

Helen Reef and the Hatohobei Community: SEM-Pasifika Socioeconomic Assessment Report



Conducted and supported by National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program, Palau International Coral Reef Center (PICRC), and Helen Reef Resource Management Office (HRRMP)



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Cover photo: Logo of Helen Reef Resource Management Office

Photo credit: Helen Reef Resource Management Office

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1. MESSAGES



HATOHOBEL STATE GOVERNMENT OFFICE OF THE GOVERNOR

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Governor Thomas Patris
Hatohobei State, Republic of Palau

Message from the Governor

Over the past nine years the people of Hatohobei, State Government, and partners have initiated active management of the Reef including the creation of Helen Reef Management Project that has made significant progress to address its primary threats and is now successfully protecting the outstanding marine resources of Helen Reef. Effective management has been achieved through community-based monitoring, awareness, and enforcement programs.

Over the past years, the measure of success of the program has been based on the results of the annual biological monitoring showing the number of target species increased and the number of poachers decreased. Through these years, we wanted to do a socioeconomic survey to understand how the community of Hatohobei feels about how the Helen Reef program meets its objectives, as well as the implementation of resource management rules. Because of our lack of capacity in social evaluations and financial resources this process was delayed. At the end of year 2009, the generous support from the U.S. National Oceanic and Atmospheric Administration (NOAA) through its Pacific Island Marine Protected Area Community (PIMPAC), and its local partner the Palau International Coral Reef Center (PICRC) this was achieved. This survey is an evidence of the good work of the Helen Reef Resource Management Staff, and its leadership. With this, the Hatohobei State Government extends its utmost thank you to U.S. National Oceanic and Atmospheric Administration and PIMPAC for their support in training our staff and conducting this baseline survey for us to compare with future surveys. We also want to thank Palau International Coral Reef Center for coordinating it and making it happen. Lastly, I would like to thank all the state representatives and conservation officers who worked day and night to complete this survey. The Helen Reef Resource Management Team now stands ready to assist other communities needing this type of evaluation.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Thomas Patris'.

Thomas Patris
Governor of Hatohobei State



HELEN REEF RESOURCE MANAGEMENT BOARD HATOHOBEL STATE, REPUBLIC OF PALAU

MESSAGE FROM THE CHAIRMAN



**Delegate Wayne Andrew
Hatohobei State**

On behalf of the Helen Reef Resource Management Board, I would like to express our utmost thank you to U.S. National Oceanic and Atmospheric Administration and PIMPAC for their support in training our staff in Socioeconomic surveys and conducting this baseline survey for us to compare future surveys with. We also want to thank the Palau International Coral Reef Center especially Researcher Noelle Oldiais Wenty for coordinating it and for putting together this fantastic report. Lastly, we would like to thank all the state representatives who worked

day and night to complete this survey.

Socioeconomic surveys are very critical in the project cycle of any conservation projects, most especially for projects that have developed and are implementing their management plans. Socioeconomic surveys become your meter gauge for sites to measure their impacts and adapt their programs to continue to improve. This is what this survey has helped us do at the Helen Reef Resource Management Program. Now, the Helen Reef Resource Management Team stands ready to assist other communities needing this type of survey.

I hope this survey results can be helpful not just to the Helen Reef Program and the people of Hatohobei, but also to other communities that reaches this state in their project cycle life and can be as another example that they can learn from.

**Wayne Andrew
Chairman
Helen Reef Resource Management Board**

2. ACKNOWLEDGEMENTS

We wish to extend our thanks and gratitude to the community of Hatohobei for participating in the socioeconomic assessment survey as well as the Helen Reef Resource Management Office and its Board for their support. Our appreciation goes to the National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program for providing us the training opportunity. We would also like to acknowledge Palau International Coral Reef Center (PICRC) for taking the lead and supporting this socioeconomic training. Last but not least, we are very thankful for all the participants of the workshop who contributed all their efforts to ensure that this process was achieved.

3. EXECUTIVE SUMMARY

At 163 sq km in area and about 300 sq km away from the main islands of Palau, Helen Reef's marine resources are in need of protection. The Helen Reef Management Act was passed by the Hatohobei State Legislature in 2001 because of the depletion of resources in Helen Reef. The Act declared Helen Reef as a State Marine Protected Area and called for a creation of a Management Plan. However, a Draft Management Plan came out of an Action Plan which satisfied the requirements from the Act. The Plan consists of a Vision that states: "We the Hatohobei people envision our islands to have an abundance of natural resources, a pristine healthy environment, and our community and friends are engaged in the sustainable use and management, utilizing traditional and scientific knowledge of our natural resources for us all today and our children for the future" (Andrew *et al.*, 2009). To meet this Vision, six Goals were made which included (1) Biological, (2) Socioeconomic, (3) Program Management, (4) Financing, (5) Enforcement and Compliance, and (6) Education and Awareness. For each Goal, Objectives were identified to achieve the Goal that will help implement these Objectives.

Because it is important that the owners of Helen Reef (the Hatohobei people also known as Tobians) be part of the process and the decision making, a socioeconomic assessment can be very helpful. Assessing the perception of the people of Hatohobei can help identify whether the Vision, Goals, Objectives, and Activities of the Draft Management Plan are being met and whether the community supports the activities in the Management Plan. The perception of the people can also be monitored over the years for changes, which can also be used for adaptive management (Wongbusarakum and Pomeroy 2008). This document provides this socioeconomic assessment as baseline information that can be useful in the management plan for improvements and recommendations based on the perception of the people of Hatohobei.

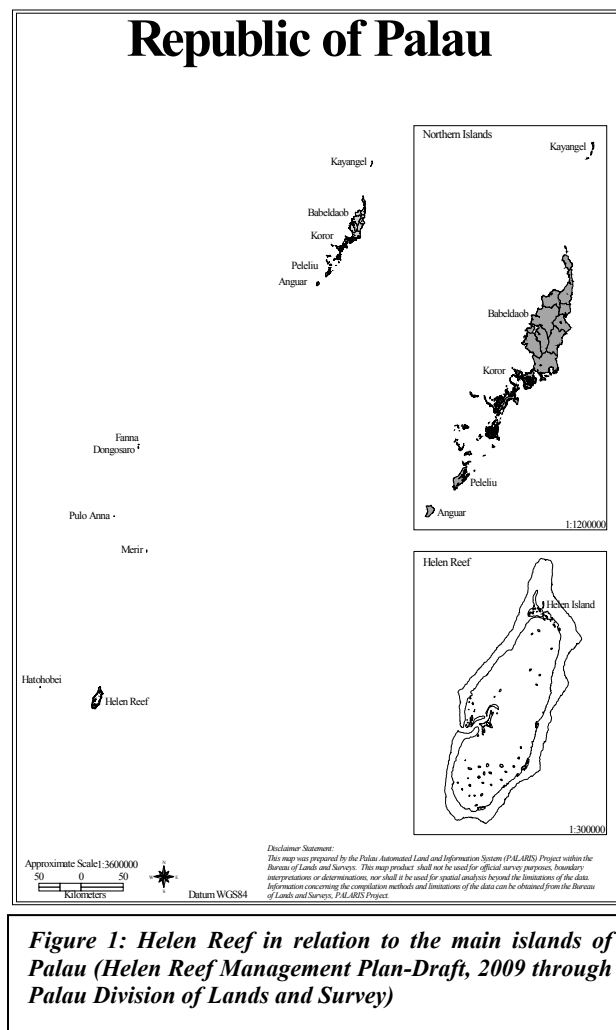
Through the help of NOAA, training was conducted for a socioeconomic assessment based on the SEM-Pasifika guidelines (Wongbusarakum and Pomeroy 2008). SEM-Pasifika is a set of a community based socioeconomic monitoring guidelines developed specifically for coastal managers in Pacific Island countries. Sixteen representatives from 10 State and Organizations in Palau joined this nine day training from November 16th-25th, 2009. Assessments and indicators were identified based on the objectives on the Draft Helen Reef Management Plan. Focus groups and key informant interviews helped with the designing of the household survey questions which was done by census. Data input and analysis came after and the results were reported back to the Board of the Helen Reef Project after the training. Out of the total 103 community members of Tobians in Echang village in Koror State including a few outside of the Echang community, 97 people took the survey. The survey showed that 70% of the community members lived in Helen Reef or Tobi Island as a child while 73% have not visited either of the islands in

the past 5 years. However, 92% would like to visit Helen Reef more often if there were more frequent and reliable transportation. The survey identified illegal fishing or poaching as the main threat at Helen reef according to the people. The rules and regulations of Helen Reef are supported by the overall majority of the people (79%); however there are some who think that there should be some clarification of the terms used in the rules and regulations as well as amendments such as making the rules more strict. According to the survey, 60% of the community members feel that the establishment of the “no take” area at Helen Reef has led to more fish; however, 58% of the community feels that there is still not enough enforcement in Helen Reef. While most of the community members have been or are involved in the Helen Reef Project, an even greater percentage of the community would like to be more involved in the Project whether it’s through meetings, volunteering in activities, workshops or being on staff. Some of the improvements that need to be considered include involving the community more in the management of Helen Reef, increasing awareness and education of the Helen Reef Project and its activities and regulations, providing more enforcement at Helen Reef, and improving transportation to Helen Reef.

4. INTRODUCTION

Helen Reef is located in the Southwest of Palau and is a “large enclosed atoll with extensive reef flats, a large channel complex, and a small island that is an important sea turtle nesting site and an over-flight refuge and nesting site for several species of seabirds” (Andrew *et al.*, 2009). With a total area of 163 square kilometers, Helen Reef, locally called “Hotsarihie”, is roughly two-thirds the size of Palau’s largest island of Babeldaob. Its ecosystem is one of the most outstanding in the Pacific in terms of biodiversity.

