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INITIATIVE**

ON CORAL REEFS, FISHERIES AND FOOD SECURITY
PHILIPPINES

STRENGTHENING COMMUNITY-BASED MANGROVE MANAGEMENT THROUGH INCOME DIVERSIFICATION SCHEMES



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Cover photo: This mangrove forest is part of a Marine Protected Area in Balibago, Verde Island Passage in the Philippines. Photo: © CTSP / Tory Read



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Strengthening Community-Based Mangrove Management through Income Diversification Schemes

Calatagan Mangrove Nursery

Barangay Balibago, Calatagan, Philippines

March 2011

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Strengthening Community-Based Mangrove Management through Income Diversification Schemes

Component of the Coral Triangle Support Partnership
Conservation International-Philippines

SUMMARY

Income Diversification is a project component initiated by Conservation International Philippines through the Coral Triangle Support Partnership (CTSP) aimed to address the twin issues of environmental degradation and poverty. The project is for pilot-testing in Barangay Balibago in Calatagan, Batangas. During the development of a business plan conducted together with the local government unit of Calatagan and the CALMADA, it was identified that establishment of schemes on community-based ecotourism, i.e. homestay and marketing of the mangrove nursery and its subsequent livelihood outcomes, was needed for the development of mangrove areas in Balibago.

INTRODUCTION

Balibago is part of the Municipality of Calatagan, Batangas with a total land area of 423.27 hectares, a total population of 3,350, and a mangrove area of 16.22 hectares. The village is the first barangay of Calatagan. Its name was taken from the native term “bakhaw na Balibago” which refers to flowering plants from the family Malvaceae (*Hibiscus tiliaceus* or *Thespesia populnea*). In 1960, Balibago, had a total of 60 hectares of Mangrove Forest. To date, it only has around 17 hectares. In 2009, SAMMACA (Samahan ng Maliliit na Mangingisda ng Calatagan), a peoples’ organization, started to have a mangrove reforestation along the shoreline of the village. In the same year, the Local Government Unit of Calatagan together with another peoples’ organization, CALMADA (Calatagan Mangrove Development Alliance), youth organization called YES (Youth Environmental Society), and Conservation International Philippines, started the rehabilitation of 3 hectares of mangrove area and 1,000 square meters of mangrove nursery. According to a research of Dr. Domingo Bravo, Balibago has “19 hectares of fringing mangroves situated within 120° 37' 6.6" longitude and 13° 55' 27.66" latitude” with *Rhizophora stylosa* as the dominant species. Mangrove associates include *Acacia farnesiana*, *Thespesia populnea*, *Morinda citrifolia*, *Pongamia pinnata*, *Cerbera manghas*, *Sesuvium portulacastrum*, *Hibiscus tiliaceus*, *Ipomea pescaprae* and *Terminalia catappa*.

Mangrove. Mangroves are assemblage of tropical trees and shrubs that inhabit the coastal intertidal zone extending inland along rivers, streams and their tributaries where the water is generally brackish. A mangrove community is composed of and dominated by trees as the primary producers whose special adaptations allow them to survive the variable flooding and salinity stress condition imposed by the coastal environment (Brown and Fisher, 1918; Hoff et.al 2002).

The Philippine mangrove flora consists of 47 “true mangroves” and associated species belonging to 26 families (Melana and Gonzales, 1996). True mangroves grow in the mangrove environment; associated species may grow on other habitat types such as the beach forest and lowland areas.

Mangrove Functions. The mangrove fauna is made up of shore birds, some species of mammals (monkeys, rats, etc.), reptiles, mollusks, crustaceans, polychaetes, fishes and insects. Primary ecological functions of the mangrove ecosystem include: 1) provision of nursery and spawning grounds for fish, crustaceans (e.g. prawns, crabs) and support fisheries production in coastal waters; 2) produce leaf litter and detrital matter which are valuable sources of food for animals in estuaries and coastal waters; 3) protect the environment by protecting coastal areas and coastal dwellers from storm surges, waves, tidal currents and typhoons; 4) produce organic biomass (carbon) and reduce pollution in near shore areas by trapping or absorption; 5) serve as recreational grounds for bird watching and observation of other

wildlife; and 6) buffer from solar UV-B radiation, cyclones, tsunamis, floods, sedimentation and soil erosion (Melana et al; Kathirezan and Bingham 2001).

Mangroves are also good sources of wood and nipa shingles for housing materials, firewood, and charcoal, poles for fish cages and traps, and raw materials for tannin, alcohol, and medicine. Mangrove seeds and propagules can be harvested and sold to organizations or other private groups for reforestation. Aquaculture and commercial fisheries also depend on mangroves for juvenile and mature fish species.

Dixon (1989) estimates the values of a complete mangrove ecosystem to be in the range of US\$500 to US\$1,550 per hectare per year, the minimum valuation of loss when mangroves are converted to other land uses. White and Cruz-Trinidad (1998) use US\$600 per hectare per year as the acceptable economic equivalent to indicate what is lost if mangroves are converted to other uses. According to the Asian Development Bank, the total estimated annual value of production from a 1-hectare holding is estimated at about Php24,950 yr⁻¹ for plantations (beginning the 12th year) with Php11,500.00 mangrove wood products and Php13,450.00 in forestation (ADB Report, 1990). Threats to mangrove ecosystems include natural phenomena such as pests and diseases, outbreaks, typhoons, sea level rise due to global warming. Other factors also include anthropogenic activities such as conversion of mangroves into fishponds and salt beds; reclamation of mangroves for various developments; pollution, siltation, and overexploitation/utilization.

