

Saipan Coral Reef Survey  
Final Survey Report  
August 2011

## Table of Contents

Survey objectives .....	3
Survey development .....	3
Methodology .....	3
Selected Results and Discussion.....	4
Acknowledgements .....	13
APPENDIX A: ONE PAGER TO ANNOUNCE SURVEY, CIRCULATED OCTOBER 2010 .....	15
APPENDIX B: DRAFT LIST OF SURVEY TOPICS, CIRCULATED FEBRUARY 2011 .....	16
APPENDIX C: FINAL QUESTIONNAIRE.....	18
APPENDIX D: SUMMARY STATISTICS FOR ALL SURVEY QUESTIONS.....	29

## Table of figures

Figure 1: Participation in coastal and marine activities in Saipan within past 12 months.....	5
Figure 2: Reasons for fishing among those who indicated that they fish.....	5
Figure 3: Popularity of Saipan beaches .....	6
Figure 4: Uncertainty in changes in the environment .....	7
Figure 5: Basis of perception of regarding aspects of the coral reef environment .....	8
Figure 6: Perceived threats to the coral reef environment .....	9
Figure 7: Support for and opposition to coral reef management measures .....	9
Figure 8: Support for and opposition to ways of reducing plastic bag use in Saipan.....	10
Figure 9: Common littering habits.....	11

## Survey objectives

There were two primary objectives to conducting this survey. The impetus for the survey was to provide background information to inform a social marketing campaign regarding littering in Saipan, with a potential focus on LaoLao Bay. Because surveys are time and resource intensive, local resource agencies in CNMI as well as the National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program used the opportunity to collect information on knowledge, attitudes and perceptions of coral reefs and coral reef management strategies.

Market Research and Development, Inc. (MRD), a Guam-based survey firm, was contracted to implement the survey. MRD had conducted a coral reef awareness study for CNMI in 2007. Where feasible, results were compared between the 2007 and 2011 studies.

## Survey development

In developing the Saipan Coral Reef Survey, numerous agencies and organizations were asked for input. First, a one-pager about the survey was developed and circulated among partners in October 2010. Representatives from SeaWeb and NOAA met with agency partners, including CNMI Division of Environmental Quality (DEQ), CNMI Coastal Resources Management (CRM), CNMI Division of Fish and Wildlife (DFW), in October to get initial input on the survey. Second, a draft survey topic list (see Appendix B) was developed by NOAA and DEQ and circulated to the following organizations in January 2011: DEQ, CRM, DFW, Mariana Islands Nature Alliance (MINA), SeaWeb, Edge Consulting, National Oceanic and Atmospheric Administration (NOAA). In February 2011, two focus groups were designed by SeaWeb and Edge Consulting and conducted by DEQ to get input on an initial list of campaign topics and messages. Based on comments from partner organizations and the focus groups, the topic list was amended and used as a basis for developing a questionnaire. The draft questionnaire was circulated to the same group of organizations in late February 2011 and, when requested, in person meetings were held to discuss the survey. The questionnaire was finalized in early March 2011 based on comments from partner organizations and is provided in Appendix C.

## Methodology

The survey was conducted from March 7 to March 22, 2011. 522 respondents completed the survey via telephone interview. The respondents were residents of Saipan who were:

- 18 years of age or older;
- Lived in traditional households (e.g. apartments, condominiums, and single family dwellings), and;

- Had a listed landline telephone number.

All efforts were made by MRD to ensure a representative sample of the Saipan population. With a population of 48,317 in 2010 (estimated), the minimum sample size is 381 respondents (95% confidence level and 5% confidence interval). The survey was offered in English, Tagalog, Chamorro, and Carolinian. Of the 522 respondents, 508 chose to take it in English, three in Tagalog, eight in Chamorro, and three in Carolinian. Several other languages are commonly spoken in Saipan, including Chinese and Korean; however, due to limited resources, the survey was only offered in the four primary languages spoken. It is not known whether any potential respondents refused because their language was not offered.

## Selected Results and Discussion

**For a full listing of the results of the survey, please see Appendix 4, which includes all questions asked and all summary statistics for the responses. Selected results are presented below.**

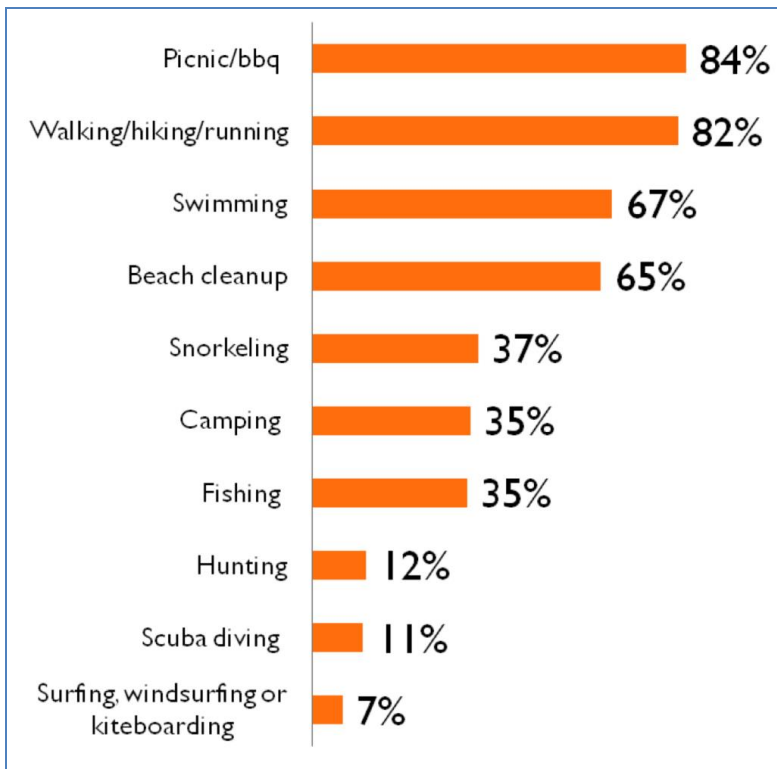
The first few questions asked generally about all issues facing Saipan and the importance of environmental issues in particular. When asked an open-ended question (that is, answer choices were not provided) about major issues facing in Saipan, three out of four mentioned something about the economy, jobs, and/or unemployment.

- Five percent mentioned the environment or climate change.
- Three percent were also concerned about the coral reef threat.
- An additional 2% were concerned about recycling or littering.

Concern about water pollution, coral reef threat, environment/climate change, and recycling/littering all increased from 2007. About 90% of respondents stated that environmental issues are “very important” to them. As compared to 2007, 89% of respondents stated that environmental issues and “very important” to them- so there has been no major change from 2007 in perceived importance of environmental issues. Saipan residents continue to perceive the environment as very important. See Appendix 4 for full responses.

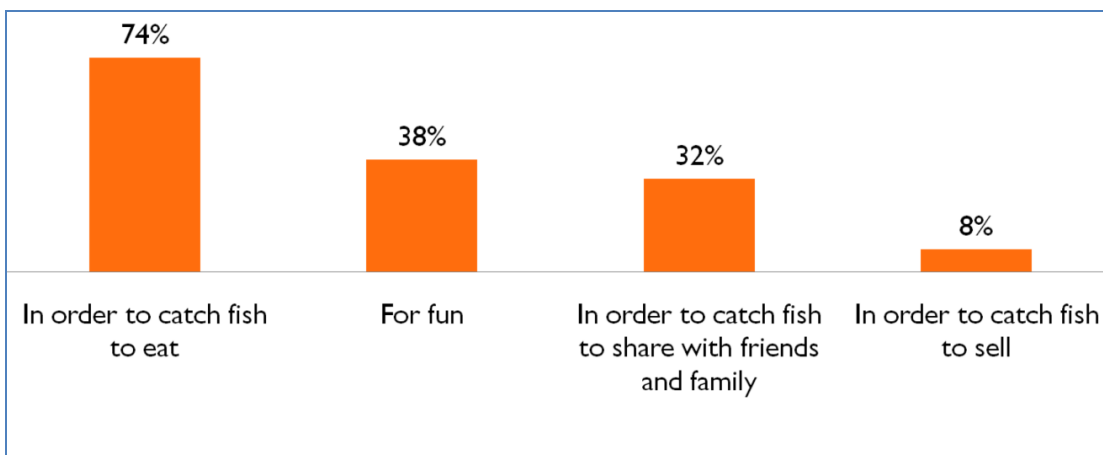
The next few questions asked about participation in coastal and marine activities over the past 12 months. As shown in Figure 1, the most popular activities are “picnics/barbecues” (84%) and “walking/hiking/running (82%).” Over a third also mentioned that they fish. “Other” activities mentioned by respondents but not included in the survey list include volleyball, sailing, canoeing, and boogie boarding.

Figure 1: Participation in coastal and marine activities in Saipan within past 12 months (n=522)



Of those who fished, nearly three-fourths did so in order to catch fish to eat, as shown in Figure 2.

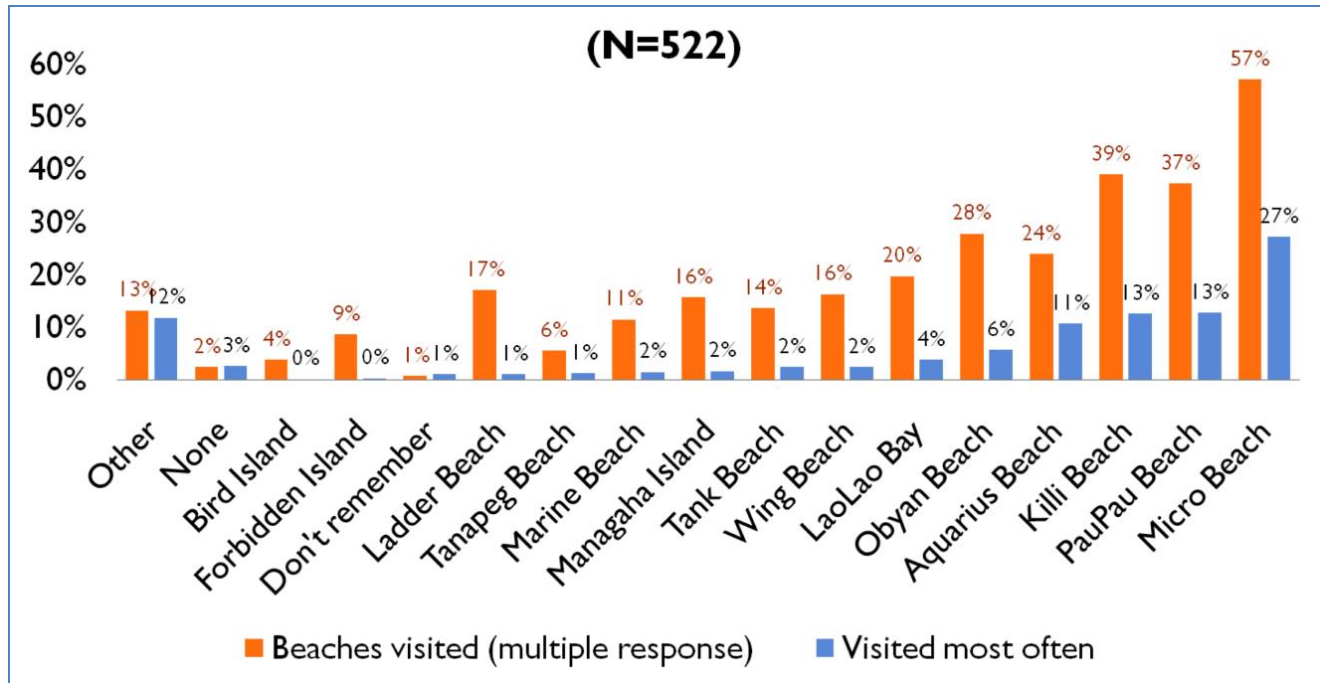
Figure 2: Reasons for fishing among those who indicated that they fish (n=182)



To get a sense of beach use and beach popularity, the next question asked which beaches were visited during the past year. This question was included to understand the use of LaoLao Bay relative to other beaches and potentially provide information to inform future campaigns. Over half of Saipan residents have visited Micro Beach in the past year. It is also the most popular beach

location, with 27% noting it as the one they visited most often. Only one fifth of respondents had visited LaoLao Bay, with only 4% saying LaoLao was the beach they visit most often.

Figure 3: Popularity of Saipan beaches (n=522)



In response to a question on perceptions of the conditions of Saipan’s marine resources, residents are most likely to notice an increase in:

- Litter on beaches: Sixty-one percent say it has either increased (22%) or increased a great deal (39%).
- Water Pollution: Fifty-seven percent say it has either increased (21%) or increased a great deal (36%).
- They are more likely to be aware of decrease in the abundance and size of fish.

These results suggest that residents’ perceive the marine environment to be getting worse over time. Perceptions such as these can form the basis for increased management actions related to the marine environment and should precipitate resident support for such management actions, such as increased enforcement of existing laws, additional education and outreach campaigns, or new regulations to conserve marine resources.

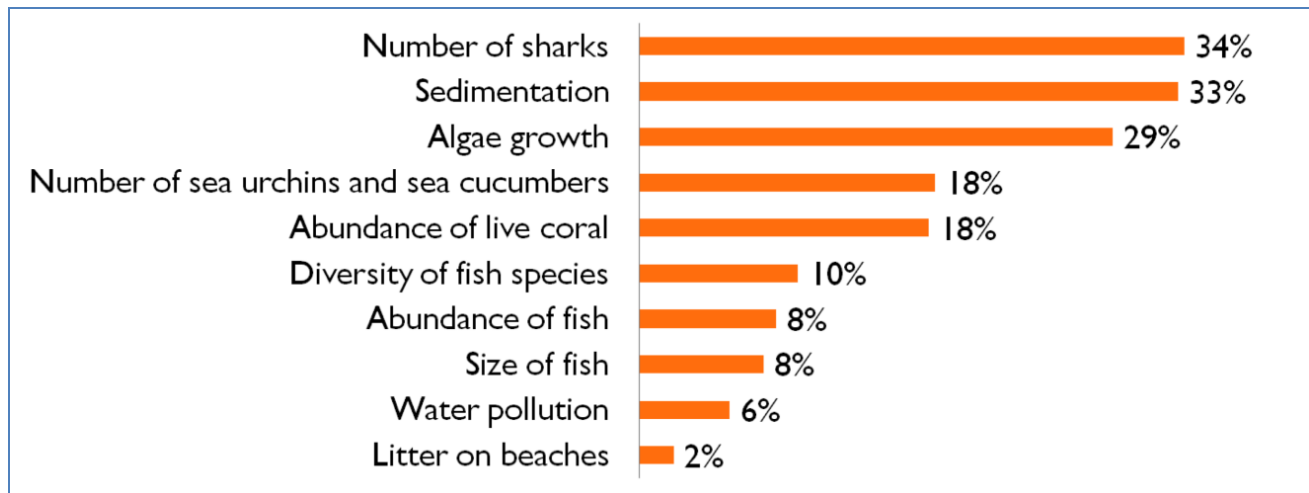
**Table 1: Change in coral reef resources over respondents’ lifetimes (n=522)**

	Abundance of fish	Size of fish	Diversity of fish species	Abundance of live coral	# of sharks	#of sea urchins and sea cucumbers	Algae growth	Sedimentation	Water pollution	Litter on beaches
Decreased/ decreased a great deal	48%	47%	40%	41%	32%	31%	20%	16%	21%	19%

No change	25%	29%	32%	21%	21%	26%	22%	25%	17%	17%
Increased/increased a great deal	17%	16%	18%	18%	13%	24%	27%	25%	<b>57%</b>	<b>61%</b>
Don't Know	8%	8%	10%	18%	34%	18%	29%	33%	6%	2%