Helen Reef is traditionally owned by the Hatohobei community which is represented by Hatohobei (also known as Tobi) State. Hatohobei is one of Palau’s smallest states in which over the years, the people have left Hatohobei Island and Helen Reef to look for economic opportunities and other benefits of a more developed society in the main islands of Palau, primarily in the State of Koror where they settled in a village called Echang. Today, the Tobian people can only visit their islands and reefs however, the resources in their islands continues to serve as important factors to and for the people of Hatohobei. The Tobians have historically relied on the rich marine resources at Helen Reef, and this ecosystem remains an important cultural, subsistence, and economic source for the Tobians today.



In recent decades however, Helen Reef has also become the target of foreign fishing vessels in search of valuable marine commodities. Pillaged by numerous fishermen from countries nearby (e.g., the Philippines and Indonesia) and distant (e.g., Taiwan and Korea) and impacted by unsustainable locally-driven harvesting, some of Helen Reef's key resources and habitats have been over exploited or harmed to the point where wide-scale damage is evident.

The resources have been depleted according to the testimony of the people of Hatohebi and a biological survey done in 2000. In 2001, the State Legislature of Hatohebi State passed the Helen Reef Management Act declaring Helen Reef a State Marine Managed Area. The Helen Reef Management Project was then created and is responsible for overseeing the management and all other related activities. The Project drafted a Management Plan with a vision for the people of Hatohebi be able to envision their islands to have an abundance of natural resources, a pristine healthy environment, and their community and friends be engaged in the sustainable use and management, utilizing traditional and scientific knowledge of their natural resources for them all today and their children in the future (Andrew *et al.*, 2009). To meet this Vision, six goals were created which include (1) Biological, (2) Socioeconomic, (3) Program Management, (4) Financing, (5) Enforcement and Compliance and (6) Education and Awareness Goals. The Project requested that a socioeconomic assessment be done to ensure that they are meeting their goals and objectives as well as see how the perspective of the people have on the work that is being done for Helen Reef. With the assessment as a baseline, the draft Management Plan can be adjusted, if needed, before it is finalized.

5. ASSESSEMENT OBJECTIVES

The socioeconomic assessment was conducted to be used as a baseline to help the Board of the Helen Reef Project with adopting its long-term management goals and objectives for Helen Reef. The assessment of the Helen Reef began with looking at the current management plan (draft). Based on the management objectives in the plan, the assessment group developed a set of objectives for the socioeconomic assessment, listed below.

- Collect basic demographic information (including income and occupation)
- Determine frequency of access to and use of Helen Reef (including frequency of trips and activities while there)
- Determine the community members' long term vision for Helen Reef (including interest and feasibility of moving back)
- Identify perceived threats to Helen Reef
- Understand awareness and knowledge of management activities
- Determine perceived changes in resource since new rules in place
- Determine perceived level of enforcement
- Determine community satisfaction with management (support for process and level of agreement with rules)
- Collect information about how can management be improved

6. METHODOLOGY

Once the socioeconomic objectives were determined using the SEM-Pasifika Guidelines, socioeconomic indicators were selected which can be found on Appendix 5. With these, questions were designed for four key informants and three focus groups (Appendix 1). These key informants and focus groups are experienced and knowledgeable people who can provide common insight and information for the groups of Tobians. With this information collected, the next step was to design the questionnaire for the household survey in English and later was translated into Palauan. It was then pre-tested, revised and pre-tested once more. The final survey is provided in Appendix 2.

The survey was conducted as a census in which the assessment team attempted to interview every community member that was 18 years or older and was able to interview 97 out of 103 community members. The majority of the household survey was done in the Echang community in the state of Koror and some at workplace and other areas outside of Echang such as parts of Koror and Babeldaob. Five survey teams with at least 2 members were each given an area of Echang community to survey and later on volunteered members surveyed the rest of the Tobians that were living outside of Echang. Data entry was the next step which was done by having each group enter the data from their own areas that were surveyed themselves, which helped with data confidentiality. Following this was the data analysis and communicating and reporting the results.

7. RESULTS

The findings of the socioeconomic assessment are based on the 97 out of the 103 total population of Tobians that took the survey that were over the age of 18. Full summary statistics for all questions are available in Appendix 3.

Based on the survey, the average age of the Echang community is 39 with a little over 50% male and 60% married. The types of occupations range from being a housewife to working for the government (Table 1) with 72% earning their income through their jobs (Table 2).

Table 1: Occupations of the Tobi community

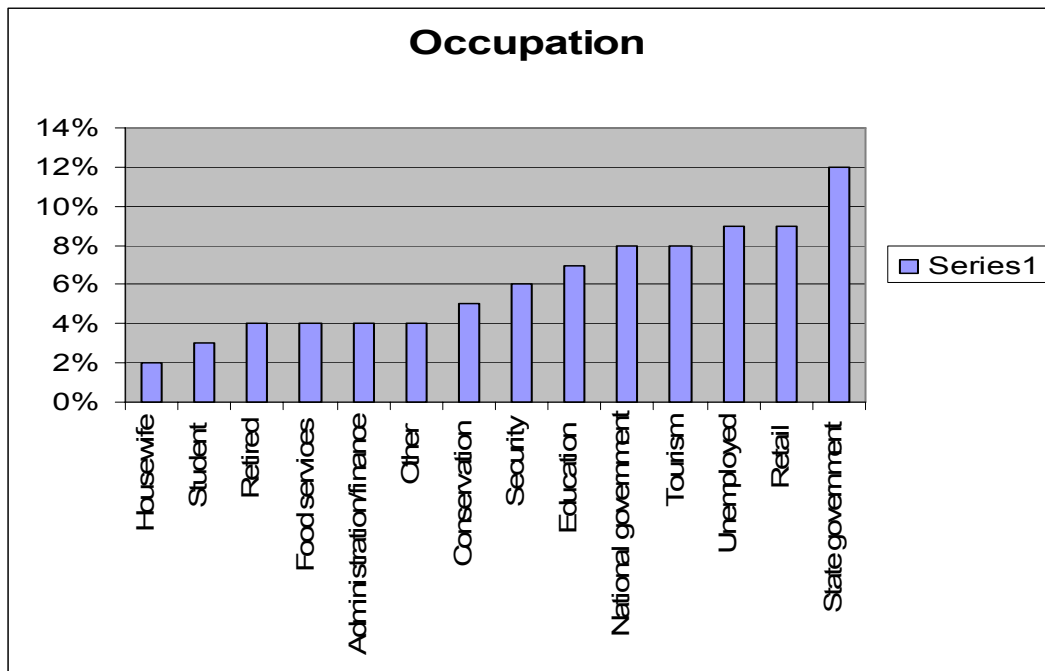
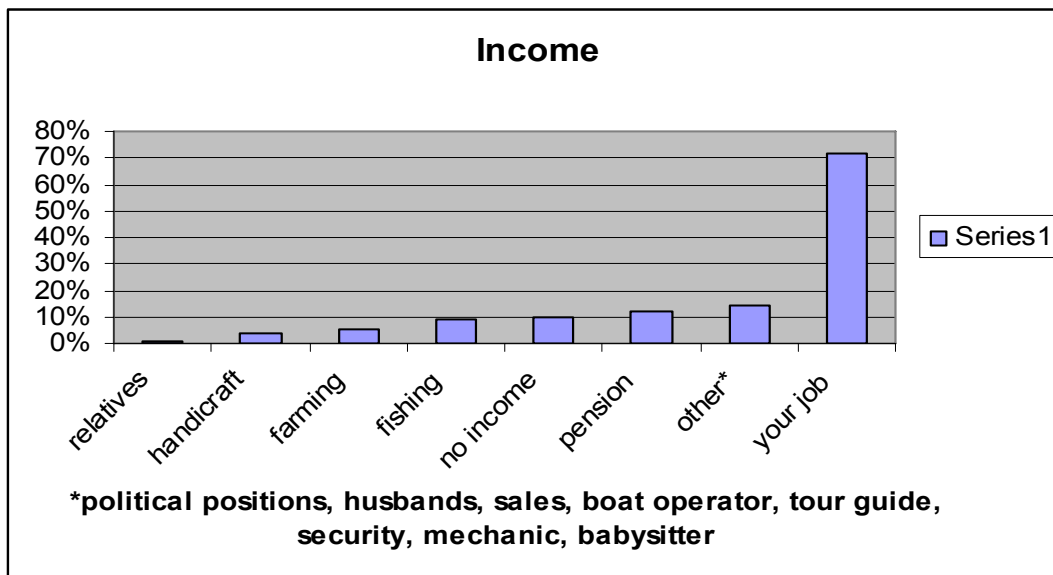


Table 2: Income



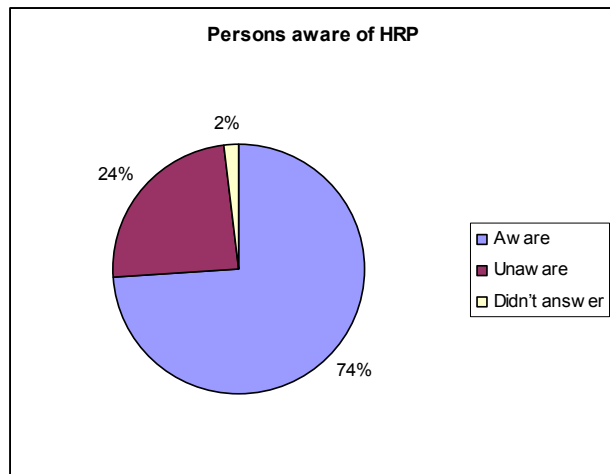
Although only 70% of the population lived in Tobi or Helen Reef as a child, 81% would like to move back to Tobi or Helen Reef. 92% would like to be able to visit Helen Reef more often if there were more frequent and reliable transportation available. The major threats to Helen Reef that they identified were illegal fishing, poaching, and commercial fishing. Even though 60% say that the establishment of a “no” take area at Helen Reef has led to more fish and other marine resources, 58% still say that there is not enough enforcement. However, we first had to know the level of awareness and knowledge of activities and the rules and regulations of Helen Reef among the people.

