

## References

- Adamowicz, W., Boxall, P., Williams, M. & Louviere, J. (1998). Stated preference approaches for measuring passive use values: choice experiments and contingent valuation. *American Journal of Agricultural Economics*, 80(1), 64-75.
- Adamowicz, W. & Deshazo, J.R. (2006). Frontiers in stated preference methods: an introduction. *Environmental Resource Economics*, 3, 1-6.,
- Adamowicz, W., Louviere, J. & Williams, M. (1994). Combining revealed and stated preference methods for valuing environmental amenities. *Journal of Environmental Economics and Management*, 26(3), 271-292.
- Balmford, A., Fisher, B., Green, R., Naidoo, R., Strassburg, B., Turner, R.K. & Rodrigues, A.S.L. (2011). Bringing ecosystem services into the real world: an operational framework for assessing the economic consequences of losing wild nature. *Journal of Environmental Resource Economics*, 48, 161-175.
- Baumol, W. J. & Oates, W. E. (1988). *The theory of environmental policy*. Cambridge: Cambridge University Press.
- Blamey, R.K., Bennett, J.W., Louviere, J.J., Morrison, M.D. & Rolfe, J.C. (2002). Attribute causality in environmental choice modelling. *Environmental and Resource economics*, 23, 167-186.
- Blamey, R., Gordon, J. & Chapman, R. (1999). Choice modelling: assessing the environmental values of water supply options. *Australian Journal of Agriculture and Resource Economics*, 43(3), 337-357.
- Boxall, P.C., Adamowicz, W.L., Swait, J., Williams, M. & Louviere, J. (1996). A comparison of stated preference methods for environmental valuation. *Ecological Economics*, 18(3), 243-253.
- Brander, L., Ghermandi, A., Kuik, O., Markandya, A., Nunes, P.A.L.D., Schaafsma, M & Wagtendonk A. (2010). Scaling up ecosystem service values: methodology, applicability and a case study. (Working paper 41.2010). Italy: Fondazione Eni Enrico Mattei (FEEM). Retrieved from: <http://www.feem.it/getpage.aspx?id=73&sez=Publications&tab=1&padre=20&searchby=d>
- Caussade, S., Ortuzar, J.de D., Rizzi, L.I. & Hensher, D.A. (2005). Assessing the influence of design dimensions on stated choice experiment estimates. *Transportation Research*, 39, 621-640.
- CBS (2003). *Huishoudens in de Nederlandse Antillen: Publicatiereeks Census 2001*. Retrieved from the Central Bureau of Statistics of the Netherlands Antilles website <http://www.cbs.an/cbs/themes/Census%202001/Publications/Huishoudens%20in%20de%20Nederlandse%20Antillen.pdf>
- CBS (2010). *Statistical Yearbook of the Netherlands Antilles 2010*. Retrieved from the Central Bureau of Statistics of the Netherlands Antilles website [http://www.cbs.an/index.php?option=com\\_jumi&fileid=33&Itemid=126](http://www.cbs.an/index.php?option=com_jumi&fileid=33&Itemid=126)
- Cultural Policy Plan Bonaire (2010), "Sin Kosecha no tin Simadan".
- de Groot, R.S., Wilson, M.A. & Boumans, R.M.J. (2002). A typology for the classification, description and valuation of ecosystem functions, goods and services. *Ecological Economics*, 41, 393-408.