From the estimated 450,000 hectares of mangroves in 1918 (Brown and Fisher, 1918), DENR 1995 Statistics estimates the mangrove forests to have been significantly reduced to about 117,700 hectares. The principal cause behind the depletion of Philippine mangrove forests was attributed to the conversion into brackish water ponds (Zamora, 1988).

Calatagan Mangroves. Rapid assessment of mangrove areas in Calatagan, Batangas (Bravo and Bungabong 2006 unpublished data) covers an area of approximately two hundred sixty eight (268) hectares. The types of mangrove forest are classified as riverine, fringing and overwashed. There are over twenty five (25) mangroves and eleven (11) associated species belonging to nineteen (19) families, most common and dominant of which are the *Rhizophora spp.*, *Avicennia spp.* and *Sonneratia spp.* Aside from shoreline protection, these mangrove forests are critical to the region climate change resilience as they serve as critical habitat and spawning grounds for marine organisms, endemic and migratory species, as well as a major source of crustaceans and shellfishes to coastal communities.

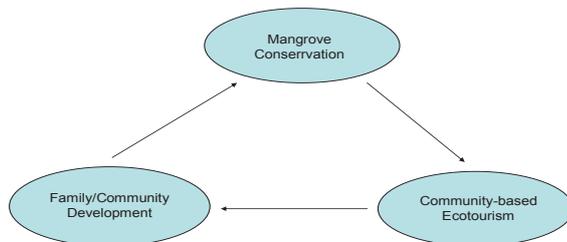
Rationale. The critical habitats and marine biodiversity in Calatagan and the rest of the Verde Island passage (VIP) are subject to overfishing, destructive practices and chronic stressors (i.e. siltation from coastal development). These impacts which work in synergy with the effects of climate change threaten the coastal marine habitats of this region. Coastal resiliency to climate change impacts is low and needs to be addressed soon through a number of adaptation strategies like mangrove rehabilitation, protection and management. Diversifying income of stakeholders is essential in alleviating these stressors, thus this workshop.

WORKSHOP PROCESS/METHODOLOGY

Workshop Methods. The conduct of the workshop proceeded with a review on business skills integration into mangrove reforestation, analysis of competition, demand and pricing. It also included a planning on management/organizational capability, technical/physical requirements, and marketing/promotional activities. Synthesis of results and its projected income outputs was facilitated. A workshop framework was developed based on initial consultations with CALMADA. The framework circles on three (3) actions,

namely: mangrove conservation, community-based eco-tourism and community development. This cyclic framework will strengthen conservation, increase income and develop communities. (See framework below:

Framework of Workshop



Guide Questions. The workshop on market demand centered on questions like who their visitors and propagule buyers are, their number and place of origin, how they came to know about the mangrove rehabilitation, how long they've been staying in Calatagan, and their unique selling point. The workshop on competition, on the other hand centered on questions about who the competitors are, what services they provide and where they provide these services, how many visitors they have, their unique selling point, the prices of their propagules, and other services. The market pricing workshop revolved around questions on buyer price capability, the prices of the same products and services, charging of competitors on their product and services, and price fluctuations on products and services. (Workshop Program see Annex 1).

The workshop also included a one year financial projection exercise for the mangrove nursery and proposed homestead in Barangay Balibago.

Workshop Results

The results gathered were based on responses from workshop groups on market demand, competition, Management/Organizational Capability, Technical/Physical Requirement, and Marketing/Promotional Plan were analyzed and synthesized in plenary. The results were interpreted and synthesized below (for raw data and workshop proceedings please see Annex 2).

Market Demand

Actual Market. The mangrove nursery and rehabilitation project caters to the students of ICC and institutions outside Calatagan ranging from 15-20 per month with the intent of planting mangroves to help preserve coastal environments. These visitors usually stay only for a day with their own supplies (food, water, etc) (see Table 1: Workshop1: Market).

Developing Markets. Networking with other universities with mangrove rehabilitation program is required to increase mangrove rehabilitation size in Barangay Balibago to improve targeted market and sustain the mangrove nursery project; moreover networking with other municipalities with mangrove rehabilitation program would expand consumers for the mangrove nursery in Brgy Balibago. Linking with other barangays with mangrove rehabilitation programs will determine exact rehabilitation sites and size that would be essential in the municipality's reforestation program. (Table 2: Market demand recommendation).

Improving Capacity and Capability. Collaboration with experts and academic institutions would increase technical capacity of CALMADA on mangrove rehabilitation. Improving access to the nursery is essential in promoting the mangrove nursery; road network improvement should be coordinated with local businessmen and the barangay local government unit. Moreover, Calmada capability can be improved by forging partnerships with local academic community and local NGOs in raising awareness on the importance of mangrove forest (see Table 2: Market demand recommendation).

Table 1: Workshop1: Market

Gabay na Tanong	Group 1	Group 2
Sino ang mga bibisita at bibili ng propagules at seedlings? Local? Taga ibang lugar.	Karamihan taga ibang lugar sa ngayon mga estudyanteng taga ICC.	Elementary, High School, College
Ilan kaya ang bibisita at bibili ng propagules seedlings? Local? Taga ibang lugar	Karamihan ay mga estudyante mula 15-20 na tao ang bumubili ng pananim.	7 grupo mula 15-20 katao >taga ibang lugar
Nasaan sila at paano sila makakarating?	Sa ngayon mga estudyanteng taga Balayan-ICC. Nakakarating sila sa pamamagitan ng pag-arkila ng sasakyan tulad ng Jeep.	Aarkila ng sasakyan
Bakit sila bibisita at bibili ng propagules at seedlings?	Bumibisita sila sapagkat gusto nila magkaroon ng bahagi at makatulong sa kalikasan, at magkaroon pa ng karanasan sa pagtanim ng bunga ng bakawan o propagules.	Para makatulong sa kalikasan.
Gaano katagal sila bibisita at babalik pa kaya sila?	Sila ay inaabot ng 1 hanggang 2 oras, at tuwing isang lingo ay bumabalik sila.	Asikasuhin ng maayos
Ano ang mayroon sa amin na wala sa ibang lugar ? ?Para bisitahin ng mga bisita	Ang mayroon po sa amin ay mga tanim na bakawan na nakatanim na sa aming baybaying dagat at mayroon na po kaming nursery na pwede nilang tangkilikin at bisitahin.	nursery

