

THREATS AND OPPORTUNITIES IN SELECTED BARANGAYS AT THE MUNICIPALITY OF CORON, PALAWAN PROVINCE, PHILIPPINES

Marissa S. Pontillas^a, John Francisco A. Pontillas^b

^aCollege of Teacher Education Faculty and, Center for Strategic Policy & Governance Research Associate, Palawan State University, Puerto Princesa City, Palawan, Philippines

^bChief, Environmentally Critical Areas Network-Policy Research Division (ECAN-PRD) Palawan Council for Sustainable Development Staff, Puerto Princesa City, Palawan, Philippines

marissa_pontillas@yahoo.com

ABSTRACT

The Municipality of Coron in northern Palawan is one of the five municipalities where the Malampaya Natural Gas Project (MNGP) pipeline passes through from El Nido, Palawan to Batangas City. Seven barangays in the municipality were chosen by Malampaya Foundation Inc. (MFI) as the focus of its social development (SD) projects in the immediate future. These are barangays I and VI in the "poblacion" and the far-flung barangays of Marcilla, Bulalacao, Banuang Daan, Cabugao, and Malawig. As commissioned by MFI, the Palawan State University's Center for Strategic Policy and Governance undertook an integrated threats analysis to identify critical needs and propose a package of high impact projects. It uses a rapid rural appraisal (RRA) approach and relies on primary data gathered through field reconnaissance, household interviews, key informant interviews, and focus group discussions. Fieldwork was on 21-28 February 2013 while the validation of results with stakeholders was held on 27 May 2013. The top problems and threats in all seven barangays pertain to limited employment opportunities, inadequate educational infrastructure, poor access to potable water, and food insecurity. Other identified problems include inflation, unemployment, natural disasters (including climate change impacts), juvenile delinquency, and garbage and waste management. While tourism has improved the municipality's economy in recent years, it also contributed threats and problems that may adversely affect the environment and lives of the residents. Investments in public services must therefore be provided to upgrade delivery of the needed basic services and facilitate movement of people and products to the town center. The barangays have bio-physical, economic and livelihood, and institutional/governance capital that can be tapped to support these investments. The bigger challenge is how to influence the local government sector and the political leaders to have a stronger commitment and participation in providing solutions.

Keywords: Problem tree analysis, community threats and opportunities

1 INTRODUCTION

1.1 Profile of Study Area

The municipality of Coron belongs to the Calamianes group of islands located in the northern tip of the province of Palawan. It is about 140 nautical miles (nmi) from Manila and around 212 nmi from Puerto Princesa City, the capital city of Palawan (Figure 1). It lies within the coordinates 11° to 11° 36' north latitude and 120° to 120° 7' east longitude. The

municipality has 63 islands and islets but only 12 of these are inhabited. It has a population of 40,007 individuals (NSO 2007) scattered across 23 barangays, covering a total area of 72,387 ha. Six barangays are found within the poblacion area, five are island barangays, and the rest are in the rural areas within Busuanga Island. (Coron CLUP 2010-2020).



Figure 1: Location of the municipality of Coron in the province of Palawan

The municipality of Coron has very high potential for eco-tourism, making it a prime and bustling tourist destination in the province. Coron is gifted with abundant natural and marine resources. It is well-known for its limestone mountains, seven lakes all found in Coron Island, shipwreck dive sites, coral reefs inhabited by marine life, and white sand beaches.

Coron is one of the five municipalities in Palawan where the Malampaya Natural Gas Project (MNGP) pipeline passes through going to Tabangao, Batangas. Hence, it is one of the impact areas of the MNGP wherein the Malampaya Foundation, Inc. (MFI) implements its social development (SD) projects. By virtue of their proximity to the MNGP pipeline, seven barangays in the municipality were chosen by MFI as the focus of its SD projects in the immediate future, namely: Barangays I, VI, Malawig, Marcilla, Bulalacao, Banuang Daan, and Cabugao. These selected barangays can be broadly dichotomized into two distinct groups: the "poblacion" barangays of Barangay I and Barangay VI; and the far-flung barangays of Malawig, Marcilla, Banuang Daan, Cabugao, and Bulalacao. These outskirt barangays are hosts to Tagbanua communities with Malawig, Banuang Daan, and Cabugao having dominant population of these indigenous peoples.

