

**Final Report**

**June 2008**

**NOAA FY 2006 International Coral Reef Conservation Grant NA06NOS4630088**

Coastal Dynamics Foundation, Inc., Cebu, Philippines

**Project Title:** Expanded Applications of SocMon Methods towards Integrated Management and Monitoring of Coral Reefs and Marine Protected Areas (MPAs)

**1. Project Summary:** The project will serve to build on the significant socio-economic assessment and monitoring (SocMon) work that has been developed and completed to date by the CDF in direct partnership with local government units (LGUs), national government agencies and NGOs as an integrated approach to establishing and managing MPAs. Project training activities and applications will be focused to directly support the establishment and improved management of MPAs of interested coastal communities and stakeholders, for whom these services are needed but alternative resources, are not available. The project will focus on prime coral reef areas with demonstrated high potential for socio-economic as well as environmental benefits, particularly existing or new MPA areas with high diving tourism potential. Project period is Oct. 2006 – March 2008.

**1.1 Project Objectives:** The project will support further application and extension of SocMon in an integrated and cost-effective approach to establishing, managing and monitoring of coral reef resources, focusing on planned or existing MPAs. Project objectives are to:

- Build on the SocMon progress made to date, supported under a NOAA FY 2003 grant;
- Support continued application of SocMon activities as an integrated community awareness and MPA establishment, management and monitoring approach;
- Support broader demonstration and extension of these SocMon experiences and approaches to other interested communities, target areas and training participants.

**2.0 Summary of Project Activities and Progress (October 2006 – March 2008)**

**2.1 October 2006 – April 2007:** Initial delays in project implementation were encountered due to:

- Late notice of the grant awarding with the application of the new Grants Online system;
- Delays in completing the CAMS requirements properly and completing the bank transfer of initial grant payment, and
- On-going national elections in the Philippines, which were held in May 2007.

These initial delays were addressed and key results during this project period included:

- Informing key stakeholders and potential partners of our NOAA FY 2006 SocMon award;

- Review, revision and updating of our FY 2003 SocMon survey questionnaire for MPA establishment, which is bilingual and prepared in Bisaya / Cebuano (predominant language of the central Philippines) and English, and
- Project introduction and sharing of project outlines and survey forms and planning with initially interested project partners.

**2.2 April – September 2007:** A summary of the key results during this reporting period included:

- Design, organization and conduct of the first SocMon surveys in 6 municipalities (in 3 different provinces) of the central Philippines in partnership with local communities and the 2007 Durham University (UK) Coral Awareness and Research Expedition (DUCARE 2007).
- These SocMon surveys were integrated with concurrent Reef Check surveys of the nearby reef areas to provide a comprehensive rapid appraisal of each area. A total of 80 reef assessments, involving 13 municipalities in 3 provinces were surveyed, with the results submitted to the Global Coral Reef Monitoring Network (GBRMN) through Reef Check.
- Five year Action Plans were developed with the DUCARE organization and The Law of Nature Foundation ([www.thelawofnature.org](http://www.thelawofnature.org)), integrating SocMon initiatives into a broader program of coastal resource management initiatives.
- Local initiatives, incorporating SocMon, were developed with the Municipality of Ronda and a major beach resort located in San Remegio, both in the province of Cebu.

**2.3 October 2007 – March 2008:** A summary of the key results during this reporting period included:

- Designed, organized and conducted of the first SocMon surveys in the Municipality of Santa Fe, Bantayan and Gintarcan Islands, Province of Cebu in partnership with local communities and the Visayan Sea Squadron. These SocMon surveys were integrated with Reef Check surveys of the nearby reef areas to provide a rapid appraisal and baseline planning data for each site.
- All SocMon surveys results were compiled and shared with local stakeholders, with copies furnished to NOAA.
- All reef assessment results were compiled and submitted to the Global Coral Reef Monitoring Network (GBRMN) through Reef Check after sharing these results with local stakeholders.
- Drafted proposed 2009 coral awareness and research expedition program, integrating SocMon activities, with the County Durham (UK) Roseberry Sports and Community College.
- Organized and supported Earth Day 2008 programs and conservation awareness activities in collaboration with the Junior Chamber (Cebu Jaycees) International, Sacred Heart Mission, Shangri-La Mactan Resort, other resorts, Olango Island Wildlife Sanctuary and Gilutongan MPA.

- Actively participated in public hearings and consultations on proposed increases in diver and visitor user fees at the Gilutongan MPA, Municipality of Cordova, Cebu.
- Developed a comprehensive presentation and outline proposal to the Shangri-La Mactan Resort in support of their proposed development of a Marine Learning Center and complimentary marine / reef conservation programs and activities for their resort operations in the Philippines and Indonesia. These plans build on our SocMon work and Shangri-La Resort collaborative support for reef conservation since 2003, for which this major resort will be awarded the prestigious 2008 Conde Nast international award for environmental and corporate social responsibility excellence.

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## **A. Summary Report of the Baseline SocMon Surveys and Public Hearing Presentations**

### **A.1 Summary of 2007 SocMon Surveys completed in the Six Municipalities and Three Provinces of the Central Philippines**

The results of the 2007 SocMon surveys conducted in 6 municipalities and 3 provinces of the central Philippines are summarized in the following Table. These survey results, which were disseminated to each of the concerned communities, include:

- 340 households were surveyed, representing some 10% of the total household population of each community (barangay). About 34% of the survey respondents were fisherfolk.
- There is a high (87% of respondents) reported awareness on the condition of local coastal resources, with some 42% reporting that coastal resource conditions are destroyed and 38% reporting local conditions have improved.
- 58% of the total respondents identified dynamite (blast) fishing as the key cause of reef destruction.
- 88% of the total respondents support the establishment of MPAs in their community.