8. DISCUSSION

Measuring the awareness of allowable activities and rules and regulations are very important indicators that can help determine how much understanding and knowledge the people have towards the management of Helen Reef. The first awareness question was asked about Helen Reef Project (HRP) and 24% of the people who took the survey said that they were not aware and 74% were aware of the Project (Graph 1) and this may be because of issue of name recognition of the Project.

The second question was regarding the Project establishing a “no take” area, a “take” area, and enforcement program. The result showed that 89% knew about these management programs and only 10% did not know of these programs (Graph 2). The next question was intended to test knowledge of the regulations under the draft Management Plan and asked respondents which activities are allowed in both the “no take” area and the “take” area. The results to this question are presented in Table 3.

Graph 1: Persons aware of HRP



Graph 2: Persons aware of HRP management

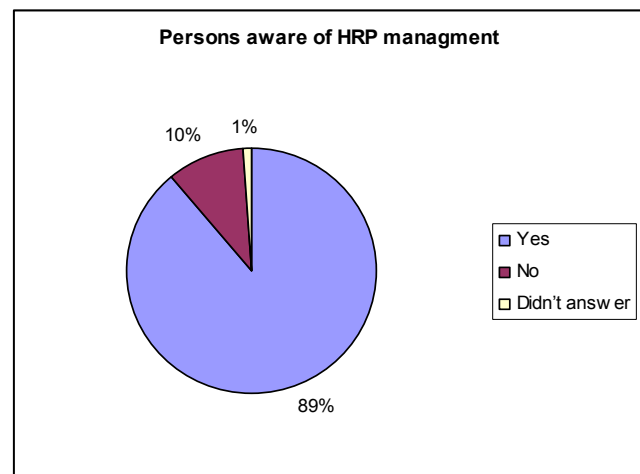


Table 3: Knowledge of activities in “no take” area and “take” area. .

<u>NO TAKE AREA</u>	Not Allowed	Allowed	Don't Know
Scuba Diving	45%	42%	12%
Harvesting Turtles	82%	6%	10%
Commercial Fishing	93%	2%	5%
Subsistence Fishing	65%	23%	12%
Taking Bird Eggs	82%	9%	8%
<u>TAKE AREA</u>			
Scuba Diving	23%	66%	11%
Harvesting Turtles	13%	78%	8%
Commercial Fishing	48%	41%	10%
Subsistence Fishing	6%	89%	5%
Taking Bird Eggs	38%	49%	11%

The next question was about community support for rules and regulations of Helen Reef. Tables 4a and 4b show the results of how much people support specific rules versus what they see in the future. However, it is not enough to be aware of the rules and regulations. The curiosity is the level of understanding that the people have of the regulations. With over 90% approval, the “no take” area is highly supported by the people of Hatohebei. There may be some confusion as far as activities that may take place, such as scuba diving, but the community is aware of the general rules and regulations. The same could be said about the “take” area, except that the confusion would be whether they are allowed to take bird eggs and the uncertainty of whether commercial fishing is allowed in the take area.

The reasons for these confusions could be that either the people of Hatohebei are not fully aware of the rules, regulations and activities of Helen Reef or the question may have been misinterpreted because the way the questionnaire was designed it caused some misunderstanding. This may have led some people

to answer wrongly without knowing. Regardless, there should be more educational and awareness programs to help the people understand fully of the rules and regulations as well as the different activities that are allowed on the different areas of Helen Reef as well as the rules and regulations that apply.

Table 4a: Attitudes toward Helen Reef rules

Rules and regulations	Support	Don't Support	Neutral	Don't Know
No Commercial Fishing	77%	5%	5%	12%
Harvesting 5 Turtles Per Year	71%	22%	4%	3%
Monetary Fines for Violation	92%	3%	3%	2%
500 Lbs. of fish per state event	78%	14%	3%	4%
72 quartz of fish per person per trip	67%	25%	5%	2%
No-take area	96%	2%	2%	0%
No Net fishing	72%	21%	3%	3%
Fishing activities must be approved by the Helen Reef Board	77%	14%	2%	5%

VS.

Table 4b: What do you see in the future?

Statements	Agree	Don't agree	IDK/Neutral
a. more fish in reef	97%	1%	2%
b. more access	95%	3%	1%
c. less restrictions	57%	31%	12%
d. more Tobians	95%	3%	2%
e. more tourism	79%	6%	14%
f. more fish for families	58%	24%	17%

According to the survey, 60% of the people feel that the establishment of the “no take” area of Helen Reef led to more fish and 97% agreed that in the future they want to see more fish in the reef (Table 4b). This shows how much the people of Hatohebei depend on the management of Helen Reef to continue to preserve the fish of Helen Reef for the future.

9. RECOMENDATIONS AND CONCLUSION

The people of Hatohobei that were surveyed in Echang and parts of Koror and Babeldaob were asked about their involvement and interested in the Helen Reef Project. 86% of them said that they are or have been involved in the management whether it was through meetings/discussions, volunteering in activities such as surveying or monitoring, workshops/trainings, or have been board members or project staff. However, 87% indicated that they are interested in being more involved in the management of Helen Reef Project. There is a great interest of the people with the management and therefore suggestions for improvements were also made for the management of Helen Reef Project.

An open ended question was asked, “Do you have any suggestions for improving the management of Helen Reef?” The following results are from that question, in which respondents came up with their own answers without being prompted by the survey team. According to the total number of people who surveyed, 24% suggested that the on-site management need to be improved especially when it is 300 miles away. Because 58% of the people feel that there is not enough enforcement, more efforts should be made such as hiring more conservation officers to control the threats that Helen Reef faces as well as providing more equipments such as buoys, radars, and patrol boats. With this, financing should be stabilized which was suggested by 7% of the total number of Tobians who were surveyed. Some also suggested that Helen Reef Project need to improve on community outreach which totaled to 8% and 7% on improvement of transportation to and from Helen Reef or Tobi. Having an airport, hospital, and school there are other suggestions that may lead to more people moving back to utilize the resources as well as introducing tourism to generate income but at the same time, maintain the health of the reef. Also, more equitable sharing of the resources among the community is important which 7% of the surveyed Tobians suggested. Good leaders are needed to make sure that the Project is being pushed through and that there is a good communication and coordination as well as management transparency and accountability. Involvement of the national government and outside consultants can also be useful.

In conclusion, good work needs to be continued however, there is always room for more improvement. Awareness and education of the Project and its activities and regulations as well as improvement with enforcement are the important factors that the management should work on. With this socioeconomic assessment as a baseline to help with adaptive management, socioeconomic monitoring can now follow to measure the changes of the Tobians’ perceptions over time and help identify whether the management is meeting it’s objectives. The resources belong to the Tobian people and their perception is very important to the management of Helen Reef.

10. LESSONS LEARNED

Here are some preliminary thoughts to be noted about this socioeconomic assessment that was done for Helen Reef and the Tobian community.

What went well?	What didn't go well?	Lessons learned	Recommendations
Good cooperation with community and Project	Not having enough information about the community and the Project	Have a better understanding of the HR Management Plan and other helpful information such as using old name for Helen Reef, "Hotsarihie"	Gather information for survey ahead of time
Good cooperation with team members	There was little time for translating the survey questions	Need more time and understanding for translation	Make sure a lot of time is put aside for translation of questions
Good cooperation with community	Issues with the survey questionnaire	Understand what the questions mean	Need more time to design structure of survey questionnaire and understand them
Cooperation and team work was good	Issues with how to conduct an interview	Learn how to conduct surveys such as approaching people and following steps	Be patient with interviews and be sure to follow steps
Cooperation and team work was good	Issues with participants who were intimately involved in the community so they did not assess	Have good number of participants that can go out to assess and at the same time have some who are involved in the community be used as guides	Organize participants and assign responsibilities ahead of time
Good cooperation and team work	Tendency to include one's own perspective to the survey data when analyzing.	Learn to be unbiased during the assessment	Resist on including owns perspective
Good cooperation with community an Project		Learned that the results are related with biological results and may provide effective implementation of management over time	

11. INTELLECTUAL PROPERTY RIGHTS

This report is the property of Helen Reef Management Project and the data itself is sensitive and should not be shared without the permission from the Helen Reef Management Project. However the summary results are not sensitive and can be included in this final report. The hard copies of the surveys will be kept with Palau International Coral Reef Center for confidentiality.