Table 2: Market demand recommendation

Questions	Group Responses	Assessment/Recommendation(s)
1. Sino ang mga bibisita at bibili ng propagules at seedlings? Local? Taga ibang lugar.	Karamihan taga ibang lugar sa ngayon mga estudyanteng taga ICC. Elementary, High School, College Elementary, High School, College	A need for networking to other universities should be done, as well as having a link with other barangays implementing the same project to know the exact size of shorelines in the municipality that needs to be reforested.
2. Ilan kaya ang bibisita at bibili ng propagules seedlings? Local? Taga ibang lugar	Karamihan ay mga estudyante mula 15-20 na tao ang bumubili ng pananim. 7 grupo mula 15-20 katao >taga ibang lugar	The targeted market is quite small and will not sustain the nursery project Coordinate with the other municipalities in Batangas and nearby provinces that would possibly need the mangrove species that will grow in their nursery project
3. Nasaan sila at paano sila makakarating?	Sa ngayon mga estudyanteng taga Balayan-ICC. Nakakarating sila sa pamamagitan ng pag-arkila ng sasakyan tulad ng Jeep. Aarkila ng sasakyan Aarkila ng sasakyan	Collaborate with academic institutions and experts that could provide them with the technical know-how in maintaining a healthy mangrove nursery
4. Bakit sila bibisita at bibili ng propagules at seedlings?	Bumibisita sila sapagkat gusto nila magkaroon ng bahagi at makatulong sa kalikasan, at magkaroon pa ng karanasan sa pagtanim ng bunga ng bakawan o propagules. Para makatulong sa kalikasan.	Make sure that the road networks are in good shape. A coordination with the Barangay Officials and Municipality should be done, as well as with the local businessmen Coordination with other NGOs and the academic community to be the partners in the education and awareness raising on the importance of Mangrove Forests in a healthy environment and balanced ecosystem, which also has a great impact to people
5. Gaano katagal sila bibisita	Sila ay inaabot ng 1 hanggang 2	

at babalik pa kaya sila?	oras, at tuwing isang lingo ay bumabalik sila. Asikasuhin ng maayos	in relation with climate change. As regards, market demand, customers for the market should be created by way of close links with different universities that need outreach projects for their extension function. The fisherfolks need to have a data-base regarding the importance of mangroves to the environment, climate change, etc. to be able to sell the idea to academic institutions. If the fisherfolks themselves will be the next to educate the youth, they could be credible teachers on this matter. This way, young people will be encouraged to take part in these activities.
6. Ano ang mayroon sa amin na wala sa ibang lugar ? Para bisitahin ng mga bisita	Ang mayroon po s aamin ay mga tanim na bakawan na nakatanim na sa aming baybaying dagat at mayroon na po kaming nursery na pwede nilang tangkilikin at bisitahin. nursery	

Competition

Actual Competition. The main competitor of CALMADA is Ang Pulo in Brgy Quilitisan, which has a mangrove board walk with 50-100 visitors per month. Talimusak (Peoples organization in Quilitisan) promotes their mangrove board walk with low entrance fees and aggressive promotion. Their promotion includes website creation, partnership development with institutions with corporate social responsibility desks, and PO organizational strengthening. (see Table 3: workshop 3: Competition)

Increasing competitiveness. Small organizations can engage competitors by building and improving their product, prices and engaging in promotional activities to market their product. This can be done through the development of a home stay program for university immersion-outreach programs culminating on mangrove rehabilitation, environmental cultural concerts by tapping local musicians to raise awareness and raise funds, creation of a mangrove rehabilitation website with a blog site showing all the information of the organization and its future plans, and promotion through local radio programs (see Table 4: Competition recommendation)

Table 3: Workshop Competition

Guide Question	Group 1	Group 2	Group 3
Sino an gating kakumpetensiya?	Ang pangunahing kakumpetensiya ay tulad ng taga Pulo at mga karatig na resort sa Calatagan.	Ang karamihan na kakumpetensiya ay yong mga tgaong nasa posisyon o namamahala ng isag samahan na nag uutos na manguha ng mga pananim at gustoi rin magpatanim sa kanilang tabing dagat.	Lago de Oro
Nasaan sila at ano ang kanilang serbisyo?	Sa Quilitisan at ibat ibang barangay ng Calatagan. Ang serbisyo nila ay mayron silang magagandang accomodation at magandang tanawin at mga tanim at iba't ibang species ng mga bakawan.	Karamihan ay taga Calatagan din na may samahan na kailangan kumita din ang kanilang mga kasapi.	Brgy. Balibago at mayroon silang waterski
Ilan ang kadalasang mga bisita nila?	Mahigit 100 katao	Maraming bisita dahil malawak ang kanilang samahan	Sa loob ng isang linggo nagkakaroon ng guest na 500
Ano ang kanilang paghikayat sa kanilang mga bisita	Ang pagbibigay ng magandang serbisyo at murang entrance fee	Kapag matatag ang samahan at kumpleto sa kagamitan at kilala na at may tumutulong para mapadali.	Maganda ang place nila at mayroon nga silang restaurant sa loob.

