechanism
1. Development of linkages of the e-NGAS system to the finance offices	10	2 months (system operational to all finance offices by the end of 2 months)	Feb 2011	Out-sourced
2. Development and establishment of on-line Reporting System on Accomplishment Reports, Reports on Absences, Undertimes & Tardiness, etc. (all kinds of reports for submission to HRMDO)	6	2 months (system operational at the end of 2 months)	Jan 2011	Out-sourced
3. Development and establishment of e-Tracking System	10	2 months (system operational to all offices involved to the PRMF Project by the end of 2 months)	EO Jan 2011	Out-sourced
4. Enhancement of HRIS: on-line leave application, payroll system, timekeeping, databank of employee's profile, etc.	6	2 months	Jan 2012	Out-sourced
MONITORING AND EVALUATION				
1. Project Monitoring and Evaluation (physical and financial)	6	15 days (includes designing of M&E Tools)	Aug 2010	Out-sourced
2. Skills Training on Monitoring and Evaluation	25	15 days	30 Oct 2010	Out-sourced
HUMAN RESOURCE INTERVENTIONS				
1. Technical Writing and Communication Skills Training	15	5 days (3 days Theory; 2 days Practicum)	May 2011	Out-sourced
2. Records Management Training	25	3 days	May 2011	Out-sourced
3. Seminar on Values Clarification	25	5 days	2011-2014 (every Lenten season)	Out-sourced
4. Training on Change Management with focus on Business Processes improvement	30	5 days (business process of every offices drafted at the end of the training for implementation)	Feb 2012	In-house

Capacity Development	No. of Participants	Duration	Training Completion	Service Mechanism
5. Skills Training on Project Management and Development	15	10 days (with practicum to come up with a project proposals at the end of the training)	Jan 2012	Out-sourced
6. Trainers' Training on Organizational Development (OD)	18	10 days	Jan 2012	Out-sourced
7. Training on HR Planning & Forecasting	10	15 days (10 days theory; 5 days practicum)	Jan 2012	Out-sourced
8. Training on Coaching & Mentoring	33	10 days	March 2012	Out-sourced
9. Refresher Course on the conduct of training	18	10 days	Jan 2013	Out-sourced
ENVIRONMENT RELATED INTERVENTIONS				
1.Environmental Impact Assessment	10	5 days (tools developed at the end of the training)	Sept 2011	Out-sourced
2.Community Organizing	15	5 days	Nov 2011	In-house
3.Integrated Environmental Management	10	3 days	Aug 2011	In-house
PROCUREMENT INTERVENTIONS				
1.Skills Training on Contract Management	25	3 days	Aug 2010	Out-sourced
2.Re-Orientation Seminar on BAC Policies, Standards, Procedures, etc.	25	3 days	EO Sept. 2010	In-house
STAKEHOLDERS INVOLVEMENT INTERVENTIONS				
1.Orientation on road policies, laws and rules	100 (4 batches)	2 days	August 2010-2014	In-house
2.Trainers' Training on Community Involvement	15	2 days	July – Aug 2010	Out-sourced

11. Investment Program Summary

This section presents the summary of all roads program and capability building investments.

Table 28 Five-Year Provincial Road Network Priorities: 2010 - 2014

Name of Program/Project		Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT					
				(in Million Pesos)					
				2010	2011	2012	2013	2014	Total
I.	ROADS								
A.	Rehabilitation								
1	Jct.(LIR)-Mahayag-Danao Rd	PRMF-BF	MBC	28.684					28.68
		PGB C'part		35.143					35.14
2	San Isidro-Catigbian via Caimbang Road	PRMF - BF	MBC	25.462					25.46
3	Cogtong (Candijay)-Panas-Pangpang-Badiang Road	PRMF-BF	MBC		23.541				23.54
		PGB C'part			2.825				2.83
4	Inabanga-Sagbayan via Lapacan-Magtangtang Road	PRMF - BF	PEO		4.242				4.24
		PGB C'part			0.510				0.51
		PRMF - IF			23.068				23.07
		PGB C'part			2.768				2.77

Name of Program/Project		Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT					
				(in Million Pesos)					
				2010	2011	2012	2013	2014	Total
5	Dimiao-Oac-Bilar Road	PRMF - BF	MBC		9.836	17.464	9.048	1.240	37.59
		PGB C'part			1.180	2.096	1.090	0.150	4.52
		PRMF - IF			7.690	27.861		5.448	41.00
		PGB C'part			0.923	3.343		0.654	4.92
		20% DF			14.830				14.83
6	Cabulao-Ondol(Mabini)-Union (Ubay) Road (Mabini - Ubay Road)	PRMF - BF	MBC			16.557	22.411		38.97
		PGB C'part				1.987	2.690		4.68
		PRMF - IF			4.242	6.446	29.80	15.28	55.77
		PGB C'part			0.509	0.774	3.580	1.830	6.69
7	Catigbian-Canmano Road	20% DF	PEO		2.110				2.11
8	Pob. Bonot-Bonot-Tiguman-Overland Road	20% DF	PEO		3.240		34.70		37.94
9	Pob.(Sagbayan)-Sagbayan Sur-Kabasakan Road	20% DF	PEO				22.56		22.56
10	Jct. (LIR) -Mahayag - Katipunan Road (San Miguel -Alicia)	20% DF	PEO				7.440		7.44
11	San Miguel-Bayongan-Bulilis-Mabuhay(Ubay) Road	20% DF	PEO	4.500					4.50

Name of Program/Project		Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT						
				(in Million Pesos)						
				2010	2011	2012	2013	2014	Total	
12	Pob.(Inabanga)-Lawis Road	20% DF	PEO	5.000						5.00
13	Alegria(Catigbian)-Baang-Jagbuaya-Janopol Road	20% DF	PEO	1.890						1.89
14	Abatan-Agahay-Busao-Toril (Maribojoc) Road	20% DF	PEO	3.000						3.00
15	Popoo-Tugas (Pres. Garcia) Road	20% DF	PEO	3.000						3.00
16	Mabini-Cabulao-Lungsodaan-Pook Road	20% DF	PEO	4.000						4.00
17	Tiguis-Calvario (Lila)-Cambanse (Loboc) Road	20% DF	PEO	3.000						3.00
18	Jct (TER) Soom-Humayhumay Road	20% DF	PEO	2.500						2.50
	Sub-total (Rehab)			192.57	109.20	104.39	133.32	30.05		569.53
	B. Upgrading									-
1	San Isidro-Catigbian via Caimbang Road	20% DF	PEO		31.59					31.59
2	Inabanga-Sagbayan via Lapacan-Magtangtang Road	20% DF	PEO	10.50						10.50
3	Dimiao-Oac-Bilar Road	20% DF	PEO	3.000						3.00

Name of Program/Project	Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT					
			(in Million Pesos)					
			2010	2011	2012	2013	2014	Total
4 Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	20% DF	PEO		8.300	5.000	26.68		39.98
5 Catigbian-Canmano Road	20% DF	PEO	3.000		29.81		25.00	57.81
	ODA/ Other Sources	PEO	10.270					10.27
6 Pob.Bonot-Bonot-Tiguman-Overland Road	20% DF	PEO			9.190			9.19
7 Pob. (Sagbayan) Sagbayan Sur Kabasakan Road	20% DF	PEO	3.000					3.00
8 Jct. (LIR) -Mahayag - Katipunan Road (San Miguel -Alicia)	20% DF	PEO	3.000					3.00
9 Tinago-Biking Road	ODA/ Other Sources	PEO	14.94					14.94
10 Tinago Bingag Road	20%DF	PEO		14.18				14.18
11 Jct. (TER)-Guindulman - Anda - Badiang Road	20% DF	PEO		14.18				14.18
12 Antequera-Balilihan via Dorol Road	20% DF	PEO			33.000			33.00
13 Calape-Pangangan Road	20% DF	PEO	8.250					8.25
14 Corella-Balilihan Road	20% DF	PEO					33.00	33.00