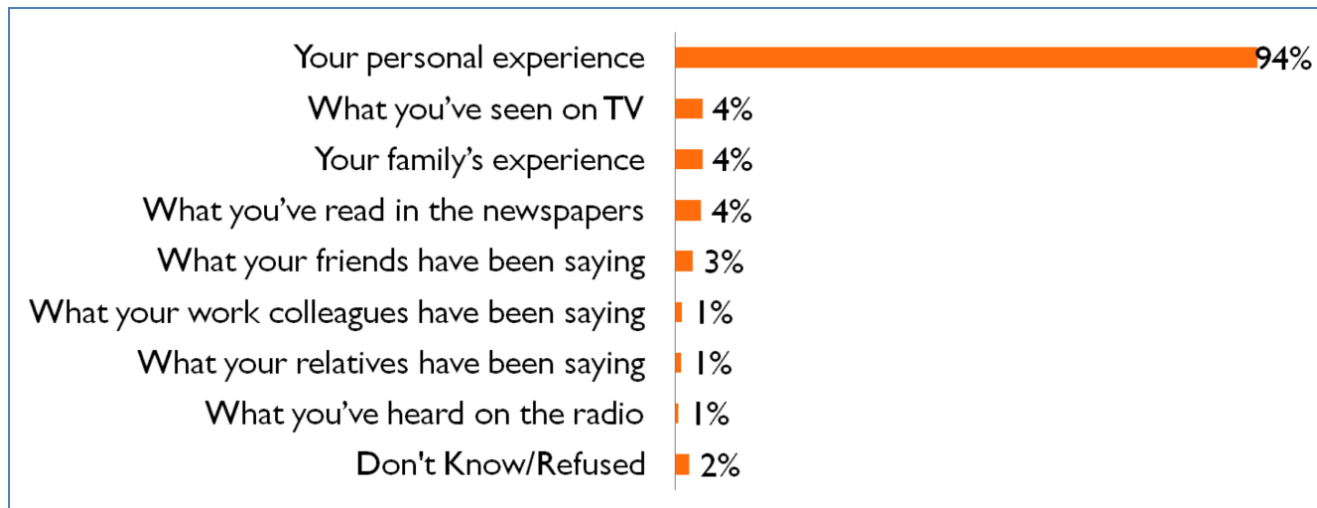
As shown in Figure 4, residents were least likely to be aware of changes in the “number of sharks,” “sedimentation,” and “algae growth”. This may be due to many residents’ limited ability to view these changes on a daily basis (as opposed to litter, which is visible on beaches). However, they are also significantly more likely to notice changes regarding litter on beaches, water pollution, and the size and abundance of fish – for these variables, less than 10% stated that they “didn’t know.”

Figure 4: Uncertainty in changes in the environment: percentage of respondents who answered "I don't know" when asked about changes in resources



Saipan residents are most likely by far to base any ratings regarding the coral reef environment on their “personal experience.”

Figure 5: Basis of perception of regarding aspects of the coral reef environment



Respondents were next asked about their knowledge of Saipan's marine resource rules and regulations. As shown in Table 2, respondents indicated high confusion and misunderstanding of Saipan's rules, in some cases thinking that rules were more restrictive than they are and in other cases thinking they are less restrictive than they are. For example, only 24% of respondents correctly answered that scuba diving is allowed everywhere in Saipan, with the other 76% of people thinking it's restricted in some areas, requires a permit, is not allowed at all, or they didn't know. However, eighty-four percent correctly believe that "taking of live coral" is not at all allowed in Saipan. People are least likely to be aware of whether or not "collecting and harvesting trochus" is legal, with 23% responding that they didn't know whether it was legal or not.

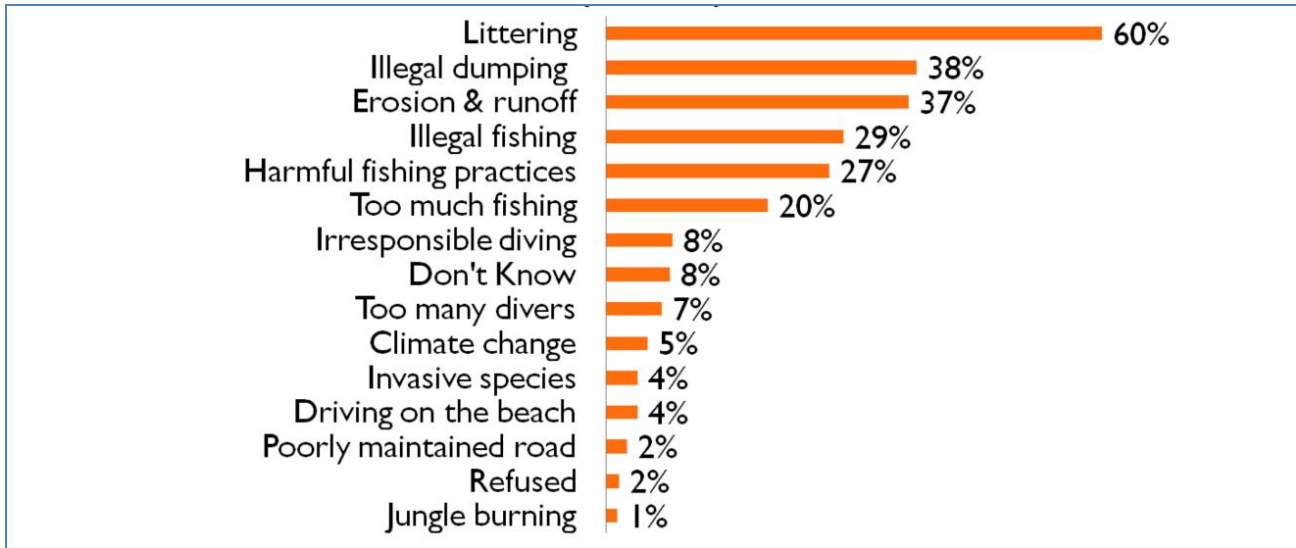
**Table 2: Knowledge of Saipan's marine resource rules and regulations. Correct answers are in bold**

Can you tell me whether the (following) activities are allowed...	SCUBA diving	SCUBA spear fishing	Talaya fishing (throw net)	Taking of live coral	Gill net fishing	Collecting & harvesting trochus	Trash dumping in the boonies	Forest burning	Driving on the beach	Fishing with rod & reel
Everywhere in Saipan	<b>24%</b>	7%	13%	1%	3%	1%	1%	0%	1%	51%
Some places in Saipan	39%	32%	<b>26%</b>	3%	14%	9%	2%	3%	7%	<b>35%</b>
Not allowed at all in Saipan	2%	30%	13%	<b>84%</b>	<b>46%</b>	<b>56%</b>	<b>92%</b>	<b>81%</b>	<b>84%</b>	5%
Allowed only with a permit	26%	19%	38%	6%	18%	8%	1%	11%	2%	3%
Don't Know	6%	11%	8%	3%	18%	23%	3%	3%	3%	4%
Refused	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Total (N)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



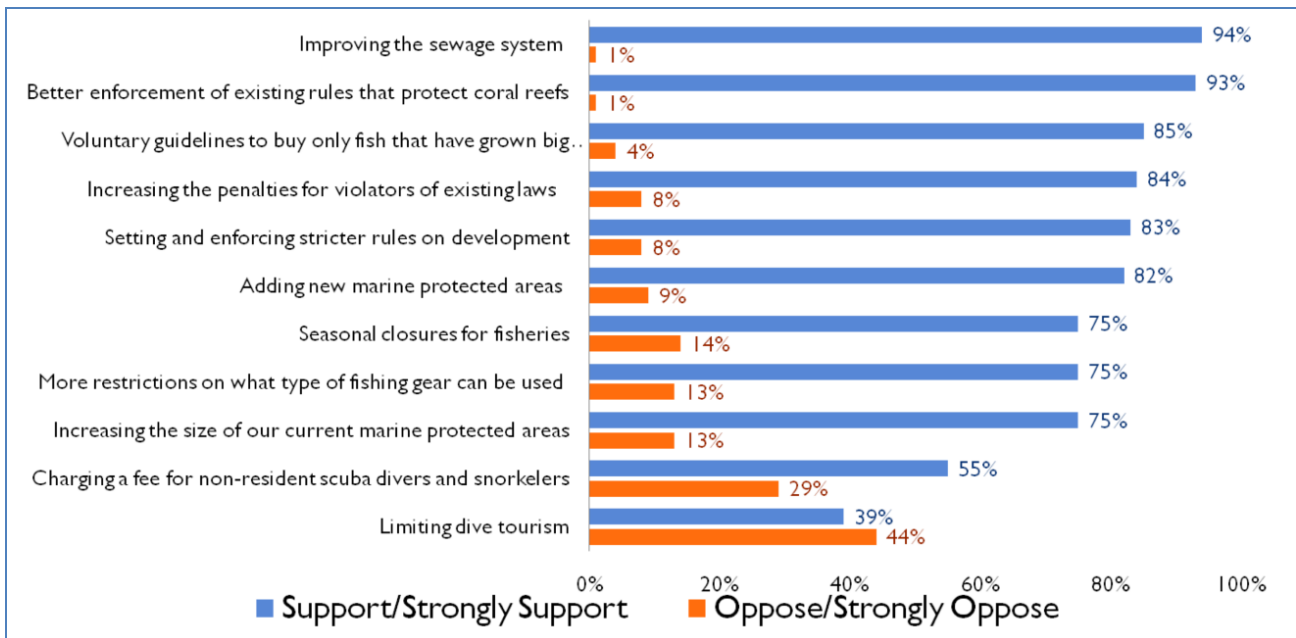
When asked to name three of the top threats to the coral reef environment, residents were most likely to mention issues related to **pollution** (littering, illegal dumping, and erosion/runoff) and **fishing practices** (illegal fishing, harmful fishing practices, too much fishing).

Figure 6: Perceived threats to the coral reef environment (n=521)



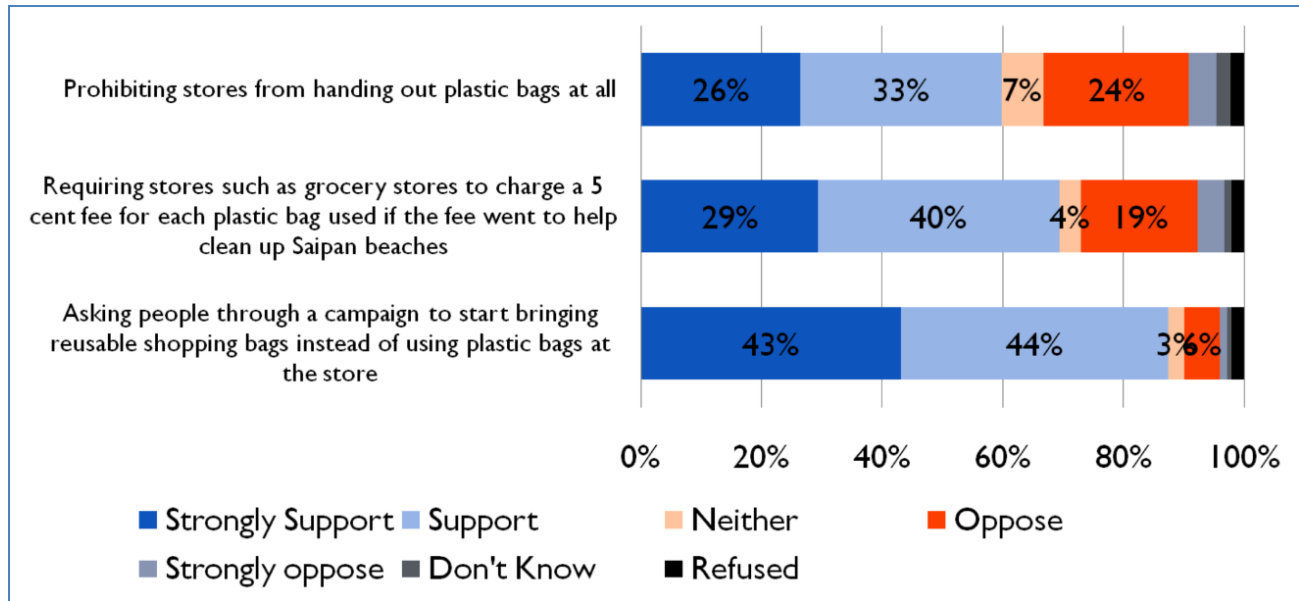
When asked about support for or opposition to marine management measures intended to improve coral reef health, respondents were in favor of ten out of the 11 measures mentioned, with only limiting dive tourism not receiving a plurality of votes.

Figure 7: Support for and opposition to coral reef management measures



When asked about ways of reducing the number of plastic bags on island, people were most likely to support a campaign for reusable bags; however, a majority of respondents would also support either a fee for plastic bags or an outright ban on them in Saipan.

Figure 8: Support for and opposition to ways of reducing plastic bag use in Saipan



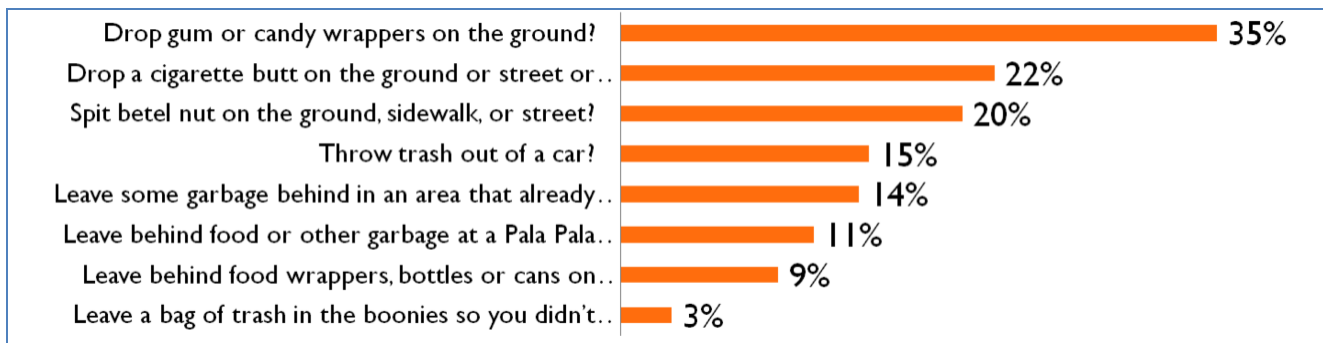
In order to gain an understanding of the frequency that certain actions that are damaging to coral reef ecosystems occur, residents were asked whether or not they had seen or heard of anyone doing a list of activities during the preceding year. The question was asked in this way to be non-intrusive so that people felt free to answer without incriminating themselves. While it is assumed that not all respondents answered this question truthfully, we also assume that the percentage of those not being truthful will remain the same over time such that this question could be asked again in the future to get a sense of whether these damaging behaviors are increasing or decreasing over time. Over three quarters of respondents had seen someone littering on or near the beach. About a quarter of respondents had seen or heard of others breaking fishing restrictions, including using gill nets, fishing in the MPAs and catching or eating sea turtles.

Table 3: Observation of damaging behaviors in Saipan (answers question: "In the past year, have you seen or heard of anyone doing the following activities in Saipan?")

Activities	Yes	No	Don't remember	Refused
Littering on or near the beach	76.60%	20.50%	0.20%	2.70%
Dumping trash in the boonies	60.70%	34.90%	1.50%	2.90%
Fishing in the marine protected areas	30.30%	63.40%	2.70%	3.60%
Using gill nets	25.30%	62.30%	9.40%	3.10%
Catching/eating sea turtles	23.20%	73.80%	0.20%	2.90%
Eating sea turtle eggs	11.30%	85.10%	0.80%	2.90%

In order to gage how many of Saipan’s residents litter and what littering actions they may take, respondents were asked directly whether they had littered in the past month. In total, 53% of respondents admitted to littering. When asked about their own behavior regarding littering, residents are most likely to mention dropping “gum or candy wrappers,” “dropping a cigarette butt,” or “spitting betel nut on the ground.” Of those who littered (n=278), 37% indicated having done so at the beach. Nineteen percent of all respondents (n=522) indicated having littered at the beach

Figure 9: Common littering habits: percentage of respondents who admitted to littering within the past month (n=522).