Most respondents (45% and 54%, respectively) identified increased education and enforcement as the recommended means to improve coastal resource management.

**Summary of Key Results of 2007 SocMon Surveys in Central Philippines**  
 Coastal Dynamics Foundation with Durham University Coral Awareness and Research Expedition (DUCARE 2007)  
 NOAA FY 2006 International Coral Conservation Grant NA06NOS54630088

Municipality / Barangay (Village) / Province	Bantayan / Sillón (Province of Cebu)	Daanbantayan / Logon / Malapascua Is., Province of Cebu)	Moalboal / Basit (Province of Cebu)	Inopacan / Apid (Province of Bohol)	Panglao / Balicasag Island (Province of Bohol)	Hindang / Himokitan (Province of S. Leyte)	Total / Averages
No. of Households in Barangay	730	780	800	500	150	480	3,440
No. of Surveyed Households	71	75	90	48	13	45	342
% of Barangay Surveyed	10%	10%	11%	10%	9%	9%	10%
% of Respondents who are Fisherfolks	56%	40%	3%	25%	31%	47%	34%
<b>Question 1. Are you aware of the current condition of our coastal environment?</b>							
Yes	87%	87%	78%	94%	92%	84%	87%
No	7%	13%	21%	4%	0%	4%	8%
<b>Question 2. How can you best describe the conditions of your coastal environment?</b>							
Same as before	6%	7%	12%	12%	0%	13%	8%
Better than before	21%	39%	42%	25%	77%	24%	38%
Destroyed / reduced catch	61%	48%	36%	50%	15%	40%	42%
Don't know	13%	7%	10%	12%	8%	22%	12%
<b>Question 3. What do you think are the causes of the destruction of our reefs?</b>							
Dynamite fishing	70%	79%	50%	44%	46%	58%	58%
Cyanide fishing	4%	25%	27%	19%	15%	11%	17%
Use of fine mesh nets	18%	32%	11%	8%	8%	22%	17%
Use of compressors for fishing	13%	0%					2%
Garbage / solid waste		5%	21%	8%	15%	18%	11%
Commercial fishing		1%					0%
Over population		1%					0%
<b>Question 4. Are you willing to support the establishment of an MPA in your place?</b>							
Yes	86%	76%	82%	92%	100%	91%	88%
No	0%	19%	16%	6%	0%	0%	7%
<b>Question 5. What is your understanding of the purpose of an MPA?</b>							
"No entry" area	18%	11%	18%	25%	38%	38%	25%
No fishing area	31%	29%	27%	44%	69%	49%	42%
Fish reserve / shelter	38%	41%	39%	37%	46%	49%	42%
Fish breeding area	51%	41%	47%	69%	54%	84%	58%
<b>Question 6. What do you think are the benefits of establishing an MPA?</b>							
Increase income of community	18%	13%	20%	23%	38%	47%	27%
Stop illegal fishing practices	31%	57%	47%	23%	77%	27%	44%
Increase in fish catch	55%	48%	57%	75%	62%	84%	64%
<b>Question 7. What is the best way of preventing reef destruction?</b>							
Alternative livelihood	28%	23%	14%	23%	23%	27%	23%
Education on marine environment	35%	44%	51%	42%	46%	51%	45%
Law enforcement / fish wardens	48%	47%	50%	58%	62%	60%	54%
<b>Question 8. What are the main problems facing your community?</b>							
Unemployment	18%	25%	30%	2%	45%	11%	22%
Financial problems	35%	11%	12%	6%	39%	29%	22%
Illegal fishing	10%	16%		6%	31%		11%
Lack of waste management	1%	15%	14%	21%		7%	10%
Drugs	1%		7%				1%
Lack of education	8%	4%	6%				3%
Lack of water supply		13%	8%	2%	31%	53%	18%
Lack of electricity		19%			8%	13%	7%
Over population		1%	7%	2%			2%
<b>Question 9. What are the possible solutions?</b>							
Livelihood projects	34%	26%	24%	16%	38%	51%	32%
Implement government programs (such as family planning)	1%	11%	18%	4%		22%	9%
Law enforcement	6%	12%	8%	6%		16%	8%
Information and education	8%	12%				18%	8%
Community unity and cooperation	10%	13%	14%	23%	15%		13%
Improve waste management			12%				2%
Improve public utilities / water supply				17%	15%		5%
<b>Question 10. Are you involved in coastal management activities?</b>							
Yes	58%	64%	51%	56%	85%	80%	66%
No	8%	21%	39%	35%	8%	16%	21%

SocMon - Socio-economic assessment and monitoring

Source: Coastal Dynamics Foundation, Inc., Cebu, Philippines, www.cebudive.com, in cooperation with the Local Communities and Durham University Coral Awareness and Research Expedition (DUCARE) 2007 with funding support provided by the U.S. National Oceanic and Atmospheric Administration (NOAA) under a FY 2006 International Coral Reef Conservation Program grant

## **A.2 Summary of 2008 SocMon Surveys completed in Four Municipalities and Two Provinces of Central Philippines.**

In partnership with local communities, the Visayan Sea Squadron and the Durham University (UK) 2008 Coral Awareness and Research Expedition, SocMon surveys were integrated with Reef Check surveys of the nearby reef areas to provide a rapid appraisal and baseline planning data in 4 municipalities and 2 provinces of the central Philippines are summarized in the following Table. These survey results, which were disseminated to each of the concerned communities, include:

- 296 households were surveyed, representing some 9% of the total household population of each community (barangay). About 48% of the survey respondents were fisherfolk.
- There is a high (90% of respondents) reported awareness on the condition of local coastal resources, with some 49% reporting that coastal resource conditions are destroyed and 32% reporting local conditions have improved.
- 45% of the total respondents identified dynamite (blast) fishing as the key cause of reef destruction, followed by use of cyanide (34%), use of fine mesh nets (19%) and illegal commercial fishing (19%).
- 67% of the total respondents support the establishment of MPAs in their community and where MPAs had been previously established, 70% of these respondents reported that conditions within the MPA had improved. Some 57% of these respondents also noted that MPA enforcement should be improved.
- Most respondents (62% and 26%) identified increased enforcement and education as the recommended means to improve coastal resource management.