Paano nila naaabot ang kanilang bisita ?	Sa pamamagitan ng website sa internet at nag aadvertise sila gamit ang mga tarpaulin	May pondo na nagagamit at kumpleto sa facilities	Sa pamamagitan ng internet.
Anu-ano ang karaniwang presyo ?	P 50.00 kada tao ang entrance fee ito ay Ang Pulo	P 2.00 at P 5.00 bawat propagules	P 560.00 per hour sa waterski bukod pa sa kwarto at pagkain.

Table 4: Competition Recommendation

Questions	Group Responses	Assessment/recommendation(s)
1. Sino an dating kakumpetensiya?	Ang pangunahing kakumpetensiya ay tulad ng taga Pulo at mga karatig na resort sa Calatagan. Ang karamihan na kakumpetensiya ay yong mga taong nasa posisyon o namamahala ng isang samahan na nag uutos na manguha ng mga pananim at gustoi rin magpatanim sa kanilang tabing dagat. Lago de Oro	The competitors were indentified and with that, as a newcomer in the same business, it is a great advantage because the fisherfolks can benchmark with them. Even as a small organization, they can beat the competitors by starting small (meaning looking first on the basics of marketing: Product, Promotion, Place and Price). In this case, the product is the mangrove propagules. Given the current promotional practices of competitors, it is important to know what CALMADA could do to market their product, where the products will be marketed, what price would be in better edge (an in between price of the main competitors could be looked into), , and what other services can CALMADA provide to the visitors. A good idea is that as a partner for the immersion-outreach activities of the universities, the group will buy a certain number of propagules to be planted in the community.
2. Nasaan sila at ano ang kanilang serbisyo?	Sa Quilitisan at ibat ibang barangay ng Calatagan. Ang serbisyo nila ay mayron silang magagandang accomodation at magandang tanawin at mga tanim at iba't ibang species ng mga bakawan. Karamihan ay taga Calatagan din na may samahan na kailangan kumita din ang kanilang mga kasapi. Brgy. Balibago at mayroon silang waterski	The organization can also come-up with environmental-cultural concerts, tapping local musicians and national musicians to raise awareness and funds. In every culmination, there should be mangrove planting activities. Projected income is attached here based on the current number of visitors coming but during the 2nd year, if all coordination plans are placed, we can also came up with a projected income which will include the nursery project and the homestay on the run. A website can also be done, showing all the information of the organization and its future plans. In the web page, it will have a blog site, wherein the web visitors and guests can leave a comment or ask questions. A computer literate person in the community should be assigned for this. Local radio programs and community signages should also be done to complement the high-tech way of contacting the PO. Some people might not be interested in using the internet so it is also good to have the traditional way of communication retained.
3. Ilan ang kadalasang mga bisita nila	Mahigit 100 katao Maraming bisita dahil malawak ang kanilang samahan Sa loob ng isang linggo nagkakaroon ng guest na 500	
4. Ano ang kanilang paghikayat sa kanilang mga bisita	Ang pagbibigay ng magandang serbisyo at murang entrance fee Kapag matatag ang samahan at kumpleto sa kagamitan at kilala na at may tumutulong para mapadali Maganda ang place nila at mayroon nga silang restaurant sa loob.	
5. Paano nila naaabot ang kanilang bisita ?	Sa pamamagitan ng website sa internet at nag aadvertise sila gamit ang mga tarpaulin May pondo na nagagamit at kumpleto sa facilities May pondo na nagagamit at kumpleto sa facilities Sa pamamagitan ng internet.	
6. Anu-ano ang karaniwang presyo ? Anu-ano ang karaniwang presyo ?	P 50.00 kada tao ang entrance fee ito ay Ang Pulo P 2.00 at P 5.00 bawat propagules P 560.00 per hour sa waterski bukod pa sa kwarto at pagkain.	

Organizational Readiness

Community Organizing. Initial organizational diagnosis of CALMADA requires activation of committees for the identification of assets. An ABCD (asset-based community development) approach to

development would be beneficial for the project in identifying their personal assets, the skills and talents of each member, their natural resources base, their networks, and in plotting each members' sociogram-friends, relatives esp. political links, etc., to ensure community ownership and project sustainability (see Table 5: Operational readiness recommendation).