- Department of Civil Affairs (2011). Totale ingeschrevenen naar geboorteland (Excel sheet). Kralendijk: governmental agency on Civil Affairs of Bonaire.
- Hanley, N., Wright, R.E. & Adamowicz, V. (1998). Using Choice Experiments to Value the Environment. *Environmental and Resource Economics*, 11(3-4), 413-428.
- Hoyos, D. (2010). The state of the art of environmental valuation with discrete choice experiments. *Ecological Economics*, 69, 1595-1603.
- IUCN. (2011). Coral Reef Resilience Assessment of the Bonaire National Marine Park, Netherlands Antilles. Gland, Switzerland: IUCN. Retrieved from <http://data.iucn.org/dbtw-wpd/edocs/2011-008.pdf>
- Lancaster, K. (1966). A new approach to consumer theory. *Journal of Political Economy*, 74, 132-157.
- Louviere, J. (2006). What you don't know might hurt you: some unresolved issues in the design and analysis of discrete choice experiments. *Environmental and Resource Economics*, 34, 173-188.
- Manski, C.F. (1977). The structure of random utility models. *Theory and Decision*, 8(3), 229-254.
- Meesters, E., Slijkerman, D., de Graaf, M., Debrot, D., (2010). Management plan for the natural resources of the EEZ of the Dutch Caribbean. IMARES, Texel Report C100/10. Retrieved from IMARES website: <http://library.wur.nl/WebQuery/wurpubs/397696>
- Mitchell, R.C. & Carson, R.T. (1989). Using surveys to value Public Goods: the Contingent Valuation Method. Washington, DC: Resources for the future.
- Millennium Ecosystem Assessment. (2005). Millennium ecosystem assessment: ecosystems and human well-being: synthesis. Washington, DC: Island Press.
- Natural resources commission. (2010). Annual report by the Natural Resources Commission.
- Nature policy plan. (2010). Evaluation report on the Nature Policy Plan Bonaire 1999-2004. Retrieved from website of Bonaire's government: [http://www.bonairegov.an/attachments/179\\_Evaluatie%20Natuurbeleidsplan%201999-2004%20versie%202.pdf](http://www.bonairegov.an/attachments/179_Evaluatie%20Natuurbeleidsplan%201999-2004%20versie%202.pdf)
- Nieuwenhuis, G. (2008). Statistical thinking and methodology for Business and Economics: Part 1. (Custom edition for Department of Econometrics and OR, Tilburg University, Netherlands). United States: McGraw-hill
- Perman, R., Ma, Y., McGilvray, J., & Common, M. (2003). *Natural Resource and Environmental Economics* (3rd ed.). Harlow, Essex, England: Pearson Education Limited.
- ROB (2009, August). Ruimtelijke Ontwikkelingsplan Bonaire-werkgroep Sociale Cohesie. Kralendijk : Governmental agency on Urban and Physical Planning of Bonaire.
- STINAPA. (2011). Retrieved from <http://www.bmp.org>
- STINAPA (2005). Washington Slagbaai National Park Management Plan. Retrieved from STINAPA website : <http://www.washingtonparkbonaire.org/pdfs/WSNP-managementplan.pdf>
- STINAPA (2006). Bonaire National Marine Park Management Plan. Retrieved from STINAPA website : <http://www.bmp.org/pdfs/BNMP-managementplan-part1.pdf>
- TEEB (2010) *The Economics of Ecosystems and Biodiversity: Ecological and Economic Foundations*. Earthscan, London.

- Tuan, T. & Navrud, S. (2007). Valuing cultural heritage in developing countries: comparing and pooling valuation and choice modelling estimates. *Environmental and Resource Economics*. 38(1), 51-69.
- van Beukering, P.H., Longland, W., Cesar, H., Sablan, J., Shjegstad, S., Beardmore, B., Liu, Y. & Omega-Garces, G. (2007). The economic value of Guam's coral reefs. Laboratory Technical Report, University of Guam.
- van Beukering, P., Brander, L., Tompkins, E. & McKenzie, E. (2007). Valuing the environment in small islands – an environmental economics toolkit. Retrieved from Joint Nature Conservation Committee (JNCC) website: <http://jncc.defra.gov.uk/page-4065>
- van Beukering, P.J.H., Haider, W.; Wolfs, E.; Liu, Y.; van der Leeuw, K.; Longland, M., Sablan, J., Beardmore, B., Di Prima, S., Massey, E., Cesar, H. & Hausfather, Z. (2006). The economic value of the coral reefs of Saipan, Commonwealth of the Northern Mariana Islands. Project Report. [www.crm.gov.mp/pubs/22.pdf](http://www.crm.gov.mp/pubs/22.pdf)
- van Beukering, P., Sarkis, S., McKenzie, E., Hess, S., Brander, L., Roelfsema, M., Looijenstijn-van der Putten, L. & Bervoets, T. (2009). Total Economic Value of Bermuda's Coral Reefs, Department of Conservation Services. <http://www.ivm.vu.nl/en/projects/Archive/bermuda-coral-reef/index.asp>
- Verbrugge E. (2010). Residents and reefs: the cultural and recreational value of coral reef surrounding the United States Virgin Islands. (Unpublished master's thesis). VU University Amsterdam, Netherlands.
- Zwerina, K., Huber, J. & Kuhfeld, W.F. (2010). A general method for constructing efficient choice designs. SAS Technical Document MR-2010. Retrieved from SAS Institute website: <http://support.sas.com/techsup/technote/mr2010e.pdf>