Name of Program/Project		Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT					
				(in Million Pesos)					
				2010	2011	2012	2013	2014	Total
15	Albuquerque-Sikatuna Road	20% DF	PEO					36.00	36.00
16	Jct.(TER) Guindulman-Catungawan-Mayuga-Lombog-Lundag Road	20% DF	PEO					36.00	36.00
17	Pob.-San Francisco Road, Talibon	20% DF	PEO	3.500					3.50
18	Dagohoy-Caluasan Road	20% DF	PEO	3.500					3.50
19	La Paz (Cortes)-Cabaguan-Lourdes (Corella) Road	20% DF	PEO	3.500					3.50
20	Canmanico-Anonang Road, Valencia	20% DF	PEO	2.000					2.00
21	Baclayon-Corella Road via Tunga Road	20% DF	PEO	3.00					3.00
22	One-way Traffic Inabanga Road	20% DF	PEO	3.00					3.00
23	Jct (Jagna-Sbullones) Malbog-Calabacita Road	20% DF	PEO	3.00					3.00
24	Lungsodaan (Candijay)-Tambongan-Sbullones Road	20% DF	PEO	3.650					3.65
25	Catigbian-Clarín via Bogtongbood Road	ODA/ Other Sources	PEO	49.69					49.69
26	Jct. (TER)-Valencia)-Anoyon-Omjon	ODA/ Other Sources	PEO			47.20			47.20

Name of Program/Project		Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT					
				(in Million Pesos)					
				2010	2011	2012	2013	2014	Total
Sub-total (Upgrading, 20% DF)				136.80	68.25	124.20	26.68	130.00	485.93
C. Maintenance									
1	Jct.(LIR)-Mahayag-Danao Rd	PRMF-BF	MBC		0.500	5.148	1.317	13.400	20.37
		PGB C'part			0.060	0.618	0.160	1.610	2.45
		PRMF-IF			0.700	7.135			7.84
		PGB C'part			0.080	0.856			0.94
2	San Isidro-Catigbian via Caimbang Road	PRMF-BF	MBC		0.530		0.579	5.892	7.00
		PGB C'part			0.064		0.070	0.707	0.84
		PGB RMF				5.401			5.40
3	Cogtong (Candijay)-Panas-Pangpang-Badiang Road	PRMF-BF	MBC			0.493	5.028	5.381	10.90
		PGB C'part				0.060	0.603	0.646	1.31
4	Inabanga-Sagbayan via Lapacan-Magtangtang Road	PRMF-BF	MBC			0.089	0.906	0.097	1.09
		PGB C'part				0.011	0.109	0.012	0.13
		PRMF - IF				0.493	4.926	0.527	5.95
		PGB C'part				0.058	0.591	0.063	0.71
5	Dimiao-Oac-Bilar Road	PRMF - BF	MBC			0.206	0.300	5.870	6.38

Name of Program/Project		Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT					
				(in Million Pesos)					
				2010	2011	2012	2013	2014	Total
		PGB C'part			0.025	0.040	0.704	0.77	
		PRMF-IF			0.161	0.280	8.703	9.14	
		PGB C'part			0.019	0.033	1.044	1.10	
		20% DF		0.300				0.30	
6	Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay)	PRMF - BF	MBC				8.082	8.08	
		PGB C'part					0.970	0.97	
		PRMF-IF			0.090		4.320	4.41	
		PGB C'part			0.011		0.518	0.53	
		PRMF-IF					0.719	0.72	
		PGB C'part					0.086	0.09	
		PGB-RMF				1.040		1.04	
7		Catigbian-Canmano Road	20% DF	PEO		0.530			0.53
		ODA/ Other Sources			0.910	0.950	0.990	1.040	3.89
Sub-total (Maintenance)				0.00	3.67	21.82	16.97	60.39	102.86
Total (Roads)				329.37	181.13	250.41	176.97	220.44	1,158.32
II.	BRIDGES/BOX CULVERT								
A.	Upgrading								

Name of Program/Project		Fund Source	Service Delivery Mechanism	INVESTMENT REQUIREMENT					
				(in Million Pesos)					
				2010	2011	2012	2013	2014	Total
1	Buko ² Bridge(15LM)- Jct.(LIR)-Mahayag-Danao Rd	20% DF	PEO		15.75				15.75
2	Caimbang Bridge RCDG-30LM (Antequera-Catigbian via San Isidro Road)	20% DF	PEO			33.00			33.00
3	Lapaz Box Culvert - Lapaz-Lourdes-Kabagoan Cortes Road)	20% DF	PEO				0.920		0.92
4	Box Culvert (Suba, Talisay, Alang ² , Badiang) - Jct. (TER)-Guindulman-Anda-Badiang Road	20% DF	PEO				3.696		3.70
5	Pasanan Br. Along Cabulao-Ondol-Union (Ubay) Road	20% DF	PEO				24.00		24.00
Total (Bridges)				0.00	15.75	33.00	4.62	0.00	53.37
GRAND TOTAL				329.37	196.88	283.41	181.59	220.44	1,211.68
Legend:		PGB RMF=	Provincial Gov't Regular Road Maintenance Fund						
	PRMF = Provincial Roads Management Fund (AusAID)	PGB C'part = Provincial Counterpart			20% DF=			20% Development Fund	
			PRMF		BF	Base Fund			
			20% Development Fund		IF	Incentive Fund			
	MBC = Management by Contract		ODA and other sources						
	PEO = Provl. Engineer's Office								

Table 29 Five-Year Summary for PRMF Assistance for Road Rehabilitation and Maintenance

		1st YEAR PRNDP		2nd YEAR PRNDP		3rd YEAR PRNDP		4th YEAR PRNDP		5th YEAR PRNDP	
Total by Fund Source:	PRMF-BF	12.295 Kms	Php54.15	13.947 Kms	Php38.65	19.337 Kms	Php39.96	26.760 Kms	Php39.59	26.474 Kms	Php39.96
	PGB Counterpart	8.316 Kms	Php35.143								
	12%PGB C'part for BF		Php0.00		Php4.57		Php4.79		Php4.75		Php4.80
	PGB RMF		Php0.00	0.000 Kms	Php0.00	6.295 Kms	Php5.40				Php0.000
	Sub Total	20.611 Kms	Php89.29	13.947 Kms	Php43.23	25.63 Kms	Php50.15	26.760 Kms	Php44.35	26.474 Kms	Php44.76
	PRMF-IF		Php0.00	8.333 Kms	Php35.70	7.797 Kms	Php42.14	6.478 Kms	Php35.00	19.405 Kms	Php35.000
	12%PGB C'part for IF		Php0.00		Php4.28		Php5.06		Php4.20		Php4.20
	PGB RMF		Php0.00		Php0.00				Php1.04	0.000 Kms	Php0.000
	Sub Total	0.000 Kms	Php0.00	8.333 Kms	Php39.98	7.797 Kms	Php47.20	6.478 Kms	Php40.24	19.405 Kms	Php39.20
Grand Total		Php89.29		Php83.21		Php97.35		Php84.59		Php83.96	