In order to guide the MFI on what SD projects would be most relevant and needed by these selected barangays, the Palawan State University, through its Center for Strategic Policy and Governance, was commissioned to undertake an integrated threats analysis.

1.2 Rationale for threats analysis

An integrated threats analysis is a comprehensive investigation and analysis of various existing and projected problems confronting a locality. It is thus one way of analyzing the complex problems and issues within the area. It is also one priority-setting mechanism that can aid planners and decision makers such as the MFI in: (1) identifying the type of project intervention to be introduced and (2) allocating resources to invest in a priority area.

1.3 Objectives of threats analysis

The general objective for the threats analysis is to recommend new potential high impact and cost effective programs and projects that will contribute to sustainable development of the target localities, at both the barangay and the municipal levels. These programs are to be recommended to the MFI and other concerned stakeholders. They are also geared toward satisfying the development needs and gaps of the target localities and fishing families. The specific objectives are to: 1) identify the threats/problems in the target coastal communities; 2) analyze threats relationships (problems/opportunities); and 3) prepare a generic list of projects.

2 THEORETICAL CONTEXT

2.1 Definitions

In the context of biodiversity, a 'threat' is defined as a cause of species decline (IUCN 2006). The target of the threat is any one of a species (organism), an area (habitat or ecosystem), or a macro-level area (MPA, corridor, eco-region). 'Threat' per se is also usually defined as a status, condition, or level of threat or conservation.

For this study, however, the operational definition of the term threat will be the historical, potential, or existing danger, stress or pressure to a target in the environment (Ona et al. 2007). The target is any of the local coastal area (barangay or municipality) that is included in the study area. The following definitions are relevant to this study. Although the terms pertain to 'biodiversity' as the general target of threat, they can be generalized to the 'sustainable development' of the locality (Salafsky et al. 2008):

1. **Direct threats:** The proximate human activities or processes that have caused, are causing, or may cause the destruction, degradation, and/or impairment of biodiversity
2. **Contributing factors:** The ultimate factors (social, economic, political, institutional, or cultural) that enable or otherwise add to the occurrence or persistence of proximate direct threats.
3. In a situation analysis, **contributing factors** or **underlying causes** are subdivided into **indirect threats** (factors with a negative effect) and **opportunities** (factors with a positive effect).
4. **Sustainable development actions:** Interventions undertaken by project staff or partners designed to reach the project's objectives and ultimate sustainable development goals.

2.2 Conceptual Frameworks: Causal Chain of Threats

The general framework used to ascertain the threats to local sustainable development is the 'causal chain' or cause-and-effect analysis. The figure below describes the normative causation of threat from an environmental problem to that problem's ultimate cause. It also shows that the threat usually propagates from the domain of the environment to social, economic, and political arenas.

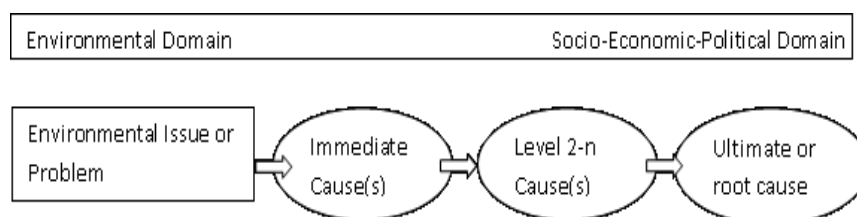


Figure 3: Conceptual framework of the causal chain analysis of threats (Regional Scientific & Technical Committee for the UNEP/GEF 2002)

2.3 Proposed Framework for Integrated Threats (+ Solutions) Analysis

This study proposes the following framework (Figure 4) for the integrated threats (plus solutions) analysis in Coron, wherein 'conservation actions' are generalized as 'sustainable development actions' to highlight not only the role of conservation but also of economic development in providing concrete solutions to addressing problems and threats. Moreover, the biodiversity target is generalized to the entire target locality of MFI.