## Annex A Composition of the household survey

Composition of the household survey by sections	
I	Section one contained general questions, addressing background and household composition of the respondent.
II	Section two contained questions related to recreation. It comprised of recreations which are directly and indirectly dependent upon the ecosystems present on the island. The information is used to assess the level of use of the ecosystems for recreational purposes. Additionally a question on the use of plants for medicinal purposes was included as this has a cultural connotation to it.
III	Section three contained questions on the environmental awareness of the respondent. The questions included assessed the involvement in environmentally friendly activities, perception of environmental threats, preference and support for different management options, and awareness on climate change threats. The section was concluded with a question assessing the "willingness to pay- preparedness" of the respondent by asking if the respondent was, in principle, willing to pay an environmental fee which would contribute to improving Bonaire's marine & land environment, and would be managed by a Non-Profit organization. The question sets the tone for the next section which is the choice experiment.
IV	comprised the choice experiment and its supporting questions. This section required more thinking in part required the assistance of the interviewer to explain the choice experiment. Following each choice the respondent expressed the certainty of their choice for validity purposes. The supporting questions after the experiment were focused on how respondents made trade-offs and the preference for an organization managing the collected funds.
V	Section five is focused on the demographics of the respondent; age, education, income and profession. Especially income is a sensitive topic and thus a help card was used which enabled respondents to give a random number instead of announcing their household income to the interviewer. This section was included to test the representativeness of the sample. Additionally respondents had to opportunity to give comments on the survey.
VI	Section six was an optional section focused on diving and snorkelling if any of the household members participate in these recreational activities. The questions focused on frequency, favourite locations and motivations for participation
VII	Section seven was also an optional section, but focused recreational fishing. The questions focused on frequency, favourite locations, composition of catch and motivations for participation. In this section a fish card was used as a supporting tool for identifying the composition.



## Annex B Household survey

### RECREATIONAL AND CULTURAL VALUE TO RESIDENTS OF BONAIRE

I. Name Interviewer:	V. Interview ID no.:	
II. Date of interview:		
III. Location of interview:	District:	
IV. Start time/end time of interview	Start time:	End time:

Hello my name is..... I am helping out with a project called "What's Bonaire's Nature worth". Maybe you have read about it in the news paper? We are conducting a survey on the importance of Bonaire's coral reefs and terrestrial landscape for the local residents of the island. We would like to know your personal values for the coral reefs and the terrestrial landscape of Bonaire. **Everything that you tell us will be kept strictly confidential.** The interview will take about thirty minutes. Would you be willing to participate?

#### I. General Questions

1. Are you originally from Bonaire?

1] Yes	(GO TO QUESTION 3)
2] No	

2. If not, where are you from? (check only one)

1] Aruba		7] Netherlands	
2] Curacao		8] Latin America	
3] Sint Maarten		9] North America/ Canada	
4] Sint Eustatius		10] Elsewhere, specify:	
5] Saba		11] Refused	
6] Elsewhere in the Caribbean			

3. What is your household composition? Check all that apply and specify the number of children.

1] Respondent		3] Children under 18		#
2] Partner		4] Children older than 18		#
		5] Other people		#

4. Who is the head of the household? Check all that apply

1] Respondent		2] Partner		3] Other	
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## II. Recreation

5. Are **you** comfortable in the water?

1] No, I preferably do not get close to water	
2] I cannot swim but I do wade in the sea	
3] I am able to swim a little, but not comfortable in deep water	
4] I am comfortable in deep water, but not able to swim very long	
5] I am very comfortable in deep water and able to swim for a long time	

6. Please indicate who in your immediate family are comfortable in deep water  
(*check all options that apply*)

1] Respondent	2] Spouse	3] All children	4] Some children	5] Other people

7. How often do **you** participate in each of the following activities at the beach? And what is your favourite location for each of these? (Use Dive/Beach map with numbers)

1] Beach picnic/ BBQ/ waterside camping						
2] Relaxing						
3] Wading						
4] Swimming						
5] Windsurfing						
6] Other board sports						
7] Kayaking						
8] Snorkelling						
9] Scuba Diving (tank)						
10] Recreational fishing						
11] Other, specify: ...						

8. How often do **you** eat locally caught fish?

1] Never	2] Once a month	3] Once a week	4] 2-4 times a week	5] 5-7 times a week



9. How often do **you** participate in each of the following activities in nature on land? And what is your favourite location for each of these?

	1] Never	2] 1-6 times	3] 7-12 times a	4] More than once	5] More than once	Favourite Location(s)
1] BBQ/ Camping						
2] Walking						
3] Hiking						
4] Cycling						
5] Hunting						
6] Other, specify: ...						

10. Do **you** make use of medicinal plants? If yes, how often and for what purpose?

	1] Never	2] 1-6 times a year	3] 7-12 times a year	4] More than once a month	5] More than once a week
1] Aloë					
2] Oregano					
3] Yerba í hole					
4] Anders:					
5] Anders:					

11. Are the following traditional and historical locations in nature important for **you**? If yes, how often do you visit these locations?