Summary of Provided Recommendations: Based on these reef assessment and SocMon survey results, the following recommendations were formally provided to the Municipality of Santa Fe (Bantayan Island, Cebu), which was a focus area of these 2008 SocMon initiatives:

- Make sure 24 hour observation of the designated MPA areas is carried out to prevent illegal fishing practices, such as cyanide fishing, dynamite fishing and invertebrate collection. This can be done from the shore or preferably using a patrol boat.
- It is important that the MPA wardens / staff-in-charge are monitored to ensure they are carrying out their duties properly and not using the sanctuary for their own use.
- Consider carrying out underwater clean up dives on a regular basis in cooperation with local resorts and dive shops to keep the MPA areas clean and pristine.
- Encourage dive guides and tourists to pick up any rubbish they see when diving and provide facilities for them to dispose of trash properly.
- Implement environmentally friendly systems for waste and sewage disposal to prevent nutrient leakage and pollution of the reef.

- Install mooring buoys to prevent anchor damage to the reef at dive sites. Also install MPA marker / boundary buoys and signage so that fishermen are aware of the designated MPA status of these areas.
- In the future, look to extend the boundaries of the MPAs and their buffer zones and the possibility of adding underwater diving “attractions” such as sunken ships, which also serve to enhance fish habitat in barren reef areas.
- If demand for recreational diving increases, consider implementing a MPA user’s fee to generate income which can be put back into the improvement of the area and to provide additional economic benefits to the local community and LGU. Good examples and models for such user fee systems are provided by the Gilutongan and Talima MPAs near Mactan Island, Cebu.
- The proposed site of the Maricaban MPA was observed as being in poor condition with a substrate consisting mostly of sand plus the existence of numerous fish traps which occupying the western part of the barangay coast. We recommend that the MPA site should be relocated to the boundary between Maricaban and Poooc.
- Regular (annual) Reef Check monitoring surveys should be conducted for the same survey sites to check if MPA management and enforcement measures are proving effective and to provide valuable feedback to the LGU and barangay stakeholders.
- Regular (annual) SocMon monitoring surveys should also conducted to assess the community MPA benefits, such as increased fish catch in areas adjacent to the MPA and to identify possible improvements to MPA design and management measures.

**Summary of Key Results of 2008 Socio-Economic Assessment and Monitoring (SocMon) Surveys in Central Philippines**

Coastal Dynamics Foundation with Durham University Coral Awareness and Research Expedition (DUCARE 2008)  
with funding support provided by NOAA 2006 International Coral Reef Conservation Grant NA06NOS4630088

Municipality / Barangay (Village)	Province of Cebu							Leyte	Total / Averages
	Municipality of Sta. Fe, Brgy Hilantagaan, Sitio Dakongbaybay	Municipality of Sta. Fe, Brgy Ocoy	Municipality of Sta. Fe, Brgy Kinatarkan, Sitio Langub	Municipality of Sta. Fe, Brgy Marikaban	Municipality of Sta. Fe, Brgy Kinatarkan, Sitio Bituon	Municipality of Bantayan, Brgy Pooc	Municipality of Ronda, Brgy Santa Cruz	Municipality of Inopacan, Brgy Mahaba	
No. of Households in Barangay	687	645	355	565	355	568	460	120	3,755
No. of Surveyed Households	31	15	30	54	38	46	63	19	296
% of Barangay Surveyed	5%	2%	8%	10%	11%	8%	14%	16%	9%
% of Respondents who are Fisherfolks	90%	46%	50%	22%	21%	40%	44%	58%	48%
<b>Question 1. Are you aware of the current condition of our coastal environment?</b>									
Yes	100%	93%	93%	78%	84%	98%	86%	84%	90%
No	0%	7%	7%	22%	16%	2%	14%	16%	11%
<b>Question 2. How can you best describe the conditions of your coastal environment?</b>									
Same as before	0%	13%	0%	9%	8%	7%	10%	11%	7%
Better than before	48%	27%	30%	20%	26%	46%	19%	42%	32%
Destroyed / reduced catch	52%	53%	60%	57%	53%	46%	32%	42%	49%
Don't know	0%	7%	10%	13%	13%	2%	40%	5%	11%
<b>Question 3. What do you think are the causes of the destruction of our reefs?</b>									
Dynamite fishing	94%	87%	36%	40%		37%	3%	19%	45%
Cyanide fishing	68%	80%	17%	11%		20%	12%	33%	34%
Use of fine mesh nets	26%	27%	15%	13%		13%	17%	23%	19%
Garbage / solid waste	16%	13%	0%	4%		1%	8%	0%	6%
Commercial fishing	10%	7%	25%	19%		23%	40%	12%	19%
<b>Question 4. Do respondents know what a Marine Protected Area (MPA) is?</b>									
Yes			70%	59%	16%	76%	84%	79%	64%
No			30%	28%	16%	15%	14%	21%	21%
No comment			0%	13%	68%	9%	2%	0%	15%
<b>Question 5. Are you willing to support the establishment of an MPA in your place?</b>									
Yes	87%	67%	70%	44%	68%	MPA already established in these survey areas			67%
No	13%	27%	0%	9%	13%				12%
No comment	0%	6%	30%	47%	19%				20%
<b>Question 6. What is your understanding of the purpose of an MPA?</b>									
"No entry" area	13%	7%	12%	5%	11%	4%	7%	9%	9%
No fishing area	29%	0%	15%	14%	11%	13%	10%	15%	13%
Fish reserve / shelter	35%	40%	46%	16%	18%	22%	20%	21%	27%
Fish breeding area	87%	53%	27%	34%	59%	37%	37%	35%	46%
<b>Question 7. What do you think are the benefits of establishing an MPA?</b>									
Increase income of community	23%	13%	0%	6%	0%	8%	8%	4%	8%
Stop illegal fishing practices	26%	27%	33%	12%	24%	17%	19%	18%	22%
Increase in fish catch	87%	53%	56%	41%	52%	53%	51%	46%	55%
Protect / restore reefs	Not included on survey form			41%	Not included	19%	11%	25%	24%
<b>Question 8. What is the best way of preventing reef destruction?</b>									
Alternative livelihood	23%	27%	12%	11%	0%	2%	2%	13%	11%
Education on marine environment	68%	53%	12%	26%	22%	9%	11%	9%	26%
Law enforcement / fish wardens	39%	13%	76%	59%	78%	88%	63%	78%	62%