12. COMMUNICATION STRATEGY

Target Audience	Key Findings of Interest	Appropriate Communication Approach	Appropriate Tool	Timeline
Community	<ul style="list-style-type: none"> 60% of community members think resources have increased as result of management actions 56% feel that there is not enough enforcement- we need rangers (opportunity for employment) 96% of Tobians who were surveyed support “No” take area rule 	<ul style="list-style-type: none"> 2-way communication 	<ul style="list-style-type: none"> Presentation Rangers Sharing experience Meetings and discussions 	<ul style="list-style-type: none"> Within 2 months after survey is completed
Potential granting agencies	<ul style="list-style-type: none"> Community awareness and support Effective management of resources Demographics Partner agencies Existing services and infrastructure at Tobi and Helen Reef Movement of people to and from Helen Reef and Tobi 	<ul style="list-style-type: none"> 1-way and 2-way communication 	<ul style="list-style-type: none"> Written report including visual aids and statistics PowerPoint presentations in conferences/ meetings/discussions Site visits Emails 	<ul style="list-style-type: none"> Pre-planning phase of assessment to post assessment and effective implementation program to improve management
HR Management Board	<ul style="list-style-type: none"> Perception on less restrictions of fishing Tourism in Helen reef Threats to environment Awareness of project/activities/regulation Level of support of work being done by HRP Level of access to resources Whether HRP doing a good job Knowledge of CCA State or private organization Suggestions of improvement of management 	<ul style="list-style-type: none"> 1-way and 2-way communication 	<ul style="list-style-type: none"> Written report Power Point Presentation Meetings and discussions 	<ul style="list-style-type: none"> One month: written report

13. REFERENCES

Andrew, W., Atkinson, S., Guilbeauz, M., and Wong, A (2009). The Helen Reef Management Plan (draft). Palau.

Wongbusarakum, S. and Pomeroy, R. (2008). SEM-Pasifika Socioeconomic Monitoring Guidelines for Coastal Mangers in Pacific Island Countries. Secretariat of the Pacific Regional Environment Programme.

14. APPENDICES

Appendix 1: Key informant and focus group interview questions and results

Appendix 2: Copy of the household survey

Appendix 3: Basic statistics for ALL survey questions

Appendix 4: Team members and affiliations

Appendix 5: Indicators

Appendix 1: Key informant and focus group interview questions and results

GROUP 1

Umai, Bradley, Verano, Japson
November 17, 2009 at Helen Reef Office

Key informant interview with KIG1

Interviewer: Umai

Q1: What is your long term vision (20 years) for Helen Reef? Resources have increased, what can KIG1 do to keep it that way? What HR means to KIG1 and KIG1's people?

A: KIG1 starts with a history of his childhood in Helen's Reef. KIG1 tells a story of clams shooting water into the air when it is low tide. KIG1 then continues with other stories of his childhood in Helen's Reef. KIG1 then tells the interviewer that he wants Helen Reef to be the stage like when he remembered in his childhood.

The KIG1 continues with his talk, and eventually answered Question 2, which was,

Q2: What is the greatest threat to the viability of Helen's Reef? What are ways his administration could address those threats?

A: KIG1 then continues with events that led the State Government to designate Helen's Reef as an MPA. Events mentioned were of neighboring international island country fishermen such as Taiwan, the Philippines, and Indonesia. KIG1 mentioned of the illegal harvesting, and practices that were used that were harmful to the marine ecological system in Helen's Reef.

Focus Group Interview with FGG1: Women's Group Association of Tobi

Interviewer: Verano

Q1: Do you know about the rules and regulations?

A: FG1a starts with a no.

FG1b then says as a member of the community, she knows about the rules and regulations. She is unsure of the level of involvement the Women's association has with the rules and regulations.

FG1c agrees and says as a State employee, she is aware.

FG1d and FG1e also agrees and says they are aware.

Verrano then asks question 2.

Q2: Have the rules and regulations affected their lives?

A: All agree that the rules and regulations have not affected their lives because they are here in Koror, and Helen Reef is over three hundred miles away.

Verrano then asks question 3.

Q3: Have they changed the way you practice your culture?

A: All agree that the rules and regulations have not changed the way they practice their culture because again it is over three hundred miles away.

Verrano then asks question 4.

Q4: Could women be officers on Helen Reef as well?

A: All agreed that there should be female marine officers. All commented that if there are female military personnel in Iraq and Afghanistan, why not in Helen's Reef?

Follow up: Bradley then comments, there were officers in Helen's Reef. The Women's Group corrected Bradley saying that the ladies mentioned actually went through training, but were not eventually hired by the Helen Reef Project due to fundings.

Verrano then thanks the Women's Association members and asks if they wanted to add anything. The women's group asks, how long will this conservation project take place? When can the community benefit from all this conservation? Also wants to point out that even there are rules and regulations, for eg. You may fish up to 500 lbs of fish per trip. Not everyone may benefit from this due to lack of visitations to Helen's Reef. Even if there are trips to the Helen's Reef, not everyone can go.

GROUP II

Renguul, King, Ngiracheues, Elwaise
November 17, 2009 at Helen Reef Office

Key informant interview with KI2a

Interviewer: Renguul

Please talk about the existing community infrastructure and technology (school, medicine, etc.) on Hatohobei?

There is no school in Hatohobei because there aren't enough people, and the dispensary is closed because there is no one to staff it.

Do you think that these services will be in use in the future?

Yes. KI2a hopes that the governor can find funding to support the school, dispensary and other essential services.

Please talk about the coastal and marine goods and services for both Hatohobei and Helen Reef (Sale of trochus, aquaculture, etc)?

In the past there was plenty of trochus but besides the state government, she doesn't feel like the community has really benefited from it.

What do you think is the perception of the community towards the management credibility for the Helen Reef Project?

K12a wonders how many years will it be before they can see the benefits of the project. K12a believes that a part of the reef should be opened for people to fish while the rest becomes a conservation area. She feels that there is less poaching because of the presence of conservation officers at Helen Reef. The work being done with the Helen Reef Project is for our benefit so the planners should communicate the process and results to community which will be a good opportunity for us to see the changes.

Key informant interview with KI2b

Interviewer: King

Please talk about the existing community infrastructure and technology (schools, and medicine) on Hatohobei:

Background comments before answering the questions: A concept began to look into creating a conservation area at Helen Reef because of a survey that was conducted in 1992 that showed a decline of clams and other marine resources, because of poaching and other reasons. Their vision was to conserve the resources at Helen Reef and ensure healthy marine ecosystem. As such, they began by establishing an enforcement component with the conservation officers.

Hatohobei lacks a school and dispensary. An airport would make things much easier for them. KI2b sees aquaculture, particularly with pearls, as one example that could be done in the area as a means of income. He sees enforcement as an issue because of the length of time that the conservation officers are based in Helen Reef. However, due in part by the establishment of conservation officers, they have seen a comeback of marine life.

What do you think is the perception of the community towards the management credibility for the Helen Reef Project?

KI2b says that the community is generally making an effort to support the work being done. There were also meetings with community members who envisioned the creation of the first organization (Helen Reef Project?)

Focus group interview with FGG2: Helen Reef Management Board

Interviewer: Ngiracheues

Please talk about the marine resources for both Hatohobei and Helen Reef:

Hatohobei doesn't have any issues with their resources because people live there and are able to see if any poachers approach the area. Helen Reef is more vulnerable because of its location and the lack of people on the island. Monitoring also showed that the trochus, fish and other marine resources were in decline. FGG2 has identified the resources that they determined could generate revenue and began monitoring them and have seen an increase ever since.

What are your thoughts about the services available at Hatohobei and Helen Reef?

Transportation is a primary issue for the movement of people to and from the Hatohobei and Helen Reef.

In terms of commercial fishing, poaching and other outside use, how effective is the management strategy in addressing these issues?

They are able to deter poaching and monitor commercial fishing. However, other outside use is a weakness in the strategy. A lack of awareness may be a factor for partners who do not comply with the regulations. Although the strategy is there, the enforcement needs to be improved.

Please talk about the frequency of access to and use of Helen Reef including trips and activities while there:

Every year, there are four trips guaranteed by the government. Any additional trips are made possible by funding for monitoring and other purposes. They want to have more access, perhaps one trip per month.

Most of the time, it will be difficult for the people of Hatohobei to access the resources of Helen Reef. This is because many of them get off at Hatohobei, a stop that's made before reaching Helen Reef. The resources available at Helen Reef could be brought to the people at state functions and other events that present opportunities to distribute such.

Are there partnerships with local NGOs and other agencies and are they effective?

CCN, Natural Equity, NOAA, PCS, PICRC and the Ministry of Justice have been partners, each providing support and assistance for the various needs of our organization. The community is also in support of the project.