	1] Never	2] 1-6 times a year	3] 7-12 times a year	4] More than once a month	5] More than once a week
1] Indian scriptures					
2] Lourdes cave in Rincon					
3] Lac					
4] Boca slagbaai					
5] Anders:					
6] Anders:					

### III. Environmental awareness

12. Did **you** do any of the following activities in the past year?

	1] Yes	2] No
1] Seek environmental information (On Internet, TV, newspaper, radio etc)		
2] Participate in beach/mangrove cleanup		
3] Used rechargeable batteries or recycled batteries		
4] Attend a public meeting or event related to the environment (e.g. free-pass day by STINAPA)		
5] Not littering, encourage other people not to litter		
6] Properly dispose of hazardous chemicals (oil, paint etc) that should not be poured down the drain		
7] Walk or bike instead of driving, at least once a week		
8] Purchase environmentally friendly products (reusable bags etc)		
9] Donate money to an environmental cause (e.g. a nature conservancy organization, marine park tag) IF YES, SPECIFY: ..... USD IN THE LAST YEAR		
10] Donate time to an environmental cause IF YES, SPECIFY: .....HOURS IN THE LAST YEAR		
11] Other, specify: ...		

13. What do you think are the three biggest threats to the health of the coral reefs here on Bonaire? [DO NOT SHOW LIST OF THE NEXT QUESTION!]

1. ....
2. ....
3. ....

14. What do you think are the three biggest threats to the terrestrial landscape here on Bonaire?(includes salinjas) [DO NOT SHOW LIST OF THE NEXT QUESTION!]

1. ....
2. ....
3. ....

15. How important do you consider the following potential threats facing the marine and land environment on Bonaire? (1 being not important at all and 5 being very important)

	Not important at all ←→ very important					Don't Know
	1	2	3	4	5	
1] Climate change and coral bleaching	1	2	3	4	5	0
2] Impacts from commercial & recreational fishing	1	2	3	4	5	0
3] Coastal development and runoff	1	2	3	4	5	0
4] Sewage from homes or boats	1	2	3	4	5	0
5] Solid waste (plastics, glass bottles etc)	1	2	3	4	5	0
6] (Cruise)Ships for tourists (anchoring, waste, oil & grounding)	1	2	3	4	5	0
7] Watersports by tourist & residents (diving, snorkelling)	1	2	3	4	5	0
8] Wild roaming goats and donkeys	1	2	3	4	5	0
9] Limestone mining (of dead coral on the North coast)	1	2	3	4	5	0
10] Cutting down of trees (charcoal, building material, development)	1	2	3	4	5	0
11] Invasive species (e.g. Lionfish)	1	2	3	4	5	0
12] Other, specify:	1	2	3	4	5	0

16. Are you in favour of using the following management activities to improve marine and land environment?

	1. Yes	2. No	3. Don't	4. Refused
1] Prohibit the emission of untreated sewage water				
2] Restricting SCUBA diving/ snorkelling				
3] Restricting coastal & inland development (e.g. where building is allowed)				
4] Improving solid waste management				
5] Expand FPA's (fisheries protected area)				
6] Install additional closures (e.g. the conch)				
7] Limiting areas of free-grazing of goats				
8] Improve enforcement of existing environmental regulations (e.g. monitor cutting down of trees)				
9] Sterilization of free roaming donkeys				
10] Other, specify: ...				

17. On Bonaire, how likely do you think it is that each of the following will occur during the next 50 years due to climate change? (1 is very unlikely and 5 is very likely)

	Very unlikely      ←→      Very likely					Don't know
	1	2	3	4	5	
1] Sea level rise	1	2	3	4	5	0
2] Worse or increased amount of storms & hurricanes	1	2	3	4	5	0
3] Droughts	1	2	3	4	5	0
4] Fewer fish	1	2	3	4	5	0
5] Fewer or smaller (sand and rubble) beaches	1	2	3	4	5	0
6] Less tourism	1	2	3	4	5	0
7] Damage to coral reefs (Coral bleaching)	1	2	3	4	5	0
8] Other, specify: ...	1	2	3	4	5	0

[REMINDE THE RESPONDENT THAT THIS IS AN ANONYMOUS QUESTIONNAIRE AND THAT ANSWERS ARE USED TO GET AN INSIGHT IN CURRENT MARINE AND TERRESTRIAL NATURE ONLY]

18. In the past year, how often have you seen or heard of anyone doing the following activities?

	1] Never	2] 1-6 times a year	3] 7-12 times a year	4] More than once a month	5] More than once a week
1] Leaving trash in the ocean, beach or mangroves	1	2	3	4	5
2] Fishing in a closed area such as a marine reserve	1	2	3	4	5
3] Taking conch or lobster (out of season)	1	2	3	4	5
4] Fishing with spear	1	2	3	4	5
5] Leaving trash in the woods	1	2	3	4	5
6] BBQ in restricted areas (e.g. Washington Slagbaai)	1	2	3	4	5
7] Other violations of environmental protection rules of Bonaire Please specify: ...	1	2	3	4	5

19. Are you in principle willing to pay an environmental fee, which would contribute to improving Bonaire's marine & land environment, and would be managed by a Non-Profit organization?