Municipality / Barangay (Village)	Municipality of Sta. Fe, Brgy Hilantagaan, Sitio Dakongbaybay	Municipality of Sta. Fe, Brgy Ocoy	Municipality of Sta. Fe, Brgy Kinatarkan, Sitio Langub	Municipality of Sta. Fe, Brgy Marikaban	Municipality of Sta. Fe, Brgy Kinatarkan, Sitio Bituon	Municipality of Bantayan, Brgy Poooc	Municipality of Ronda, Brgy Santa Cruz	Municipality of Inopacan, Brgy Mahaba	Total / Averages
<b>Question 9. What are the main problems facing your community?</b>									
Unemployment	26%	7%	12%	26%	13%	2%	19%	6%	14%
Financial problems	26%	7%	2%	17%	13%	22%	17%	23%	16%
Lack of water supply	6%		33%						5%
Illegal fishing activities	29%		19%	11%		10%	6%	6%	10%
Decreased fish catch	13%								2%
No income	6%					5%			1%
Things are getting expensive		13%		35%			21%		9%
Garbage / No proper waste disposal		7%		6%		10%			3%
Others		53%			17%	18%			11%
<b>Question 10. What are the possible solutions?</b>									
Offer jobs	13%								2%
Livelihood projects	3%	13%	8%	57%	15%	6%	22%	14%	17%
Create sustainable MPA	29%								4%
Law enforcement	45%	40%	26%	28%	10%	19%	8%	43%	27%
Community unity and cooperation	13%	13%	3%	14%		6%	3%		7%
Improve public utilities / water supply	6%							14%	3%
Implement Gov't programs		7%	54%		30%	44%	10%		18%
No comment / Others	6%	13%			25%			28%	9%
<b>Question 11. Are you involved in coastal management activities?</b>									
Yes	52%	93%	63%	48%	24%	70%	30%	63%	55%
No	39%	7%	37%	41%	53%	27%	51%	37%	37%
<b>Question 12. Respondents aware of an MPA in their Barangay (for barangays in which an MPA was previously established)</b>									
Yes				54%		69%	59%	74%	64%
No				7%		2%	14%	26%	12%
No comment				39%		28%	27%	0%	24%
<b>Question 13. Respondents understanding of how the reef and fish in the MPA have changed since being established</b>									
Conditions in the MPA have declined				12%		3%	13%	23%	13%
Conditions in the MPA have improved				69%		88%	44%	77%	70%
No change				19%		9%	6%	0%	9%
<b>Question 14. Are you actively involved in MPA support, management and/or other enforcement activities</b>									
Yes				86%		37%	25%	43%	48%
No				13%		41%	52%	57%	41%
No comment				0%		22%	22%	0%	11%
<b>Question 15. Respondents view on whether MPA enforcement should be improved?</b>									
Yes				52%		54%	54%	67%	57%
No				9%		20%	13%	33%	19%
No comment				39%		26%	33%	0%	25%
<b>Question 16. Respondents view on whether MPA size should be increased or have a new one set up</b>									
Yes				20%		37%	22%	54%	33%
No				28%		35%	43%	46%	38%
No comment				52%		28%	35%	0%	29%

Source: Coastal Dynamics Foundation, Inc., (www.cebudive.com), in cooperation with the local communities, Visayan Seas Squadron / School of the Seas, and DUCARE 2007 and 2008 with funding support provided by the U.S. NOAA under a 2006 Int. Coral Reef Conservation Program grant

**B. Summary Report of the Formal SocMon Training and Cross-Visit / Orientation Tour Program**

**E-mail Quote from Coral Cay Conservation Project, Southern Leyte, Philippines**

Subject: Many thanks!  
From: "Jan-Willem van Bochove" <jvb@coralcayconservation.com>  
Date: Tue, April 3, 2007 9:57 pm  
To: "Mike Ross" <mikeross@mozcom.com>  
Cc: lrcp@coralcayconservation.com

Dear Mike and Nora,

I wanted to extend my thanks for talking to the Padre Burgos MPA team and making their trip so worthwhile. Claudio sent me an event report and was very enthusiastic about the input and ideas that were provided by CDF. In addition, the trip to Gilutongan MPA was a highlight.

I hope it will iron out a lot of the issues we've been having in Burgos and contribute to a healthier reef system, increased financial benefits to the community and more fish for the fisherfolk!