Legend:

PGB RMF = PGB Regular Maintenance Fund

PRMF-BF = PRMF Base Fund

PRMF-IF = PRMF Incentive Fund

PGB C'part = Provincial Gov't of Bohol Counterpart

PR Periodic & Routine Maintenance

R Routine Maintenance

Assumptions: 5% cost increment per year; Rehabilitation Cost per year per km= Php 4.0 Million; Routinary Maintenance cost per year per km= Php 0.08M; Periodic Maintenance Cost per Year/km = P.70M

Table 30 Summary of Roads Investment Priorities for PRMF Assistance (Road Rehabilitation and Maintenance): 2010-2011

PHYSICAL WORKS PROGRAM	Project No.	COMPONENT ACTIVITIES FUNDED AS SEPARATE CONTRACTS	FY 2010-2011				PRMF		PLGU	TOTAL
			1	2	3	4	Base	Incentive		
Maintenance . Jct.(LIR)-Mahayag-Danao Road (6.0km) and Upgrading of Bukobuko sa Anay Bridge, Danao	BHL-04.a	Routine Maintenance					0.500	-	0.060	0.560
	BHL-04b.1	Engineering investigations and design					-	-	0.158	0.158
	BHL-04b.2	Tendering					-	-	0.0065	0.0065
	BHL-04b.3	Construction					-	-	15.75	15.750
Maintenance of San Isidro-Catigbian via Caimbang Road (6.3km)	BHL-05a.1	Engineering investigations and design					0.019	-	-	0.019
	BHL-05a.2	Tendering					0.0065	-	-	0.0065
	BHL-05a.3	Routine Maintenance					0.530	-	0.06	0.594
Rehabilitation of Cogtong (Candijay)-Panas-Pangpang-Badiang Road (3.0km)	BHL-06a.1	Engineering investigations and design					0.413	-	-	0.413
	BHL-06a.2	Tendering					0.00325	-	-	0.0033
	BHL-06a.3	Construction					12.600	-	1.512	14.112
Rehabilitation of Cogtong (Candijay)-Panas-Pangpang-Badiang Road (2.605km)	BHL-06b.1	Engineering investigations and design					0.333	-	-	0.333
	BHL-06b.2	Tendering					0.0033	-	-	0.0033
	BHL-06b.3	Construction					10.941	-	1.313	12.253
Rehabilitation of Inabanga-Lapacan-Magtangtang Road (3.502km)	BHL-07a.1	Engineering investigations and design					0.084	-	-	0.084
	BHL-07a.2	Tendering					0.0033	-	-	0.0033
	BHL-07a.3	Construction					4.242	12.601	1.512	18.355
Rehabilitation of Inabanga-Lapacan-Magtangtang Road (3.0km)	BHL-07b.1	Engineering investigations and design					0.084	-	-	0.084
	BHL-07b.2	Tendering					0.00325	-	-	0.0033
	BHL-07b.3	Construction					-	10.467	1.256	11.723
Cabulao-Ondol (Mabini)-Union (Ubay) Road (Mabini-Ubay) (1.01km)	BHL-08a.1	Engineering investigations and design					0.212	-	-	0.212
	BHL-08a.2	Tendering					0.0065	-	-	0.0065
	BHL-08a.3	Construction					-	4.242	0.509	4.751
Dimiao-Oac-Bilar Road (4.173km)	BHL-09a.1	Engineering investigations and design					0.175	-	-	0.175
	BHL-09a.2	Tendering					0.0065	-	-	0.0065
	BHL-09a.3	Construction					9.836	7.69	2.103	19.629
Totals						40.00	35.00	24.24	99.24	

legend in-house
 outsourced

Table 31 Summary of Road Investment for Rehabilitation and Upgrading from the 20% Development Fund

PROVINCIAL ROAD NETWORK DEVELOPMENT PLAN: 2010-2015												
BOHOL PROVINCE												
Funding Source: BOHOL PROVINCIAL GOVERNMENT (20% Development Fund)												
PROJECT	Gravel L = km.	FIRST YEAR PRNDP		2ND YEAR PRNDP		3RD YEAR PRNDP		4TH YEAR PRNDP		5TH YEAR PRNDP		
		Proj. Length (KM)	Fund Source 20%DF (M)	Proj. Length (KM)	Fund Source 20%DF	Proj. Length (KM)	Fund Source 20%DF	Proj. Length (KM)	Fund Source 20%DF	Proj. Length (KM)	Fund Source 20%DF	
A. Roads												
1	Concreting of Catigbian-Canmano Road	6.220	0.500	3.000	3.010	31.605	2.710	29.810				
2	Concreting of Calape - Pangangan Road	5.287	0.825	8.250				4.462	51.313			
3	Raising of grade along Inabanga - Lawis Road	4.523	1.250	5.000				3.273	15.0558			
4	Raising of grade along Abatan-Agahay-Busao-Aghao-	8.769		3.000								
5	Soil Stabilization of gravel road at Popoo-Tugas Road	12.420		3.000								
6	Asphalting of La Paz(Cortes) -Cabaguan-Lourdes-Corella Road	6.215		3.500								
7	Concreting of Canmanico-Anonang Road	4.135		2.000								
8	Concrete paving of Sagbayan-Sagbayan Sur-Kabasakan	5.360	0.300	3.000								
9	Raising of grade at Mabini-Cabulao-Lungsodaan-Pook	4.510		4.000								
10	Asphalting of Jct. (LIR) Mahayag-Katipunan Road	10.315	0.500	3.000				5.000	34.500			
11	Soil Stabilization of Tiguis-Calvario(Lila)-Cambance	8.245		3.000								
12	Asphalting of Dagohoy-Caluasan-Estaca-Bagumbayan	9.788	0.580	3.500				2.772	19.127			
13	Soil Stabilization of San Miguel-Bayongan-Bulilis (Ubay)	17.443	17.443	4.500								
14	Asphalting of Inabanga-Sagbayan via Lapacan Road, and Construction of Magkaya Box Culvert	8.025	1.750	10.500						5.791	41.695	
15	Asphalting of San Franciso Road, Talibon	4.957	0.830	3.500								
16	Asphalting of Baclayon - Corella via Tunga Road	4.376	0.500	3.000								
17	Asphalting of One Way Traffic Inabanga Road	0.335	0.335	3.000								
18	Soil Stabilization of Dimiao-Oac-Bilar Road	17.834	17.834	3.000								
19	Soil Stabilization of Jct.(TER)-Soom-Humayhumay Road	3.305	3.305	2.500								
20	Soil Stabilization of Alegria-Baang-Jagbuaya-Hanopol	7.976	7.976	1.189								
21	Asphalting of Jct(Jagna-SB)-Malbog-Calabacita Road	9.110	0.500	3.000								
22	Concreting of Lungsodaan-Tambongan Road, Candijay	4.593	0.435	4.350						4.158	49.896	
23	Asphalting of Pob.-Bonot-Bonot-Tiguman-Overland Road	9.150	9.15				7.150	47.190		2.000	14.400	
24	Asphalting of Tinago-Bingag Road	2.250	2.250		2.250	14.175						
Sub-total		175.14	66.263	82.79	5.260	45.78	9.86	77.00	15.51	120.00	11.95	105.99