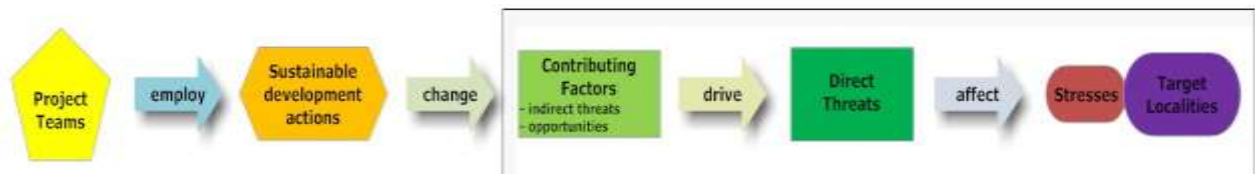


Figure 4: A proposed general model of a sustainable development project (Salafsky et. al. 2008, modified)

The determination of solutions and strategies or new projects to break the causal (hierarchical) chain of threats requires a situational analysis of threats. Situational analysis is another term for integrated threats analysis. The algorithm for the integrated threats analysis is adapted from Open Standards for the Practice of Conservation, Version 2.0 (Conservation Measures Partnerships 2007). The framework entails the following assumptions:

1. The needs and priorities of the community are the combination of threats and opportunities existing in that community.
2. Threats are the same as the problems of and (negative) issues in the community.
3. The desired new projects are sustainable social development (SD) actions and solutions. To be sustainable, these recommended projects are expected to be: (1) high impact, (2) cost-effective, (3) ecologically viable, as per the Strategic Environmental Plan for Palawan Act (SEP Law), (4) socially acceptable, and (5) holistic.
4. Identifying needs/priorities will lead to the identification of new projects.
5. The threats/problems/issues and the opportunities will yield solutions to the former.

3 RESEARCH METHODS

In assessing the threats/problems and opportunities present in the selected seven barangays of Coron, the researchers utilized the rapid rural appraisal (RRA). This consists of four interactive steps: secondary data analysis, reconnaissance survey, field data gathering, and stakeholder/community validation. Permission to conduct the RRA was sought from concerned local government officials at the municipal and barangay levels.

3.1 Secondary Data

The researchers secured secondary data as background information and inputs in the threats analysis. These include Comprehensive Land Use Plans (CLUPs); Community Development Programs (CDPs); Strategic Environment Management Plan (SEMP); and National Statistics Coordination Board (NSCB) statistics for barangay population records.

3.2 Primary Data Gathering Methods

Reconnaissance was conducted to identify the physical characteristics of the study barangays as well as the possible threats and opportunities on the ground. Photographs were taken to document bio-physical conditions that may present actual or potential threats/opportunities.

Household surveys or face-to-face structured interviews were conducted to 152 randomly

selected household respondents in the study site. The questionnaire was a combination of close-ended and open-ended questions, seeking information on: (1) respondent's profile and household roster; (2) household socio-economic characteristics; (3) resource/habitat conditions (4) current community concerns and issues; and (5) perceptions, plans and aspirations.

Identified key informants included 24 formal/informal leaders coming from barangay councils, churches, education sector, fisher/farmer groups, business sector and long-time residents.. Using a semi-structured questionnaire, key informants were interviewed and asked to enumerate the threats and opportunities that occurred in the barangay within the last 3 years or may occur in the next 3 years, including development concerns that were wholly or inadequately addressed.

FGDs with similar set of community leaders were conducted for each of the seven barangays. Problem Tree analysis was used in the FGD. The objectives of this FGD are: (1) to analyze the cause-and-effect relationships of critical threats and problems; (2) to deepen the understanding of the community on the problems confronting their area and how these impact on their socio-economic well-being; and (3) to suggest proposed solutions and actions to respond to the critical problems and issues identified by the community. The facilitator solicited core or major problems/issues/threats that the participants have identified in their community. The participants were assisted in analyzing their community's core problems by determining its causes and effects, and their inter-relationships, if any. After these are schematically diagrammed, the participants are asked to generate the strengths or opportunities present in their community and how these can help solve their community's problems. The facilitator also helps the participants determine which are the most appropriate and feasible solutions.

3.3 Research Instruments

The research instruments used were 13-page household interview (HHI); 5-page key informant interview (KII) to determine the threats and opportunities; 9-page guide questions - FGD for threats and opportunities; and 6-page guide questions for the Field Observation. The instruments were pre-tested and improved prior to data gathering. Enumerators and facilitators were trained for quality assurance and ensure professionalism during the field work.