GROUP III

Tracey, Felisa, Isao, Alson, Claire, Noelle
November 17, 2009 at Helen Reef Office

Key Informant Interview with KIG3

Interviewer: Alson

1. What are the alternative and supplementary livelihoods?
Fishing, farming, marketing
2. What are the resource conflicts in HR?
 - no conflicts but later on KIG3 mentioned poachers from Philippines and Indonesia
3. How management of HR can be improved?
 - by awareness and education of community about management
 - a lot of people know about HR through meetings
4. Are you satisfied with current management?
 - yes
5. Opportunities to improve?
 - people be able to go down and fish and do marketing

-leaders can look into marketing in HR or other alternate source of income

6. What are the number of visitors visiting HR and Tobi island?
 - depends on number of field trips
 - 2 trips/year→ about 20-30 visitors per year
7. What activities are stakeholders participating in HR?
 - monitoring, survey, assist in surveillance
8. What is your vision of HR?
 - airport, bungalows, tourism (diving)
 - reef itself: replenish resources (fish, reef)
9. Are there changes you would like to see in the management of HR?
 - Not now

Focus group interview with FGG3: Youth Group

Interviewer: Noelle

1. Number of people going to Tobi and HR? How many people want to be able to go to (visit/live) Tobi/HR?
 - all participants have never visited Tobi/HR
 - 30 some people went for educational summer program (camp) this year
 - 50 or so go every winter break before (when trips were often)
 - They would go back if there is reliable transportation
2. What is your long term vision (10-20 years) for HR?
 - more workers/rangers
 - rotation of workers/rangers
 - more supplies available
 - want an airport
 - stop illegal fishing
 - one guy had no vision
 - healthy marine environment
 - tourism and marketing of marine resources (sustainable use)
 - have open and close seasons for marine resources
3. What services would you like to see in Tobi to move back?
 - hospital
 - school
 - airport
 - reliable transportation
 - employment opportunities

4. Are there any changes you would like to see in the management of HR? if yes, what are they?
 - more enforcement
 - more workers
5. What resources are inside of HR?
 - turtle
 - trochus
 - clams
 - fish
6. What activities would you do in HR?
 - fishing
 - collecting trochus
 - handicraft (shells, fishing lines)
 - diving
 - snorkeling
7. Are they benefiting from HR?
 - yes, for future generation

Appendix 2: Copy of the household survey

Palau Helen Reef Community Survey

November 19, 2009

Survey Draft 7

FINAL- 9:30 am 11/20/09

Team # (circle): 1a/ 1b/ 2a/ 2c/ 3b

Interviewer_____

Recorder_____

Survey # _____

Hello, good {morning/afternoon/evening} my name is ____ and this is/are _____. I hope you were informed about our visit to your community to do a socio-economic study about Helen Reef. We would like to ask some questions about what you think of Helen Reef. This information is confidential and if you come across any questions that you do not wish to answer, then it is fine. This survey will take about 30 minutes to answer. Would you be willing to answer some questions?

Alii, ungil {tutau/ochedechosong/lilta sils/kebsengei}. E ngak a ngklek a _____ e ngkal/tirkal lobengkek a _____. E kemam a ngar tial kirel a omesubel a Helen Reef (e kom cha mla remenges el kirel). Ng somam el loker a uldesuem el kirel a Helen Reef e aikal information er kau a confidential e aleskum eng morngii a diak el soam el longer er ngii eng kmal di ungil. Tial survey a di okedei el bung. Ke kongei el mo onger a ikal ker?

First I'm going to ask about you. Kot eak mo oker a ker el kirem.

1. May I ask your age? Ng sebechek el loker er a rekim
2. [Record sex] M / F
3. Are you married? Ke bechiil? Y / N
4. What is your occupation? Ngera urerem?
5. What are **your** sources of income? I will read a list of income sources, please say yes or no for each one. Ngar ngii a kuk ngodech el kerrekerngem? *(note to interviewer: this is sources from interviewee only not their family)*
 - a. Your job urelem
 - b. Fishing Ke er a chei/omenged
 - c. Farming Ke nga er a sers
 - d. from relatives overseas nges el udoud el nga er a ikrel a Belau el mei
 - e. handicrafts Klalo el mekedmokl er a chim (story board, oruikl, olbiungel)
 - f. pension/ social security
 - g. no income diak a kerrekerek
 - h. other Nga er ngii a ngodech _____

6. What is your highest level of education completed? Ngera sel kot el ngarbab el skuul el omtilobed er ngii?
(interviewer read choices and circle one)

less than elementary

nga er riou er a elementary

elementary

elementary

high school

high school

college

daingak

Next I'll ask about your experiences with Helen Reef and ideas for the future. Elechang eak mo oker er a klaumedengei er kau me a uldesuem el kirel a Helen Reef ma ngar medad el taem.

7. Did you live in Helen Reef Island or Tobi Island as a child? Sera omkekerei el ngalek e ke mle kiei er a Tobi malechub eng Helen Reef? *(if no, skip to question 10)*

Yes___ No___

8. About how many years ago did you move away from Helen Reef Island and/or Tobi Island? Ng locha mla mo telal rak er a bo lak kom kiei er a Helen Reef me a lechub eng Tobi island? *(note to recorder- it is okay if they say a range like 15-20 years; just record what they say)*
9. What was your reason for leaving Helen Reef and/or Tobi Island? I'll read a list of choices, please say yes or no for each one Ngera mle uchul meng mlo diak om kiei er a Tobi/Helen Reef. Ak mo masech a bebil er a uldasu el uchul a rechad a mellukl el mei, e ke onger el kmo choi malechub eng diak.
- lack of schools Ng diak a skuul: Y N
 - lack of medical services Ng a ungil ukeruul: Y N
 - lack of reliable transportation Ng diak a ungil olidiuul: Y N
 - lack of employment opportunities Ng diak a ureor: Y N
 - because my family was leaving A rechad era blik a milrael: Y N
 - other Ngar ngii a kuk ngodech? _____
10. How many times have you visited Helen Reef Island and/or Tobi Island in the past 5 years? Ng mla mo tela chobo er a Tobi malechub eng Helen Reef er a chelsel aikal merko el cheim el rak? *(note to recorder- it is okay if they say a range like 5 or 6 years; just record what they say. **If answer is ZERO, skip to question 14)***
11. Why did you visit? Ngera uchul meke mlo er Helen Reef Island and/or Tobi Island. *(interviewer: do not give examples)*
12. Did you fish while you were Helen Reef? Ke mla er a chei er sera om nga er a Helen Reef? (make sure it's fishing at Helen Reef ONLY)
- Yes Choi____ No Diak____
13. Did you bring any fish back to Koror from Helen Reef? Kulab a ngikel er a Helen Reef el mei er a Oreor (make sure it's bringing fish from Helen ONLY)
- Yes Choi____ No Diak____
14. Would you visit Helen Reef more often if there were more frequent or reliable transportation available? Ng soam el mo blechoel el mo er a Helen Reef alsekum eng mo ungil a olidiuul?
- Yes Choi____ No Diak____ Don't know Diak kudengei____
15. Would you ever like to move back to Tobi and/or Helen Reef? Ng soam el lemuut el melukl el mo kiei er a Tobi me a lechub eng Helen Reef.
- Yes Choi____ No Diak____ Don't know Diak kudengei____

Next I'm going to ask about what you would ideally like to see happen in Helen Reef for the future. I'm going to read a list of statements. Please tell me if you: agree, disagree, neutral (meaning you neither agree nor disagree), or don't know. Elechang eak mo oker er kau er a uldesum el kirel a Helen Reef er a ngermedal taem. Ak mo omasech a

bebil er a tekoi meke mo onger el kmo: ke kongei, diak kom kengei, oumdednger, me a lechub eng diak modengei.

16. In the future, I would like to see:

- a. More fish and other marine resources in Helen Reef. Bo le betok a ngikel ma cheled er a Helen Reef.

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- b. My children to have more access to visit Helen Reef. A rengelek bol sebechir el ngar ngii a techellir el mo oldingel er a Helen Reef

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- c. Less restrictions on fishing and taking of other natural resources from Helen Reef. Kossadel a lechul a omeliul a ngikel ma cheled

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- d. More Tobians living on Helen Reef or Tobi. Bol luut el mo obdois a rechad el kiei er a Tobi ma Helen Reef

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- e. More tourism at Helen Reef Bol klou a klekangkodang er a Helen Reef

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- f. My family receive more fish and other resources from Helen Reef. A telungalek er ngak bol sebechel el ngmai a betok a idisel ngikel me a cheled er a Helen Reef.

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- 17. What do you think are the main threats or problems to the environment of Helen Reef? Sel momdasu eng ngera ikel kmal uchul a telemellel a kerensel a Helen Reef? (note to interviewer: **DO NOT READ ANSWERS** - leave open ended. note to recorder: fill in the following categories:)**

_____climate change
 _____natural disasters
 _____illegal fishing (poaching)
 _____overfishing by community members
 _____not enough enforcement
 _____limited funding
 _____distance from Koror
 _____don't know/ no answer
 _____pollution
 _____others: _____
 _____others: _____

- 18. Of those that you listed, what would you say is the biggest threat or problem? Chelsel aikal bla basech e ngera sel kot el klou a telemellel. (list one only)**

Next we're going to ask some questions about how much you've heard about the Helen Reef management. Remember there are no right or wrong answers here, please just answer what you think. Elecha ki mo oker el kirel a klaumedengei er kau er a oretel a ureor er a Helen Reef. Ng diak a ungil me a mekngit el nger me dim dung aikel nga er a uldesuem.

19. Are you aware of the Helen Reef Project? Ngar er ngii a klaumedengei er kau el kirel a Helen Reef Project?
Yes Choi No Diak

20. Do you know that the Helen Reef Project established a no-take area, a take area, and enforcement program at Helen Reef? Ngar ngii a klemendengei er kau el kirel a Helen Reef Project el mla omul er a basio el diak de nga er a chei er ngii, ma kuk de nga er a chei er ngii, ma otutel a lechul?
Yes Choi No Diak

21. I'm going to read a list of activities. Please tell me whether you think these activities are allowed within the Helen Reef **no take area**. Please say yes, no, or I don't know: Ak mo masech aikel omeruul el sebechel ngar ngii er a chelsel sel blul el basio er a Helen Reef. E ko nger el kmo choi, ng diak , ng diak kudengei

In the no-take area...