1] Yes	
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2] No	
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**IV Choice experiment**

REFER TO THE INTERVIEW PROTOCOL

IMPORTANT: FILL VERSION NUMBER\_\_\_\_\_ !!! AND VERSION COLOR\_\_\_\_\_!!!

[REMINDE THE RESPONDENT THAT THIS IS AN ANONYMOUS QUESTIONNAIRE AND THAT THIS EXPERIMENT IS HYPOTHETICAL AND THAT THEY SHOULD CHOOSE THE SCENARIOS REGARDLESS OF WHO IS MANAGING THE FUNDS]

20. Record the respondent's answers to each choice question and the certainty of the choice in the table below. (Check only one box per row).

Choice set	1. Option A	2. Option B	3. Option C	4. Refuse d	1. Very uncertain	2. Uncertain	3. Neutral	4. Certain	5. Very certain
Choice card 1									
Choice card 2									
Choice card 3									
Choice card 4									
Choice card 5									
Choice card 6									

[ONLY ASK THE FOLLOWING QUESTION IF THE RESPONDENT HAS CHOSEN SCENARIO "EXPECTED FUTURE WITHOUT EXTRA MANAGEMENT" EACH TIME OR REFUSED TO MAKE A CHOICE, OTHERWISE SKIP TO QUESTION 22]

21. You have chosen the 'Expected Future Scenario' in each card or refused to make a choice. Can you explain why? (Check only one)

1] I am not responsible for the damage to the reef		6] Don't need another tax no matter what it is used for	
2] I am not confident that the money will be used as specified		7] I couldn't understand the questions/ Too hard to make the choices	
3] I do not believe there are serious threats to the reef		8] The choices weren't relevant to me / Didn't describe what matters to me	
4] The issues are more complex than these questions suggest		9] Other, specify...	

5] I cannot afford it /The costs were too high		10] Don't know/refused	
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22. How did you make your choices? Did you: (*Check only one*)

1] Consider all items simultaneously		4] Use your intuition	
2] Consider a few items		5] Make a random choice	
3] Only consider one item		6] Don't know	

23. In making your choices, how important were the following items to you? (*1 being not important at all and 5 being very important*)

	Not important ← → Very important at all				
1] Reef quality	1	2	3	4	5
2] Fish catch per trip	1	2	3	4	5
3] Terrestrial quality	1	2	3	4	5
4] Goat Management	1	2	3	4	5
5] Public Access to (sand and rubble) beaches	1	2	3	4	5
6] Environmental fee	1	2	3	4	5

24. Would you have a preference for one of the following organizations to manage the collected funds?

1] Non-Profit Organization		4] Existing organizations (e.g. STINAPA)	
2] Local government		5] Other, specify	
3] Federal government		6] Don't know	

**V. Demographics**

[REMINDER: FOLLOWING QUESTIONS ARE FOR STATISTICAL PURPOSES ONLY]

25. Gender:

1] Male		2] Female	
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26. May I ask what age category you fall in?

1] 18-25		4] 46-55	
2] 26-35		5] 56-65	
3] 36-45		6] 66+	

27. What is the highest level of education you have completed?

1] None		4] College/University (bachelors)/HBO	
2] Primary school		5] Masters degree or other post-grad	
3] High school/technical school/MBO		6] Don't know/refused	

28. In which sector are you employed? (If respondent has multiple jobs, check main field)

1] Agriculture and fishing		8] Financial intermediation	
2] Manufacturing		9] Real estate/renting	
3] Electricity, gas and water		10] Public administration	
4] Construction and mining		11] Education	
5] Wholesale and retail		12] Health/Social work	
6] Restaurants and hotels		13] Other	
7] Transport and storage		14] Don't Know/Refused	

29. May I ask your **household income** before taxes in US \$ last month?

(Refer to income card)

LETTER: .....
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30. If you have any other comments, please leave them in the box below.

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#### VI. Scuba Diving and Snorkelling

31. In which of the following activities does anybody in your household participate in Bonaire? Please specify the number of people. (*You may check more than one*)

1] Snorkelling		2] SCUBA diving		3] None [GO TO QUESTION 37]	
Number of people:		Number of people:			

32. Roughly how many snorkel trips were made in total, by people in your household?

1] 0-20		4] 101 - 300	
2] 21-50		5] 301 - 500	
3] 51-100		6] > 500	

33. Roughly what share of the snorkel trips took place on Bonaire? \_\_\_\_\_%

IF RESPONDENTS HOUSEHOLD ONLY GOES SNORKELING, THIS SECTION IS FINISHED

(NOTE: THIS QUESTION FOR DIVERS ONLY)