You can't win all the battles but I definitely consider the Mactan visit a victory. Thanks so much for your continued support to our project and taking the time to answer out many questions.

Warm regards, Jan-Willem van Bochove, Senior Scientist  
Coral Cay Conservation, Southern Leyte Project, Philippines

**SOCMON Training and Survey Questionnaire:  
For Establishing New Marine Protected Areas (MPAs)**

Name of Surveyor: \_\_\_\_\_  
Name of Respondent (optional): \_\_\_\_\_ Respondent No. \_\_\_\_  
Address: \_\_\_\_\_ Barangay: \_\_\_\_\_ City/Municipality: \_\_\_\_\_  
Distance of house from shore in meters:  
(0 – 50 m): \_\_\_\_ (50 – 100 m): \_\_\_\_ (100 – 200 m): \_\_\_\_ (> 200 m): \_\_\_\_  
How long have you lived here: \_\_\_\_\_

**A. Socio-Economic Profile:**

Age: \_\_\_\_ Sex: ( ) Male ( ) Female Number of Children: \_\_\_\_  
Educational Attainment: ( ) did not complete Elementary ( ) Elementary ( ) High School  
( ) College ( ) Vocational

Occupation:

- Fisherman                       Fish vendor                       Hotel / resort employee
- Housewife                       Sari-sari store  Government employee
- Boatman                       Pumpboat operator                       Private firm employee
- Businessman  Others: please specify \_\_\_\_\_

**B. Social Awareness and Involvement**

1. Are you aware of the current condition of our coastal environment?  
 Yes                       No
  
2. How can you best describe the condition of your coastal environment?  
 Same as before  
 Better than before  
 Destroyed/damaged now  
 Don't know
  
3. What do you think are the causes of the destruction of our reefs?  
a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_
  
4. Are you actively involved in coastal management activities?  
 Yes                       No
  
5. Do you know what a "marine sanctuary" or "marine protected area (MPA)" is?  
 Yes                       No
  
6. What is your understanding of the purpose of a marine sanctuary or MPA?  
 Breeding ground of fishes and other marine organisms  
 Fish shelter / reserve  
 "No Fishing" area  
 "No Entry" area  
 Others, please specify \_\_\_\_\_
  
7. What do you think are the benefits of establishing a marine sanctuary?  
 Increase fish catch  
 Stop illegal fishing practices  
 Increase community/city revenues  
 Others, please specify \_\_\_\_\_
  
8. Are you willing to support the establishment of a marine sanctuary in your area?  
 Yes                       No
  
9. What is the best way of preventing the destruction of our reefs?  
 Alternative livelihood  
 Law enforcement / detail fish wardens  
 Information and education campaign about our marine environment  
 Others, please specify \_\_\_\_\_
  
10. What are the main problems of your community?  
a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_

- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

11. What are the possible solutions to these problems?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

**Thank you!**

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**SOCMON Training and Survey Questionnaire:  
For Assessing Already Established Marine Protected Areas (MPAs)**

Name of Surveyor: \_\_\_\_\_  
 Name of Respondent (optional): \_\_\_\_\_ Respondent No. \_\_\_\_  
 Address: \_\_\_\_\_ Barangay: \_\_\_\_\_ City/Municipality: \_\_\_\_\_  
 Distance of house from shore (gilay-on sa balay gikan sa baybayon) in meters:  
 (0 – 50 m): \_\_\_\_ (50 – 100 m): \_\_\_\_ (100 – 200 m): \_\_\_\_ (> 200 m): \_\_\_\_  
 How long have you lived here: \_\_\_\_\_

**A. Socio-Economic Profile:**

Age: \_\_\_\_ Sex: ( ) Male ( ) Female Number of Children: \_\_\_\_  
 Educational Attainment: ( ) did not complete Elementary ( ) Elementary ( ) High School  
 ( ) College ( ) Vocational  
 Occupation:  
 ( ) Fisherman ( ) Fish vendor ( ) Hotel / resort employee  
 ( ) Housewife ( ) Sari-sari store ( ) Government employee  
 ( ) Boatman ( ) Pumpboat operator ( ) Private firm employee  
 ( ) Businessman ( ) Others: please specify \_\_\_\_\_

**B. Social Awareness and Involvement**

1. Are you aware of the current condition of your coastal environment?  
 ( ) Yes ( ) No
2. How can you best describe the condition of your coastal environment?  
 ( ) Same as before  
 ( ) Better than before  
 ( ) Destroyed/damaged now  
 ( ) Don't know
3. What do you think are the causes of the destruction of your reefs?  
 e. \_\_\_\_\_  
 f. \_\_\_\_\_  
 g. \_\_\_\_\_

h. \_\_\_\_\_

- 4. What is the best way of preventing the destruction of our reefs?
  - Alternative livelihood
  - Law enforcement / detail fish wardens
  - Information and education campaign about our marine environment
  - Others, please specify \_\_\_\_\_

- 5. Are you actively involved in coastal resource management (CRM) activities?
  - Yes                       No

If yes, please describe how you are actively involved in CRM activities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- 6. Do you know what a “marine sanctuary” or “marine protected area (MPA)” is?
  - Yes                       No

- 7. What is your understanding of the purpose of an MPA?
  - Protected area to restore damaged / depleted reefs and other coastal habitats
  - Breeding ground of fishes and other marine organisms
  - Fish shelter / reserve
  - “No Fishing” area
  - “No Entry” area
  - Others, please specify \_\_\_\_\_

- 8. What do you think are the benefits of establishing an MPA?
  - Protect / restore / improve reefs and other coastal habitats
  - Increase fish catch
  - Stop illegal fishing practices
  - Increase community/city revenues
  - Others, please specify \_\_\_\_\_