Table 32

Summary of Bridge Development Investments from the 20% Development Fund

B. Bridges	lm	lm		LM	COST	LM	COST	LM	COST	LM	COST
CONVERSION OF TEMPORARY BRIDGES INTO PERMANENT											
1		20.000		20.000	21.000						
2		15		15.000	15.750						
3		15		15.000	15.750						
4		30				30	33.000				
5		20								20	24.00
Conversion of Short-span Bridges into Box Culvert											
Guindulman - Anda - Badiang Road											
1.				5.000	0.840						
2.				5.000	0.840						
3				5.000	0.840						
4.				5.000	0.840						
La Paz(Cortes)- Lourdes-Cabaguan Road											
5.				5.000	0.840						
Kaptorsing - Abaca Road											
6.				5.000	0.840						
Alegria -Baang - Jagbuaya - Janopol Road											
7.				5.000	0.840						
Catigbian - Clarin via Bogtongbod Road											
8.				5.000	0.840						
Sub-total											
0.00 100.00 0.00 90.000 59.220 30.00 33.00 0.00 0.00 20.00 24.00											

Capacity Development Objectives	Table 33 Summary of Capacity Development Investment Program										Total Cost
	Cost Estimates and Fund Source										
	2010		2011		2012		2013		2014		
	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	
To capacitate the key employees of the finance offices on e-NGAS operation	189,000.00	PRMF	189,000.00	PRMF/PGBh							378,000.00
To link the e-NGAS system to the different finance offices of the PGBh	6,000,000.00	PRMF									6,000,000.00
To train employees on the basic and advance MS Office (MS Word, Excel, Powerpoint) operations.	75,000.00	PRMF	75,000.00	PRMF/PGBh	75,000.00	PRMF/PGBh	75,000.00	PRMF/PGBh	75,000.00	PRMF/PGBh	375,000.00
	150,000.00	PRMF	150,000.00	PRMF/PGBh	150,000.00	PRMF/PGBh	150,000.00	PRMF/PGBh	150,000.00	PRMF/PGBh	750,000.00
To enhance the capacity of employees on the conduct of real property assessment and appraisal	600,000.00	PRMF	300,000.00	PRMF/PGBh	300,000.00	PRMF/PGBh					1,200,000.00
To establish linkage on planning, budgeting and performance	171,000.00	PRMF	171,000.00	PGBh	171,000.00	PGBh					513,000.00
To appreciate and understand the importance of planning and public expenditure management	171,000.00	PRMF	171,000.00	PGBh	171,000.00	PGBh					513,000.00
To level - off understanding on Accounting rules and regulations	600,000.00	PRMF	300,000.00	PGBh	300,000.00	PGBh	300,000.00	PGBh	300,000.00	PGBh	1,800,000.00
To capacitate employees in financial analysis and projection	600,000.00	PRMF	300,000.00	PRMF/PGBh	300,000.00	PRMF/PGBh	300,000.00	PRMF/PGBh	300,000.00	PRMF/PGBh	1,800,000.00
To capacitate employees in conducting performance based project monitoring	360,000.00	PRMF									360,000.00
To develop personality in order to increase confidence in speaking to the public	378,000.00	PRMF	189,000.00	PRMF/PGBh			189,000.00	PRMF/PGBh			756,000.00
To deepen understanding on the laws and regulation on treasury related issues	600,000.00	PRMF	300,000.00	PGBh	300,000.00	PGBh	300,000.00	PGBh	300,000.00	PGBh	1,800,000.00
To educate employees on the methods and processes of records management	453,600.00	PRMF	491,400.00	PRMF/PGBh							945,000.00
To capacitate employees in the conduct of Environmental Impact Assessment	300,000.00	PRMF	300,000.00	PRMF/PGBh							600,000.00

Capacity Development Objectives	Table 33 Summary of Capacity Development Investment Program										Total Cost
	Cost Estimates and Fund Source										
	2010		2011		2012		2013		2014		
	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	
To capacitate technical employees in the approaches and strategies of integrated environmental management	126,000.00										
To be able to involve the community in the implementation of environmental policies/laws and as a revenue generation strategy	300,000.00	PRMF	300,000.00	PRMF/PGBh							600,000.00
To enhance knowledge on the elements of internal auditing	120,000.00	PRMF	120,000.00	PRMF/PGBh			120,000.00	PGBh	120,000.00	PGBh	480,000.00
To enhance knowledge on the concepts of administrative, operational accounting and financial control	120,000.00	PRMF	120,000.00	PRMF/PGBh			120,000.00	PGBh			360,000.00
To enhance capabilities on the examination and appraisal of areas and management other than financial and accounting	120,000.00	PRMF			120,000.00	PRMF/PGBh			120,000.00	PGBh	360,000.00
To acquire/enhance knowledge Of the new approaches on risk - based audit.	120,000.00	PRMF	120,000.00	PRMF/PGBh			120,000.00	PRMF/PGBh			360,000.00
To acquire knowledge and techniques on detection of fraudulent transactions.	120,000.00	PRMF			120,000.00	PGBh			120,000.00	PPRMF/PGBh	360,000.00
To acquire/enhance skills and capabilities on technical writing	720,000.00	PRMF	720,000.00	PRMF/PGBh	600,000.00	PRMF/PGBh	600,000.00	PRMF/PGBh	300,000.00	PRMF/PGBh	2,940,000.00

Table 34 PEO Five-Year Capacity Development Investment Matrix to Support Road Network Development and Management

Capacity Development Objectives	Cost Estimates and Fund Source										Total Cost
	2010		2011		2012		2013		2014		
	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	
To improve database on the provincial road network	900,000.00	PRMF									900,000.00
To acquire appropriate equipment and use the technology for road design and cost estimates	900,000.00	PRMF									900,000.00
To develop and use tools for monitoring and evaluation	1,500,000.00	PRMF									1,500,000.00
To acquire and practice values of honesty, teamwork and cooperation	315,000.00	PRMF	315,000.00	PRMF with counterpart from PGBh	315,000.00	PRMF with counterpart from PGBh	315,000.00	PRMF with counterpart from PGBh	315,000.00	PRMF with counterpart from PGBh	1,575,000.00
To acquire and apply knowledge on Contract Management and supervision of provincial road projects	1,500,000.00	PRMF	1,500,000.00	PRMF with counterpart from PGBh							3,000,000.00
To orient the participants on the policies with regards to the road right of way, installation of water pipes, etc.	185,000.00	PRMF	185,000.00	PRMF with counterpart from PGBh	185,000.00	PRMF with counterpart from PGBh	185,000.00	PRMF with counterpart from PGBh	185,000.00	PRMF with counterpart from PGBh	925,000.00
To improve existing Business Processes particularly on Records Management and Document Tracking			400,000.00	PRMF with counterpart from PGBh							400,000.00
To acquire and apply knowledge and principles of Project Management	900,000.00	PRMF			900,000.00	PRMF with counterpart from PGBh					1,800,000.00

Table 35 HRMDO Five-Year Capacity Development Investment Matrix to Support Road Network Development and Management