Allowed Activities/ Omeruul	No take area / Blul el basio		
	Y	N	don't know/ diak kudengei
Scuba diving allowed ngar er ngii a omechelbaki el lolab a tank			
Harvesting turtles allowed ngar er ngii a omelai el uel			
Commercial fishing allowed Ngar er ngii a commercial fishing			
Subsistence fishing allowed ngar er ngii a omenged er a di mo odoim			
Taking bird eggs allowed ngar er ngii a omelai el ngisel a suebek el charm			

22. Now, please tell me whether you think these activities are allowed within the Helen Reef **take area**. Please say yes, no, or I don't know: Ak mo masech aikel omeruul el sebechel el ngar ngii er a chelsel sel diak el blul el basio er a Helen Reef. E ko nger el kmo choi, ng diak , ng diak kudengei

In the take area...

Allowed Activities/ Omeruul	Take area DIAK el blul basio		
	Y	N	don't know/ diak kudengei
Scuba diving allowed ngar er ngii a omechelbaki el lolab a tank			
Harvesting turtles allowed ngar er ngii a omelai el uel			
Commercial fishing allowed Ngar er ngii a commercial fishing			
Subsistence fishing allowed ngar er ngii a omenged er a di mo odoim			
Taking bird eggs allowed ngar er ngii a omelai el ngisel a suebek el charm			

23. Has the establishment of a no take area at Helen Reef led to: Tial blul a Helen Reef ng uchul meng mla mo:
- ___ More fish and other marine resources betok a ngikel me a cheled
 - ___ Less fish and other marine resources mekesai a ngiekel me a cheled
 - ___ No change Diak a mla mengodech
 - ___ Don't know Ng diak kudengei

24. How do you feel about the enforcement of the rules at Helen Reef? Ng ua ngera uldesuem el kirel a klekerngel me a llechul a Helen Reef
- ___ Too much enforcement Ng kuk kmal mesisiich
 - ___ Not enough enforcement Diak el sal mesisiich
 - ___ Right amount of enforcement Ungil a klisiechel
 - ___ Don't know Diak kudengei

Thanks, we're almost done! Finally, I'm going to ask some questions on what you think about management of Helen Reef. Sulang, me moutekangel e kede muchu merek. Elechang eak mo oker el kirel a oretel a Helen Reef.

25. What are your thoughts on each rules and regulations of Helen Reef? I'm going to read you each rule and regulation and you will tell me if you support it. Ak kmo masech a bebil er a llechul a Helen Reef e kouchais a uldesuem el kirel aikallach. Ng soam, ng chetim, kou mededenger, ng diak mo dengei. E alsekum eng chetim eng ngera uchul?

Rules/regulations	Support Ng soam	Don't Support Ng chetim	Neutral Ou mededenger	Don't know Ng diak modengei	If don't support...why not? <i>Or write other comments here:</i> Al chetim...eng ngera uchul?
No commercial fishing Ng diak a siobai el omenged					
Limited to take of five turtles per year Ng di kleim el uel a ngeiuul er a chelsel a ta el rak					
Penalty of monetary fine for violation Ngar ngii a belsel a telemellel a llach					
Limit number of 500 pounds of whole fish per state event Ng diak el lengelaki ra 500 pound a ngkelel a ungil klebesei er a beluu					
Limit of a 72 quart cooler per person per trip (about 100 lbs)A blingel a ngikel el mora tal chad a diak lengelaki ra 72 quart cooler ra tal omerael.					
No take area where no fishing is allowed Ng diak omenged er sel blul malechub eng chelsimer el basio					
No net fishing except cast nets allowed A rokui el omenged el ousbech a uuked a mekull eng di tal omuked el (UH) or bidekill (throw nets) a sebechel					
Fishing activities must be approved by Helen Reef Board A usbechel a uldelid el teletael er a omenged er a irechar a mengai a kengei er ngii ra a Helen Reef Managmnt Board					

26. I am going to read a list of statements about your feelings on the Management of Helen Reef. Please tell me whether you agree, disagree, are neutral, or don't know: Ak kmo masech a bebil er a uldasu el kirel a orretel ma okedmeklel a Helen Reef, e konger el kmo ak kongei ng diak ke ngei, ak ou mededenger, ng diak udengei

- a. I support the work being done by the Helen Reef Project. Ak uldubech a ureor el longedmokl a Helen Reef Project.

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- b. My family receives benefits from the resources of Helen Reef like sharing in catch of fish and turtles from Helen Reef? A ngelel a Helen Reef, sel le mengai eng murrou el mo er kau ma telungalek er kau?

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- c. The Helen Reef Project protects our heritage and identity as Tobians. A Helen Reef Project a smisichii sel uldelid el dikesed er a irechar el mei.

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- d. The Helen Reef Project provides opportunities like employment, funding, training A Helen Reef Project ng uchul eng sebecel melemolem el kerreomel a debel ma aikel rokui el ngar ngii er a chelsel.

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- a. The Helen Reef Project doesn't give us enough access to our resources A Helen Reef Project a olngasek a techellel a ulsebechellel tial iungs

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- e. The current Helen Reef Project management board is doing a good job. Sel chelchad er a Helen Reef Project management board a ungil el ourer

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- f. The Helen Reef Project prevents us from earning income A Helen Reef Project a merrob a techellel a osisebel a udoud

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- g. The Helen Reef Project takes away our rights to live off the land. A Helen Reef Project a merrob a lemeltam ma klisicham el kiei e ousbech a klungiolel tial iungs.

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

- h. The Helen Reef Project protects our resources for the future A Helen Reef Project a omecheliu e mengeluolu a chutem me a debel a Helen Reef.

agree ke kongei disagree diak kom kengei neutral oumdednger don't know diak modengei

Okay, last few questions...

27. Have you heard of the Community Conservation Agreement, which may provide some funding to the Helen Reef Project? Ng ngar ngii a oderngesem ma klemedengei er kau el kirel a Community Conservation Agreement, el sebechel el mou uchul a ngesu era udoud el mei er a Helen Reef Project ?
Y / N
28. How have you been involved in the management of the Helen Reef Project? I'll read a list of choices, you can tell me yes or no for each one: Ng mla ngar ngii a techellem el teloi er a omesodel, malechub eng okedmklel a urerel a Helen Reef Project? Elechang ak mo masech a bebil er aikal teletael er a ureor e konger el choi malechub eng diak.
- a. Meetings and discussions Ongdibel ma omesodel a HR Project: Y / N
 - b. Volunteering in the activities such as surveying or monitoring Olngeseu a urerel a omesubel tia el basio: Y / N
 - c. Workshops, trainings Omesuub ma osischakl er urerel tia el basio: Y / N
 - d. Board member, project staff, etc. Chedal tial el chelchad: Y / N
 - e. Have not been involved Ng diak chelsechusem er tial ureor: Y / N
29. Would you be interested in being more involved in the management of Helen Reef? Y / N
Ngar ngii a klemierar reng er kau el Olngeseu e oldubech a urerel a Helen Reef Project? Y / N
30. In your opinion, should the Helen Reef Project be a State organization or a private Non-Governmental Organization for example the women association? Please pick one. Sel momdasu e a Helen Reef Project eng kirel chederdall er a state Kabelment, ma lechub eng mo ileakl el chelechad el uai a cheldebechel er a remechas er a beluu?
- a. State Amt er a State
 - b. Private non-governmental organization cheldebechel
 - c. Don't know/ it doesn't matter ng diak kudengei
31. Do you have any suggestions to improve the management of the HR Project? Ngar ngii a di ngodech el uldesuem el sebechel el mo ngosukemam el smisichii a okedmeklel ma orretel a HR Project?

Thank you for your time and helpful information. The results of this study will be shared with the community within the next two months by the Helen Reef Project. Sulang er a temem ma uldesuem . A kekka er tial omesuub a mo sebechemiu el mes ra chelsel a cheru'l buil ra Helen Reef Project.

Appendix 3: Basic statistics for all survey questions

1. May I ask your age? /Ng sebechek el loker er a rekim

AVERAGE AGE= 39 YEARS OLD

AGE RANGE	% of RESPONDENTS
18-25	21%
26-35	29%
36-45	14%
46-55	18%
56-65	9%
66 and older	6%
no answer	3%

2. Sex
52% male
47% female
1% no answer (blank)

3. Are you married? /Ke bechiil?

39% not married
60% married
1% no answer (blank)

4. What is your occupation? / Ngera urerem?

unemployed	9%
national government	8%
state government	12%
retired	4%
tourism	8%
retail	9%
education	7%
student	3%
food services	4%
conservation	5%
administration/finance	4%
housewife	2%
security	6%
other	4%

5. What are **your** sources of income? I will read a list of income sources, please say yes or no for each one.
/ Ngar ngii a kuk ngodech el kerrekerngem? (interviewee only not their family)

income source	% of respondents
a. your job	72%
b. fishing	9%
c. farming	5%
d. relatives	1%
e. handicraft	4%
f. pension	12%
g. no income	10%
h. other*	14%
*other includes: political position (5%), husband (2%), sales (2%), boat operator (1%), tour guide (1%), security (1%), mechanic (1%), babysitting (1%)	

6. What is your highest level of education completed? / Ngera sel kot el ngarbab el skuul el omtilobed er ngii?

Highest level of education completed	% of respondents
less than elementary	1%
elementary	19%
high school	53%
college	27%
no answer	1%

7. Did you live in Helen Reef Island or Tobi Island as a child? / Sera omkekerei el ngalek e ke mle kiei er a Tobi malechub eng Helen Reef? (if no, skip to question 10)

30% no

70% yes

8. About how many years ago did you move away from Helen Reef Island and/or Tobi Island? / Ng locha mla mo telal rak ra bo lak kom kiei er a Helen Reef me a lechub eng Tobi island?