3.4 Validation of Research Results

The fieldworks and interviews were conducted in the seven barangays in the Municipality of Coron on 21-28 February 2013 while the validation workshop was conducted on 27 May 2013. Barangay officials and selected respondents were invited to a workshop during which the findings of the study were discussed and feedbacks were sought as to the accuracy and completeness of the data.

4 RESULTS AND DISCUSSION

4.1 Community Level Concerns and Issues Gathered from FGDs, KIIs, and HHIs

From the household perspective, at least 38% of households in the study area consider the following as the top household concerns and issues (Table 2), in rank order: (1) inflation or increase in prices of commodities; (2) access to/supply of electricity; (3) unemployment; (4) limited employment opportunities; (5) limited educational opportunities; (6) lack of roads/transportation problems; (7) lack/poor access to potable drinking water; (8) natural disasters (including climate change impacts); (9) poor access to health care; and (10) juvenile delinquency. Those who identified a concern or issue as present in the barangay were further asked about the "seriousness" of its impact. Accordingly, only inflation and

access to or supply of electricity were rated as very serious while the other concerns are considered as somewhat serious.

Table 1: Ranked current community-level concerns and issues selected coastal barangays of the Municipality of Coron, Province of Palawan, February 2013

Community concerns and issues	Percentage of HHI respondents reporting (n = 152)	Seriousness rank*	Barangays affected (based on KII and FGD)**							Total
			Bgy1	Bgy6	Mar	Mal	Cab	BnD	Bul	
1. Inflation	84.2	1/VS	X	X						2
2. Access to or supply of electricity	81.6	2/VS	X	X			X	X	X	5
3. Unemployment	69.1	8/SS								
4. Lack/limited employment (livelihood) opportunities	67.1	5/SS	X	X	X	X	X	X	X	7
5. Limited educational opportunities (lack of education-related infrastructure)	62.5	6/SS	X	X	X	X	X	X	X	7
6. Lack of roads/ transportation problems	60.5	3/SS		X	X	X	X		X	5
7. Lack/poor access to potable drinking water	57.2	9/SS	X	X	X	X	X	X	X	7
8. Natural disasters (including climate change impacts)	40.1									
9. Poor access to health care	38.8				X	X	X	X	X	5
10. Juvenile delinquency	38.2	10/SS								
11. Food security	32.2			X	X	X	X	X	X	6
12. Garbage and waste management	30.9	7/SS	X							
13. Residents' undesirable behaviour, attitudes, and values	27.0									
14. Peace and order situation	23									
15. Illegal drugs	22.4	4/SS								
16. Residents' lack of cooperation & sense of community	20.4	12/SS						X		
OTHERS (Based on FGDs)										
1. Declining fish catch			X		X	X	X	X	X	6
2. Food security especially during <i>amihan</i>				X	X	X	X	X	X	6
3. Low agriculture productivity				X	X	X	X	X	X	6
4. Illegal fishing					X	X		X		3
5. Lack of community infrastructure and equipment (i.e. Barangay Hall, etc)			X		X					2

*Seriousness of problem is ranked based on the mean of the scores given, rank "1" being the highest or most serious. The possible scores are: 1 = not serious; 2 = somewhat serious; 3 = very serious. Only concerns/issues with a mean of 2 (somewhat serious) and above are indicated.****Bgy1**=Barangay 1; **Bgy6**= Barangay 6; **BnD**=Banuang Daan; **Bul**=Bulalacao; **Cab**=Cabugao; **Mal**=Malawig; **Mar** =Marcilla;

It is important to note that although these top problems and threats were identified by the households to be present in varying degrees in the seven barangays, the presence of each is not always recognized in the FGDs and KIIs. FGD and KII data show that only lack/limited employment (livelihood) opportunities, limited educational opportunities, lack of

education-related infrastructure, and lack/poor access to potable drinking water are common concerns for all the seven barangays. On the other hand, food security (especially during *amihan*) and declining fish catch were reported in six barangays, while access to or supply of electricity, lack of roads/transportation problems, poor access to health care were reported in five barangays. Overall, however, there is general commonality of identified problems and threats both at the level of households and communities or barangays.