As shown in Table 3, residents are more likely to litter when they are: “holding something biodegradable,” (35%), “in a hurry” (15%), or “the trash cans are already full” (16%).

**Table 4: Factors influencing likelihood of littering (n=522)**

Likelihood of littering given the following situations	No trash cans nearby	Trash cans are full	Already garbage on the ground	Not likely to get caught	Holding something biodegradable (apple core, banana peel, etc)	Tired	In a hurry	In car
Would be more likely to litter	14%	16%	11%	12%	35%	15%	17%	8%
No effect	20%	20%	22%	22%	15%	22%	22%	24%
Would be less likely to litter	62%	60%	62%	60%	46%	59%	56%	63%
Don't Know	1%	1%	1%	2%	1%	0%	1%	1%
Refused	4%	4%	4%	4%	4%	4%	4%	4%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

Table 4 shows the results of a series of statements about littering. For the social marketing campaign, it is important to note the resonance of beach and marine related comments. In particular,

- 94% of respondents agree or strongly agree that "litter that accumulates on our beaches will discourage tourists and hurt our economy."
- 93% of respondents agree or strongly agree that "litter that accumulates on our beaches is a bad reflection on us as Saipan residents."
- 93% of respondents agree or strongly agree that "litter causes harm to marine life."
- 88% of respondents agree or strongly agree that "littering is a problem on Saipan beaches."

Respondents are most likely to **strongly disagree** with:

- "Littering is not a big deal because someone (like DPW) will pick it up."
- "Cigarette butts are not litter."
- "If others litter, it is not my problem."

<b>Table 4: Percentage of respondents agreeing or disagreeing with various statements about littering.</b>						
<b>Statements about littering</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>	<b>Don't Know/ Refused</b>
Litter that accumulates on our beaches will discourage tourists and hurt our economy	<b>53%</b>	41%	1%	0%	0%	4%
Litter that accumulates on our beaches is a bad reflection on us as Saipan residents.	<b>52%</b>	41%	1%	2%	1%	4%
Littering is a problem on Saipan beaches	<b>49%</b>	39%	3%	6%	0%	4%
Litter causes harm to marine life	47%	46%	1%	2%	1%	4%
Even a small piece of litter is a big problem	45%	45%	2%	3%	1%	4%
Even litter far away from the beach often ends up in the water	39%	51%	1%	3%	1%	4%
Litter is particularly harmful when it is done at the beach or in the ocean	39%	43%	3%	8%	2%	4%
Litter on the beach makes me enjoy the beach less	39%	46%	2%	8%	1%	5%
I often see litter at the beach	34%	49%	3%	8%	1%	4%
Littering is OK, as long as it is not done intentionally	5%	10%	3%	62%	17%	4%
Cigarette butts are not litter	5%	7%	1%	61%	<b>23%</b>	4%
If others litter, it is not my problem	4%	12%	3%	56%	<b>21%</b>	4%
Littering is not a big deal because someone (like DPW) will pick it up.	1%	3%	1%	67%	<b>24%</b>	4%

In order to further inform the social marketing campaign, a number of messages were tested. These have similar themes to the statements in Table 5 but are phrased more closely to campaign messages and asked if the messages would encourage people to stop littering. Table 5 lists these messages in order of agreement, with the most number of respondents strongly agreeing that:

- “litter harms our marine life;”
- “litter pollutes our beaches and ocean;” and
- “when you litter, you disrespect our island and our culture”

would convince them to stop littering. Only one message had a higher number of respondents disagreeing with it: “Would you like it if someone littered in your backyard? Don’t litter at the beach!”, indicating that messages in this vein would not be advised for the campaign.

**Table 5: Agreement with various messages regarding littering**

Agreement with the following messages	Strongly agree		Neither agree nor disagree	Strongly disagree		Don't Know/Refused
	Strongly agree	Agree		Disagree	Strongly disagree	
Litter harms our marine life	47%	48%	0%	1%	0%	1%
Litter pollutes our beaches and ocean	46%	49%	0%	1%	0%	1%
When you litter, you disrespect our island and our culture	45%	48%	0%	2%	0%	1%
Littering is a health danger	43%	51%	0%	1%	0%	1%
If you litter, you’ll get fined	42%	49%	1%	3%	1%	1%
We should stop littering in LaoLao Bay because it is a special place	36%	46%	2%	6%	2%	4%
Your mom’s not here- clean up after yourself	32%	50%	1%	10%	2%	1%
Would you like it if someone littered in your backyard? Don’t litter at the beach!	9%	5%	1%	<b>59%</b>	<b>22%</b>	1%

In all, the results indicate substantial recognition of coral reefs and their importance to recreation and Saipan’s economy. Saipan residents are supportive of management measures to improve the health of coral reefs, with the exception of limiting dive tourism.

## Acknowledgements

This survey was completed through a NOAA grant to SeaWeb for the CNMI Social Marketing Campaign. MRD Research was contracted to conduct the survey. This study was made possible through input from Fran Castro, Frank Rabauliman, Lisa Eller, Olivia Tebuteb, Carlos Ketebengang, and John Iguel, CNMI Division of Environmental Quality (DEQ); Brooke Nevitt, CNMI Coastal Resources Management; Lisa Dropkin, Edge Consulting, and Scott Radway, SeaWeb. Valuable comments and suggestions were provided by Mike Tenorio and Trey Dunn, CNMI Division of Fish and Wildlife; Jon Corsiglia, Steve McKagan and Dana Okano, NOAA. This report was completed by Christy Loper, NOAA, based on MRD data.

## **APPENDIX A: ONE PAGER TO ANNOUNCE SURVEY, CIRCULATED OCTOBER 2010**

### **Saipan-wide survey of local residents**

#### **What?**

CNMI Division of Environmental Quality and Coastal Resources Management, in partnership with the NOAA Coral Reef Conservation Program and SeaWeb are developing a Saipan-wide survey of local residents to inform the Laolao Bay Social Marketing Campaign. As part of this survey, we have the opportunity to add questions in that address information needs for management that go beyond the questions needed to address the social marketing campaign. We are seeking your input for survey topics to include that will assist in your coral reef management efforts.

We will also be seeking your input on the survey itself, once it has been drafted (anticipated early January 2011)

#### **When?**

Proposed timing for the survey is as follows:

- October 2010- hold scoping meetings with relevant partners
- November 2010- develop and circulate to partners a draft list of survey topics
- December 2010- draft initial survey and circulate to partners for comment
- January 2011- pretest survey; translate into local languages
- February 2011- implement survey, ideally via face to face interviews
- March 2011- analyze data; write survey report and share results with partners and interested community members

#### **Who?**

The survey will be coordinated by:

Brooke Nevitt, CRM ([brookenevitt@gmail.com](mailto:brookenevitt@gmail.com))

Lisa Eller, DEQ ([lisaeller@deg.gov.mp](mailto:lisaeller@deg.gov.mp))

Christy Loper, NOAA ([christy.loper@noaa.gov](mailto:christy.loper@noaa.gov))

We are still working to determine how the survey will be implemented.

#### **What will the survey include?**

- Questions to inform social marketing campaign (including questions to understand residents' behaviors and barriers to positive behaviors)
- Questions to feed into the Micronesia Challenge measures (including questions regarding level of participation in the marine resource management process, attitudes toward MPAs, perceived compliance with regulations)
- Questions to address some national level monitoring (including questions about perceived threats to coral reefs, participation in marine related activities)
- Other topics that are locally important (TBD by you)

## APPENDIX B: DRAFT LIST OF SURVEY TOPICS, CIRCULATED FEBRUARY 2011

CNMI- list of survey topics  
SECOND DRAFT  
February 2, 2011

Please note: this is an initial list meant to spark discussion and further brainstorming. Input is welcome. Please send comments to Christy Loper ([christy.loper@noaa.gov](mailto:christy.loper@noaa.gov) and Lisa Eller [lisaeller@deq.gov.mp](mailto:lisaeller@deq.gov.mp) by Wednesday, February 9, 2011)

### ***SURVEY TOPICS- specific to social marketing campaign***

1. Questions about LaoLao Bay
  - Frequency of visiting LaoLao (have you ever visited LaoLao?)
  - Attitudes toward LaoLao (eg. do people view it as a special place? What do they think of when they think of LaoLao)
2. Questions about littering in LaoLao
  - a. How much of a problem is littering?
  - b. Why do people do it?
  - c. How can we get them to stop?
  - d. What messages would resonate with the community?
3. Questions about communication and receiving information
  - a. Where do people get their information (we have good info on this, but may want to connect specifically to some of the attitudes that come out from this survey)
  - b. Who would be some good messengers for the social marketing campaign (eg. celebrities, community elders, elected officials, etc)

### ***SURVEY TOPICS- other general topics of use to coral reef managers in the CNMI***

4. Knowledge of coral reefs
5. Cultural and social importance of coral reefs
6. Perceived threats to coral reefs
7. Knowledge of coral reef rules and regulations
8. Perception of compliance with rules and regulations (asked indirectly)
9. Attitudes towards coral reef management strategies, including:
  - Marine protected areas
  - Gear restrictions
  - Seasonal closures



- Better enforcement of existing rules
- Limiting dive tourism
- Others

10. Participation in coral reef related activities

- Fishing → (if yes here, ask purpose of fishing- eg. fun, food, sell, share, etc)
- Diving
- Snorkeling
- Kayaking
- Boarding (surfing, kitesurfing, SUP)
- Going to the beach
- Beach BBQ
- Swimming

11. Participation in positive behaviors (eg beach cleanups)

12. Demographic questions

- Age
- Village
- Religion
- Level of education
- Language(s) spoken
- Ethnicity
- Income
- Sources of income

## APPENDIX C: FINAL QUESTIONNAIRE

Environmental Public Awareness Survey  
Draft #8: MR&D March 7, 2010- FINAL

Hello, my name is: \_\_\_\_\_. I am calling from Market Research & Development, Inc., a local research firm doing work on behalf of the CNMI Coral Reef Program. We are not trying to sell you anything; we are simply interested in your opinions on some important environmental issues in Saipan today. Your participation in this survey will be kept strictly confidential.

### IF NECESSARY:

- Your phone number has been selected at random to participate in the island-wide survey
  - We are not trying to sell you anything.
  - We are happy to provide you with a copy of the results.
- May I please proceed?

- Yes
- No

- S1. First of all, does anyone in your household work for:
- A radio or television station, a newspaper, or magazine?
  - Or an advertising agency or market research company?
1. **NO [PROCEED]**
  2. Yes [**THANK AND TERMINATE**]
  3. Don't Know/Refused [**THANK AND TERMINATE**]

### [RANDOMIZE S2A AND S2B,]

- S2A. I need to speak to the person in your household who is **18 years of age** or older and
1. **Yes [PROCEED]**
  2. No [**Ask for the person 18 years or older who has had the most recent birthday**]
  8. **DON'T KNOW [THANK AND TERMINATE]**
  9. **REFUSED [THANK AND TERMINATE]**

S2B. I need to speak to the youngest male, 18 years of age or older, who is now at home. Would you be that person?

1. **Yes [PROCEED]**
2. No [**IF NO youngest male at home, ASK: MAY I SPEAK TO THE OLDEST FEMALE, 18 YEARS OF AGE OR OLDER?**]
8. **DON'T KNOW [THANK AND TERMINATE]**
9. **REFUSED [THANK AND TERMINATE]**

S3. [RECORD GENDER]

1. Male
2. Female

S4. And how old were you on your last birthday?

**RECORD AGE:** \_\_\_\_\_  
999. Refused

S5. And what is your primary ethnic background?

**[IF NECESSARY, READ OUT]**

1. Chamorro
2. Filipino
3. Carolinian
4. Korean
5. Yapese
6. Kosraen
7. Chuukese
8. Pohnpeian
9. Palauan
10. Chinese
11. Japanese
12. Hawaiian
13. Caucasian
14. Other (Specify: \_\_\_\_\_)
98. DON'T KNOW
- 99. REFUSED**

A1. What village do you live in?

A2. Next, what would you say are the major issues facing Saipan today?

**[DON'T READ OUT; ACCEPT MULTIPLE RESPONSES]**

1. Budget, deficit, taxes
2. Economy, jobs, unemployment
3. Illegal immigration
4. Water pollution, water rights
5. Coral Reef threat
6. Crime
7. Education, schools
8. Tourism
9. Environment/Climate Change
10. Minimum wage increase
11. Federal government takeover of immigration
12. Corruption
97. OTHER (please specify \_\_\_\_\_)
- 98 DON'T KNOW
- 99 REFUSED

A3. In general, how important are environmental issues to you--are they **not important, somewhat important, or very important?**

1. Not important
2. Somewhat important
3. Very important
8. DON'T KNOW
9. REFUSED

[A3 = 2, 3]

**[GENERAL MARINE QUESTIONS]**

MA1. I will now read out a list of coastal and marine activities; please let me know which ones you participate in on a regular basis in Saipan.

**[RANDOMIZE AND READ OUT]**

- A. Fishing
- B. Swimming

- C. Snorkeling
- D. Scuba diving
- E. Picnic/bbq
- F. Walking/hiking/running
- G. Camping
- H. Hunting
- I. Beach cleanup
- J. Surfing, windsurfing or kiteboarding
- K. Other (please describe): \_\_\_\_\_

**[FOR: M1A-M1K:]**

- 1. Yes
- 2. No

**[DO NOT READ]**

- 8. DON'T KNOW
- 9. REFUSED

**[IF M1A=1:]** M2. You said previously that you fish. Do you fish for:

**[ACCEPT MULTIPLE RESPONSES]**

- 1. Fun?
- 2. In order to catch fish to eat?
- 3. In order to catch fish to share with friends and family?
- 4. In order to catch fish to sell?

**[ALL RESPONDENTS]**

M3. Which of the following beaches have you visited in the past year?

**[RANDOMIZE AND READ OUT]**

- 1. PauPau Beach
- 2. Wing Beach
- 3. Micro Beach
- 4. Managaha Island
- 5. Killi Beach
- 6. Obyan Beach
- 7. Ladder Beach
- 8. Forbidden Island
- 9. LaoLao Bay
- 10. Tank Beach
- 11. Marine Beach
- 12. Bird Island
- 13. Tanapeg Beach
- 14. Aquarius Beach

**[DO NOT READ]**

- 15. Don't remember
- 16. Other
- 17. None

M4. Which beach do you visit most often?

**[ACCEPT ONLY ONE RESPONSE, DO NOT READ OUT]**

- 1. PauPau Beach

2. Wing Beach
3. Micro Beach
4. Managaha Island
5. Killi Beach
6. Obyan Beach
7. Ladder Beach
8. Forbidden Island
9. LaoLao Bay
10. Tank Beach
11. Marine Beach
12. Bird Island
13. Tanapeg Beach
14. Aquarius Beach
- [DO NOT READ]**
15. Don't remember
16. Other
17. None

M5. When you think of LaoLao Bay, what comes to mind?

**[RECORD RESPONSE: \_\_\_\_\_]**

**[CORAL REEF SECTION]**

Thank you. The next set of questions asks what you think about Saipan's coral reefs and how they are doing.

CRD1. Next, I'm going to read out some aspects of the local coral reef environment and ask you to rate the extent to which these aspects have changed during your lifetime. On a scale running from 1 to 5, where 1 means **decreased a great deal** and 5 means **increased a great deal**, please indicate how each aspect has changed. If you believe that there has been no change, you would give a rating of 3.

**[ROTATE AND READ OUT EACH OF THE FOLLOWING. IF NECESSARY, REPEAT THE RATING INSTRUCTIONS FOR EACH ASPECT READ OUT]**

The first aspect I'll read out is [A]...