34. Roughly how many dives were made in total, by people in your household?

1] 0-20		4] 101 - 300	
2] 21-50		5] 301 - 500	
3] 51-100		6] > 500	

35. Roughly what share of the dives took place on Bonaire? \_\_\_\_\_%



36. How often did members of your household visit the following dive sites in the last year?

Sites	#number dives	Sites	#number dives
1] Playa Funchi (#3)		13] Angel City (#44)	
2] Wayaca (#5)		14] Salt City (#50)	
3] Boca Slagbaai (#6)		15] Tori's Reef (#52)	
4] Playa Frans (#7)		16] Margate Bay (#55)	
5] Karpata (#10)		17] Vista Blue (#58)	
6] Oil Slick Leap (#20)		18] Willemstoren/Lighthouse (#61)	
7] Cliff (#26)		19] Blue hole/White hole (#62)	
8] Bari's reef (#30)		20] Cai (#63)	
9] Something Special (#32)		21] Klein Bonaire	
10] 18th Palm (#35)		22] Anders:	
11] Bachelor's beach (#38)		23] Anders:	
12] Hilma Hooker (#43)		24] Anders:	

**VII. Recreational Fishing in your household**

37. How many people currently fish for recreational purposes in your household? Number: \_\_\_\_\_ [Important Note - fishing can include any method of harvesting marine food from the sea; hook and line, spearing, netting, gathering lobster, etc.]

(IF 0, THIS IS THE END OF THE QUESTIONNAIRE. THANK THE RESPONDENT KINDLY FOR HIS/HER

TIME AND PATIENCE)

IF THE RESPONDENT DOES NOT FISH BUT SOMEONE ELSE IN THE HOUSEHOLD DOES, ASK IF THE RESPONDENT CAN ANSWER ON BEHALF OF THAT PERSON

38. How many fishing trips are usually made in your household and how much fish is usually caught per trip on average **either in kilograms or number of fish?**

1] # Fishing trips per month (average)	
2] Average catch per trip	# fish / kg

39. Can you indicate which of the following reasons are important for people in your household to go fishing? Check all applicable boxes

1] I enjoy fishing/ I find it relaxing		5] For tradition: my family has always fished	
2] I catch for food		6] Fishing strengthens the bond with my friends & family	
3] To give catch to family and friends		7] Other, specify ...	
4] I catch fish to sell the fish			

40. What percentage of your total catch is made up of each of the following types of fish?  
**(Distribute catch across the different types of fish, total table should add to 100%)**

Type of catch	Share (must add up to 100%)
1] Shallow reef fish (0-30 meter) e.g. Barracuda, Bonefish, Tarpon	
2] Deep reef fish (30-60 meter) e.g. Yellow-tail snapper, King Mackarel, Bar jack	
3] Deep Sea fish , e.g. Marlin, Wahoo, Mahi Mahi, Tuna etc.	
4] Invertebrates like lobster	
5] Bait fish	
6] Total	

41. Do people in your household mostly go shore fishing or do you fish from a boat?

1] Shore fishing	
2] Boat fishing	

IF RESPONDENT WANTS TO LEAVE HIS OR HER PERSONAL INFORMATION IN ORDER TO RECEIVE INFORMATION OF THE REPORT, ASK HIM OR HER TO DO SO NOW AND RECORD IT.

Name (optional): \_\_\_\_\_

Phone (optional): \_\_\_\_\_

E-mail (optional) \_\_\_\_\_

**THANK THE RESPONDENT FOR HIS/HER TIME AND PATIENCE!!!**

## Annex C Survey package

The training consisted of; an introduction to the total economic valuation study "What's Bonaire's Nature worth?", a thorough explanation of the choice experiment, a role-play of conducting the choice experiment, training of conducting the choice experiment between the interviewers, a run through and clarification of all questions within the additional survey, discussion on critical points when conducting the interviews, discussion on practical issues such as collection of the completed surveys, controlling, sampling strategy, and compensation. Additionally throughout the training interviewers were allowed to express their concerns and raise questions.