4.2 Analysis of threats and their interrelationships

4.2.1 Key common problems and threats

The processed Problem Tree output is presented in Figure 5. All key common problems can be characterized into three categories: (1) poor delivery and access to basic public services (in terms of education, health, water, electricity, and market/growth center (except for Barangays I and VI)); (2) lack/limited employment and business opportunities; and (3) food insecurity. All of these can be traced to limited technical and infrastructure support from local and national governments, funding institutions, and the business sector. These, on the other hand, lead to a decrease in production/loss in productivity, low disposable income, few business opportunities, and ultimately a low quality of life.

The lack of/limited/poor provision of basic services in the barangays, especially those far from the municipal center, renders the barangays and populace poorly capacitated as individuals and as a community. This hampers the healthy functioning of households and the communities resulting to underdevelopment. Meanwhile, high dependence of livelihood on land and sea resources which have been compromised contributes to lack/limited employment opportunities. The decreasing fishery production, already being constrained by climate seasonality, makes diversification in the industry difficult. This is due to and leads further to overfishing of traditional fishing grounds, destruction of coral reefs from the use of sodium cyanide in the live reef fish industry and dynamite fishing, use of efficient fishing gears, and encroachment of commercial fishers and fishers from other barangays. The agriculture sector, meanwhile, suffers from limited water supply, high cost of production (especially noted in Barangay VI), and lack of technical know-how thus, resulting to low production. In turn, the low productivity of fishery and agriculture sectors leads to food insecurity in the communities.

A review of the HHI results validates the problems and issues that were aired during the FGDs. For an ecotourism haven, the households perceived their bio-diverse resources to be in "neither good nor bad" or at most in "good" conditions, which somehow are a signal to their deterioration.

Majority (53.4%) of the households, particularly those outside the poblacion, do not have access to community water system for drinking and are dependent on wells, natural springs, and bottled commercial water. Some 72.37% have to haul their drinking water from the source, buy from water vendors, or a combination of the two. This problem of safe drinking water is caused by open source wells, inefficient water system, far distance of the potential source, and threat caused by deforestation of the watershed. In turn, this leads to high cost of clean drinking water and susceptibility to water-borne diseases.

4.3 The Concerns of the Indigenous Peoples of Coron Island

The right to self-determination was accorded to the Tagbanua communities of Coron Island by virtue of the Indigenous People's Rights Act of 1997. The law paved the way for the Tagbanua community to manage their own affairs as a cohesive group according to their cultural beliefs and practices. The advent of tourism in the Municipality of Coron afforded the IP communities opportunities to capitalize on the natural assets within their ancestral domain. Particularly, they generate income by collecting entrance fees from tourists who want to visit Kayangan Lake, Barracuda Lake, lagoons, and numerous white sand beaches at Coron Island. This newfound freedom and livelihood, however, resulted to socio-political conflicts. The conflicts involve: (1) the Municipal Government of Coron which the IP communities view to have no jurisdiction over their ancestral domain but from whom they expect public services; (2) greater IP members of Tagbanua Tribe of Coron Island Association (TTCIA) and some families of the Tagbanua communities who apportioned to themselves a number of beaches within the Coron Island as their own and refuse to give share to their IP organization and even to their host barangay; and (3) TTCIA and the barangay council of Banuang Daan.

Other specific concerns of the IP communities in Coron Island include the chipping of limestone rocks as sinker for hook and line used in live fish capture, the decrease in quantity of bird's nest collected due to noise pollution, displacement in the wildlife habitat of monkeys resulting to destruction of the agricultural crops of the residents, soil erosion, lack of training for the Tagbanua watchmen in Kayangan Lake, poor sanitation, and malnutrition. Sand quarrying for hollow blocks making was also reported in Barangay Malawig.

4.3.1 Tourism and Its Threats

The development of tourism in the Municipality of Coron spurs economic activities for the municipality. However, tourism development also brings with it environmental and social problems and threats. Recognized concerns during the FGDs and KIIs especially in the centrally located Barangays I and VI include the carrying capacity of the tourist spots, the use of illegal drugs, prostitution, increase in incidence of petty theft, and the need for hospitality management trainings among those involved in the industry.