- A. The abundance of fish
- B. The size of fish
- C. The diversity of fish species
- D. The abundance of live coral
- E. Algae growth
- F. Sedimentation
- G. Water pollution
- H. Litter on beaches
- I. Number of sharks
- J. Number of sea urchins and sea cucumbers

[CRD1A-G]

1. Decreased a great deal
- 2.
3. No change
- 4.
5. Increased a great deal

[DON'T READ OUT]

8. DON'T KNOW

9. REFUSED

CRD2. Thinking again about these various aspects of the coral reef environment, did you base your ratings on your personal experience or on something else?

[ACCEPT MULTIPLE RESPONSES]

- 1 Your personal experience?
2. Your family's experience?
3. What your friends have been saying?
4. What your relatives have been saying?
5. What your work colleagues have been saying?
6. What you've read in the newspapers?
7. What you've seen on TV?
8. What you've heard on the radio?
9. What you've read or seen on the Internet?
10. Other (please specify \_\_\_\_\_)
98. DON'T KNOW
99. REFUSED

C2. When thinking about Saipan's coral reefs, how important would you say they are for:

- A. Saipan's economic well-being
- B. Tourism in Saipan
- C. Recreation
- D. Food, for you or your immediate family
- E. Food, primarily to share with extended family and friends
- F. Local culture and traditions

[FOR C2A-F:]

Would you say they are important, somewhat important, or very important?

**[DO NOT READ]**

1. Not important
2. Somewhat important
3. Very important
4. Don't Know
5. Refused

C3. What do you believe to be the top three threats to Saipan's coral reefs?

**[DO NOT READ]**

1. Erosion & runoff (too much soil going into ocean)
2. Littering
3. Illegal dumping
4. Jungle burning
5. Driving on the beach
6. Too much fishing
7. Harmful fishing practices
8. Illegal fishing
9. Too many divers
10. Irresponsible diving

11. Climate change
12. Poorly maintained road
13. Invasive species
14. Other (Specify)
15. Don't Know
16. Refused

C4. I'm going to read a list of activities. Can you tell me whether the activities are allowed: everywhere in Saipan, in some places in Saipan, not allowed at all in Saipan, or allowed only with a permit in Saipan?

**[RANDOMIZE AND READ OUT]**

- A. SCUBA diving
- B. SCUBA spear fishing
- C. Talaya fishing (throw net)
- D. Taking of live coral
- E. Gill net fishing
- F. Collecting & harvesting sea cucumbers
- G. Collecting & harvesting trochus
- H. Trash dumping in the boonies
- I. Forest burning
- J. Driving on the beach
- K. Fishing with rod & reel

**[For C4A-K:]**

1. Everywhere in Saipan
2. Some places in Saipan
3. Not allowed at all in Saipan
4. Allowed only with a permit

**[DO NOT READ]**

5. Don't Know
6. Refused

C5. Would you support or not support the following types of protection intended to improve the health of Saipan's coral reefs?

**[RANDOMIZE AND READ OUT]**

- A. Adding new marine protected areas
- B. Increasing the size of our current marine protected areas
- C. More restrictions on what type of fishing gear can be used
- D. Seasonal closures for fisheries
- E. Better enforcement of existing rules that protect coral reefs
- F. Limiting dive tourism
- G. Setting and enforcing stricter rules on development
- H. Improving the sewage system
- I. Charging a fee for non-resident scuba divers and snorkelers
- J. Increasing the penalties for violators of existing laws
- K. Voluntary guidelines to buy only fish that have grown big enough to reproduce

**[FOR C5A-K:]**

1. Strongly Support

2. Support
3. Neither
4. Oppose
5. Strongly oppose

**[DO NOT READ]**

6. Don't Know
7. Refuse

C6. Plastic bags contribute to about 10% of Saipan's litter. In order to reduce litter, Saipan is considering some ideas for reducing the amount of plastic bags used here on the island. Do you support or oppose each of the following ideas?

**[READ OUT:]**

- A. Asking people through a campaign to start bringing reusable shopping bags instead of using plastic bags at the store
- B. Requiring stores such as grocery stores to charge a 5 cent fee for each plastic bag used if the fee went to help clean up Saipan beaches
- C. Prohibiting stores from handing out plastic bags at all

**[FOR C6A-C:]**

1. Strongly Support
2. Support
3. Neither
4. Oppose
5. Strongly oppose

**[DO NOT READ]**

6. Don't Know
7. Refuse

C7. In the past year, have you heard of or seen people doing the following things in Saipan?

**[RANDOMIZE AND READ OUT]**

- A. Using gill nets
- B. Littering on or near the beach
- C. Dumping trash in the boonies
- D. Fishing in the marine protected areas
- E. Catching/eating sea turtles
- F. Eating sea turtle eggs

**[FOR C7A-F:]**

1. Yes
2. No

**[DO NOT READ]**

3. Don't remember
4. Refused

Okay, thanks. We are more than halfway done. Now I'm going to ask you some questions about litter in Saipan. Our main purpose is to understand how it sometimes happens that people litter. Again this survey is anonymous and you don't have to answer any questions that you're not comfortable with.

L1. Can you think of any items that you yourself might have discarded as litter in the past month, either because you didn't think much of it, or because you thought of it as a minor item, or it was accidental? I'm going to read a list of actions, let me know if you have done them in the past month:



- A. Leave behind food or other garbage at a Pala Pala after a barbeque?
- B. Throw trash out of a car?
- C. Leave some garbage behind in an area that already had a lot of trash?
- D. Drop gum or candy wrappers on the ground?
- E. Spit betel nut on the ground, sidewalk, or street?
- F. Leave behind food wrappers, bottles or cans on the beach ?
- G. Leave a bag of trash in the boonies so you didn't have to drive to the transfer station?
- H. Drop a cigarette butt on the ground or street or out of a car window?

**[For L1A-H, DO NOT READ:]**

- 1. Yes
- 2. No
- 3. Don't remember
- 4. Refused

**[IF L1A, B, C, D, E, F, G, or H = 1:]**

L2. Did you do any of these actions when you were at the beach?

- 1. Yes
- 2. No
- 3. Don't remember
- 4. Refused

L3. We are talking about litter which is a thing that sometimes people do without thinking. Are there places in Saipan that you would NEVER litter?

- 1. Yes
- 2. No **[SKIP TO L4B]**
- 3. Don't remember **[SKIP TO L5]**
- 4. Refused **[SKIP TO L5]**

L4A. If so, where/which places would this be?

**[RECORD RESPONSE: \_\_\_\_\_ ]**

**[SKIP TO L5]**

L4B. Why would you say that is?

**[RECORD RESPONSE: \_\_\_\_\_ ]**

L5. I will now read out a list of situations, and I would like you to indicate whether or not you would be more likely to litter if this situation was true. Let's start with:

**[RANDOMIZE AND READ OUT]**

- A. There are no trash cans nearby
- B. The trash cans are already full
- C. There is already garbage on the ground
- D. I am not likely to get caught
- E. When I'm holding something biodegradable (apple core, banana peel, etc)
- F. I am tired
- G. I am in a hurry
- H. I am in my car
- I. I'm at the beach or a Pala Pala
- J. Other:

**[FOR L5A-J, DO NOT READ:]**

1. Would be much more likely to litter
2. Would be somewhat more likely to litter
3. No effect
4. Would be somewhat less likely to litter
5. Would be much less likely to litter
6. Don't Know
7. Refused

L6. I'm going to read a series of statements about littering. Please tell me whether you agree or disagree with the statements...

**[RANDOMIZE AND READ OUT]**

- A. Littering is a problem on Saipan beaches
- B. Litter that accumulates on our beaches is a bad reflection on us as Saipan residents.
- C. Litter that accumulates on our beaches will discourage tourists and hurt our economy
- D. Even a small piece of litter is a big problem
- E. If others litter, it is not my problem
- F. Littering is OK, as long as it is not done intentionally
- G. Littering is not a big deal because someone (like DPW) will pick it up.
- H. Litter causes harm to marine life
- I. Cigarette butts are not litter
- J. Litter is particularly harmful when it is done at the beach or in the ocean
- K. Even litter far away from the beach often ends up in the water
- L. I often see litter at the beach
- M. Litter on the beach makes me enjoy the beach less

**[FOR L6A-M:]**

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don't Know
7. Refused

L7. I'm going to read a list of statements. Please tell me agree or disagree that they are a convincing reason that would stop you from littering:

**[RANDOMIZE AND READ OUT]**

- A. If you litter, you'll get fined
- B. Would you like it if someone littered in your backyard? Don't litter at the beach!
- C. We should stop littering in LaoLao Bay because it is a special place
- D. Your mom's not here- clean up after yourself
- E. When you litter, you disrespect our island and our culture
- F. Littering is a health danger
- G. Litter pollutes our beaches and ocean
- H. Litter harms our marine life

**[FOR L7A-H:]**

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don't Know
7. Refused

L8. In your own words, can you tell us what would it take to make you or other people stop littering? Please be as detailed and specific as possible.

**[RECORD RESPONSE]**

L9. Do you smoke cigarettes?

1. Yes
2. No
3. Don't Know
4. Refused

**[ALL RESPONDENTS:]**

D1. Which language do you mainly speak at home?

1. Chamorro
2. Carolinian
3. Other Micronesian
4. Japanese
5. English
6. Korean
7. Chinese
8. Russian
9. Tagalog
10. Other: \_\_\_\_\_
11. Don't Know
12. Refused

D2. Which of the following best describes your household?

**[READ OUT]**

1. Single person? **[SKIP TO D4]**
2. One parent family with children?
3. Couple with children?
4. Couple with no children?
5. Group household with children
6. Group household without children

**[DO NOT READ]**

97. Other
98. DON'T KNOW
99. REFUSED

D3A. In total, how many individuals 18 and older live in your household?

[Record total # of adults in household] \_\_\_\_\_

997. NONE
998. DON'T KNOW

999. REFUSED

D4. What is your highest level of education?

1. Elementary (1-6)
2. Junior High (7-8)
3. High School (9-12)
4. Some college or trade school
5. Two year degree (AA, AS)
6. Four year college degree (Bachelor's degree)
7. Graduate or professional degree (MA, PhD, LLD, MD, DDS, EdD)
8. **[DO NOT READ]**
  98. DON'T KNOW
  99. REFUSED

D5. What is your occupation?

---

D6. What are your sources of income? I'm going to read a list of choices; please say yes or no for each one:

- a. Salary from your job
- b. Fishing
- c. Farming
- d. Money from relatives off-island
- e. Pension/social security
- f. Other \_\_\_\_\_

D7. Are you originally from Saipan?

5. Yes
6. No
7. Don't Know
8. Refused

That's all! Thank you very much for your time. If you would like to provide your email address we are happy to send a copy of the results. This is totally optional. We'll store your email address separate from your survey responses so that your responses remain anonymous. We would not use your email address for any purpose other than sending the results of the survey.

## APPENDIX D: SUMMARY STATISTICS FOR ALL SURVEY QUESTIONS

S3.

<b>Gender</b>	<b>N</b>	<b>Col%</b>
Male	260	50%
Female	262	50%
<b>Total</b>	<b>522</b>	<b>100%</b>

S4. And how old were you on your last birthday?

<b>Age (categorized)</b>	<b>N</b>	<b>Col%</b>
18-34	174	33%
35-54	235	45%
55+	77	15%
Refused	36	7%
<b>Total</b>	<b>522</b>	<b>100%</b>

S5. And what is your primary ethnic background?

<b>Ethnicity</b>	<b>N</b>	<b>Col%</b>
Filipino	198	38%
Chamorro	162	31%
Carolinian	39	7%
Caucasian	30	6%
Palauan	22	4%
Chuukese	8	2%
Korean	6	1%
Yapese	5	1%
Japanese	4	1%
Pohnpeian	3	1%
Chinese	2	0%
Other	32	6%
Don't Know	1	0%
REFUSED	9	2%
<b>Total</b>	<b>521</b>	<b>100%</b>

<b>Ethnicity (categorized)</b>	<b>N</b>	<b>Col%</b>
Chamorro	162	31%
Filipino	198	38%
Other	162	31%
<b>Total</b>	<b>522</b>	<b>100%</b>

A1. What village do you live in?

<b><i>D8. Finally, in which village do you currently reside?</i></b>	<b>N</b>	<b>Col%</b>
As Matus	11	2%
Gualo Rai	15	3%
Kagman	59	11%
Koblerville	38	7%
Marpi	2	0%
Navy Hill	15	3%
Papago	6	1%
Puerto Rico	7	1%
Sadog Tasi	4	1%
San Antonio	23	4%
San Jose/Oleai	19	4%
Capitol Hill	28	5%
San Roque	12	2%
San Vicente	35	7%
Susupe	15	3%
Tanapag	11	2%
As Lito	21	4%
Airport Road	1	0%
As Gonno	1	0%
As Perdido	2	0%
Chinatown	8	2%
As Teo	3	1%
Kannat Tabla	3	1%
As Terlaje	2	0%
Chalan Kanoa	28	5%
Chalan Galaide	1	0%
Oleai	1	0%
Achugao	1	0%
Chalan Kiya	16	3%
Chalan Laulau	14	3%
Chalan Piao	5	1%
Dan Dan	38	7%
Fina Sisu	18	3%
Garapan	33	6%
Don't Know	1	0%
REFUSED	25	5%
<b>Total</b>	<b>522</b>	<b>100%</b>

A2. Next, what would you say are the major issues facing Saipan today?

**[DON'T READ OUT; ACCEPT MULTIPLE RESPONSES]**

<b><i>What would you say are the major issues facing Saipan today?</i></b>	<b>N</b>	<b>Col%</b>
--	----------	-------------

Economy, jobs, unemployment	385	76%
Budget, deficit, taxes	85	17%
Federal government takeover of immigration	59	12%
Water pollution, water rights	39	8%
Tourism	38	8%
Corruption/Government leadership	34	7%
Illegal immigration	29	6%
Environment/Climate Change	25	5%
CUC/Power Rates	24	5%
Cost of Living/Prices	20	4%
Crime	19	4%
Minimum wage increase	18	4%
Coral Reef threat	15	3%
Education, schools	8	2%
Recycling/Littering	8	2%
Healthcare/CHC	2	0%
OTHER	23	5%
Don't Know	20	4%
REFUSED	3	1%
<b>Total</b>	<b>506</b>	<b>100%</b>

Note: Due to multiple responses, totals will not sum to 100%

A3. In general, how important are environmental issues to you--are they **not important**, **somewhat important**, or **very important**?

<i>In general, how important are environmental issues to you--are they not important, somewhat important, or very important?</i>		
	N	Col%
Not important	7	1%
Somewhat important	52	10%
Very important	460	88%
Don't Know	2	0%
REFUSED	1	0%
<b>Total</b>	<b>522</b>	<b>100%</b>

**[GENERAL MARINE QUESTIONS]**

MA1. I will now read out a list of coastal and marine activities; please let me know which ones you participate in on a regular basis in Saipan.

**[RANDOMIZE AND READ OUT]**

<b>MA1. I will now read out a list of coastal and marine activities; please let me know which ones you participate in on a regular basis in Saipan.</b>								
	Fishing		Swimming		Snorkeling		Scuba diving	
	N	Col%	N	Col%	N	Col%	N	Col%
Yes	182	35%	351	67%	194	37%	60	11%
No	340	65%	171	33%	328	63%	462	89%
DON'T KNOW	0	0%	0	0%	0	0%	0	0%
REFUSED	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	Picnic/bbq		Walking/hiking/running		Camping		Hunting	

	N	Col%	N	Col%	N	Col%	N	Col%
Yes	437	84%	428	82%	185	35%	63	12%
No	85	16%	94	18%	337	65%	459	88%
DON'T KNOW	0	0%	0	0%	0	0%	0	0%
REFUSED	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	Beach cleanup		Surfing, windsurfing or kiteboarding		Other			
	N	Col%	N	Col%	N	Col%		
Yes	338	65%	36	7%	0	0%		
No	184	35%	486	93%	0	0%		
DON'T KNOW	0	0%	0	0%	0	0%		
REFUSED	0	0%	0	0%	0	0%		
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>		

[IF M1A=1:] M2. You said previously that you fish. Do you fish for:  
[ACCEPT MULTIPLE RESPONSES]

<i>M2. You said previously that you fish. Do you fish for:</i>	N	Col%
In order to catch fish to eat?	134	74%
Fun?	70	38%
In order to catch fish to share with friends and family?	58	32%
In order to catch fish to sell?	14	8%
<b>Total</b>	<b>182</b>	<b>100%</b>

[ALL RESPONDENTS]

M3. Which of the following beaches have you visited in the past year?