Capacity Development Objectives	Cost Estimates and Fund Source										Total Cost
	2010		2011		2012		2013		2014		
	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	
To be able to enhance the TDMT as trainers on OD	1,080,000.00	PRMF									1,080,000.00
To be able to determine HR requirements on road sector			600,000.00	PRMF							600,000.00
To be able to develop interpersonal relationship and help employees improve performance and motivation					1,980,000.00	PRMF with counter-part from PGBh					1,980,000.00
To enhance the existing system and prompt submission of reports from different offices	6,000,000.00	PRMF									6,000,000.00
To establish a tracking system for monitoring and easy retrieval of documents and personnel profile	6,000,000.00	PRMF									6,000,000.00
To update and upgrade existing HRIS programs and systems	6,000,000.00	PRMF									6,000,000.00
To upgrade KSAs of TDMT on the Training Cycles and in the preparation of detailed training plan	1,440,000.00	PRMF with counter-part from PGBh			1,440,000.00	PRMF with counter-part from PGBh					2,880,000.00

Table 36 BAC Five-Year Capacity Development Investment Matrix to Support Road Network Development and Management

Capacity Development Objectives	Cost Estimates and Fund Source										Total Cost
	2010		2011		2012		2013		2014		
	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	
To harmonize interpretation and understanding on BAC policies and procedures among members of the BAC & secretariat and the offices involved in the PRMF project	378,000.00	PRMF with counter-part from PGBh									378,000.00
To solicit commitment of stakeholders for their involvement in road implementation and monitoring	189,000.00										189,000.00

Table 37 Capacity Development Matrix for PRMF Assistance for 2010-2011

PRMF Core Capabilities (1)	Project No.	CAPACITY DEVELOPMENT PROJECT & STRATEGIES/ACTIVITIES	FY 2010-11				PRMF		PLGU	Total
			1	2	3	4	Base	Incentive		
Planning and Budgeting	1	Enhancement of Planning and Budgeting Linkages								
	1.1	Orientation on JMC No. 1 s. 2007					168,850			168,850
	1.2	PLPEM Orientation Workshop					357,500			357,500
Good Governance	2	Executive Legislative Agenda (ELA) Formulation Workshop					975,000		147,000	1,122,000
Financial Management	3	Public Finance Management						137,500		137,500
Performance Management, Internal Audit, Monitoring and Evaluation Systems	4	Enhancement of Monitoring and Evaluation Systems								
	4.1	Monitoring and Evaluation (M & E) Training Workshop for PMET					114,125			114,125
	4.2	Community Based M & E						138,875		138,875
	5	Environmental Management in Road Service Delivery								
	5.1	Capacity Development for Environmental Plan Compliance Monitoring						60,500		60,500
	5.2	Basic Environmental Management Training for Contractors and Communities						39,875		39,875
	6	Strengthening the Provincial Internal Audit Office								
	6.1	Teambuilding of PIAO Staff							15,125	15,125
	6.2	Audit Operations Training Workshop						92,400		92,400

Table 37 Capacity Development Matrix for PRMF Assistance for 2010-2011

PRMF Core Capabilities (1)	Project No.	CAPACITY DEVELOPMENT PROJECT & STRATEGIES/ACTIVITIES	FY 2010-11				PRMF		PLGU	Total
			1	2	3	4	Base	Incentive		
Engineering Services	7	Enhancement of Technical Capacities in Road Service Delivery								
	7.1	Auto CAD						575,000		575,000
	7.2	Training on Contract Management						92,400		92,400
	7.3	Social Preparation/Community Organizing					114,125			114,125
	7.4	Detailed Engineering Road Designs and Cost Estimates					137,500			137,500
	7.5	Feasibility Study Preparation						137,500		137,500
	7.6	Project Cycle Management						354,250		354,250
	7.7	Technical Writing					60,500			60,500
Human Resource Management and Development	8	Enhancement of HR Capacities								
	8.1	Participatory Facilitation Skills Training						182,875		182,875
	8.2	Participatory and Transformational Leadership						182,875		182,875
Capability to continuously improve and adapt	9	Strengthening of Bids and Awards Committee								
	9.1	Re-orientation of BAC Policies and RA 9184					69,850			69,850
Capability to commit and engage	10	Orientation on Road Policies, Rules and Laws							8,525	8,525
TOTALS							1,997,450	1,994,050	170,650	4,162,150

(1) Following the LGU Core Capabilities defined in the PRMF CD Framework

12. Monitoring and Evaluation Plan

12.1.1 PRNDP Monitoring and Evaluation Objectives

The objectives of Monitoring and Evaluation (M&E) in PRNDP are:

- to enable the Province to determine its status and progress against the PRNDP targets, objectives, and goals, and provide actionable information to stakeholders and decision makers; and
- to enable the Province to improve PRNDP activities, making it more effective in delivering what it should deliver.

12.1.2 Monitoring and Evaluation Organizational Structure

The M&E Organizational Structure of the Province is illustrated in Figure 9:

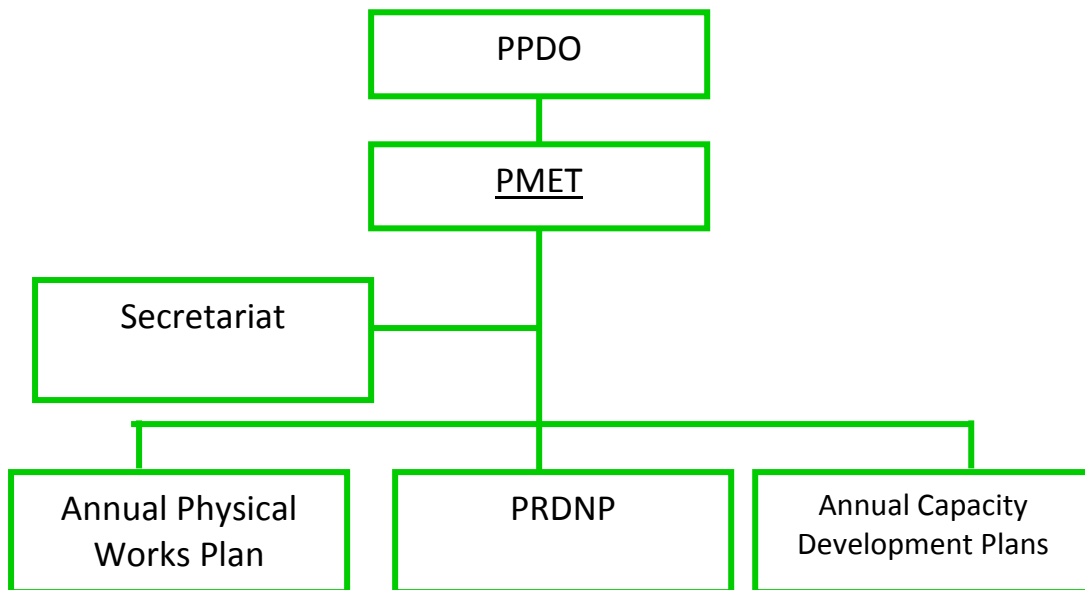


Figure 9 Bohol PRNDP M&E Organizational Structure

Table 38 PRNDP M&E Organizational Structure

M & E Teams	Composition	Function	Reports to
Project Monitoring and Evaluation Team (PMET)	Multi-sectoral team from the private, civil society, national government agencies and the PGBh (Refer to E O27 of 2009) The team elects a chair to preside team meetings and lead the PMET in delivering its tasks and functions	<ul style="list-style-type: none"> • Oversees the conduct PRNDP monitoring and evaluation • Initiates formation of monitoring teams • Formulates monitoring tools and guidelines adopted by PRNDP partners and implementers • Submit periodic monitoring Reports 	Project Management Team
Provincial Office M & E Team (POMET)	Represented by a designated M & E point person in PGBh offices (BEMO, IAS, PTO, PEO, PACCO, PBMO, HRMDO, PGSO, PASSO, PPDO)	<ul style="list-style-type: none"> • Collects information from their respective offices and prepares development reports • Submits monthly monitoring reports 	PMET
LGUs M & E Team (LGUMET)	Represented by a designated M & E person from the LGUs where road works are implemented	<ul style="list-style-type: none"> • Collects information on the development of the PRNDP in their respective LGUs • Prepares and submits monthly development reports 	PMET
Community Monitoring and Evaluation Team (COMET)	PO/Purok leaders and the BLGU	<ul style="list-style-type: none"> • Prepares and submits reports on the progress of the PRNDP in their respective communities • Provides feedback/information to the community 	PMET
Secretariat	Project Development and Monitoring Unit of the PPDO	(refer to EO) <ul style="list-style-type: none"> • Consolidates and packages the monitoring and feed-backing reports 	PMET

The M&E Unit is composed of four teams namely: the Bohol PRNDP PMET headed by the President of the League of Municipalities – Bohol Chapter, the Provincial Office M & E Team, the MLGU M & E Team and the Community M & E Team with the support of a secretariat from the Project Development and Monitoring Unit of the Provincial Planning and Development Office. The unit shall report directly to the Project Management Team (PMT) on a monthly basis.

The M&E Framework for PRNDP is crafted based on the development framework of the PRNDP and the existing data collection systems of the Province.

Table 39 is the Logical Framework of PRNDP. It describes the hierarchy of objectives of the PRNDP, the key performance indicators of the objectives, the means of verification of the performance indicators, and the major assumption of the PRNDP in terms of achieving its targets and objectives.

12.1.3 Monitoring and Evaluation Framework

Table 39 PRNDP LOGICAL FRAMEWORK

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
<p>Goal</p> <p>Developed sustainable provincial road network by prioritizing and funding road development activities</p>		<p>Poverty Database Monitoring System (PDMS) Sample survey Case study PRMF Web-Information System Use of Secondary Data Monthly Progress Reports Terminal Report</p>	
<p>Purpose</p> <p>To provide a tool that support efforts of the Provincial Government of Bohol to enhance provincial governance system and capacity related to the provision and maintenance of provincial roads</p>	<p>Participatory planning Increased provincial revenue Increased budget for road maintenance Rationalized planning and budgeting Improved financial system Annual increased in kilometers of road maintained</p>	<p>Logic Framework Project site visitation Interviews/FGD Periodic Reports Annual Investment Program Terminal Report</p>	<p>Convergent Planning and Convergent delivery of services of different development sectors is necessary in order to attain and to sustain the goal in the long run.</p>

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
<p>Objectives/Outputs</p> <p><u>Component 1: Road Network Development</u></p> <p>Objectives:</p> <p>1.To directly support the objectives of the Provincial Development and Physical Framework Plan (PDPFP) by developing and maintaining selected roads</p> <p>Output: Identified priority Provincial roads/bridges based on the PDPFP</p> <p>2. To improve public access to infrastructure and services by Strategically developing and maintaining selected priority roads</p> <p>Output: Strategic provincial roads/bridges rehabilitated and maintained</p> <p>3.To develop road investment priorities through stakeholders and community consultation processes;</p> <p>Output: Prioritized roads for rehabilitation ad maintenance</p> <p>4.To develop systematic, repeatable and</p>	<p># of Projects in the PDPFP supported and implemented</p>	<p>Provincial Road Network Development Plan</p> <p>Work and Financial Plan</p> <p>Periodic Work and Financial Accomplishment Reports</p> <p>Accounting Records</p> <p>Budget Records</p> <p>FGD</p> <p>Site Visits</p> <p>Secondary Data</p> <p>Poverty Database and Monitoring System (PDMS)</p>	<p>High dependency on Internal Revenue Allotment (IRA)</p> <p>Poor tax collection system</p> <p>New Provincial Administration may not be as supportive than the previous administration</p> <p>There may not be enough provincial government funds for projects</p> <p>There may be weak support of communities and other private sector stakeholders in maintenance and rehabilitation.</p>

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
<p>transparent selection processes for prioritizing road investment</p> <p>Output: Guidelines and criteria of selection processes 5.To institutionalize road rehabilitation and maintenance as a critical function of the Provincial Government so that the road network is maintained in optimal condition with efficient use of available resources</p> <p>Output: Budget for rehabilitation and maintenance of identified priority roads regularly included in Annual Investment Program (AIP) of the Provincial Government of Bohol</p> <p><u>Component 2: Human Resource Development</u></p> <p>Objective 1: To develop Provincial capacity to sustain and improve the existing road network through investment planning and budgeting, systems improvement, human resource development and community involvement</p> <p>Output : Improved Provincial Capacity</p>			<p>No coordination mechanism after the project life of PRMF</p> <p>Collaborative implementation of a project is not practiced in the PGBh</p> <p>Possibilities for graft and corruption practices</p>
<p><u>Component 3: Monitoring and Evaluation</u></p>			

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
<p>Objective 1: To enable the Provincial Government of Bohol to determine its status and progress against the PRNDP targets, objectives, and goals, and provide actionable information to stakeholder and decision makers</p> <p>Output: Status and progress of the PRNDP</p> <p>Objective 2: To enable the Provincial Government of Bohol to improve the PRNDP activity – making it more effective in delivering what it should deliver</p> <p>Output: Improved rate of accomplishment of PRNDP activities</p>			
<p>Inputs/Activities</p> <p>Component 1: Road Network Development</p> <p>Maintenance of Provincial Roads</p>	<p>14.316 km Jct. (LIR)-Mahayag-Danao Rd maintained</p> <p>-5.605 km Cogtong (Candijay)-Panas-Pangpang-Badiang Rd maintained</p>	<p>Five-Year Provincial Road Network Development Plan – 2010-2015</p> <p>Annual Work and Financial Plan</p> <p>Quarterly Accomplishment Reports</p>	

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
	<ul style="list-style-type: none"> - 17.834 km Dimiao-Oac-Bilar Rd maintained 20.772 km Cabulao-Ondol (Mabini)-Union (Ubay) Rd (Mabini-Ubay) Maintained -18.481 km Antequera-Catigbian via San Isidro Rd maintained -8.002 km Inabanga-Sagbayan via Lapacan-Magtangtang Rd. maintained -10.305 km Jct. (LIR)-Mahayag-Katipunan Road (San Miguel-Alicia) maintained - 4.587 km Calape-Pangangan Road maintained -2.765 km Corella-Balilihan road maintained - 9.665 km alburquerque-Sikatuna Road maintained -10.874 km Jct (TER) Guindulman-Catungawan-Mayuga-Lombog-Lundag Road maintained -4.957 km Pob.-Sa Francisco Road, Talibon maintained -17.443 km San Miguel-Bayongan-Buliis-Mabuhay (Uby) Road maintained - 7.938 km Tajang-Sandingan Road maintained - 5.227 km Carmen-Vallehermoso Road 	<ul style="list-style-type: none"> Financial Records Completion Reports 	