- 9. Are you aware of any MPAs that have been established in your barangay?
  - Yes                       No

- 10. If yes to question # 8,
  - MPA #1
  - What is the name of this MPA? \_\_\_\_\_
  - Where is this MPA located at? \_\_\_\_\_
  - When was this MPA established? \_\_\_\_\_
  - What is the size of this MPA? \_\_\_\_\_
  - What types of activities are not allowed inside the MPA?
    - \_\_\_\_\_ No fishing                      \_\_\_\_\_ No gleaning
    - \_\_\_\_\_ No diving                      \_\_\_\_\_ No entry
    - \_\_\_\_\_ Other restrictions (please describe: \_\_\_\_\_)

- MPA #2
- What is the name of this MPA? \_\_\_\_\_
- Where is this MPA located at? \_\_\_\_\_
- When was this MPA established? \_\_\_\_\_
- What is the size of this MPA? \_\_\_\_\_
- What types of activities are not allowed inside the MPA?

- No fishing                       No gleaning
- No diving                         No entry
- Other restrictions (please describe: \_\_\_\_\_)

11. If yes to question #8, did you support the establishment of these MPA(s) in your barangay?  
 Yes                                       No

Please explain why you did or did not support the establishment of these MPA(s) in your barangay:

\_\_\_\_\_

\_\_\_\_\_

12. If yes to question #8, from what you have personally seen or heard from others, how have the reef and fish conditions in these MPA(s) changed since the MPA(s) were established?

- reef and fish conditions in the MPA have not changed since the MPA was established
- reef and fish conditions in the MPA have improved since the MPA was established
- reef and fish conditions in the MPA have declined since the MPA was established
- don't know

13. Are you actively involved in MPA support, management and/or enforcement activities?  
 Yes                                       No

14. Do you think that management and/or enforcement the MPA should be improved?  
 Yes                                       No

If yes, please describe how you think that MPA management and/or enforcement can be improved:

\_\_\_\_\_

\_\_\_\_\_

15. Do you think that the MPA area should be increased in size and/or new MPAs established in your Barangay?  
 Yes                                       No

If yes, why do you think that the MPA area should be increased in size and/or new MPAs established in your Barangay?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

16. What are the main problems of your community?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

17. What are the possible solutions to these problems?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

**Thank you!**

### C. Integration of SocMon Measures

A foundation of CDF's work are the annual 2-month long Durham University (UK) Coral Awareness and Research Expeditions (DUCARE) which have been conducted each year since 2004. The following is there their 5-year plan (2008 – 2012) which includes integration of SocMon measures:

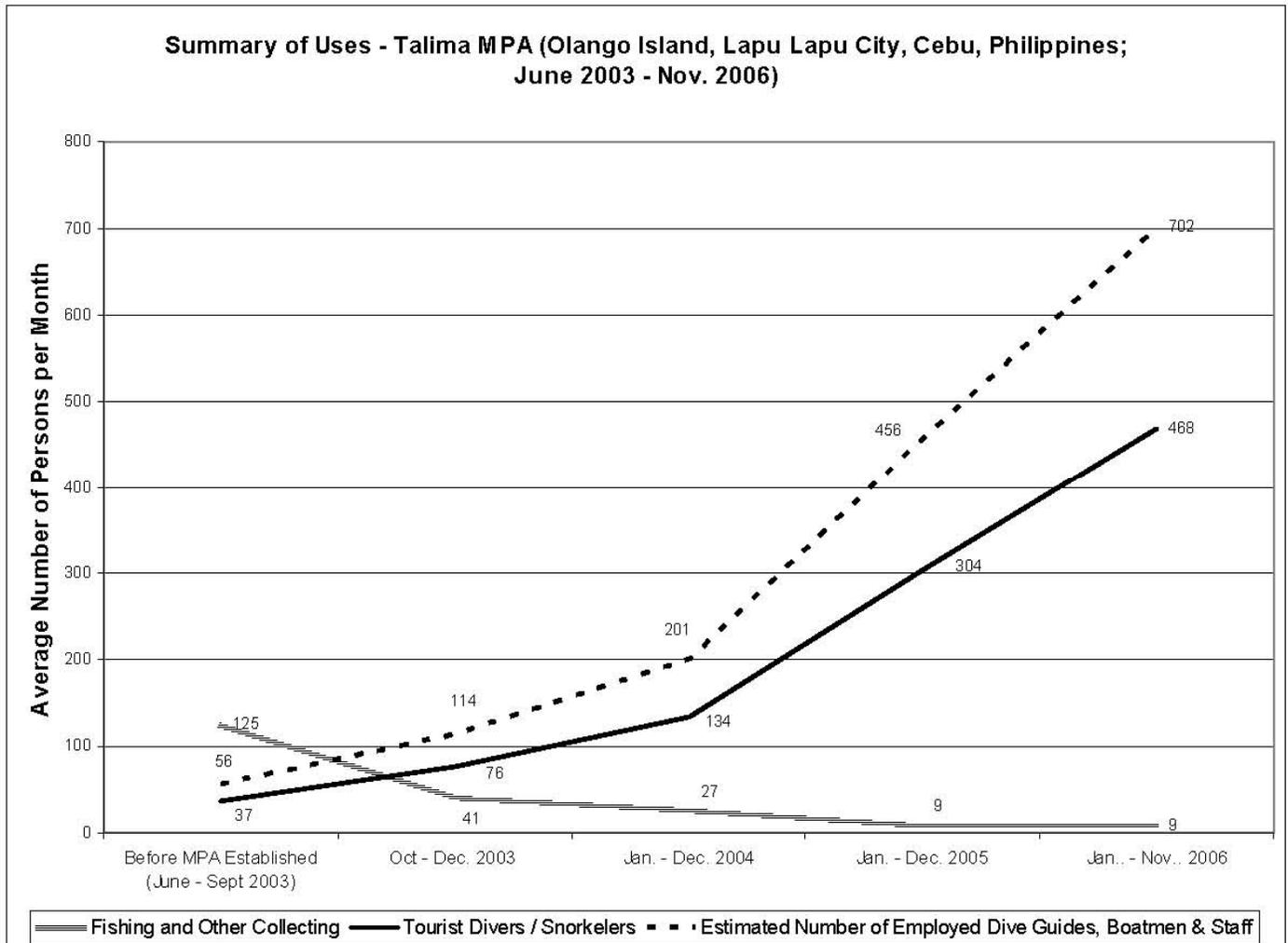
- Expand the application of SocMon surveys while improve the SocMon survey questions, in the Visayan language, to address both the establishment of new MPAs and the management of existing MPAs.
- Discontinue reef check surveys in Mactan, Panglao, Balicasag, Malapascua and Moalboal, as local communities are not receptive or supportive, and are unwilling to help them selves and as a result, the reefs and stakeholders are not benefiting from CDF and DUCARE's work.
- Concentrate effort on Himokilan Island (Quatro Islas), Bantayan and Ronda where we can make a big difference. Increase number of survey sites within these areas to get a far more detailed and accurate representation of the reef there. Aim to significantly improve / revive certain areas to make them model sites for other areas to copy in the future.
- Improve IEC: concentrating on particular high schools (Maribago, Himokilan, Bantayan and Ronda). Organize regular classes and teach a set curriculum including the hydrological and carbon cycle, coral reef science, conservation etc. Use a professionally made printed flip chart. Distribute workbooks with exercises etc, to be completed over the course of the program. Find a company to sponsor these costs. Establish a link for each school with a school in England. Take a group of students snorkeling to point out healthy reefs and threats / damage.
- Sponsors fish warden to protect MPAs, beginning with Himokilan Island. Pay selected individual to act as full time protectors of the reef and enforce the laws. The allocated salary should be sufficient to provide for their families (about P 5,000 per month).
- Provide target areas with patrol boats, flashlights, telescope and GPS for efficient coastal surveillance and protection.
- Once areas, such as Himokilan, have gained an excellent reputation, tourist divers could be permitted, but only with a trained local guide to ensure the divers do not remove anything from the reef, or harm it in any way.
- Alternative methods of income will be introduced to Island Communities such as mar making, and other jobs which make use of sustainable natural resources that are readily available. this will reduce the dependence upon the ocean for income. Link with large companies in UK, eg Harrods to sell products.
- Install more water tanks and improve solid waste management and trash disposal.
- Sponsor fishermen children through college (scholarships) to take them out of the seas.