[RANDOMIZE AND READ OUT]

<i>M3. Which of the following beaches have you visited in the past year?</i>	N	Col%
Micro Beach	298	57%
Killi Beach	204	39%
PauPau Beach	195	37%
Obyan Beach	145	28%
Aquarius Beach	125	24%
LaoLao Bay	103	20%
Ladder Beach	89	17%
Wing Beach	85	16%
Managaha Island	82	16%
Tank Beach	71	14%
Marine Beach	60	11%
Forbidden Island	45	9%
Tanapeg Beach	29	6%
Bird Island	20	4%
Don't remember	4	1%
Other	69	13%
None	13	2%
<b>Total</b>	<b>522</b>	<b>100%</b>

Note: Due to multiple responses, totals will not sum to 100%



M4. Which beach do you visit most often?

[ACCEPT ONLY ONE RESPONSE, DO NOT READ OUT]

<b>M4. Which beach do you visit most often?</b>	<b>N</b>	<b>Col%</b>
Micro Beach	142	27%
PauPau Beach	67	13%
Killi Beach	66	13%
Aquarius Beach	56	11%
Obyan Beach	30	6%
LaoLao Bay	20	4%
Wing Beach	13	2%
Tank Beach	13	2%
Managaha Island	9	2%
Marine Beach	8	2%
Tanapeg Beach	7	1%
Ladder Beach	6	1%
Forbidden Island	2	0%
Bird Island	1	0%
Don't remember	6	1%
Other	62	12%
None	14	3%
<b>Total</b>	<b>522</b>	<b>100%</b>

M5. When you think of LaoLao Bay, what comes to mind?

<b>comments</b>	<b>frequency</b>
All rocks and you can't swim.	1
All the trees and rocky beaches.	1
An isolated and under developed part of the island.	1
An isolated area.	1
An ugly place.	1
Ancient beach.	1
Ancient site.	1
Awesome scuba diving.	1
Backside.	1
Bad Road. Golf Course.	1
Bay or ocean.	1
Bay.	1
Beach and golf course.	1
Beach is rocky.	1
Beach that needs a lot of work, a lot of divers, beach not easy to get to.	1
<b>Beach</b>	<b>4</b>
Beautiful but road is really bad.	1
beautiful environment with plenty grass.	1

Beautiful golf course for the people.	1
<b>Beautiful golf course.</b>	<b>3</b>
Beautiful place and should be developed for recreation.	1
Beautiful place for the people.	1
Beautiful place to look at.	1
<b>beautiful place</b>	<b>13</b>
calendar.	1
Clean beach.	1
Clean beach. Nice picnic spot..	1
clean golf course.	1
Clean nice beach.	1
clean place with less trash.	1
Clean.	1
Compared to before, it is less clean. But haven't been there lately.	1
Contaminated.	1
Coral beach, full of rocks.	1
Coral.	1
Corals, rocks.	1
Corals, they are dead, erosion.	1
<b>Dangerous beach.</b>	<b>2</b>
dangerous place located behind the island.	1
<b>dangerous place.</b>	<b>6</b>
Deep cliffs.	1
Deep.	1
Dirt and trash. Sea cucumbers.	1
<b>Dirty.</b>	<b>2</b>
Diving, snorkeling, erosion that has taken place in the last years.	1
Does not know where LaoLao bay is located.	1
Don't know haven't been there.	1
Don't know that place.	1
<b>Don't know where that is.</b>	<b>3</b>
<b>Don't know.</b>	<b>8</b>
Don't really go to the back beach because I'm scared.	1
Don't really know very far.	1
<b>Don't remember.</b>	<b>2</b>
Don't think about it.	1
Don't know much about LaoLao bay, very good for scuba.	1
Don't remember been to LLB.	1
Erosion run road goes into the ocean. used to fish there but no more because very dirty from erosion.	1

Far away, so you go to Kilili beach.	1
Far but nice and quiet beach.	1
Far distance.	1
far place and haven't been there.	1
far place with bad roads.	1
<b>far place.</b>	<b>3</b>
Favorite beach, go running at that beach.	1
few people frequent the place because it is privately owned and more exclusive to tourists only.	1
Fishing trip.	1
Fishing, diving, sanctuary.	1
<b>Fishing.</b>	<b>2</b>
For the tourist to go diving.	1
Ghosts.	1
Golf and nice beach.	1
Golf and spear fishing.	1
golf course and a commercial area.	1
golf course but haven't been there yet.	1
Golf course for tourist.	1
<b>Golfing/Golf course.</b>	<b>68</b>
Golf course. Not enough fish.	1
Golfing/LaoLao beach	1
Good because they have a ranch there.	1
good but dangerous place to swim.	1
Good diving point.	1
<b>good place to fish.</b>	<b>4</b>
Good place to hike.	1
good place to swim and fish.	1
Good place.	4
Government needs to take of road.	1
Grandfather's ranch is located nearby and a good place to swim.	1
Great golf course.	1
Great spot for fishing and a nice spot for picnic.	1
Hardly go there.	1
Haven't been there in a long time.	1
Haven't been there lately.	1
Hidden beach and sanctuary.	1
Hiking.	1
I do not go there.	1
I don't go there much but I think it's a really good place. I know there was dirt in the cave before. A nice place to develop.	1

I feel sorry for the fisherman, no place to dock and place is not maintained.	1
I hardly go there.	1
I have never been there yet, but I think it should be preserved for fishing.	1
I have no comment.	1
I have no idea I never thought of LaoLao bay.	1
I have no idea.	1
I haven't been there yet. I only go to San Antonio Beach because its cleaner.	1
I haven't really gone to LaoLao bay.	1
I haven't been there because it is far.	1
<b>I haven't been there for a long time.</b>	<b>2</b>
I haven't been there, but I heard it is a nice beach.	1
<b>I haven't been there.</b>	<b>28</b>
I haven't seen the place yet, only the bad roads.	1
I like the place because it's well maintained.	1
I live close-by and used to fish a lot there.	1
I suggest to build a small dock for parking boats.	1
I think it is a nice place, but they need to clean it up a little.	1
I think it is pristine and undisturbed.	1
I think of a beautiful and clean place.	1
I think of diving.	1
I think of rocks and bad road.	1
I think of rocks.	1
I think of rough roads and the beach is hard to get to.	1
I think of running.	1
I think of surfing.	1
I think of the fish.	1
I think of the pollution.	1
I think of theft, robbery, and spear fishing.	1
I think that it is a clean beach.	1
I think that it is a sanctuary.	1
I think that it is deep.	1
I think that the corals are dying.	1
I think the road is bad.	1
I think there's a lot of fish.	1
I used so beautiful but not so much coz of lack of maintenance.	1
Improve the road, beach needs to be clean, and improved.	1
Isolated area and beach is rough.	1
<b>It has a great view.</b>	<b>2</b>
It has been a long time.	1

It is a beach.	1
It is a good place to have picnics.	1
It is a good place with very clean water, far away from the dump.	1
It is a highly preserved area because of corals.	1
<b>It is a nice place.</b>	<b>2</b>
It is a very nice place, and you can compare it just like the ones in the states.	1
It is better than on land.	1
It is near the boonies.	1
It is very far and has golf course and its nice there. There is a hotel there.	1
It needs to be cleaned-up and the roads need to be paved.	1
It's a bay.	1
It's a beautiful place & nice view.	1
It's a good beach.	1
It's a nice beach.	1
It's a nice location for diving. as far as accessibility to beach its poor. Road is bad..	1
It's a nice place.	1
It's a quiet place and nice.	1
It's beautiful but road needs work.	1
It's kind of dirty.	1
It's really a trash..people dumps there trashes.	1
It's the best diving area.	1
It's a good spot for fishing, most fishes are there outside the reef, natural side.	1
Its clean.	1
Its far and it?s so rocky and not good to swim.	1
It's nice & quiet.	1
It's really nice. paradise.	1
Just starting to develop. Nice ocean scenery.	1
LaoLao Bay is hurting, the reef.	1
LaoLao bay now a days is no good cause road problems.	1
Long drive.	1
Looks nice.	1
lot of rocks.	1
lot of runoffs are going on there.	1
Marine protected area.	1
mosquito-infested area.	1
Most beautiful place.	1
Mostly golf.	1
Natural beauty.	1
Need improvement . Road is too bad. Some people want to go their but the road is the biggest issue.	1

Need to put more facilities such as restroom.	1
Needs more improvement, especially the water runoff.	1
Needs to be cleaned ( the trees are overgrown and the road is too small).	1
Needs to be fixed.	1
Needs to clean and need pavilion and more improvement.	1
<b>Never been there.</b>	<b>13</b>
Never been to LaoLao Bay.	1
<b>Never go there.</b>	<b>2</b>
Nice and clean.	1
nice and quiet beach, but haven't been there.	1
Nice beach, very far and road is bad.	1
Nice beach.	1
nice but littered place.	1
Nice for the tourist.	1
Nice place & leave as is.	1
nice place for fishing and swimming.	1
nice place for picnic and swimming.	1
nice place to fish and nice scenery.	1
nice place to fish where fish are abundant.	1
nice place which attracts tourists.	1
<b>Nice place/ very nice place</b>	<b>15</b>
Nice place. A lot of people go picnic there.	1
Nice scenery and fresh air.	1
<b>Nice view.</b>	<b>2</b>
Nice, not really bothered area , not a lot of people.	1
nice, relaxing place.	1
Nicest beach even with the runoff.	1
Not a good place because of the bad roads.	1
Not a good place for children. The place needs to be cleaned.	1
Not as clean as before.	1
Not fully developed beach.	1
Not good needs repair.	1
Not maintained. road is very bad & rough.	1
Not really sure about it, hardly go there.	1
Not so good.	1
Not so much.	1
Not sure because I haven't been there yet.	1
Not well developed.	1
Nothing just good beach.	1

Nothing just sit down, go fishing there sometimes.	1
Nothing never really been there.	1
Nothing/ no comment/ no idea	13
Now I read on the news that there are beach clean ups by tour companies and now it's a good place..	1
Ocean, bay area.	1
Ocean.	1
One of a kind beach on the back side of Saipan. also road project ongoing & water run-off.	1
One of the beautiful places on Saipan.	1
Peace and tranquility.	1
peaceful place.	1
Picnic.	2
place for golfing and scuba diving.	1
place for tourists and divers.	1
place near Pacific Ocean.	1
place where there are lots of fish and corals.	1
place where there is plenty of algae growth.	1
place with a good view.	1
place with a nice scenery.	2
place with a nice view where one can relax and think.	1
place with a nice view.	2
Pretty beach, not as dirty as the rest of the beaches.	1
pretty place.	1
Quiet and peaceful and clean.	1
quiet place to go for snorkeling, fishing and picnic.	1
quiet place.	3
Reef is very nice.	1
Reef. Spear Fishing. Golf course. San Vicente.	1
regular far away beach.	1
Relaxing place. Great to appreciate the surroundings.	1
Remote, fishing, and diving.	1
Rich in natural resources.	1
Road is bad so we hardly go there.	1
<b>Road is bad.</b>	<b>9</b>
Road is ok.	1
Road need to be fix.	1
Road to golf.	1
Road to LaoLao Bay.	1
Robberies, and crime.	1
Rocks everywhere.	1

Rocky and not too good for kids.	1
rocky beach place.	1
Rocky road.	1
rocky, polluted place where plastics are everywhere.	1
<b>Rocky.</b>	<b>3</b>
Rough road.	1
Rough waves.	1
Runoff.	1
Sacred place for fishes.	1
sacred place.	1
Scary to go there alone.	1
Scary.	1
<b>Scuba diving.</b>	<b>4</b>
Scuba diving. illegal fishermen.	1
serene place.	1
Southern backside.	1
Spanish used it to off-load during the 16th century.	1
Still clean, but far from where I live so we only go there sometimes.	1
Swimming.	1
The beach is far so hardly go there.	1
The beach is not clean and its very far.	1
The birds.	1
The erosion is bad.	1
The green golf scenario.	1
The new golf course, haven't been there yet.	1
The ocean.	1
The place need to put up nets on the shore lines to keep golf balls from going into the ocean, affecting the marine life.	1
The reef is close to the beach.	1
Road is bad and never been there.	1
The scenery.	1
There is no negative with that area, it's just I don't feel comfortable there, feel more relaxed at Oban.	1
They need road repairs to be accessible to tourists and need to promote the beautification of that area.	1
<b>Too far/very far</b>	<b>3</b>
Too rocky.	1
Trash everywhere.	1
<b>Trash.</b>	<b>2</b>
Uncontrollable human disposal; no outhouse.	1
Very beautiful and unspoiled.	1
Very beautiful but the road is really bad.	1



very clean place.	1
Very difficult to get there on the road.	1
Very few people visit.	1
Very fresh and cool and a lot of fish.	1
Very good coz it's clean and quiet. Water also clean.	1
Very LaoLao.	1
Very nice and special place. Just beautiful I may say. But the road is really bad.	1
Very nice place but not so good for swimming. Its shallow and rocky.	1
Very quiet and plenty birds.	1
Very rocky and very far.	1
Waves.	1
Windy.	1

**[CORAL REEF SECTION]**

Thank you. The next set of questions asks what you think about Saipan’s coral reefs and how they are doing. CRD1. Next, I’m going to read out some aspects of the local coral reef environment and ask you to rate the extent to which these aspects have changed during your lifetime. On a scale running from 1 to 5, where 1 means **decreased a great deal** and 5 means **increased a great deal**, please indicate how each aspect has changed. If you believe that there has been no change, you would give a rating of 3.

**CRD1. Next, I’m going to read out some aspects of the local coral reef environment and ask you to rate the extent to which these aspects have changed during your lifetime. On a scale running from 1 to 5, where 1 means decreased a great deal and 5 means increased a great deal, please indicate how each aspect has changed. If you believe that there has been no change, you would give a rating of 3.**

	A. The abundance of fish		B. The size of fish		C. The diversity of fish species		D. The abundance of live coral	
	N	Col%	N	Col%	N	Col%	N	Col%
Decreased a great deal	132	25%	120	23%	84	16%	86	16%
2	121	23%	127	24%	123	24%	132	25%
No change	132	25%	149	29%	167	32%	110	21%
4	46	9%	47	9%	45	9%	48	9%
Increased a great deal	43	8%	35	7%	48	9%	48	9%
Don't Know	44	8%	40	8%	51	10%	93	18%
REFUSED	4	1%	4	1%	4	1%	5	1%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	E. Algae growth		F. Sedimentation		G. Water pollution		H. Litter on beaches	
	N	Col%	N	Col%	N	Col%	N	Col%
Decreased a great deal	42	8%	30	6%	45	9%	32	6%
2	64	12%	50	10%	61	12%	67	13%
No change	117	22%	132	25%	89	17%	89	17%
4	72	14%	64	12%	108	21%	113	22%
Increased a great deal	70	13%	68	13%	186	36%	206	39%
Don't Know	152	29%	173	33%	29	6%	11	2%
REFUSED	5	1%	5	1%	4	1%	4	1%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>

	I. Number of sharks		J. Number of sea urchins and sea cucumbers	
	N	Col%	N	Col%
Decreased a great deal	83	16%	73	14%
2	82	16%	89	17%
No change	109	21%	134	26%
4	30	6%	57	11%
Increased a great deal	38	7%	70	13%
Don't Know	175	34%	95	18%
REFUSED	5	1%	4	1%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>

CRD2. Thinking again about these various aspects of the coral reef environment, did you base your ratings on your personal experience or on something else?