4.3.2 Potentials and opportunities

The seven subject barangays have potentials and opportunities, however limited, which can be tapped to mitigate the identified problems and threats. These can be grouped into bio-physical potentials, economic and livelihood potentials, and institutional and governance potentials. The bio-physical potentials existing in most of the barangays, excluding Barangay I, are the non-timber forest products (NTFPs) which can be utilized for handicraft making as livelihood. Natural endowments such as mountains, fresh and saltwater lakes, marine protected areas, beaches, and mangroves were identified in all barangays except Barangay VI. Potential water sources for domestic uses were identified in Barangay VI, Banuang Daan, Cabugao and Marcilla. Finally, potential clean energy sources such as wind and solar were identified in the island barangays of Banuang Daan, Bulalacao, and Cabugao.

In terms of institutional and governance potential, there exists a non-governmental/micro-finance organization in Barangay VI that lends start-up capital for small businesses. A pearl farm and a recently opened boutique resort in Bulalacao may provide employment opportunities and become a market for tourism goods and services. Lastly, Barangay Marcilla has active community organizations and associations that can be mobilized for seaweed product marketing. At the municipal level, the LGU has a Rural Agricultural Center and Food Terminal manned by dedicated staff of the provincial government. The center provides training and support to farmers and fishers by tapping and linking with other government and non-government entities.

4.3.3 Sustainable social development actions

The specific recommended sustainable development actions are enumerated in Table 2. These solutions address the identified core and secondary problems for each of the barangay as borne by the results of the FGD problem tree analysis, KIIs, and HHIs.

Table 2: Recommended solutions to significant problems in selected coastal barangays of the Municipality of Coron, Province of Palawan, 2013

Recommended sustainable development actions	
Barangay I	
<ul style="list-style-type: none"> • Provide residents with training and technical marketing support on tourist-related livelihoods such as: Massage, Tour guiding, Soap making, souvenir bags (materials are to be sourced out) • Equip residents with self-employment skills such as Cosmetology, Hair cutting, carpentry, and furniture making • LGU to facilitate sale of MRF by-products 	<ul style="list-style-type: none"> • Involve the stakeholders for elementary school rehabilitation and support • Barangay council to proactively take actions to protect watershed and plant appropriate trees • NAPOCOR to provide additional generating unit for /BISELCO to have greater capacity
Barangay VI	
<ul style="list-style-type: none"> • Improve farm productivity through technical assistance from DA, particularly on high value crops and in organic farming • Embark on home stay program for tourists (to be initiated by the barangay) • Skills training in cosmetology & massage, Soap-making, dressmaking as livelihoods for women • Virgin Coconut Oil processing and marketing • Electricity provider should have additional power plant to meet demand for electricity 	<ul style="list-style-type: none"> • Seek help from other institutions on marketing of products • Seek capital support from NGOs • Plant lettuce and other vegetables that can be supplied to restaurants and resorts • More cooperation from residents • Seek concrete actions from LGU to actualize their 5-yr commitment to support the school with DepEd
Barangay Marcilla	
<ul style="list-style-type: none"> • Technical training for aquaculture (milkfish, sea cucumber etc) • Technical training/support on coconuts product processing, vegetable farming, poultry/piggery • Marketing assistance for seaweed products • Fund raising for school facilities improvement • Marketing of seaweeds and farm products • Strictly implement by-laws as to households' payment of water consumed • Reforestation of the watershed 	<ul style="list-style-type: none"> • Skills Training on utilizing NTFP and handicraft making (bamboo, rattan, etc) • Develop beaches and coral reef areas as tourism sites under a Community Based Ecotourism program • Deploy more teachers in the school • Follow-up on requests from the municipal LGU and KALAHI-CIDSS fund for filtration system and potable water • establish an irrigation system to support crop production
Barangay Malawig	
<ul style="list-style-type: none"> • Training/technical/marketing support/seed capital on alternative livelihoods such as banig weaving, handicraft making, seaweed farming, fish culture, cashew nut processing, vegetable farming, piggery/poultry • Construct road linking Barangays Buenavista and Malawig • establish an irrigation system to support crop production • Marketing marine/agricultural products 	<ul style="list-style-type: none"> • Technical know-how and support on upland farming • Rehabilitate communal water system (change pipes and tank with bigger ones) • Establish secondary school in a location accessible to the barangay • Request for a fully-equipped rural health unit facility • Increase the frequency of visit of the midwife to the Barangay
Barangay Banuang Daan	
<ul style="list-style-type: none"> • skills training and marketing strategies for Cashew processing, coconut product processing, Mat weaving & basket making (from buho, pandan, and kawayan), bamboo furniture making • skills training on Tour guiding for ecotourism • technological know-how and support on backyard poultry • Employ additional elementary teachers • Establish a secondary school in Coron Island 	<ul style="list-style-type: none"> • LGU to provide additional pipes and construct water storage tanks at the four sources of water in the Barangay. • Replace defective batteries used for solar power • Explore use of windmill as source of energy • Request for a fully-equipped rural health unit facility • Increase the frequency of visit of the midwife