Survey package	
1	<b>Household surveys:</b> A stack of blank surveys provided in all three languages and in proportions similar to the population of Bonaire. (See appendix B for the complete household survey in English)
2	<b>Six versions of choice sets:</b> A choice experiment binded-book was provided to all interviewers. The binded-book contained six versions of choice sets, with each version containing six different choice sets, completely laminated with the addition of the common card to explain the choice experiment to the respondents. Each version was preceded by its colour for codification of the version used (See appendix D for a full choice set, See figure 4 for the common card).
3	<b>Interview protocol:</b> The interview protocol explains in detail the structured interview process with critical points and detailed explanation on conducting the choice experiment. (See appendix E for the interview protocol (Dutch)). The reason why the interview protocol was provided in the Dutch language is that this was the most difficult language to articulate for the interviewers and translation hereby to the other languages was feasible for all interviewers.
4	<b>Beach &amp; Dive map:</b> To facilitate respondents in the interview process a beach/dive map was provided. Given that the same beach/dive area may have different names, and respondents may know the location but not the name, a map made it easier to process this data. (see appendix F for the beach & dive map)
5	<b>Fish card:</b> In the section on recreational fishing respondents are asked to state their relative catch composition. To facilitate in this process the fish card is used. The fish card depicts the most popular fishes for recreational fishing per habitat. It provides both the English name as well as the local Papiamentu name of the fish species. (see appendix G)
6	<b>Answer cards:</b> The survey contained Likert scales which were repeatedly used for different questions. To facilitate respondents with the available choices three of these Likert scales were laminated and could be provided to the respondent if deemed necessary. (see appendix H)
7	<b>Income card:</b> Due to the sensitiveness surrounded with providing a household income this process was facilitated with an income card. The income card states the different ranges of household income with a randomly selected alphabetical number for each range. The respondent would only mention the alphabetical letter to the interviewer. (see appendix I for the income card)
8	<b>Badge:</b> All interviewers received a badge with their names and a logo representing the project. This was done for formality purposes. (see appendix J for an example badge)
9	<b>Appointment cards:</b> The appointment cards were provided in the case that the respondent would like to make an appointment with the interviewer for a more suitable day/time. The appointment cards purpose is to make the appointment less prone to change. Additionally the appointment cards could be used when no one was present at the household and the interviewer could leave a contact number for making a future appointment. (see appendix J for the appointment card)



## Annex D Full choice set

Respondents get to see each version separately.

VIC1

	Option A	Option B	Expected future without extra management
Reef quality	High	Moderate	Poor
Terrestrial quality	Moderate	Poor	Poor
Fish catch per trip	20% higher catch	No change	20% lower catch
Roaming goats	No grazing	Grazing	Grazing
Public beach access	20% less access	10% less access	20% less access
Fee	\$5	\$20	No payment

VIC3

	Option A	Option B	Expected future without extra management
Reef quality	High	Poor	Poor
Terrestrial quality	High	Moderate	Poor
Fish catch per trip	20% lower catch	No change	20% lower catch
Roaming goats	Grazing	No grazing	Grazing
Public beach access	20% less access	No change	20% less access
Fee	\$10	\$20	No payment

VIC5

	Option A	Option B	Expected future without extra management
Reef quality	Moderate	Poor	Poor
Terrestrial quality	High	Moderate	Poor
Fish catch per trip	20% higher catch	20% lower catch	20% lower catch
Roaming goats	No grazing	Grazing	Grazing
Public beach access	No change	10% less access	20% less access
Fee	\$20	\$5	No payment

VIC2

	Option A	Option B	Expected future without extra management
Reef quality	Moderate	Poor	Poor
Terrestrial quality	Poor	High	Poor
Fish catch per trip	20% higher catch	20% lower catch	20% lower catch
Roaming goats	No grazing	Grazing	Grazing
Public beach access	10% less access	No change	20% less access
Fee	\$10	No payment	No payment