<b>CRD2. Thinking again about these various aspects of the coral reef environment, did you base your ratings on your personal experience or on something else?</b>		
	N	Col%
Your personal experience?	489	94%
Your family's experience?	23	4%
What you've seen on TV?	23	4%
What you've read in the newspapers?	22	4%
What your friends have been saying?	15	3%
What your work colleagues have been saying?	6	1%
What your relatives have been saying?	5	1%
What you've heard on the radio?	3	1%
Don't Know	6	1%
REFUSED	6	1%
<b>Total</b>	<b>522</b>	<b>100%</b>

Note: Due to multiple responses, totals will not sum to 100%

C2. When thinking about Saipan's coral reefs, how important would you say they are for:

	Saipan's economic well-being	Tourism in Saipan	Recreation	Food, for you or your immediate family	Food, primarily to share with extended family and friends	Local culture and traditions
	Column N %	Column N %	Column N %	Column N %	Column N %	Column N %
Not important	.2%	.0%	.6%	2.5%	3.4%	1.0%
Somewhat important	6.7%	6.1%	15.7%	6.9%	14.8%	7.9%

Very important	90.6%	92.1%	81.4%	87.5%	78.7%	88.5%
Don't Know	1.5%	.8%	1.3%	1.7%	1.7%	1.7%
Refused	1.0%	1.0%	1.0%	1.3%	1.3%	1.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

C3. What do you believe to be the top three threats to Saipan's coral reefs?

**[DO NOT READ]**

<b>C3. What do you believe to be the top three threats to Saipan's coral reefs?</b>		
	<b>N</b>	<b>Col%</b>
Littering	313	60%
Illegal dumping	196	38%
Erosion & runoff (too much soil going into ocean)	191	37%
Illegal fishing	150	29%
Harmful fishing practices	141	27%
Too much fishing	102	20%
Irresponsible diving	42	8%
Too many divers	35	7%
Climate change	26	5%
Driving on the beach	20	4%
Invasive species	20	4%
Poorly maintained road	13	2%
Jungle burning	7	1%
Don't Know	40	8%
Refused	8	2%
<b>Total</b>	<b>521</b>	<b>100%</b>

*Note: Due to multiple responses, totals will not sum to 100%*

C4. I'm going to read a list of activities. Can you tell me whether the activities are allowed: everywhere in Saipan, in some places in Saipan, not allowed at all in Saipan, or allowed only with a permit in Saipan?

**[RANDOMIZE AND READ OUT]**

<b>C4. I'm going to read a list of activities. Can you tell me whether the activities are allowed: everywhere in Saipan, in some places in Saipan, not allowed at all in Saipan, or allowed only with a permit in Saipan?</b>								
	<b>SCUBA diving</b>		<b>SCUBA spear fishing</b>		<b>Talaya fishing (throw net)</b>		<b>Taking of live coral</b>	
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>
Everywhere in Saipan	127	24%	38	7%	66	13%	6	1%
Some places in Saipan	206	39%	165	32%	136	26%	17	3%
Not allowed at all in Saipan	12	2%	156	30%	67	13%	440	84%
Allowed only with a permit	137	26%	97	19%	200	38%	33	6%
Don't Know	33	6%	58	11%	44	8%	18	3%
Refused	7	1%	8	2%	9	2%	8	2%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	<b>Gill net fishing</b>		<b>Collecting &amp; harvesting sea cucumbers</b>		<b>Collecting &amp; harvesting trochus</b>		<b>Trash dumping in the boonies</b>	
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>

Everywhere in Saipan	15	3%	25	5%	6	1%	7	1%
Some places in Saipan	75	14%	72	14%	48	9%	8	2%
Not allowed at all in Saipan	239	46%	282	54%	293	56%	478	92%
Allowed only with a permit	92	18%	22	4%	44	8%	6	1%
Don't Know	92	18%	113	22%	122	23%	14	3%
Refused	9	2%	8	2%	9	2%	9	2%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	<b>Forest burning</b>		<b>Driving on the beach</b>		<b>Fishing with rod &amp; reel</b>			
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>		
Everywhere in Saipan	2	0%	7	1%	265	51%		
Some places in Saipan	15	3%	37	7%	185	35%		
Not allowed at all in Saipan	423	81%	439	84%	26	5%		
Allowed only with a permit	55	11%	13	2%	15	3%		
Don't Know	18	3%	17	3%	22	4%		
Refused	9	2%	9	2%	9	2%		
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>		

L.

C5. Would you support or not support the following types of protection intended to improve the health of Saipan's coral reefs?

[RANDOMIZE AND READ OUT]

C5. Would you support or not support the following types of protection intended to improve the health of Saipan's coral reefs?								
	Adding new marine protected areas		Increasing the size of our current marine protected areas		More restrictions on what type of fishing gear can be used		Seasonal closures for fisheries	
	N	Col%	N	Col%	N	Col%	N	Col%
Strongly Support	191	37%	179	34%	159	30%	145	28%
Support	233	45%	214	41%	236	45%	244	47%
Neither	24	5%	27	5%	19	4%	18	3%
Oppose	35	7%	59	11%	58	11%	63	12%
Strongly oppose	12	2%	13	2%	11	2%	13	2%
Don't Know	18	3%	21	4%	31	6%	30	6%
Refused	9	2%	9	2%	8	2%	9	2%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	Better enforcement of existing rules that protect coral reefs		Limiting dive tourism		Setting and enforcing stricter rules on development		Improving the sewage system	
	N	Col%	N	Col%	N	Col%	N	Col%
Strongly Support	218	42%	58	11%	150	29%	309	59%
Support	268	51%	147	28%	280	54%	185	35%
Neither	5	1%	47	9%	18	3%	3	1%
Oppose	5	1%	190	36%	36	7%	3	1%
Strongly oppose	0	0%	41	8%	4	1%	0	0%
Don't Know	17	3%	29	6%	24	5%	11	2%
Refused	9	2%	10	2%	10	2%	11	2%

Total	522	100%	522	100%	522	100%	522	100%
	Charging a fee for non-resident scuba divers and snorkelers		Increasing the penalties for violators of existing laws		Voluntary guidelines to buy only fish that have grown big enough to reproduce			
	N	Col%	N	Col%	N	Col%		
Strongly Support	89	17%	199	38%	194	37%		
Support	197	38%	240	46%	253	48%		
Neither	46	9%	16	3%	17	3%		
Oppose	118	23%	30	6%	21	4%		
Strongly oppose	31	6%	8	2%	1	0%		
Don't Know	31	6%	19	4%	26	5%		
Refused	10	2%	10	2%	10	2%		
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>		

C6. Plastic bags contribute to about 10% of Saipan’s litter. In order to reduce litter, Saipan is considering some ideas for reducing the amount of plastic bags used here on the island. Do you support or oppose each of the following ideas?

**[READ OUT:]**

C6. Plastic bags contribute to about 10% of Saipan’s litter. In order to reduce litter, Saipan is considering some ideas for reducing the amount of plastic bags used here on the island. Do you support or oppose each of the following ideas?						
	Asking people through a campaign to start bringing reusable shopping bags instead of using plastic bags at the store		Requiring stores such as grocery stores to charge a 5 cent fee for each plastic bag used if the fee went to help clean up Saipan beaches		Prohibiting stores from handing out plastic bags at all	
	N	Col%	N	Col%	N	Col%
Strongly Support	225	43%	153	29%	138	26%
Support	231	44%	209	40%	174	33%
Neither	14	3%	19	4%	36	7%
Oppose	31	6%	101	19%	126	24%
Strongly oppose	6	1%	23	4%	24	5%
Don't Know	4	1%	6	1%	12	2%
Refused	11	2%	11	2%	12	2%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>

C7. In the past year, have you heard of or seen people doing the following things in Saipan?

**[RANDOMIZE AND READ OUT]**

- G. Using gill nets
- H. Littering on or near the beach
- I. Dumping trash in the boonies
- J. Fishing in the marine protected areas
- K. Catching/eating sea turtles
- L. Eating sea turtle eggs

**[FOR C7A-F:]**

- 5. Yes
- 6. No

**[DO NOT READ]**

7. Don't remember

8. Refused

	Yes	No	Don't remember	Refused
Littering on or near the beach	76.60%	20.50%	0.20%	2.70%
Dumping trash in the boonies	60.70%	34.90%	1.50%	2.90%
Fishing in the marine protected areas	30.30%	63.40%	2.70%	3.60%
Using gill nets	25.30%	62.30%	9.40%	3.10%
Catching/eating sea turtles	23.20%	73.80%	0.20%	2.90%
Eating sea turtle eggs	11.30%	85.10%	0.80%	2.90%

Okay, thanks. We are more than halfway done. Now I'm going to ask you some questions about litter in Saipan. Our main purpose is to understand how it sometimes happens that people litter. Again this survey is anonymous and you don't have to answer any questions that you're not comfortable with.

L1. Can you think of any items that you yourself might have discarded as litter in the past month, either because you didn't think much of it, or because you thought of it as a minor item, or it was accidental? I'm going to read a list of actions, let me know if you have done them in the past month:

<b>L1. Can you think of any items that you yourself might have discarded as litter in the past month, either because you didn't think much of it, or because you thought of it as a minor item, or it was accidental? I'm going to read a list of actions, let me know if you have done them in the past month:</b>								
	Leave behind food or other garbage at a Pala Pala after a barbeque?		Throw trash out of a car?		Leave some garbage behind in an area that already had a lot of trash?		Drop gum or candy wrappers on the ground?	
	N	Col%	N	Col%	N	Col%	N	Col%
Yes	60	11%	77	15%	74	14%	185	35%
No	443	85%	426	82%	426	82%	316	61%
Don't remember	1	0%	2	0%	4	1%	4	1%
Refused	18	3%	17	3%	18	3%	17	3%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	Spit betel nut on the ground, sidewalk, or street?		Leave behind food wrappers, bottles or cans on the beach ?		Leave a bag of trash in the boonies so you didn't have to drive to the transfer station?		Drop a cigarette butt on the ground or street or out of a car window?	
	N	Col%	N	Col%	N	Col%	N	Col%
Yes	106	20%	49	9%	16	3%	116	22%
No	396	76%	455	87%	488	93%	388	74%

Don't remember	1	0%	1	0%	1	0%	1	0%
Refused	19	4%	17	3%	17	3%	17	3%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>

[IF L1A, B, C, D, E, F, G, or H = 1:]

L2. Did you do any of these actions when you were at the beach?

<b>L2. Did you do any of these actions when you were at the beach?</b>	<b>N</b>	<b>Col%</b>
Yes	101	36%
No	174	63%
Don't remember	3	1%
<b>Total</b>	<b>278</b>	<b>100%</b>

L3. We are talking about litter which is a thing that sometimes people do without thinking. Are there places in Saipan that you would NEVER litter?

<b>L3. We are talking about litter which is a thing that sometimes people do without thinking. Are there places in Saipan that you would NEVER litter?</b>	<b>N</b>	<b>Col%</b>
Yes	391	75%
No	64	12%
Don't remember	37	7%
Refused	30	6%
<b>Total</b>	<b>522</b>	<b>100%</b>

L4A. If so, where/which places would this be?

<b>L4A. If so, where/which places would this be? (categorized)</b>	<b>N</b>	<b>Col%</b>
Everywhere/I don't litter at all	138	35%
Beaches	98	25%
Home/other people's homes/private property	35	9%
Other - specific location named	27	7%
Public areas	25	6%
Churches	22	6%
The roads/streets	21	5%
Tourist areas	19	5%
American Memorial Park	18	5%
Micro Beach	11	3%
Schools	10	3%
Hospitals	9	2%
Parks	9	2%
Cemeteries	7	2%
Hotels	6	2%
Boonies/jungle	5	1%
Government property	5	1%
Sanctuaries/Protected areas	5	1%
Recreational sites	3	1%
Workplace	2	1%

Other	5	1%
Don't Know/Not sure	4	1%
Refused	1	0%
<b>Total</b>	<b>389</b>	<b>100%</b>

Note: Due to multiple responses, totals will not sum to 100%

L4B. Why would you say that is?

[RECORD RESPONSE: \_\_\_\_\_ ]

L5. I will now read out a list of situations, and I would like you to indicate whether or not you would be more likely to litter if this situation was true. Let's start with:

[RANDOMIZE AND READ OUT]

L5. I will now read out a list of situations, and I would like you to indicate whether or not you would be more or less likely to litter if this situation was true. Let's start with:								
	There are no trash cans nearby		The trash cans are already full		There is already garbage on the ground		I am not likely to get caught	
	N	Col%	N	Col%	N	Col%	N	Col%
Would be more likely to litter	71	14%	83	16%	59	11%	65	12%
No effect	102	20%	102	20%	114	22%	114	22%
Would be less likely to litter	324	62%	314	60%	325	62%	315	60%
Don't Know	6	1%	4	1%	5	1%	9	2%
Refused	19	4%	19	4%	19	4%	19	4%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	When I'm holding something biodegradable (apple core, banana peel, etc)		I am tired		I am in a hurry		I am in my car	
	N	Col%	N	Col%	N	Col%	N	Col%
Would be more likely to litter	181	35%	79	15%	87	17%	43	8%
No effect	78	15%	114	22%	116	22%	123	24%
Would be less likely to litter	241	46%	307	59%	294	56%	331	63%
Don't Know	3	1%	2	0%	4	1%	3	1%
Refused	19	4%	20	4%	21	4%	22	4%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	I'm at the beach or a Pala Pala		Other:					
	N	Col%	N	Col%				
Would be more likely to litter	30	6%	15	3%				
No effect	113	22%	130	25%				
Would be less likely to litter	351	67%	291	56%				
Don't Know	6	1%	54	10%				
Refused	22	4%	32	6%				
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>				

L6. I'm going to read a series of statements about littering. Please tell me whether you agree or disagree with the statements...