Table 5: Operational readiness recommendation

Questions	Group Responses	Assessment AND Recommendation(s)
1. Ilan sa mga kasapi ng smahan ang naius na gawin ang proyekto?	Lahat ng kasapi ay nais makatulong upang mas mapaganda ang mga gagawing proyekto. Halos lahat ng kasapi ay interesado at nais gawin ang proyekto. 100 percent ang suporta ng bawat isa.	Since the majority of the members of CALMADA are excited for the project, then this is a good start. CALMADA should be able to organize committees already by conducting asset inventory among members of the organization. They may be trained in doing the AI (Appreciative Inquiry or the ABCD-Asset based approach to Community Development). Identify the personal assets- what skills and talents each member have, identify natural resources base- how many hectares of shoreline belong to Balibago, for mangrove reforestation. Identify the networks and plot each members sociogram-friends, relatives esp. political links etc..
2. Anu-anong pagsasanay ang kailangang isagawa? Anu-anong pagsasanay ang kailangang isagawa?	Ang pagdalo sa mga seminar, workshop activities at iba't ibang trainin g na ipinagkakaloob ng CI. Ang pagdalo sa mga seminar, workshop activities at iba't ibang trainin g na ipinagkakaloob ng CI. Pagsasanay ukol sa pamamaraan ng pagtatanim, kaalaman sa tamang pagpili ng lugar na pagtataniman, tamang paraan sa pangangalaga ng seedlings at mga propagules, pagsasanay ukol sa pag mamarket o pagbebenta ng mga seedlings, pagsasanay ng kaalaman para sa paggabay ng tour guide, pamamaraan sa pagkilala ng mga uri ng seedlings. Leadership Training, Tour Guiding, Pricing, Management Skills	An alternative training or additional training will be provided if the internal resources (skills, natural resources and networks) were already utilized. An external assistance should be utilized when internal resources are exhausted to ensure "owning of the project by the community" and ultimately, project sustainability that will lead to empowered community free from poverty and exploitation.
3. Anong mga pamamaraan para ipalaganap ang proyekto?	Kailangang maganda ang maipakita sa mga magiging bisita, upang sa pag-alis nila ay maipalaganap nila ang kagandahan ng bakawan na proyekto. sa pamamagitan ng internet, pagbibigay ng babasahin sa mga bisita tungkol sa proyekto, pagbabalita ng mga kasapi sa mga kakilala sa iba't ibang lugar. Maggawa ng website para maipalaganap ang proyekto, gumawa ng isang tarpaulin sa iba't ibang lugar. Asikasuhin mabuti ang mga bisita para bumalik sila.	An external assistance should be utilized when internal resources are exhausted to ensure "owning of the project by the community" and ultimately, project sustainability that will lead to empowered community free from poverty and exploitation.

Projected Profit Cash Flow for the Calatagan Mangrove Nursery and Rehabilitation Project (CMNRP)

The CMNRP was subjected to projected cash flows on proposed sub programs on the creation of homesteads and mangrove nursery promotions. Below is the profit cash flow (for detailed projections see excel file).

Homestead.

The cumulative net income of the proposed homestead for twelve (12) months is PHP 34,800 by providing services of two (2) rooms for PHP500 each room of projected four day stay per month, already less the cost of utilities, repair and maintenance. (See table 6: projected cash flow of homestaead).

Operationalization of Mangrove Nursery

The cumulative net income for the operationalization of the mangrove nursery for twelve months (12) is PHP 122,400 by providing services (selling propagules, sevicees on tourguiding, entrance fees and mangrove management fees) less the cost on promotional materials, website development, tourguide training, leadership training, financial management, food service training and operating expences of plastic pots.

Table 6: Cash Flow projections for the proposed Homestead

Microsoft Business Planner													
Go to Article: Introduction to Financial Statements													
Mini-Resort Income Statement - 12 Months													
© Microsoft, 1998.													
Income Statement - 12 Months													
Period Starting:	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Totals
Sales													
Sales (2 rooms X 500 per day X 4 days)	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Total Sales	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Less Cost of Goods Sold													
Materials(c/o orly)													0
50,000													0
Labor 25,000 (c/o partner1)													0
Land 25,000 (c/o partner 2)													0
Total Cost of Goods Sold	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross Profit	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Operating Expenses													
Salaries and wages													0
Employee benefits													0
Payroll taxes													0
Rent													0
Utilities	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Repairs and maintenance	150	150	150	150	150	150	150	150	150	150	150	150	1,800
Insurance													0
Travel													0
Total Operating Expenses	350	350	350	350	350	350	350	350	350	350	350	350	4,200
Operating Income	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	43,800
Interest income (expense)													0
Other income (expense)													0
Total Nonoperating Income	0	0	0	0	0	0	0	0	0	0	0	0	0
Income (Loss) Before Tax	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	43,800
Income Taxes													0
Net Income (Loss)	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	3,650	43,800
Cumulative Net Income (L	3,650	7,300	10,950	14,600	18,250	21,900	25,550	29,200	32,850	36,500	40,150	43,800	43,800

Table 7: Cash Flow Projections on Mangrove Nursery Promotion

8:15-9:15	Recapitulation	Jun Galacio/Participants
9:15-10:00	Workshop Groups <ul style="list-style-type: none"> • Management/Organizational Capability • Technical/Physical Requirement • Marketing/Promotional Activities Plan 	Mr. Orly Arciaga and Mr. Jun Galacio
10:00-10:15	Break	
10:15-10:30	Sharing of Experience	Mr. Jessie delos Reyes
10:30-11:45	Synthesis and Next Session to finalized Community-based Mangrove Reforestation, Nursery and Ecotourism Project	Mr. Orly Arciaga
11:45-12:00	Workshop Evaluation	
12:00-12:30	Lunchbreak	
12:30-1:30	Tour	

XX

Annex 2: Workshop Proceedings

Proceedings of the Workshop. First Day - February 19. It started at past 10:00 AM for the preliminary activities such as, registration of the participants. After a while, Opening Prayer followed and led by officer of the organization then an Opening remarks was given by the President of CALMADA. Ton Bringas of Conservation International-Phil's is in charge on the introduction of the participants.