Years since moved away from Helen Reef or Tobi	% of respondents
0-10 years	23%
11-20 years	22%
21-30 years	12%
31-40 years	3%
41-50 years	6%
51-60 years	3%
no answer (because did not live in Helen or Tobi before)	31%

9. What was your reason for leaving Helen Reef and/or Tobi Island? I'll read a list of choices, please say yes or no for each one / Ngera mle uchul meng mlo diak om kiei er a Tobi/Helen Reef. Ak mo masech a bebil er a uldasu el uchul a rechad a mellukl el mei, e ke onger el kmo choi malechub eng diak.

Reason for moving away from Helen Reef or Tobi	No	Yes	Did not answer (bc did not live in HR or Tobi before)
Lack of schools	26%	45%	29%
Lack of medical services	32%	39%	29%

Lack of reliable transportation	36%	35%	29%
Lack of employment opportunities	27%	44%	29%
Because my family was leaving	21%	51%	29%
Other*	2%		
*Other includes: parents' health (1%), poor economy (1%)			

10. How many times have you visited Helen Reef Island and/or Tobi Island in the past 5 years? / Ng mla mo tela chobo er a Tobi malechub eng Helen Reef er a chelsel aikal merko el cheim el rak? If answer is ZERO, skip to question 14)

Times visited Helen Reef or Tobi in the past 5 years	% of respondents
0	27%
1-5	45%
6-10	13%
11-15	7%
16-20	3%
21 or more	4%

11. Why did you visit? / Ngera uchul meke mlo er Helen Reef Island and/or Tobi Island.

Reason for visiting	% of respondents
summer camp	4%
school trip	5%
work related	21%
vacation	23%
missed island/ from there	5%
family	3%
just visit	3%
opportunity came up	3%
other	4%
no answer (bc did not visit)	28%

12. Did you fish while you were Helen Reef? / Ke mla er a chei er sera om nga er a Helen Reef?
Yes Choi 39%
No Diak 35%
No answer (bc did not visit Helen in past 5 years): 26%
13. Did you bring any fish back to Koror from Helen Reef? / Kulab a ngikel er a Helen Reef el mei er a Oreor
Yes Choi 22%
No Diak 52%
No answer (bc did not visit Helen in past 5 years): 26%
14. Would you visit Helen Reef more often if there were more frequent or reliable transportation available? / Ng soam el mo blechoel el mo er a Helen Reef alsekum eng mo ungil a olidiuul?
Yes Choi 92%
No Diak 7%
Don't know Diak kudengei 1%

15. Would you ever like to move back to Tobi and/or Helen Reef? / Ng soam el lemuut el melukl el mo kiei er a Tobi me a lechub eng Helen Reef.

Yes Choi 81%

No Diak 16%

Don't know Diak kudengei 2%

16. In the future, I would like to see:

- a. More fish and other marine resources in Helen Reef. / Bo le betok a ngikel ma cheled er a Helen Reef.

Agree / <u>Ke kongei</u>	97%
Disagree / <u>Diak kom kengei</u>	1%
Neutral / <u>Oumdednger</u>	2%
Don't know / <u>Diak modengei</u>	0%

- b. My children to have more access to visit Helen Reef. / A rengelek bol sebechir el ngar ngii a techellir el mo oldingel er a Helen Reef

Agree / <u>Ke kongei</u>	95%
Disagree / <u>Diak kom kengei</u>	3%
Neutral / <u>Oumdednger</u>	0%
Don't know / <u>Diak modengei</u>	1%

- c. Less restrictions on fishing and taking of other natural resources from Helen Reef. / Kossadel a lechul a omeliul a ngikel ma cheled

Agree / <u>Ke kongei</u>	57%
Disagree / <u>Diak kom kengei</u>	31%
Neutral / <u>Oumdednger</u>	10%
Don't know / <u>Diak modengei</u>	2%

- d. More Tobians living on Helen Reef or Tobi. / Bol luut el mo obdois a rechad el kiei er a Tobi ma Helen Reef

Agree / <u>Ke kongei</u>	95%
Disagree / <u>Diak kom kengei</u>	3%
Neutral / <u>Oumdednger</u>	2%
Don't know / <u>Diak modengei</u>	0%

- e. More tourism at Helen Reef / Bol klou a klekangkodang er a Helen Reef

Agree / <u>Ke kongei</u>	79%
Disagree / <u>Diak kom kengei</u>	6%
Neutral / <u>Oumdednger</u>	11%
Don't know / <u>Diak modengei</u>	3%

- f. My family receive more fish and other resources from Helen Reef. / A telungalek er ngak bol sebechel el ngmai a betok a idisel ngikel me a cheled er a Helen Reef.

Agree / <u>Ke kongei</u>	58%
Disagree / <u>Diak kom kengei</u>	24%
Neutral / <u>Oumdednger</u>	13%
Don't know / <u>Diak modengei</u>	4%

17. What do you think are the main threats or problems to the environment of Helen Reef? / Sel momdasu eng ngera ikel kmal uchul a telemellel a kerensel a Helen Reef? (note to interviewer: **DO NOT READ ANSWERS** – leave open ended. Note to recorder: fill in the following categories:)

THREATS	% of respondents coming up with this response
climate change	24%
natural disasters	6%
illegal fishing (poaching)	69%
overfishing by community members	18%
not enough enforcement	3%
limited funding	1%
distance from Koror	1%
don't know/ no answer	12%
pollution	7%
Others*	26%
<i>*including plants dying, local leaders (politics), business, human disturbance, trash, erosion</i>	

18. Of those that you listed, what would you say is the biggest threat or problem? / Chelsel aikal bla basech e ngera sel kot el klou a telemellel. (list one only)

biggest threat	% of respondents
illegal fishing, poaching, and commercial fishing	49%
climate change	12%
overfishing	4%
inequitable sharing of resources and political division	3%
others	9%
Others include: distance from Koror, destructive fishing, lack of water, pollution, too many people, no one living on Helen to watch over resources, plants dying, logs, and erosion.	

19. Are you aware of the Helen Reef Project? / Ngar er ngii a klaumedengei er kau el kirel a Helen Reef Project?

Yes Choi: 74%

No Diak: 24%

No answer: 2%

20. Do you know that the Helen Reef Project established a no-take area, a take area, and enforcement program at Helen Reef? / Ngar ngii a klemendengei er kau el kirel a Helen Reef Project el mla omul er a asio el diak de nga er a chei er ngii, ma kuk de nga er a chei er ngii, ma otutel a lechul?

Yes Choi: 89%
 No Diak: 10%
 No answer: 1%

21. I'm going to read a list of activities. Please tell me whether you think these activities are allowed within the Helen Reef **no take area**. Please say yes, no, or I don't know: / Ak mo masech aikel omeruul el sebechel ngar ngii er a chelsel sel blul el basio er a Helen Reef. E ko nger el kmo choi, ng diak , ng diak kudengei

In the no-take area...

Allowed Activities/ <u>Omeruul</u>	No	Yes	Don't know
Scuba diving allowed / <u>Ngar er ngii a omechelbakl el lolab a tank</u>	45%	42%	12%
Harvesting turtles allowed / <u>Ngar er ngii a omelai el uel</u>	82%	6%	10%
Commercial fishing allowed / <u>Ngar er ngii a commercial fishing</u>	93%	2%	5%
Subsistence fishing allowed / <u>Ngar er ngii a omenged er a di mo odoim</u>	65%	23%	12%
Taking bird eggs allowed / <u>Ngar er ngii a omelai el ngisel a suebek el charm</u>	82%	9%	8%

22. Now, please tell me whether you think these activities are allowed within the Helen Reef **take area**. Please say yes, no, or I don't know: / Ak mo masech aikel omeruul el sebechel el ngar ngii er a chelsel sel diak el blul el basio er a Helen Reef. E ko nger el kmo choi, ng diak , ng diak kudengei

In the take area...

Allowed Activities/ Omeruul	No	Yes	Don't know
Scuba diving allowed / <u>Ngar er ngii a omechelbakl el lolab a tank</u>	23%	66%	11%
Harvesting turtles allowed / <u>Ngar er ngii a omelai el uel</u>	13%	78%	8%
Commercial fishing allowed / <u>Ngar er ngii a commercial fishing</u>	48%	41%	10%
Subsistence fishing allowed / <u>Ngar er ngii a omenged er a di mo odoim</u>	6%	89%	5%
Taking bird eggs allowed / <u>Ngar er ngii a omelai el ngisel a suebek el charm</u>	38%	49%	11%

23. Has the establishment of a no take area at Helen Reef led to: / Tial blul a Helen Reef ng uchul meng mla mo:

More fish and other marine resources / Betok a ngikel me a cheled: 60%
 Less fish and other marine resources / Mekesai a ngiekkel me a cheled: 0%
 No change / Diak a mla mengodech : 6%
 Don't know / Ng diak kudengei: 33%
 No answer / Diak a nger: 1%

24. How do you feel about the enforcement of the rules at Helen Reef? / Ng ua ngera uldesuem el kirel a klekerngel me a llechul a Helen Reef?

Too much enforcement / Ng kuk kmal mesisiich 4%
 Not enough enforcement / Diak el sal mesisiich 58%
 Right amount of enforcement / Ungil a klisiechel 27%
 Don't know / Diak kudengei: 10%
 No answer / Diak a nger: 1%

25. What are your thoughts on each rules and regulations of Helen Reef? I'm going to read you each rule and regulation and you will tell me if you support it. / Ak kmo masech a bebil er a llechul a Helen Reef e kouchais a uldesuem el kirel aikal llach. Ng soam, ng chetim, kou mededenger, ng diak mo dengei. E alsekum eng chetim eng ngera uchul?