[RANDOMIZE AND READ OUT]



<b>L6. I'm going to read a series of statements about littering. Please tell me whether you agree or disagree with the statements...</b>								
	<b>Littering is a problem on Saipan beaches</b>		<b>Litter that accumulates on our beaches is a bad reflection on us as Saipan residents.</b>		<b>Litter that accumulates on our beaches will discourage tourists and hurt our economy</b>		<b>Even a small piece of litter is a big problem</b>	
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>
Strongly agree	255	49%	273	52%	277	53%	234	45%
Agree	204	39%	215	41%	216	41%	234	45%
Neither agree nor disagree	14	3%	3	1%	5	1%	11	2%
Disagree	29	6%	8	2%	2	0%	18	3%
Strongly disagree	1	0%	3	1%	1	0%	3	1%
Don't Know	3	1%	4	1%	5	1%	5	1%
Refused	16	3%	16	3%	16	3%	17	3%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	<b>If others litter, it is not my problem</b>		<b>Littering is OK, as long as it is not done intentionally</b>		<b>Littering is not a big deal because someone (like DPW) will pick it up.</b>		<b>Litter causes harm to marine life</b>	
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>
Strongly agree	20	4%	24	5%	7	1%	243	47%
Agree	61	12%	51	10%	15	3%	241	46%
Neither agree nor disagree	17	3%	15	3%	3	1%	3	1%
Disagree	294	56%	323	62%	351	67%	10	2%
Strongly disagree	110	21%	89	17%	126	24%	4	1%
Don't Know	4	1%	3	1%	3	1%	5	1%
Refused	16	3%	17	3%	17	3%	16	3%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	<b>Cigarette butts are not litter</b>		<b>Litter is particularly harmful when it is done at the beach or in the ocean</b>		<b>Even litter far away from the beach often ends up in the water</b>		<b>I often see litter at the beach</b>	
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>
Strongly agree	26	5%	205	39%	206	39%	178	34%
Agree	37	7%	226	43%	265	51%	255	49%
Neither agree nor disagree	3	1%	18	3%	7	1%	17	3%
Disagree	317	61%	40	8%	17	3%	42	8%
Strongly disagree	119	23%	13	2%	6	1%	7	1%
Don't Know	4	1%	4	1%	5	1%	7	1%
Refused	16	3%	16	3%	16	3%	16	3%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	<b>Litter on the beach makes me enjoy the beach less</b>							
	<b>N</b>	<b>Col%</b>						
Strongly agree	203	39%						
Agree	241	46%						
Neither agree nor disagree	8	2%						
Disagree	41	8%						
Strongly disagree	5	1%						
Don't Know	7	1%						

Refused	17	3%
<b>Total</b>	<b>522</b>	<b>100%</b>

L7. I'm going to read a list of statements. Please tell me agree or disagree that they are a convincing reason that would stop you from littering:

[RANDOMIZE AND READ OUT]

<b>L7. I'm going to read a list of statements. Please tell me agree or disagree that they are a convincing reason that would stop you from littering:</b>								
	<b>If you litter, you'll get fined</b>		<b>Would you like it if someone littered in your backyard? Don't litter at the beach!</b>		<b>We should stop littering in LaoLao Bay because it is a special place</b>		<b>Your mom's not here- clean up after yourself</b>	
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>
Strongly agree	219	42%	48	9%	189	36%	169	32%
Agree	254	49%	24	5%	239	46%	261	50%
Neither agree nor disagree	3	1%	4	1%	12	2%	4	1%
Disagree	18	3%	308	59%	33	6%	52	10%
Strongly disagree	3	1%	115	22%	9	2%	10	2%
Don't Know	7	1%	4	1%	22	4%	7	1%
Refused	18	3%	19	4%	18	3%	19	4%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>
	<b>When you litter, you disrespect our island and our culture</b>		<b>Littering is a health danger</b>		<b>Litter pollutes our beaches and ocean</b>		<b>Litter harms our marine life</b>	
	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>	<b>N</b>	<b>Col%</b>
Strongly agree	234	45%	226	43%	238	46%	244	47%
Agree	252	48%	266	51%	254	49%	250	48%
Neither agree nor disagree	1	0%	0	0%	1	0%	2	0%
Disagree	9	2%	5	1%	5	1%	3	1%
Strongly disagree	1	0%	1	0%	0	0%	0	0%
Don't Know	7	1%	6	1%	5	1%	5	1%
Refused	18	3%	18	3%	19	4%	18	3%
<b>Total</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>	<b>522</b>	<b>100%</b>

L8. In your own words, can you tell us what would it take to make you or other people stop littering? Please be as detailed and specific as possible.

<b>L8. In your own words, can you tell us what would it take to make you or other people stop littering? Please be as detailed and specific as possible.</b>
Add more trash bins around the islands. Provide own trash bags.
Add more trash bins. Enforce the penalty fees and have a round the clock patrol to monitor beaches around the island.
Add more trash bins. Provide a strong campaign that would educate our people that littering is not healthy, is illegal, and that it causes harm.
Add more trash bins. Stricter and greater penalty and enforcement.
Advertised it on TV or conduct meetings.

Advice: not to litter because it keep beaches clean and maintain for us and our friends.
Advise people not to throw trash or penalize them.
Always have seminars at schools to inform kids about littering.
Always make reminders on radio to stop littering. Having more trash cans around public areas.
Always teach your kids.
As far sea cucumbers and trochus, we should farm it so that it would multiply. Enforce a higher penalty fee for violators. We also need to provide more and bigger trash bins especially around the beach areas. The government or a private business should open a recycling center for plastic, paper, and bottles.
As long as there are trash cans everywhere I guess.
Ask people not to throw garbage better to put notice at the places not to throw trash.
Availability of trash cans.
Basically it should start with our very own law enforcement down to the politicians. It doesn't matter we have laws but they are not enforced, especially if your family.
Be a good example. Don't litter & talk to the people about littering.
Be conscious of our own law; be conscious for your own good.
Be good and responsible of your trash.
Be more responsible and do not litter.
Be more strict to people who litter. Have more bigger consequences for those who litter.
Be more strict with penalties to people who litters on our environment and also to put more signs even in private places.
Be responsible.
Be responsible. Put up more signs- larger fines when littering.
Be responsible; take your own trash with you.
Better enforce the rules of littering. Even the rules that were enforced are still not being respected by the people and they still litter.
Better enforcement.
Better enforcement; educate people more about litter and community service.
Bigger fines and catch more people to scare other people.
Blah.
Bring a plastic bag and more trash cans.
Bring plastic with you to carry your trash.
Bring trash bags and put trashes inside when done picnic.
Bring trash bags.
Bring your own bags for trash and bring it home when yr done.
Bring your own trash bags to collect your own trash coz sometimes trash bins are already full.
Candidates promised to place varieties of transfer station around the island, and promise was never done.
Catch them and fine.
Change habits - the habit of just dropping things always good have a bag to throw it in. Start working on better habits.
Change in our culture.
Charge whoever is found littering anywhere..
Charged entry for beaches and Palapalas, and the fees would go to help clean beaches and more enforcement. More educational outreach for youth.
Clean up after yourself.
Clean up after yourself.
Clean up after yourself.
Collecting our own trash on the beach and put it in the trash can.

Come up with a catchy motto.
Committing to plans of enforcement.
Community helping each other, spread the awareness!
Consider it as a crime on the island.
Containers provided to beaches and enforce stricter rules on littering.
Contribute to harness the resurrection to trash our place anywhere anytime and anyplace.
Convince others not to litter, more beach cleanup on weekends.
Convince them to pick up trash, tell people its not good to litter. Have contests who can bring the most trash.
Cooperation within the community...enforce the law or just penalize.
Cruel and unusual punishment on littering and the make it public for everyone to see.
Depend on the people if they have the urge to clean up after yourselves.
Deposit and trade cans for money, and exchange bags of trash for bucks.
Designate more trash bins around areas that people litter at, like at beaches, park, parties.
Discipline and throw trashes in the proper place.
Discipline will probably be the right thing.
Discipline!
Discipline.
Discipline.
Disgusting to see liter at beaches & have more sense to people who does it, educate them not to liter.
Do more beach cleanups. Show a good example & clean beaches on free time.
Don't know what would take people not to litter just know that you should pick up or clean up after yourselves.
Donate more trash cans or educate people on littering.
Draw awareness and education throughout the community.
Educate in school, start with kids, laws to put up sign to public for fines. Make known public is our home. When clean for us.
Educate kids more.
Educate more people not to litter. Or when I see trashes I dispose to show good example or show people to dispose in the right place.
Educate people about the cost of littering.
Educate people more. Pick up trash on a daily basis.
Educate people not to litter.
Educate people to not litter.
Educate the people.
Educate the public about littering. Provide bigger trash cans for beaches that are always full on the weekends. Impose penalties. Take photos of people littering and publish in magazines.
Educate the public. Impose penalties.
Educate them.
Educate them.
Educate them.
Educate.
Educated people because some people don't know the consequences that might happen to our environment.
Educated the younger generation and teach them the effects and outcome of littering.
Educating youth to teach parents not litter.
Education & enforcement.
Education and understanding that every single piece matters. Worst offenders are smokers..

Education, you have to start from the kids, educate them in schools. tell the kids the truth about the environmental effects of littering. need enforcement and education.
Education.
Encourage people to help clean up and have more fines on littering.
Enforce a higher penalty fee. Not only in LaoLao Bay but people should not litter anywhere.
Enforce education on not littering and maybe a fine.
Enforce law against littering.
Enforce laws and stricter penalties. Educate and strongly enforce current laws.
Enforce more eyes to see who's littering.
Enforce more rules and people patrol public places more often. Increase fine for littering.
Enforce neighborhood watch to catch them and find litterers.
Enforce or put up signs about littering. Make a ranger for the beaches like in Managaha, they have a ranger for the island. Ranger makes sure the people clean up their mess.
Enforce the funds, education programs, upgrade inspections.
Enforce the law and not lower the fine of \$400 for littering. Put more trash cans especially in public places. Every 800 ft, there should be recycling bins.
Enforce the law to impose fines when caught littering.
Enforce the law! No need to increase the penalties, but they must enforce it.
Enforce the law, fine the ones who are littering and get more enforcement. Especially on the weekends. Law enforcements riding around not paying attention.
Enforce the law.
Enforce the laws that's it.
Enforce the laws.
Enforced fines.
Enforcement of current laws and penalties need to be communicated to the public to educate them and warn them of the consequences.
Enforcement of existing laws, not even the police takes enforcing seriously, it wouldn't hurt if threes more trash cans.
Enforcement.
Enforcement.
Enforcement.
Enforcing the law and fines on littering.
Enforcing the laws and incriminating violators and making the laws a little bit harsher.
Every part of the beach should have a trash bin or receptacle.
Everyone is getting older. We should know when to pick up our trash..
Everything dirty affects people's health. Those should be fined for littering.
Everything starts in the house. Education starts at home. From there, family members will educate other about dangers of littering.
F people the damage in the marine life that will stop them from littering..
Fine whoever is found littering and enforce it..
Fine whoever is found littering.
Fines would help, issue is tourist & what you are going to do with tourist, need to have trash cans available for tourist & tour guides should guide tourist. Need to have signs at the airport to please take care of our beautiful island. First response lies w/those of us who live here that we need to keep our island clean, then tourist would keep island clean as well.
Fines, enforce the law, be more strict about it.
Follow regulations for littering, be clean so our tourism will be always good for our island.
For people to remind each other to pick up their trash. Put up signs. Make sure trash cans are provided at the beaches and make sure they are collected.

For stores to remind people to bring their green bags. For stores to offer reusable bags at a cheaper price or even for free. Enforce litter laws..
For the good health of the people, educate them more.
Force people to think about the future, think about what future impact about thier present action.
Get more signs on not littering. everyone should have a trash can outside their house. more education from TV & campaign on littering.
Get your own trash whenever you go anywhere.
Give a ticket from police for those that are caught littering.
Give fines to people that litter.
Give good advice not to litter so tourist don't say our island is really dirty.
Give people fines if they litter.
Give them a ticket a fine for littering.
Give trash bin to schools and other places, work places. provide trash bags to people.
Go around and fine them.
Good fine.
Government needs to enforce laws and serious penalties should be passed. Community needs to be aware to keep the island beautiful!
Government should practice more restrictions (like in Singapore) on littering.
Have a stronger campaign in getting the message out.
Have more signs to not litter, and stricter enforcement.
Have more trash bins around the Pala Pala's. Should have more beach clean ups.
Have more trash bins. Use less plastic bags and use more paper bags.
Have more trash cans, keep the place clean.
Have people patrol public places to prevent littering!.
Have stiffer laws in regards to litter, have more patrols and enforcement.
Help each other to clean our environment.
High fines and more education in schools. Spitting betel nut should be included as littering.
Higher fines to people who litter.
Higher fines, better surveillance, mandate Pala Pala reservations.
Higher fines, more patrols on public areas, more trash cans within a g=few feet from each other.
Higher penalties for violators, and enforcement needs more support.
Honestly it takes more than just a few people to talk, people will still do it, no matter what position. As long as you don't get caught you will do it.. No matter what.
How would feel your place is full of trash? Treat your island like your home.
How you treat the environment is how you treat your own home. How you litter outside is how you do the same inside your home.
Huh, to make other people stop littering? To hire private security for beaches to watch out for littering.
I believe litter is bad. If people don't know that, it means they love trash.
I do not litter.
I don't know.
I don't know because i think that Saipan people are very clean and I never see local people actually litter.
I don't litter.
I guess more posters posted around about littering. Put more trash cans everywhere.
I think it would take more enforcement. Make police for the beaches.
I think people who litter on the beaches will pay a lot.
I think that people need recycling places.
I think that people should be responsible.

I think that people should bring their own trash bags and take their garbage home.
I think that the police should go around and remind everyone not to litter. Also, they should arrest people who are littering.
I think that they should put up signs for reminders and also cameras so that the people would know that it really is a big deal if you litter.
I think that they should teach the teenagers because nowadays it's the teens doing the littering. It's not nice for our tourist.
I think that we need more trash cans and recycling places.
I think that we need to change the culture. View littering as detrimental and harmful to the island.
I think that we need to help each other and be responsible.
I think that we should be more educated and have more trash cans. Also, consider entrance fee to the beaches to help trash pickup.
I think that we should be more responsible.
I think that we should be responsible and aware of the health danger, not only of the beaches and environment, but also the people's health.
I think that we should educate the people.
I think that we should encourage them to love our island. More education and responsibility.
I think that we should enforce the law and it's self disrespectful..
I think that we should have a bigger fine and make violators go to jail.
I think that we should have cameras and so that when they litter, they would get fined and the violators will not get away.
I think that we should have more awareness and education.
I think that we should have more education.
I think that we should have more fines and enforce the law.
I think that we should have more responsibility.
I think that we should have more signs and awareness.
I think that we should have sign.
I think that we should provide more trash cans at the beach and collect the trash often.
I think that we should put up signs in some areas and also have someone to watch over the places for a certain period of time. We should also prosecute violators.
I think that we should show a good example and also be responsible.
I think that we should take pride of our island and be more responsible. Also, we should enforce the law.
I think we should add more signs in Pala Pala's with a warning. A strong campaign should get the message out.
I think we should all look out for each other & when we see other people litter we should tell them to pick it up. Also raise the penalty charge for littering.
I think we should have more education and awareness. Also, more responsibility.
I think we should show a good example to other people especially the young generation. And that the government should impose stricter rules and regulations.
I think what it is we just have to have common sense, it does not look good to litter you look better when you're trying to find a trash can. That's how my mother taught me to do it. Don't just throw it on the ground. we are too used to the customs of the outside.
I would imagine to stop littering completely, just dispose in the proper place.
I would not litter & others should have respect to clean up after their selves.
I would set an example to them as in my own ways, in my neighborhood I show them that I am cleaning my house and that the trash I throw in the appropriate places, and I also teach my kids to do the same.
I would tell them that the beach is not a trash can you should throw it in the dump.

If everyone wants live in a clean environment, they should not litter at all.
If people knew the effect of the environment and health danger and more trash cans.
If people start cooperating and seeing that we need to follow rules.
If people would just clean up after their mess, there would be no problem. Stricter enforcement.
If possible put on all villages the trailer that is being used at the transfer station for more convenience for people to throw their trash in, and bigger fines on people caught littering.
If the people who were enforcing the litter would be more strict and up forward on the job.
If there are more enforcers around the beach or area that are being used.
If there's a fine for it and more restriction on it.
If they enforce and do action. Educate people..
If we enforce stricter laws and campaign about littering abuses!
If we have park rangers or security guards to watch the beach and make sure people clean up after themselves.
If we keep on littering, our economy will have a harder time recovering.
If we see people littering, tell them to stop littering.
If we were to spread the message that littering is harmful to both marine and human lives. The education should start at home..
If you have trash you should just take it home and not treat the ground like a trash can.
If you have trash, keep it to you until you get home or to trash cans...
If you liter you will be penalize.
If you litter there's penalty so just get your trash with you.
If you litter, you're hurting animals and environment.
If you really care about the island and environment, depends on person if they really care about environment, discipline.
I'm gonna show to them, if there's already a trash on the ground and I pick it up. Just give them idea that trash is not good on the beach.
Impose a stricter fine.
Impose big penalties.
Impose fines. Educate people the harmful effects to environment..
Impose fines..
Impose the law and fine if littering. Educate people. Add more trash cans. Accessibility of trash cans.
Impose the laws on littering, increase fines, have to put signs no littering to remind everybody.
Increase the fine and educate the community more.
Instead of charging a \$0.05 fee stores should switch over to paper bags instead. Add more trash bins along the Pala Pala's.
It depends on people if they listen to or not. Be responsible.
It needs to start at home. Teach the younger generation and set a good example.
It needs to start from home.
It starts at home you must teach your family to not litter and be an example.
It takes discipline on our part. The government should have a more active campaign against litter.
It would help if there were huge dumpster everywhere on the island.
It would take everyone to talk about it and set a good example.
It would take us to help the environment and improve Saipan's life.
It's better to make a fine for littering. Self discipline must be provided and also think of the future of our kids.
It's a tough question. Educate the public..
Its fine the way it is.
Just be responsible and take your own trash.