Expectations of the participants were shared, as follows;

- Magkaroon ng ideya kung paano ibebenta ang propagules
- Malaman pangangalaga sa bakawan
- Mapaunlad ang proyekto at magpatuloy ang pagkakaisa ng samahan
- Mapaunlad at mapalago ang proyekto
- Maisaayos ang samahan
- Maghanap kung sino-sino ang maaaring lapitan para matulungan ang samahan at proyekto.
- *Hindi magsawa ang Conservation International sa pagtulong*
- Pagkakaisa ng CALMADA
- Business Plan ng bakawan
- Isyu sa bakawan tulad ng pagkuha ng propagules

To have a better discussion and order, the flow of activities for 2 days was discussed. The facilitators emphasized the need for an active participation of everyone. The workshop is designed for group activities and it will revolve around the following topics:

1. Demand
2. Competition
3. Pricing
4. Management/Organizational Capability
5. Technical/Physical Requirement
6. Marketing/Promotional Plan

The output that were presented would hopefully become a basis to come up with simple but concise market study

Presentation of Output

Workshop 1- Market demand

Gabay na Tanong	Group 1	Group 2
Sino ang mga bibisita at bibili ng propagules at seedlings? Local? Taga ibang lugar.	Karamihan taga ibang lugar sa ngayon mga estudyanteng taga ICC.	Elementary, High School, College
Ilan kaya ang bibisita at bibili ng propagules seedlings? Local? Taga ibang lugar	Karamihan ay mga estudyante mula 15-20 na tao ang bumibili ng pananim.	7 grupo mula 15-20 katao >taga ibang lugar
Nasaan sila at paano sila makakarating?	Sa ngayon mga estudyanteng taga Balayan-ICC. Nakakarating sila sa pamamagitan ng pag-arkila ng sasakyan tulad ng Jeep.	Aarkila ng sasakyan
Bakit sila bibisita at bibili ng propagules at seedlings?	Bumibisita sila sapagkat gusto nila magkaroon ng bahagi at makatulong sa kalikasan, at magkaroon pa ng karanasan sa pagtatanim ng bunga ng bakawan o propagules.	Para makatulong sa kalikasan.
Gaano katagal sila bibisita at babalik pa kaya sila?	Sila ay inaabot ng 1 hanggang 2 oras, at tuwing isang lingo ay bumabalik sila.	Asikasuhin ng maayos
Ano ang mayroon sa amin na wala sa ibang lugar ? ?Para bisitahin ng mga bisita	Ang mayroon po s aamin ay mga tanim na bakawan na nakatanim na sa aming baybaying dagat at mayroon na po kaming nursery na pwede nilang tangkilikin at bisitahin.	nursery

- Likewise discussed was the Framework of Workshop to give insight for the participants. (Enforcement, monitoring)

Workshop 2- Competition

Guide Question	Group 1	Group 2	Group 3
Sino an gating kakumpetensiya?	Ang pangunahing kakumpetensiya ay tulad ng taga Pulo at mga karatig na resort sa Calatagan.	Ang karamihan na kakumpetensiya ay yong mga tgaong nasa posisyon o namamahala ng isnag samahan na nag uutos na manguha ng mga pananim at gustoi rin magpatanim sa kanilang tabing dagat.	Lago de Oro
Nasaan sila at ano ang kanilang serbisyo?	Sa Quilitisan at ibat ibang barangay ng Calatagan. Ang serbisyo nila ay mayron silang magagandang accomodation at magandang tanawin at mga tanim at iba't ibang species ng mga bakawan.	Karamihan ay taga Calatagan din na may samahan na kailangan kumita din ang kanilang mga kasapi.	Brgy. Balibago at mayroon silang waterski
Ilan ang kadalasang mga bisita nila?	Mahigit 100 katao	Maraming bisita dahil malawak ang kanilang samahan	Sa loob ng isang linggo nagkaroon ng guest na 500
Ano ang kanilang paghikayat sa	Ang pagbibigay ng magandang	Kapag matatag ang samahan at	Maganda ang place nila at mayroon

kanilang mga bisita	serbisyo at murang entrance fee	kumpleto sa kagamitan at kilala na at may tumutulong para mapadali.	nga silang restaurant sa loob.
Paano nila naaabot ang kanilang bisita ?	Sa pamamagitan ng website sa internet at nag aadvertise sila gamit ang mga tarpaulin	May pondo na nagagamit at kumpleto sa facilities	Sa pamamagitan ng internet.
Anu-ano ang karaniwang presyo ?	P 50.00 kada tao ang entrance fee ito ay Ang Pulo	P 2.00 at P 5.00 bawat propagules	P 560.00 per hour sa waterski bukod pa sa kwarto at pagkain.

- A video presentation was takes place focused on the sustainable ecotourism in Chambok, Cambodia a remote area having no electricity but develop best practices in terms of conducting a sustainable tourism that includes ferrying of tourist, home stay, local tour guiding, food preparation and native handicraft. There was a certain percentage that goes to environmental purposes and the remaining percentage goes to the individual members of the community to be able to augment their needs.
- Process check on the participants in relation to video presentation.
 - mahusay ang grupo
 - kumikita ang bawat kasapi
 - pwede ba ito gawin halimbawa sa aming lugar
 - nanganganak ang mother negosyo
- The last discussion was focused on the business of CALMADA of Brgy Balibago, Calatagan that center on the following.
 1. Unique Selling Point (USP)
 2. Your Product
 3. Your Team
- At the end of the first day, an evaluation was conducted to determine the level of retention on the topics discussed and to gauge the effectiveness on the methodology.

Second Day – February 20, 2011

- The second day started at 8:30 AM through Opening Prayer led by the Youth Environmental Society member and followed by the review on the first day discussion. The participants actively shared their insights on what has been taken place.
- It was then presented the projected income of mangrove for 12 months including the sales on propagules, potted seedlings, entrance fee, tour guiding/boating and mangrove management fee. This will serve as guide in terms of projecting the income and cost analysis of the mangrove business. The group was very amazed that the mangrove business has an opportunity to develop as sustainable business.
- Feeling level base on the presentation of financial analysis
 - maraming natutunan at masaya na kikita ang proyekto.
 - Nagkaroon ng ideya na mapa-unlad ang bakawan
 - Bahagi ng barangay council ay natutuhan at natutukan ang barangay para sa ganitong proyekto.