Rules/regulations	Support	Don't Support	Neutral	Don't know
No commercial fishing / <u>Ng diak a siobai el omenged</u>	77%	5%	5%	12%
Limited to take of five turtles per year / <u>Ng di kleim el uel a ngeiuul er a chelsel a ta el rak</u>	71%	22%	4%	3%
Penalty of monetary fine for violation / <u>Ngar ngii a belsel a telemellel a llach</u>	92%	3%	3%	2%
Limit number of 500 pounds of whole fish per state event / <u>Ng diak el lengelakl ra 500 pound a ngkelel a ungil klebesei er a beluu</u>	78%	14%	3%	4%
Limit of a 72 quart cooler per person per trip (about 100 lbs) / <u>A blingelel a ngikel el mora tal chad a diak lengelakl ra 72 quart cooler ra tal omerael.</u>	67%	25%	5%	2%
No take area where no fishing is allowed / <u>Ng diak omenged er sel blul malechub eng chelsimer el basio</u>	96%	2%	2%	0%
No net fishing except cast nets allowed / <u>A rokui el omenged el ousbech a uuked a mekull eng di tal omuked el (UH) or bidekill (throw nets) a sebechel</u>	72%	21%	3%	3%
Fishing activities must be approved by Helen Reef Board / <u>A usbechel a uldelid el teletael er a omenged er a irechar a mengai a kengei er ngii ra a Helen Reef Management Board</u>	77%	14%	2%	5%

26. I am going to read a list of statements about your feelings on the Management of Helen Reef. Please tell me whether you agree, disagree, are neutral, or don't know: / Ak kmo masech a bebil er a uldasu el kirel a orretel ma okedmeklel a Helen Reef, e konger el kmo ak kongei ng diak ke ngei, ak ou mededenger, ng diak udengei

- a. I support the work being done by the Helen Reef Project. / Ak uldubech a ureor el longedmokl a Helen Reef Project.

Agree / <u>Ke kongei</u>	90%
Disagree / <u>Diak kom kengei</u>	2%
Neutral / <u>Oumdednger</u>	5%
Don't know / <u>Diak modengei</u>	3%

- b. My family receives benefits from the resources of Helen Reef like sharing in catch of fish and turtles from Helen Reef? / A ngkelel a Helen Reef, sel le mengai eng murrous el mo er kau ma telungalek er kau?

Agree / <u>Ke kongei</u>	65%
Disagree / <u>Diak kom kengei</u>	24%
Neutral / <u>Oumdednger</u>	6%
Don't know / <u>Diak modengei</u>	4%

- c. The Helen Reef Project protects our heritage and identity as Tobians. / A Helen Reef Project a smisichii sel uldelid el dikesed er a irechar el mei.

Agree / <u>Ke kongei</u>	89%
Disagree / <u>Diak kom kengei</u>	4%
Neutral / <u>Oumdednger</u>	2%
Don't know / <u>Diak modengei</u>	5%

- d. The Helen Reef Project provides opportunities like employment, funding, training. / A Helen Reef Project ng uchul eng sebechel melemolem el kerreomel a debel ma aikel rokui el ngar ngii er a chesel.

Agree / <u>Ke kongei</u>	87%
Disagree / <u>Diak kom kengei</u>	2%
Neutral / <u>Oumdednger</u>	7%
Don't know / <u>Diak modengei</u>	4%

- e. The Helen Reef Project doesn't give us enough access to our resources. / A Helen Reef Project a olngasek a techellel a ulsebechellel tial iungs

Agree / <u>Ke kongei</u>	35%
Disagree / <u>Diak kom kengei</u>	37%
Neutral / <u>Oumdednger</u>	8%
Don't know / <u>Diak modengei</u>	20%

- f. The current Helen Reef Project management board is doing a good job. / Sel chelchad er a Helen Reef Project management board a ungil el oureor

Agree / <u>Ke kongei</u>	66%
Disagree / <u>Diak kom kengei</u>	6%
Neutral / <u>Oumdednger</u>	11%
Don't know / <u>Diak modengei</u>	16%

- g. The Helen Reef Project prevents us from earning income. / A Helen Reef Project a merrob a techellel a osisebel a udoud

Agree / <u>Ke kongei</u>	23%
Disagree / <u>Diak kom kengei</u>	41%

Neutral / <u>Oumdednger</u>	11%
Don't know / <u>Diak modengei</u>	24%

- h. The Helen Reef Project takes away our rights to live off the land. / A Helen Reef Project a merrob a lemeltam ma klisicham el kiei e ousbech a klungiolel tial iungs.

Agree / <u>Ke kongei</u>	29%
Disagree / <u>Diak kom kengei</u>	58%
Neutral / <u>Oumdednger</u>	5%
Don't know / <u>Diak modengei</u>	8%

- i. The Helen Reef Project protects our resources for the future. / A Helen Reef Project a omecheliu e mengeluolu a chutem me a debel a Helen Reef.

Agree / <u>Ke kongei</u>	91%
Disagree / <u>Diak kom kengei</u>	3%
Neutral / <u>Oumdednger</u>	2%
Don't know / <u>Diak modengei</u>	4%

27. Have you heard of the Community Conservation Agreement, which may provide some funding to the Helen Reef Project? / Ng ngar ngii a oderngesem ma klemedengei er kau el kirel a Community Conservation Agreement, el sebechel el mou uchul a ngesu era udoud el mei er a Helen Reef Project ?
Yes / Choi: 54%
No / Diak: 45%
No answer / Diak a nger: 1%
28. How have you been involved in the management of the Helen Reef Project? I'll read a list of choices, you can tell me yes or no for each one: / Ng mla ngar ngii a techellem el teloi er a omesodel, malechub eng okedmklel a urerel a Helen Reef Project? Elechang ak mo masech a bebil er aikal teletael er a ureor e konger el choi malechub eng diak.
- f. Meetings and discussions / Ongdibel ma omesodel a HR Project: Yes: 76%
g. Volunteering in the activities such as surveying or monitoring / Olngeseu a urerel a omesubel tia el basio: Yes: 38%
h. Workshops, trainings / Omesuub ma osischakl er urerel tia el basio: Yes: 32%
i. Board member, project staff, etc. / Chedal tial el chelchad: Yes: 30%
j. Have not been involved / Ng diak chelsechusem er tial ureor: Yes: 14%
29. Would you be interested in being more involved in the management of Helen Reef?
/ Ngar ngii a klemierar reng er kau el olngeseu e oldubech a urerel a Helen Reef Project? Yes: 87%
30. In your opinion, should the Helen Reef Project be a State organization or a private Non-Governmental Organization for example the women association? Please pick one. / Sel momdasu e a Helen Reef Project eng kirel chederdall er a state Kabelment, ma lechub eng mo ileakl el chelechad el uai a c heldebechel er a remechas er a beluu?

- d. State / Amt er a State 46%
- e. Private non-governmental organization / Cheldebechel 35%
- f. Don't know/ it doesn't matter / Ng diak kudengei 18%
- g. No answer / Diak a nger 1%

31. Do you have any suggestions to improve the management of the HR Project? / Ngar ngii a di ngodech el uldesuem el sebechel el mo ngosukemam el smisichii a okedmeklel ma orretel a HR Project?

Suggestions	% of people who came up with this suggestion
increase on-site management, including enforcement	24%
sustainable financing	7%
more community outreach	8%
improve transportation	7%
more involvement of national government	2%
management transparency and accountability (e.g. rangers should not be fishing)	2%
more equitable sharing of resources (e.g. not just mgmt board)	7%
no improvement needed	2%
no suggestion/don't know	31%
Others*	14%
*Others include: rangers should be able to fish in no-take area under certain conditions, separation of government officials and project mgmt, more communications & electricity infrastructure	

Appendix 4: Team Members and Affiliations

Names	Status	Organization
Claire Polloi Japson Yoshiwo	Participants	Airai State
Bradly Patris Tracy Marcello	Participants	Hatohobei State
King Sam Davis Rekemsiik	Participants	Koror State
William Andrew	Participant	LMMA
Alson Ngiraiwet Ngirachues Aderkerori	Participants	Ngardmau State
Verano Ngirkelau Bruce Ngirkuteling	Participants	Ngchesar State
Elwais Samil	Participant	Peleliu State
Umai Basilius Victor R. Masahiro	Participants	PCS
Noelle Wenty Oldiais Dawnette “Uli” Olsudong	Participants	PICRC
Ismael Bernardo Felisa Andrew	Participants	Sonsorol State
Christy Loper Meghan Gombos	Trainers	NOAA
Isao Frank	Observer	MIC



Appendix 5: Indicators

Category	Indicators
Demographics	<ul style="list-style-type: none"> • Household size • Age • Sex • Education • Occupation • Sources of Income • Community infrastructure and technology
Threats	<ul style="list-style-type: none"> • Perceived resource condition • Perceived threats to coastal and marine resources
Management	<ul style="list-style-type: none"> • Coastal and marine activities • Awareness of rules and regulations • Enforcement • Compliance • Management credibility • Management effectiveness • Management benefits • Management body • Management types and structure • Formal rules and regulations • Management benefits • Stakeholder participation
Coastal Uses	<ul style="list-style-type: none"> • Coastal and marine goods and services • Means of production of goods and services • Types and level of use by outsiders • Dependence on coastal and marine services