- Create a festival day each year in all the target areas with games, talent shows and music with the aim of promoting Marine Conservation to the local communities.
- Make puppets from recycled materials and create emotive stories about protecting the seas and marine creatures to gain the interest of young children traveling around performing the puppet show, and enroll students from local schools to take part or make their own too.
- Create a drama radio show - broadcasting regular episodes, with the help of professional actors, with close reference to preserving the seas. This will reach many people and will promote marine conservation in a fun and enjoyable way.
- Make a link with another university either in the USA or England. This will be a good way of expanding the team size and raising the money independently of each other.
- Conduct coastal and barangay clean up days involving the whole community and school students ( linked with DENR ) to prove that a difference can be made with cooperation and persistence.
- Plant mangroves in the areas that need recover.
- Apply for sponsorship for needed equipment, such as projector, underwater camera, video camera, laptops, sound systems and etc.

In addition, SocMon measures have been incorporated into the program of work of the Visayan Sea Squadron and School of the Seas ([www.thelawofnature.org](http://www.thelawofnature.org)).

### D. Summary Report of Established Formal Measures to Improve Direct Economic Benefits

Support and active participation was provided during consultations and meetings to increase user fees by 100 % at the Gilutongan MPA and to rationalize the application of user fees at the Talima MPA. In addition to user fees, project documentation was provided to local stakeholders on the direct employment benefits generated by the improved condition and attraction of these MPAs, as measured in estimated number of employed dive guides, boat men and related staff serving the recorded number of MPA recreational divers.



## E. Summary Report of Extension Activities, Documentation and Website Postings

Project collaboration, survey methods, data results and/or assistance were provided to the:

- Philippines' Environmental Ombudsman, Philippine Department of Tourism, prominent government officials, European Union international students and local community leaders and members during "Sea Camp" programs held at the Bantayan Island "School of the Seas"
- NOAA (Christy Loper, SocMon coordinator, meta-analysis of SocMon data)
- Dr. Robert Pomeroy, MPA / SocMon expert, University of Connecticut
- WWF Washington DC Conservation Science Program (Annie Claus, Social Scientist)
- WWF Cambodia Coastal Marine Development and Management Project (Daniel Rasmussen and Bart Kluskens)
- Oliver Simon, PhD research studies, Thresher Shark Project ([www.web.mac.com/spoliver](http://www.web.mac.com/spoliver))
- Visayas State University, Leyte, Philippines (Zeny Cesar, Assistant Professor)
- Law of Nature Foundation / Visayan Sea Squadron ([www.thelawofnature.org](http://www.thelawofnature.org))
- Coral Cay Conservation and local government units of Southern Leyte (Philippines)
- Durham University (UK) Coral Awareness & Research Expedition (DUCARE 2007)
- Coastal communities and MPA sites in Quatro Islas, Leyte and 32 municipalities within the Visayan Sea Squadron project area
- USAID-funded / World Wildlife Fund-implemented Coastal Resource and Fisheries Conservation (CRFC) Project, central Philippines
- USAID-funded Sustainable Coastal Tourism in Asia (SCOTIA) / Philippines Project
- Cebu Jaycees International, Inc.
- Aceh Ocean Coral Foundation, Aceh, Indonesia ([www.acehoceancoral.org](http://www.acehoceancoral.org))
- World Wildlife Fund Conservation Science Program (Washington DC); Michael Mascia and Annie Claus, literature review of social impacts of MPAs in the world;
- BBC Earth Report documentary film "Death in the Visayan Sea";
- Dive-in to Earth Day 2007, in partnership with Gilutongan MPA, Cebu Jaycees Inc., Coral Reef Alliance (CORAL) and Project Aware
- Dalhousie University (Canada); Dr. Camilo Mora, Fishery Management Assessment Project
- Visayan Sea Squadron ([www.thelawofnature.org](http://www.thelawofnature.org)); compilation, summary analysis and website posting of results of 2006 reef assessment surveys for 32 central Philippine municipalities.
- Planning and conduct of MPA / SocMon orientation cross-visit by local government units of Southern Leyte (Philippines) and Coral Cay Conservation.
- BBC Earth Report documentary film "Death in the Visayan Sea" which was featured world-wide in May 2007 and focused on related coastal law enforcement and management issues.
- Fish Roving Survey of Cebu area lead by Dr. Kent Carpenter, Old Dominion University, VA, USA, which highlighted that the Cebu / central Philippines are part of the "center of the center" of global marine biodiversity.
- Served as external reviewer of NOAA FY 2007 SocMon project proposals.



## Project-related Media Publications

### Philippine Inquirer Newspaper

(posted date: June 05, 2007 by Mikhail V. Tsyganov,  
Chief of RIA Novosti Southeast Asian Bureau, Indonesia, corjkt@cbn.net.id)

#### *Visayan Sea gets boost from UK Reef Survey*

*Manila, Philippines -- The Central Visayas Sea will receive a boost in environmental protection when the UK-based Durham University Coral Awareness and Research Expedition 2007 (DU CARE 2007) enters the Visayan seas next month. DU CARE will resurvey all reef check sites in the Visayas Sea from previous years to assess the level of improvement or degradation in reef health. Scientists and students will pay particular attention to establishing new reef check sites, particularly in areas damaged by the recent oil spill in Guimaras Island, in order to assess the damage inflicted.*

*An important aspect of the project is awareness-building among local schools to educate students about the crucial importance of marine conservation for the fishing trade of future generations. Capabilities of local people will be enhanced in carrying out detailed anthropological surveys to gain local insights on existing sanctuaries and the extent of local knowledge of marine conservation.*

*To ensure sustainability from the start, DU CARE will involve local states and local executives. It will engage village captains, government officials, the Coast Guard, and the Bureau of Fisheries and Aquatic Resources in their initiatives. During these visits they will present the results of surveys and discuss methods already in place for preserving the seas, in addition to gathering suggestions for the future.*

*DU CARE 2007 combines specialist knowledge and expertise with NGO determination and grit. It is the fourth in a series of expeditions, which have been extremely successful. In just six months, spread over three years, marine sanctuaries have been installed in damaged areas, strong links have been established with the Coastal Dynamics Foundation (CDF) in Cebu, public awareness of sustainable fishery and conservation effects has increased significantly and a great improvement in the marine biodiversity of protected areas has been seen. The work of the CDF, including links with DU CARE, has been documented by BBC Earth Reports.*

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### **The Transect Line - September 2007 (Reef Check; [www.reefcheck.org](http://www.reefcheck.org))**

#### ***Reef Check Teams in Action: DUCARE and Reef Check team to establish coral reef health in the Philippines***

*In collaboration with multiple Philippine-based NGOs, the Coastal Dynamics Foundation, Durham University and the Royal Geographical Society, the DUCARE project led a successful expedition to the Visayan Sea region of the Philippines to establish coral reef health and possible strategies for the conservation of these reefs. Using a multi-faceted approach to gain as much information as possible, the two month expedition completed 76 Reef Check surveys as well as conducted multiple detailed anthropological studies and raised awareness of the importance of coral reefs and their conservation through numerous educational talks and presentations. Their successful expedition highlighted the importance of the reefs in this Visayan region, determined to be the epicenter of marine biodiversity.*



BOARD RESOLUTION NO. 03

Let it be known:

That the 2008 Board of Directors of JCI-CEBU Inc. signified its interest to continue its partnership with COASTAL DYNAMICS FOUNDATION: Buyong, Brgy. Maribago, Lapulapu City for the DUCARE-Reef Program for the year 2008 as approved during its 11<sup>th</sup> BOD Meeting held last March 13, 2008 at the JCI-CEBU Inc. Clubhouse in Lahug, Cebu City, Philippines.

This is in line with the organization's continued thrust and commitment to protect, preserve and enrich the environment as it continues to make its presence relevant to the Community of Cebu in particular and the World in general as a manifestation of its creed that "*Service to humanity is the best work of life.*"

This decision of the Board of Directors of JCI-CEBU Inc. will be in effect immediately after the signing of a Memorandum of Agreement outlining the roles & responsibilities of the two aforementioned parties and related activities of the program.

Signed this 18<sup>th</sup> day of March, year 2008 at the JCI-CEBU Inc. Clubhouse, Lahug, Cebu City, Philippines.

  
JCI Mem. Vincent Mangle  
Secretary General, JCI-CEBU Inc.

 03-13-08  
JCI Mem. F. Constantine Yu  
LOM President, JCI-CEBU Inc.