Workshop 3 – Kakayahan at Kahandaan ng CALMADA, YES at Brgy. Council

Guide Question	Group 1	Group 2	Group 3
Ilan sa mga kasapi ng smahan ang naius na gawin ang proyekto?	Lahat ng kasapi ay nais makatulong upang mas mapaganda ang mga gagawing proyekto.	Halos lahat ng kasapi ay interesado at nais gawin ang proyekto.	100 percent ang suporta ng bawat isa.
Anu-ano ang pagsasanay ang kailangang isagawa?	Ang pagdalo sa mga seminar, workshop activities at iba't ibang trainin g na ipinagkakaloob ng CI.	Pagsasanay ukol sa pamamaraan ng pagtatanim, kaalaman sa tamang pagpili ng lugar na pagtataniman, tamang paraan sa pangangalaga ng seedlings at mga propagules, pagsasanay ukol sa pag mamarket o pagbebenta ng mga seedlings, pagsasanay ng kaalaman para sa paggabay ng tour guide, pamamaraan sa pagkilala ng mga uri ng seedlings.	Leadership Training, Tour Guiding, Pricing, Management Skills
Anong mga pamamaraan para ipalaganap ang proyekto?	Kailangang maganda ang maipakita sa mga magiging bisita, upang sa pag-alis nila ay maipalaganap nila ang kagandahan ng bakawan na proyekto.	sa pamamagitan ng internet, pagbibigay ng babasahin sa mga bisita tungkol sa proyekto, pagbabalita ng mga kasapi sa mga kakilala sa iba't ibang lugar.	Maggawa ng website para maipalaganap ang proyekto, gumawa ng isang tarpaulin sa iba't ibang lugar. Asikasuhin mabuti ang mga bisita para bumalik sila.

- Jessie DeLos Reyes, CAPOceans Coordinator share his insights regarding on the successful stories of same effort on mangrove reforestation through slide presentation.
- Evaluation for 2 days activity was through the form distributed to the participants to serve as basis for improvement of the resource person.
- A closing remarks was given by the Barangay Captain of Balibago and the Vice-President of CALMADA.
- ADJOURNMENT : 12:20 PM

ASSESSMENT OF THE WORKSHOP OUTPUT

Market demand

Questions	Group Responses	Assessment/Recommendation(s)
1. Sino ang mga bisita at bibili ng propagules at seedlings? Local? Taga ibang lugar.	Karamihan taga ibang lugar sa ngayon mga estudyanteng taga ICC. Elementary, High School, College Elementary, High School, College	A need for networking to other universities should be done, as well as have a link with other barangays implementing the same project to know the exact size of shorelines in the municipality that needs to be reforested. The targeted market is quite small and will not sustain the nursery project Also, to coordinate with the other municipalities in Batangas and nearby provinces that would possibly need the mangrove species that will grow in their nursery project Collaborate with academic institutions and experts that could provide them with the technical know-how in maintaining the healthy mangrove nursery Make sure that the road networks are in good shape. A coordination with the Barangay Officials and Municipality should be done, as well as with the local businessmen Coordination with other NGOs and academic community to be the partners in the education and awareness raising on the importance of Mangrove Forests in the a healthy environment and balance ecosystem, in which also important
2. Ilan kaya ang bisita at bibili ng propagules seedlings? Local? Taga ibang lugar	Karamihan ay mga estudyante mula 15-20 na tao ang bumibili ng pananim. 7 grupo mula 15-20 katao >taga ibang lugar	
3. Nasaan sila at paano sila makakarating?	Sa ngayon mga estudyanteng taga Balayan-ICC. Nakakarating sila sa pamamagitan ng pag-arkila ng sasakyan tulad ng Jeep. Aarkila ng sasakyan Aarkila ng sasakyan	
4. Bakit sila bibisita at bibili ng propagules at seedlings?	Bumibisita sila sapagkat gusto nila magkaroon ng bahagi at makatulong sa kalikasan, at magkaroon pa ng karanasan sa pagtatanim ng bunga ng bakawan o propagules.	

	Para makatulong sa kalikasan.	in the great impact to people in relation to climate change
5. Gaano katagal sila bibisita at babalik pa kaya sila?	Sila ay inaabot ng 1 hanggang 2 oras, at tuwing isang linggo ay bumabalik sila. Asikasuhin ng maayos	As regards, market demand, customers for the market should be created by way of close links with different universities that needs outreach projects for their extension function. The fisherfolks need to have a data-base as regards importance of mangrove to environment, climate change etc. to be able to sell the idea to academic institutions. If the fisherfolks themselves will be the one to educate the young people, they could be credible teachers as regard this matter, in this way, young people will be encouraged to take part in this undertakings
6. Ano ang mayroon sa amin na wala sa ibang lugar? Para bisitahin ng mga bisita	Ang mayroon po sa amin ay mga tanim na bakawan na nakatanim na sa aming baybaying dagat at mayroon na po kaming nursery na pwede nilang tangkilikin at bisitahin. nursery	