VIC4

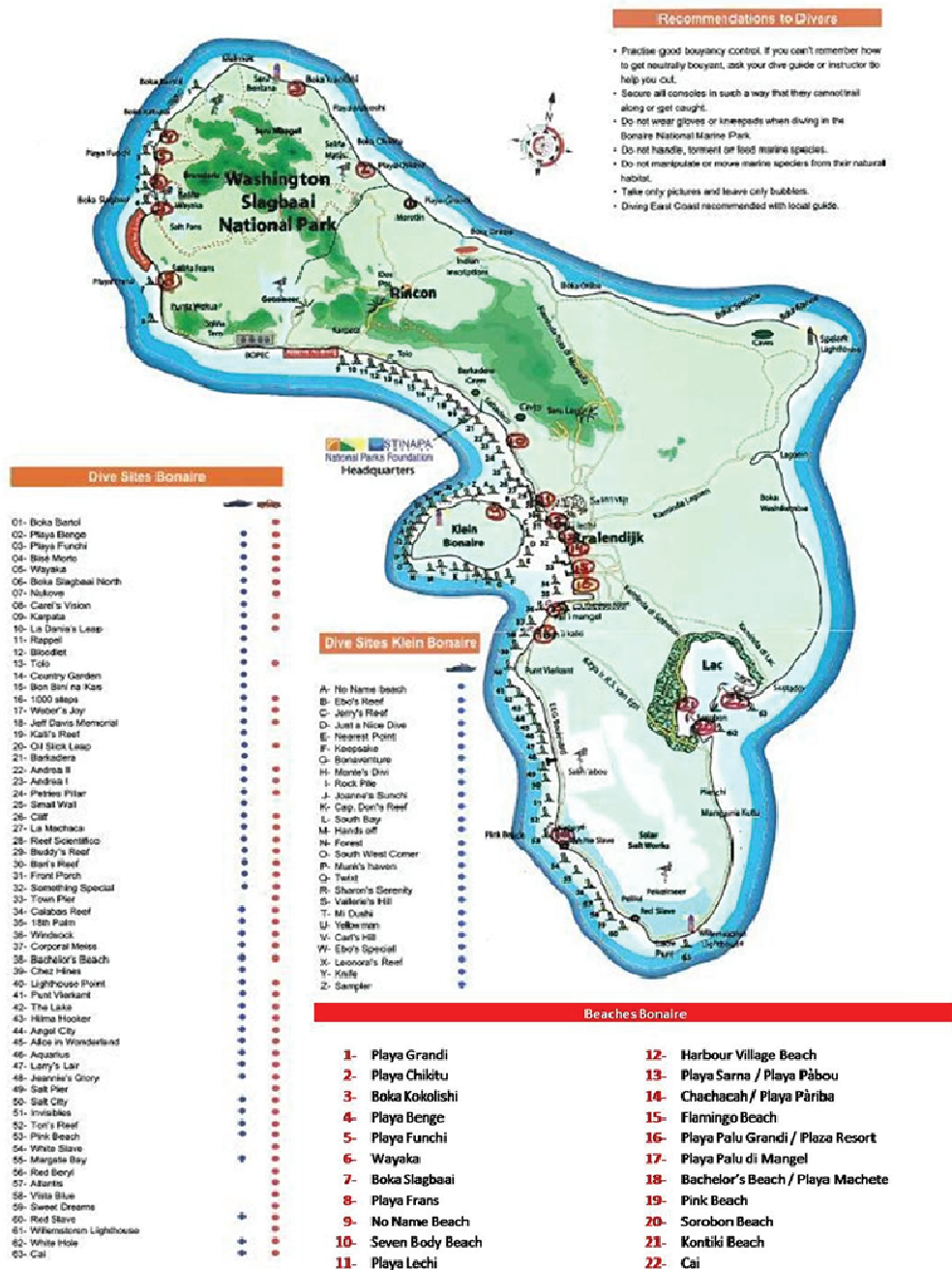
	Option A	Option B	Expected future without extra management
Reef quality	Moderate	High	Poor
Terrestrial quality	High	Poor	Poor
Fish catch per trip	No change	20% higher catch	20% lower catch
Roaming goats	No grazing	Grazing	Grazing
Public beach access	20% less access	No change	20% less access
Fee	No payment	\$5	No payment

VIC6

	Option A	Option B	Expected future without extra management
Reef quality	High	Poor	Poor
Terrestrial quality	Poor	Moderate	Poor
Fish catch per trip	20% lower catch	No change	20% lower catch
Roaming goats	No grazing	Grazing	Grazing
Public beach access	10% less access	20% less access	20% less access
Fee	No payment	\$10	No payment



## Annex E Beach / dive map







## Annex F Fish card

### Shallow Reef



Barracuda - Piku



Permit - Pampel



Snook - Sapat'i Sòldá



Black Jacks - Korkobá Pretu



Bonefish - Warashi



Tarpon - Sabalo

### Deep Reef



Bar jack - Yag



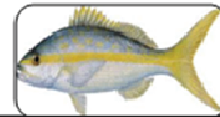
Horse-eye jack - Korkobá



King Mackerel - Konovis



Rainbow runner - Gristelchi Laman Afó



Yellowtail snapper - Gristelchi piedra

### Deep Sea



Dolphin fish - Mahi Mahi



Wahoo - Mulatu, Mulá



Yellowfin tuna - Buní Rabu Héli



Marlin - Balau



## Annex G Answer cards

1] Never	2] 1-6 times a year	3] 7-12 times a year	4] More than once a month	5] More than once a week	Favourite Location(s)

Not important at all ←→ very important					Don't Know
1	2	3	4	5	0
1	2	3	4	5	0
1	2	3	4	5	0
1	2	3	4	5	0

Very unlikely ←→ Very likely					Don't know
1	2	3	4	5	0
1	2	3	4	5	0
1	2	3	4	5	0
1	2	3	4	5	0



## Annex H Income card

### Income card

Associated with question 29 (Demographics section)

T.	Less than 250	Y.	3.000 - 3.999
U.	250 – 549	E.	4.000 - 4.999
B.	500 – 749	Q.	5.000 - 5.999
N.	750 – 999	J.	6.000 - 6.999
F.	1.000 - 1.249	R.	7.000 - 7.999
V.	1.250 - 1.499	K.	8.000 - 8.999
G.	1.500 - 1.749	S.	9.000 - 9.999
A.	1750 – 1999	C.	10.000 - 12.499
W.	2.000 - 2.499	Z.	12.500 - 15.000
H.	2.500 - 2.999	L.	More than 15.000

Caution! This is gross monthly income in US \$



## Annex I Badge and appointment card