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
	maintained - 5.766 km Guadalupe-Monte Video Road maintained - 10.727 km Pob. (Catigbian)-Ambuan-Sagasa (Balilihan) Road maintained - 4.523 km Pob. (Inabanga)-Lawis Road maintained - 7.05 km Dagohoy-Caluasan Road maintained -8.283 km Catigbian-Clarín via Bogtongbood Road maintained - 3.600 km Rizal (Catigbian)-San Isidro Road maintained - 7.159 km Baclayon-Corella Road maintained - 14.287 km Jct. (TER)-Pob. Valencia-Anoyon-Ojo Road maintained - 2.199 km Tinago-Biking Road maintained - 9.115 km Sikatuna-Balilihan via Badiang Road maintained - 7.976 km Alegria (Catigbian) –Baang-Jagbuaya-Janopol Road maintained - 16.579 km Garcia Hernandez-Tabuan-Datag		

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
	Road maintained TOTAL = 243.035 kms.		
2. Rehabilitation of Provincial Roads and Bridges	<ul style="list-style-type: none"> - 14.316 km Jct. (LIR)-Mahayag-Danao Road rehabilitated - Side ditches & cross drains rehabilitated - 5.605 km Cogtong (Candijay-Panas-Pangpang-Badiang Road rehabilitated - 6.220 km Catigbian-Canmano Road rehabilitated - 17.834 km Dimiao-Oac-Bilar Road rehabilitated - 18.481 km Antequera-Catigbian via San Isidro Road rehabilitated - 8.002 km Inabanga-Sagbayan via Lapacan-Magtangtang Road rehabilitated - 9.150 km Pob-Bonot-Bonot-Tiguman-Overland Road rehabilitated - 5.36 km Pob. (Sagbayan)-Sagbayan Sur-Kabasakan Road rehabilitated - 10.305 km Jct. (LIR)-Mahayag-Ktipunan Road(San Miguel-Alicia) rehabilitated 		

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
	<ul style="list-style-type: none"> - 2.250 km Tinago-Bingag Road rehabilitated - 6.659 km Jct. (TER)-Guindulman-Anda-Badiang Road rehabilitated - 11.463 km Anteuera-Balilihan via Dorol Road rehabilitated - 4.587 km Calape-Pangangan Road rehabilitated - 2.765 km Corella-Balilihan Road rehabilitated - 9.665 km Alburquerque-Sikatuna Road rehabilitated 10.874 km Jct. (TER) Guindulman-Catungawan-Mayuga-Lombog-Lundag Road rehabilitated Total= 143.536 kms. 		
<p>Component 2: Human Resource Development</p> <p>Office/Department: PTO, PAssO, PBMO, PAccO, IAS</p> <p>1. Training on e-NGAS</p>	<p>75 staff incharge of eNGAS of PTO, PAssO, PBMO; auditors of PAccO, IAS (15 pax per training</p>	<p>Five-Year Capacity Development Investment Plan</p> <p>Registration Sheets</p> <p>Post-Training Reports</p>	

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
		Financial Records	
2. Development of linkages of the e-NGAS system to finance offices	Developed and functional e-NGAS linkages		
3. Basic Computer Training (MS Word, Excel, Powerpoint)	75 staff from PTO, PAssO, PBO, PAccO trained (15 pax per year)		
4. Advanced Computer Training (MS Word, Excel, Powerpoint)	75 staff from PTO, PAssO, PBO, PAccO trained (15 pax per year)		
5. Training on Real Property Assessment and Appraisal	division heads and staff from the Assessment and Appraisal division PAssO trained (10 pax each of 5 training conducted)		
6. Orientation on JMC No. 1 series of 2007	Department Heads, AOs, Finance Officers of PGBh offices (114 pax)		
7. Orientation/Workshop on PLPEM	Department Heads, AOs, Finance Officers of PGBh offices (114 pax)		
8. Training on Accounting Rules and Regulation	Auditors of PAccO, IAS (10 pax - 1st yr, 6 pax in 4 training in 4 years)		
9. Training on Financial Analysis and Projection	staff from PAccO, PBMO, PTO (10 pax per year)		
10. Project Monitoring and Evaluation	staff from PBMO, IAS		
11. Communications Skills Training	division heads and staff from Tax xampaign division of PTO (10 pax - 1st yr, 5 pax for the		

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
	succeeding years)		
12. Training on Treasury Laws, Judicial and Civil Remedies and Environmental Laws	division heads and staff from Tax xampaign division of PTO (10 pax - 1st yr, 5 pax for the succeeding years)		
13. Records Management Training	Records Officers of all offices& personnel from the Records Division of PAssO (12 pax - 1st yr, 13 - 2nd yr)		
14. Environmental Impact Assessment Training	Division Heads and staff of the Resource Mgt. Division of BEMO (5 pax per training))		
15. Community Organizing Training	Division heads and staff of BEMO and the Tax campaign division of PTO (5 pax per training)		
16. Basic Internal Auditing	staff from IAS (2 pax per training)		
16. Basic Internal Control Concepts Training	staff from IAS (2 pax per training)		
17. Training on Operations Audit	staff from IAS (2 pax per training)		
18. Training on Risk-Based Audit Approach	staff from IAS (2 pax per training)		
19. Fraud Awareness, Detection and Prevention	staff from IAS (2 pax per training)		
20. Training on Technical Writing	AOs of all offices of PGBh (12 pax - 1st & 2nd yr, 10 pax each for the succeeding years)		
Office/Department: Provincial engineer's Office			

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
21. Skills Training on Geographic Information System (GIS)	PEO GIS Team, PPDO, BEMO, PAssO (15 pax)		
22. Skills Training on AutoCAD and other related software and equipment for road design and cost estimates	PEO, PGSO, PPDO (15 pax)		
23. Skills Training on Monitoring and Evaluation	10 involved offices and PMET (20 pax)		
24. Training on Values Clarification	10 involved offices (20 pax)		
25. Skill Training on Contract Management	PEO, PGSO, and Contractors (25 pax)		
26. Orientation on Road Policies, Laws and rules	Community, Barangay & Municipal Officials, transport operators, and other stakeholders (100 participants per year in 5 years)		
27. Training on change Management with focus on Business Process Improvement	10 involved offices (30 pax)		
28. Skills Training on Project Development and Management	PEO, PMPO, PPDO, BEMO (15 pax for each training)		
Office/Department: Human Resource Management and Development Office 29. Trainors' Training on Organizational Development	TDMT (18 pax)		
30. Training on HR Planning and	Key Personnel from HRMDO (10 pax)		

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
Forecasting			
31. Training on Coaching and Mentoring	Key HRMDO Staff, TDMT and Admin Officers of the 10 involved offices (33 pax)		
32. Development and Establishment of On-Line Reporting System on Accomplishment Reports, Reports on Absences, Undertimes & Tardiness, Etc.	Functional On-Line Reporting System established lodged at HRMDO		
33. Development and establishment of e-Tracking System	Functional e-Tracking System established 10 involved offices		
34. Enhancement of HRIS, On-Line Leave Application, Payroll System, Timekeeping, Databank of Employees' Profile, etc.	Enhanced functional HRIS HRMDO-PMID & Bohol IT		
35. Enhancement of TDMT on Training Cycle (TNA & Delivery	Enhanced TDMT TDMT (18 pax)		
Office/Department: Bids and Awards Committee 36. Re-Orientation Seminar on BAC Policies, Standards, Procedures, etc.	BAC members & secretariat including DH of the 10 involved offices of PRMF (25 pax)		
Component 3: Monitoring and Evaluation			
1. Establishment of a provincial monitoring system	Presence of an established and functional monitoring structure		