Competition

Questions	Group Responses	Assessment/recommendation(s)
1. Sino an dating kakumpetensiya?	Ang pangunahing kakumpetensiya ay tulad ng taga Pulo at mga karatig na resort sa Calatagan. Ang karamihan na kakumpetensiya ay yong mga taong nasa posisyon o namamahala ng isang samahan na nag uutos na manguha ng mga pananim at gustoi rin magpatanim sa kanilang tabing dagat. Lago de Oro	The competitors are identified and with that, as newcomer in the same business, it is great advantage because the fisherfolks can benchmark with them. Even small organization, they can beat the competitors by starting small (meaning looking first on the basic of marketing Product, Promotion, Place and Price). In this case the product is the mangrove propagules, given the current promotion practices of competitors, what CALMADA could do to market their product? Place, where the products will be marketed? And what price would be in better edge, an in between price of the main competitors could be look into. What other services can CALMADA Provide with the visitors? A good idea is that as a partner for the immersion-outreach activities of the universities wherein, the students will leave as homestay and as a group, as culminating activity, the group will buy a certain number of propagules to be planted in the community.
2. Nasaan sila at ano ang kanilang serbisyo?	Sa Quilitisan at ibat ibang barangay ng Calatagan. Ang serbisyo nila ay mayron silang magandang accomodation at magandang tanawin at mga tanim at iba't ibang species ng mga bakawan. Karamihan ay taga Calatagan din na may samahan na kailangan kumita din ang kanilang mga kasapi. Brgy. Balibago at mayroon silang waterski	The organization can also come-up with an environmental-cultural concerts, tapping local musicians and national musicians to raise awareness and funds. In every culmination, there should be a mangrove planting activities. Projected income is attached here based on the current number of visitors coming but during the 2nd year, if all coordination plans are placed, we also came up with a Projected Income which will include the nursery project and the homestay on the run. A website can also be done, showing all the information of the organization and its future plans. In the web page, it will have a blog site, wherein, the web visitors and guests can say something or ask questions. A computer literate young people in the community should be assigned for this. Local radio programs and community signages should also be done to complement the high-tech way of contacting the PO. Some people might not be interested in using the internet so it is good that traditional way of communication should be retained.
3. Ilan ang kadalasang mga bisita nila	Mahigit 100 katao Maraming bisita dahil malawak ang kanilang samahan Sa loob ng isang linggo nagkakaroon ng guest na 500	
4. Ano ang kanilang paghikayat sa kanilang mga bisita	Ang pagbibigay ng magandang serbisyo at murang entrance fee Kapag matatag ang samahan at kumpleto sa kagamitan at kilala na at may tumutulong para mapadali Maganda ang place nila at mayroon nga silang restaurant sa loob.	
5. Paano nila naaabot ang kanilang bisita ?	Sa pamamagitan ng website sa internet at nag aadvertise sila gamit ang mga tarpaulin May pondo na nagagamit at kumpleto sa facilities May pondo na nagagamit at kumpleto sa facilities Sa pamamagitan ng internet.	
6. Anu-ano ang karaniwang presyo ? Anu-ano ang karaniwang presyo ?	P 50.00 kada tao ang entrance fee ito ay Ang Pulo P 2.00 at P 5.00 bawat propagules P 560.00 per hour sa waterski bukod pa sa kwarto at pagkain.	

Organizational Readiness to handle and manage the project

Questions	Group Responses	Assessment AND Recommendation(s)
1. Ilan sa mga kasapi ng smahan ang naius na gawin ang proyekto?	Lahat ng kasapi ay nais makatulong upang mas mapaganda ang mga gagawing proyekto. Halos lahat ng kasapi ay interesado at nais gawin ang proyekto. 100 percent ang suporta ng bawat isa.	Since the majority of the members of CALMADA are excited for the project, then this is good start. CALMADA should be able to organized committees already by conducting asset inventory among members of the organization, they may be trained in doing the AI (Appreciative Inquiry or the ABCD-Asset based approach to Community Development). Identify the personal assets- what skills and talents each member have, identify natural resources base- how many hectares of shoreline belong to Balibago, for mangrove reforestation?, Identify the networks and plot each members sociogram-friends, relatives esp. political links etc.. An alternative training or additional training will be provided if the internal resources (skills, natural resources and networks) were already utilized. An external assistance should be utilized when internal resources is exhausted to ensure "owning of the project by the community" and ultimately, project sustainability that will lead to empowered community free from poverty and exploitation.
2. Anu-anong pagsasanay ang kailangang isagawa? Anu-anong pagsasanay ang kailangang isagawa?	Ang pagdalo sa mga seminar, workshop activities at iba't ibang trainin g na ipinagkakaloob ng CI. Ang pagdalo sa mga seminar, workshop activities at iba't ibang trainin g na ipinagkakaloob ng CI. Pagsasanay ukol sa pamamaraan ng pagtatanim, kaalaman sa tamang pagpili ng lugar na pagtataniman, tamang paraan sa pangangalaga ng seedlings at mga propagules, pagsasanay ukol sa pag mamarket o pagbebenta ng mga seedlings, pagsasanay ng kaalaman para sa paggabay ng tour guide, pamamaraan sa pagkilala ng mga uri ng seedlings. Leadership Training, Tour Guiding, Pricing, Management Skills	
3. Anong mga pamamaraan para ipalaganap ang proyekto?	Kailangang maganda ang maipakita sa mga magiging bisita, upang sa pag-alis nila ay maipalaganap nila ang kagandahan ng bakawan na proyekto. sa pamamagitan ng internet, pagbibigay ng babasahin sa mga bisita tungkol sa proyekto, pagbabalita ng mga kasapi sa mga kakilala sa iba't ibang lugar. Maggawa ng website para maipalaganap ang proyekto, gumawa ng isang tarpaulin sa iba't ibang lugar. Asikasuhin mabuti ang mga bisita para bumalik sila.	

NEXT STEP



CORAL TRIANGLE
INITIATIVE
ON CORAL REEFS, FISHERIES AND FOOD SECURITY
PHILIPPINES