Just don't trash at all anywhere.
Just enforce the law.
Just impose fines for any one that litters..
Just learn from others to not litter.
Just talk to them not to trash anywhere.
Just think about the island and tourist it would scare away.
Just use the trash cans or take with you.
Keep advertising about the effects litter.
Keep beaches clean so everyone can enjoy cause it is less enjoyable when it is dirty.
Keep or increase fines for littering..
Keep reminding about rules on littering to people everywhere.
Keep your trash w/you to throw in trash bins.
Larger fines, more to watch TV programs to educate.
Legislature should be more strict on beach goers.
Liter is not good for our island. It makes US look dirty.
Make a law on littering.
Make a lot of trash cans available and have someone check the trashes everyday.
Make additional laws strictly for violators.
Make fines and penalties sticker and more fees.
Make fines.
Make sticker rules.
Make up their own mind and focus on cleanliness and health and well being of our environment.
Make your party at the house so no trashes..
Make/have bigger trash bins at the popular beaches.
Matter of discipline, if you are disciplined enough, you should know things that are proper where ever you are. if you are a self disciplined person you know which is wrong and which is right.
Maybe arrest them..
Maybe employers should have seminars in which they can better educate the people on the dangers of littering.
Maybe have a security guard on all the beaches.
Maybe more public education and talk about the cons of littering.
Maybe we have to continue enforcing laws and educating the public about the effects or littering on our island.
Maybe we should put up signs at the beaches and anywhere and we have our channel 7 they could also do something about trash. Add more trash cans, because we don't have as many trash cans as before so people can throw their trash in there.
Morals. Education.
More available trash cans in public areas.
More awareness on littering.
More discipline.
More education & more trash cans especially on weekends & holidays.
More education about how it will affect the island && the environment.
More education for people and make better personal habits. Better understanding and cooperation.
More education in schools.
More education on littering and more support from parents if their children are under age. More seminars at school about how littering affects the environment.
More education on littering because it ruins the beauty of our beaches.
More education on littering or campaign at school about littering.
More education on the effects of littering.

More education regarding what litter does to the ocean, stricter enforcement of littering laws and penalties and some kind campaign showing direct links between the destruction of the environment and on the economy.
More education. Saw what it is doing to the island. Start from the young ones in the house.
More educational awareness and more trash cans around.
More enforcement & fine to people who litter.
More enforcement and more signs and reminders, and more trash cans.
More enforcement and penalties.
More enforcement for violators.
More enforcement of laws and regulation.
More enforcement of policy and fines, deeper understanding of how it effects our economy.
More enforcement of the law, put more trash cans in public areas, show more signs at public places.
More enforcement to scare violators.
More enforcement.
More enforcements, more trash cans, more community services, and more signs about fines.
More fine fee for littering.
More fines, more public outreach on the harmful effects. And they should have patrols that actually do go around give fines and monitor the beaches.
More garbage can in public parks, beaches.
More help from the community and communication and team work.
More large trash can around.
More penalties...
More police officers going around checking on people littering.
More police officers to enforce it so lazy people that litter will know it & be fined.
More publicity on littering, TV commercials.
More publicity.
More sign / more advertisement.
More signs about littering and more enforcement.
More signs and help each other pick up trash.
More strict regulations and enforce it.
More strict rules and regulations.
More trash bins and caged bins & more signs.
More trash bins and put more signs.
More trash bins, and have everyone pick up every day.
More trash bins, enforce more laws.
More trash cans & more fines for those that litter.
More trash cans and empty it every hour.
More trash cans around the beaches.
More trash cans in convenient places.
More trash cans, more beach clean ups,.
More trash cans.
More trash receptacles, better policing and people giving a damn.
More warnings...
Motivation and discipline...
Must have stickers that states where ever you go take your trash with you.
Need more public trash cans, need penalty for littering.
Need pride in their island to see it as a beautiful place and want to keep it that way.
Need to add more trash bins.

Need to educate everyone to pick up after yourselves.
Need to have a law that not only government officials but the public to report when they see people littering so the police can give citation to the littering people.
Needs to start at home, parents need to teach their kids that it is wrong to litter.
Negative consequences to littering.
No comment.
No comment.
No comment.
No comment.
No comment.
No comment.
No idea.
No warning, fine the litterer right (first offense).
Not Applicable.
Not everyone can discipline themselves. We need more things like this to encourage others.
Not really.
Not sure.
Not sure.
Not sure. Needs more trash cans. Need someone to guard the public areas & watch those people who litter.
Not sure..
Only way if there are cameras to catch people littering so they can get caught and penalized, more patrol, make beach patrol, and distribution of trash bags, more trash cans at beach, empty trash cans more often, higher fines.
People discipline themselves.
People have to clean up after their functions and bring their trash bags and take their trashes home or throw it in appropriate place.
People have to discipline themselves and take their trash with them.
People have to see/understand how it reflects themselves and our culture..
People need to be fined more often.
People need to be more educated and join beach cleanups and organizations.
People need to be responsible and respectful to our islands.
People need to help each other, cause people don't respect one another nowadays.
People need to use their common sense.
People should be more responsible.
People should treat places just like their homes.
People that volunteer to do clean up is a good way.
Pick up the trash at the beaches more often..
Post more signs that when caught littering, they will be fined. I try to educate my students to clean up, and the government should add more trash cans. If Saipan had a really strong campaign, we should be able to get the message out.
Post no littering signs.
Projects and clean up. Making people aware, telling them what would happen if they didn't clean. That it would greatly affect our marine life and the ocean.
Provide more education base on littering.
Provide more media assistance to better enforce the non littering environment..
Provide more trash bins around the beach areas.

Provide more trash bins with covers that are secured on the ground so it won't tip over. Saipan should also think about having a Transfer station in the southern part of Saipan so that people have more access in properly disposing their trash.
Provide more trash can or bigger trash cans. At least warning signs at the pavilions.
Provide more trash cans on the beaches and recycling bins.
Provide more trash cans; put up signs to clean up.
Provide our own trash bags and bring home trash instead of leaving it at the Pala Pala. Put up signs at the Pala Pala's and enforce a higher penalty fee. With more trash bins we would have less trash.
Provide own trash bags when at the beach. DLNR, DEQ, or CRM should have a round the clock beach patrol to better regulate laws and regulations in regards to Littering.
Provide own trash bags when having a picnic at the beach.
Providing more trash cans on the beach side.
Providing trash cans. Impose big fines.
Public education to convince and make them understand, through broadcast in TV.
Public education will inform people that there is a no-no. Stiff penalties for littering.
Put a sign to show that littering is not good for our island and its destroying the atmosphere.
Put additional drum cans or bid dumpsters so people would be more likely to dump their trash in them.
Put empty containers around for people to throw their trash.
Put more announcements and reminders at the beaches or around the island, and put more warnings and impose strict penalties.
Put more of the drum cans at the beaches so people can throw their garbage.
Put more signs and some public law.
Put more trash bins around beaches and public places.
Put more trash cans. Put up more signs.
Put out more signs and more recycling bin.
Put signs so people can see and won't litter.
Put signs.
Put trash more trash cans around the beach and Pala Pala.
Put trashes in the right places. Stuff them in the trash bags and put in the trash can.
Put up more sign and add more trash cans.
Put up signs and ads in newspapers.
Put up signs such as throw your trashes and signs that says pick up after yourselves..
Put up signs.
Put up signs.
Put up signs. Impose fines for littering.
Put up signs. Talk to people..
Put up signs..
Raise up the fines enforce for more. More signs.
Reach out more and show what the trash is doing to our island.
Recycling centers should be more available and stricter enforcements.
Refuse.
Regularly empty out trash bins at the beach, and add more trash cans.
Reminding the young and old that littering is a serious problem for our environment.
Respect the island. Enforce the law.
Responsibility and education.
See the effects of littering.
Self discipline and to encourage others not to litter.

Self discipline that we know already that if we throw or litter at any place it would be bad for everyone, and the children will follow in your steps.
Self discipline.
Set up more bigger trash bins all over Saipan so no more littering.
Should have law enforcement follow up and enforce people not to throw trashes.
Should increase the fine of littering not lowering. so people would learn.
Should plan to bring trash bags when their done. When going to the beach bring your own trash bag.
Should put up more sign that are encouraging.
Should raise more fined more trash bins, more signs, and more security.
Show effect, and to educate other people of the harm in littering.
Sign reminder- your mom not here- clean up yourself. Encourage children and adult to clean up. Put up a sign board.
Signs on beach, warning signs.
Signs up- throw trash in proper place. Do not litter.
Someone who would enforce it a little more and trash cans with no holes at the bottom generally if a group of people come out every other weekend to do beach cleanup.
Spread the word and have a stronger campaign in sending out the message that littering is illegal.
Start a campaign against litter and encourage trash bags when they have events in public areas.
Start caring for our environment and think for a better future.
Steeper fine.
Stop chewing and smoking cigarettes. Add more trash bins..
Stop littering.
Strict enforcement by the right authority, educate the litterers.
Strictly putting restrictions against littering, like if you have permit enforce them to keep it clean after they leave.
Strong message to parents to start at home.
Stronger fines and put ads on the radio.
Stronger punishment, and fines enforced.
Suggestion: To centralize scuba diving and minimize coral disturbance. There should also be law for collecting and harvesting of sea cucumbers and be seasonal. Former Governor Guerrero in 1990 introduced to have the Sewer Treatment Plant in Puerto Rico moved to a different location but was turned down. Saipan should also find out what department is responsible for dead animals on the roads and highways. Right now the Saipan Mayor office is volunteering its services but should be placed in the proper department.
Talk to people not to litter.
Teach the kids so they can teach their parent, make it a priority. It can help our tourism economy and be responsible of our actions.
Tell people to pick up their trash and be an adult and stop acting like a child.
Tell them not to litter and put the trash in the right place.
The government should give ticket for those that litter.
The island should make a new law that would restrict littering.
The police should start doing their jobs and patrolling the beaches and actually doing something about it.
There is no way to stop littering. It's cultural to litter.
There must be a strict law for littering, self discipline. And we must think not only of ourselves but also for the future generations.
They have to have laws that are actually taken seriously and there should be fines for littering.
They need to be taught a lesson. They should raise the fine for littering.

They should bring their own bottles or cans to throw their cigarette butts. Education on littering should start at home.
They should put more trash cans.
They would be more aware of how littering can damage our environment.
Think about the environment before throwing your trash.
Think twice.
Throw your trash in the garbage can, do not just throw it around the beach area. if you see any trash pick it up and put it in a proper place.
Throw your trash in the nearest trash can.
Tickets for littering. Providing more trash bins.
To advertise the importance of our island beauty.
To be more strict on littering.
To better enforce the rules and law about littering...to also teach the children at school.
To better enhance people knowledge on the environment and how littering can destroy the beauty of the island..
To give a fine to those that litter.
To impose fines..
To inform the public the causes and consequences of littering.
To make other people stop littering, people just have to be more responsible because litter affects everyone on the island.
To make the law strong on not allowing people to litter. And to make sure that the law is enforce.
To make trash cans, enforce stricter laws on littering.
To provide more strict rules on littering.
To provide strict enforcement to non-littering on the island.
To reinforce community service on Saipan. To create a court order in each village to have a cleanup from time to time to do a majority clean up on villages and beaches.
To stop littering you have to be aware that the environment is important to our life.
To tell everyone to not litter.
Try and help by telling people not to trash at all.
U should be a model to everyone, be litter free.
Use the trash beams and just don't litter.
We have to get people to make sure that when they go to the beach or anywhere to bring a bag for trash. Put more trash cans in the beach.
We have to promote the penalty for littering.
We need our enforcement to be more active regarding this issue.
We need to give stricter penalties to people that litter.
We should always carry or keep trash bag or containers.
We should bring our own bags or cans to put our trash in, that way we would not contribute to littering anywhere on island.
We should fine people for littering.
We should have a department that during active times to patrol the beaches & give citation. Cameras at the beach. Bring up fine to \$50.
We should have a neighborhood watch not only for the neighborhood but for the beaches around the island.
We should have more enforcement charge people going to the beach but still take your trash.
We should have more trash and more signs to let people know not to throw trash. Make advertising to stop throwing trash. To remind people about not throwing trash, be more aware.
We should implement the fines. More enforcement.
We should increase the fines for littering and enforcement..

We should protest and make a volunteer group to promote the non littering on our island.
We should train all people and give them proper guidelines about littering and the dangers.
When DPW is around, more camera to catch people who are littering, security at every beach.
When others litter, arrest them and put them in jail.
When people see how ugly Saipan is they would think of stop littering.
When you see litter you have to take it and put it in the trash an respect our environment.
With the recent Tsunami how are we going to protect ourselves from the radiation that Japan is facing now? As to littering the education should start from home.
You have to bring your trash bags with you. Laws should be added so that people will start to bring their own trash bags or be fined.
You have to set good examples in your community and always have trash bags.
You must have discipline, so littering stop within our community.
You put the sign for the trash. Put for the recycle and bottles and the trash.

**[RECORD RESPONSE]**

L9. Do you smoke cigarettes?

- 9. Yes
- 10. No
- 11. Don't Know
- 12. Refused

**[ALL RESPONDENTS:]**

D1. Which language do you mainly speak at home?

<b><i>D1. Which language do you mainly speak at home?</i></b>	<b>N</b>	<b>CoI%</b>
English	257	49%
Tagalog	108	21%
Chamorro	92	18%
Carolinian	26	5%
Korean	6	1%
Japanese	2	0%
Other Micronesian	1	0%
Other	10	2%
Refused	18	3%
<b>Total</b>	<b>520</b>	<b>100%</b>

D2. Which of the following best describes your household?

<b><i>D2. Which of the following best describes your household?</i></b>	<b>N</b>	<b>CoI%</b>
Couple with children	262	50%
Group household with children	68	13%
One parent family with children	56	11%
Couple with no children	54	10%
Single person	42	8%
Group household without children	18	3%
Don't Know	2	0%
REFUSED	20	4%

<b>Total</b>	<b>522</b>	<b>100%</b>
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D3A. In total, how many individuals 18 and older live in your household?

<b>D3A. In total, how many individuals 18 and older live in your household? (categorized)</b>	<b>N</b>	<b>Col%</b>
1	25	5%
2 to 4	388	81%
5 or more	40	8%
NONE	7	1%
REFUSED	20	4%
<b>Total</b>	<b>480</b>	<b>100%</b>

D4. What is your highest level of education?

<b>D4. What is your highest level of education?</b>	<b>N</b>	<b>Col%</b>
Elementary (1-6)	2	0%
Junior High (7-8)	10	2%
High School (9-12)	183	35%
Some college or trade school	119	23%
Two year degree (AA, AS)	55	11%
Four year college degree (Bachelor's degree)	86	16%
Graduate or professional degree (MA, PhD, LLD, MD, DDS, EdD)	37	7%
Don't Know	2	0%
REFUSED	28	5%
<b>Total</b>	<b>522</b>	<b>100%</b>

99. REFUSED

D5. What is your occupation?

D6. What are your sources of income? I'm going to read a list of choices; please say yes or no for each one:

- g. Salary from your job
- h. Fishing
- i. Farming
- j. Money from relatives off-island
- k. Pension/social security
- l. Other \_\_\_\_\_

D7. Are you originally from Saipan?

<b>D7. Are you originally from Saipan?</b>	<b>N</b>	<b>Col%</b>
Yes	239	46%
No	264	51%
Don't Know	1	0%
Refused	18	3%
<b>Total</b>	<b>522</b>	<b>100%</b>