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
2. Development of M & E tools and guidelines	M & E tools and guidelines developed and applied		
3. Orientation on Monitoring and Evaluation tools and guidelines	16 PMET and secretariat members; 14 members of the PMT; 11 members of the TWG on PRNDP; 14 members of the TWG on Human Resource Development and Capability Building COMETs oriented on the M & E tools and procedures		
4. Monitoring of Activities	Progress of plan implementation determined; 20 Consolidated Quarterly Monitoring Reports		
5. Mid-Year/Year-End Assessment and Replanning Conference-Workshop	10 Conference-Workshops conducted 10 Assessment Reports Issues and concerns in PRNDP implementation identified and addressed; Set of recommendations or remedial measures; Revised PRNDP Improved Project Performance		
6. Installation of an Infra Development Information System (IDIS)	Installed and operational IDIS		
7. Documentation and Dissemination	Print/Broadcast Media Releases		

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumption
	Documents		
8. Formulation of Terms of Reference	Term of Reference formulated		
9. Organization of a Provincial Network of Development Coordinating Bodies	Institutionalized Provincial Network of Development Coordinating Bodies Manual of Operation	Executive Orders/SP/SB Resolutions	

Table 40 Matrix of PRNDP Five-Year Monitoring and Evaluation Implementation Plan

PROVINCIAL ROAD NETWORK DEVELOPMENT PLAN															
Five-Year Monitoring and Evaluation Plan - 2010-2015															
ACTIVITY	EXPECTED OUTPUTS	RESPONSIBLE	PERIOD OF IMPLEMENTATION												
		OFFICE/UNIT/PERSON	2010		2011		2012		2013		2014		2015		TOTAL
			Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	COST
1. Establishment of a Provincial Monitoring and Evaluation System	Strengthened PMET	PMET/Secretariat	94,560.00	PRMF	34,560.00	PRMF	34,560.00	PRMF	34,560.00	PRMF	34,560.00	PRMF	34,560.00	PRMF	232,800.00
	Organized and functional MLGU MET														
	Organized and functional Community Monitoring & Evaluation Teams (COMETs)	33 sites	org		reg mtg										
2. Development of M&E Tools and Guidelines	M&E tools and guidelines developed and applied	PMET/Secretariat mtg & consultn	16,900.00	PRMF											16,900.00
3. Orientation on M&E Tools and Guidelines	16 PMET and Secretariat members	PMET/Secretariat	50,820.00	PRMF											50,820.00
	14 PMT members														
	11 PRNDP-TWG members														
	14 Cap Dev-TWG														

PROVINCIAL ROAD NETWORK DEVELOPMENT PLAN															
Five-Year Monitoring and Evaluation Plan - 2010-2015															
ACTIVITY	EXPECTED OUTPUTS	RESPONSIBLE	PERIOD OF IMPLEMENTATION												
		OFFICE/UNIT/ PERSON	2010		2011		2012		2013		2014		2015		TOTAL
			Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	Cost	Fund Source	COST
	members														
	COMETs oriented														
4. Monitoring and Evaluation Activities	Progress of Plan Implementation determined	PMET/Secretariat	65,250.00	PRMF	65,250	PRMF	65,250.00	PRMF	65,250.00	PRMF	65,250.00	PRMF	65,250.00	PRMF	326,250.00
	20 consolidated Quarterly Monitoring Reports														
5. Mid-Yr./Yr.-End Assessment and Replanning Conference-Workshop	10 Conference-Workshops conducted	PMET/Secretariat	96,000.00	PRMF	96,000.00	PRMF	96,000.00	PRMF	96,000.00	PRMF	96,000.00	PRMF	96,000.00	PRMF	480,000.00
	55 pax each of 5 wrkshps														
	10 Assessment Reports	ten wrkshps													
	Issues and concerns identified and addressed														
	Revised PNRDP														
	Improved PNRDP performance														
6. Installation of an Infra Dev't Information System (IDIS)	Installed IDIS computer, accessories maintenance	PMET/Secretariat	125,000.00	PRMF	60,000.00	PRMF	60,000.00	PRMF	60,000.00	PRMF	60,000.00	PRMF	60,000.00	PRMF	365,000.00
7. Documentation and Dissemination	Print and broadcast media releases	PMET/Secretariat	xxxx												300,000.00
8. Formulation of M&E Terms of Reference	Formulated TOR	PMET/Secretariat	xxxx												
9. Organization of Provincial Network of Development Coordinating Bodies	Institutionalized Coordinating Bodies - Manual of Operation	PMET/Secretariat	52,500.00	PRMF											52,500.00
	repro of manuals														
		TOTAL	501,030.00		255,810.00		255,810.00		255,810.00		255,810.00		255,810		1,824,270.00

12.2 Data Collection Requirements

Data will be collected through existing data collection and reporting mechanisms. Existing data collection systems include the Poverty Database and Monitoring System (PDMS), Local Government Performance Management System (LGPMS), Agricultural Reports, Reports from Provincial Health Sector and Education Sector, Business Registry, Land Assessment, Reports on Road Condition Survey among others.

For data that are not covered under existing data collection systems or when the frequency of data does not fall in time when data are needed, the Province will either (i) expand a data collection mechanism related to the data needed, or (ii) engage a service provider/s to devise a data collection tool and under the data collection.

The M&E Plan specifies the data collection method to be used for a given performance indicator.

12.3 Completion Reports

Data Management

The M&E Group will coordinate in managing PRNDP related-data – ensuring the security, availability, and accessibility of digital and hard data and reports when it is needed.

Data and reports will be stored at designated place that provides security but easy access to its intended users – including the M&E Group. If possible, the M&E Group are furnished with a copy of reports or excerpts/summary of the report of PRNDP-concern. This is for the analysis of overall accomplishment, progress, and results of the PRNDP, and preparation of the periodic report required from the M&E Group.

Reports and Feedback Mechanism

The M&E Group shall prepare reports and other materials (e.g., presentation materials) to report what is required in their Terms of Reference. All concerned data custodians shall be informed of the due dates of PRNDP periodic reports and shall timely provide the necessary data to the M&E Group.

Status of the PRNDP reported to the Provincial Governor, PDC, and SP every PDC meeting.

12.4 Evaluation Process

The PRNDP planning process shall be evaluated on an annual basis. The M&E Group shall spearhead and facilitate the evaluation process – enabling the PRNDP Team to improve PRNDP planning process.

Amongst the key questions that are to be answered in the activity include:

- Methodology. Has the process been able to provide the appropriate venue and opportunity for the stakeholders to participate/contribute and PRNDP Team to prepare the PRNDP effectively? How can this be further improved?

- Implementation. Has the PPAs in the PNRDP been implemented as per plan and in a timely manner? What are the facilitating and/or hindering factors?

- Targeting and progress towards objectives. Are the accomplishments and results brought about by the PPAs in the PRNDP contributing to the overall goal and objective of the PRNDP and of the PDPFP? Has the criteria and relative weights been effective in identifying the core road network and priority road sections for funding? How can achievement of results be further improved?