Recommended sustainable development actions	
<ul style="list-style-type: none"> • Additional funds for potable water supply 	to the Barangay
Barangay Cabugao	
<ul style="list-style-type: none"> • Establish MPAs as fish sanctuaries • Ban sodium nitrate in Palawan to prevent illegal fishing • Engage in alternative livelihood such as mat weaving of book/ laptop/ipad covers, handicraft making, furniture making etc • Strict law enforcement • Technical assistance on management of the ancestral domain as a protected area • There should be an elder assigned to bring the children to school to ensure that children make it to school • Solicit college scholarships from foundations for those who get to finish High School 	<ul style="list-style-type: none"> • Seek technical assistance from institutions like PSU on marketing of products • Regulate the use of mangroves so that it can serve as area for mariculture • Coordinate with other institutions such as DA, BFAR, PSU to provide livelihood trainings on seaweed farming, aquaculture, mariculture (seaweeds, balatan crabs, oysters, shrimps), cashew processing, etc • Negotiate and communicate with IP communities from other Barangays to maintain a free boarding house for high school students from their Barangays in Coron mainland • Provide skills trainings for OSYs
Barangay Bulalacao	
<ul style="list-style-type: none"> • Training/technical/marketing support to alternative livelihood such as mat weaving, handicraft making, etc • Seek the permission of the IP leaders regarding the construction of the high school on a lot which is part of CADT • Negotiate with all stakeholders to establish a high school in the barangay • Seek scholarships for college (especially for IPs) • Request for a fully-equipped rural health unit facility • Increase the frequency of visit of the midwife to the Barangay 	<ul style="list-style-type: none"> • Coordinate with other institutions such as DA, BFAR, PSU to provide livelihood trainings on seaweed farming, aquaculture, cashew processing, tour guiding, etc • Find a way to tap the water source in Kanipo • Barangay should build a communal water tank to impound rain water/store water hauled from Kanipo • Explore the possibility of using wind turbines to supply electricity to the Barangay

Solutions to the identified problems and threats in the seven target barangays would require a comprehensive development plan that takes into consideration the development trajectory of the whole municipality of Coron. While addressing the basic needs of the barangays, it is important for the Municipality to utilize its strategic position in the Calamianes Group of Island and the West Philippine Sea which is a hub for oil and gas development. The municipality should take advantage of its being the business center in the Calamianes area and its proximity to the West Philippine Sea. This can be done through developing a business/industrial park under public-private partnerships, which will also attract related businesses and may be linked with the municipality's tourism industry.

REFERENCES

- National Statistics Office. (2007) The 2007 census of population and housing–Palawan. [Online]. Available: <http://www.census.gov.ph/old/data/census2007/index.html>.
- Ona, REA, Fuentes, RT, Regoniel, PA, Alfonso, OT, Pontillas, JFA, Pido, MD, Regalo, AV & Salva, TL (2007), *An Analysis of Threats to Biodiversity in the Balabac Strait Corridor*. Palawan State University-Center for Strategic Policy and Governance, Inc. Puerto Princesa City, Palawan, Philippines.
- Salafsky, N, Salzer, D, Stattersfield, AJ, Hilton-Taylor, C, Neugarten, R, Butchart, SHM, Collen, B, Cox, N, Master, LL, O'Connor, S & Wilkie, D (2008), 'A standard lexicon for biodiversity conservation: unified classifications of threats and actions', *Conservation Biology*, vol. 22, pp. 897–911. doi: 10.1111/j.1523-1739.2008.00937.x [Online]. Available:

http://www.iucnredlist.org/documents/Salafsky_et_al._2008_Unified_Classifications_of_Threats_and_Actions.pdf