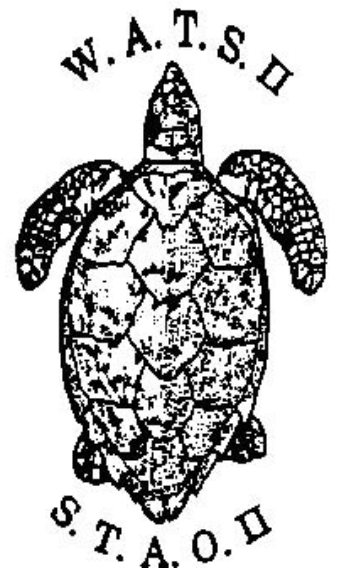


# **WATS II REPORT / DATA SET**



**National Report to WATS II Netherlands Antilles**

**Jeffrey Sybesma**

**12 October 1987**

**WATS2 057**



With a grant from the U.S. National Marine Fisheries Service, WIDECAST has digitized the databases and proceedings of the **Western Atlantic Turtle Symposium (WATS)** with the hope that the revitalized documents might provide a useful historical context for contemporary sea turtle management and conservation efforts in the Western Atlantic Region.

With the stated objective of serving “as a starting point for the identification of critical areas where it will be necessary to concentrate all efforts in the future”, the first Western Atlantic Turtle Symposium convened in Costa Rica (17-22 July 1983), and the second in Puerto Rico four years later (12-16 October 1987). WATS I featured National Reports from 43 political jurisdictions; 37 presented at WATS II.

WATS I opened with these words: “The talks which we started today have the multiple purpose of bringing our knowledge up to date about the biological peculiarities of the marine turtle populations of the western Atlantic; to know and analyse the scope of the National Reports prepared by the scientific and technical personnel of more than thirty nations of the region; to consider options for the orderly management of marine turtle populations; and in general to provide an adequate forum for the exchange of experiences among scientists, administrators, and individuals interested in making contributions for the preservation of this important natural resource.”

A quarter-century has passed, and the results of these historic meetings have been lost to science and to a new generation of managers and conservationists. Their unique importance in providing baseline data remains unrecognized, and their potential as a “starting point” is neither known nor appreciated.

The proceedings document what was known at the time concerning the status and distribution of nesting and foraging habitat, population sizes and trends, mortality factors, official statistics on exploitation and trade, estimated incidental catch, employment dependent on turtles, mariculture operations, public and private institutions concerned with conservation and use, legal aspects (e.g. regulations, enforcement, protected areas), and active research projects.

Despite the potential value of this information to agencies responsible for conducting stock assessments, monitoring recovery trends, safeguarding critical habitat, and evaluating conservation successes in the 21st century, the National Reports submitted to WATS II were not included in the published proceedings and, until now, have existed only in the private libraries of a handful of agencies and symposium participants. To help ensure the legacy of these symposia, we have digitized the entire proceedings – including National Reports, plenary presentations and panels, species synopses, and annotated bibliographies from both meetings – and posted them online at <http://www.widecast.org/What/RegionalPrograms.html>.

*Each article has been scanned from the original document. Errors in the scan have been corrected; however, to be true to the original content (as closely as we can discern it), potential errors of content have not been corrected. This article can be cited (with the number of pages based on the layout of the original document) as:*

Sybesma, J. 1987. National Report to WATS II for the Netherlands Antilles. Prepared for the Second Western Atlantic Turtle Symposium (WATS II), 12-16 October 1987, Mayagüez, Puerto Rico. Doc. 057. 29 pages.

Karen L. Eckert  
WIDECAST Executive Director  
June 2009

**WESTERN ATLANTIC SEA TURTLE SYMPOSIUM II**

**OCTOBER 1987**

**NETHERLANDS ANTILLES**

**NATIONAL REPORT**

**by**

**JEFFREY SYBESMA**

**SECOND WESTERN ATLANTIC SEA TURTLE SYMPOSIUM  
OCTOBER 11-16, 1987**

**NETHERLANDS ANTILLES  
NATIONAL REPORT**

by  
**JEFFREY SYBESMA**

**CARMABI, P.O. Box 2090  
Curaçao, Netherlands Antilles**

## **1. INTRODUCTION**

### 1.1. Geographical Position, Geological Situation and Socio-Economic Profile of the Netherlands Antilles (Figure 1)

The Netherlands Antilles consists of five islands, inhabited by approximately 200,000 people. Curaçao and Bonaire are called the Leeward Islands (described in the WATS I proceedings as Neth. Ant. South), while St. Maarten, St. Eustatius and Saba are the Windward Islands of the Netherlands Antilles (described as Neth. Ant. North).

Curaçao, the biggest island has a land area of 444 km<sup>2</sup>. It is the most populated with 160,000 people. Being the center of the Central Government it generates income through oil refining, harbor activities like container movements and drydock facilities, off-shore banking and financing and tourism. The coastal zone is divided in a steep rocky north coast with rough water and a quiet south coast also consisting of rocky shores but intersected by natural harbors, rubble beaches and small sandy beaches. The whole coast of the island is covered by healthy fringing reefs which are best developed at the calm south coast. Three km to the south east of the east point of Curaçao lies a small island called Klein Curaçao. It is an uninhabited island, which is only infrequently inhabited by fishermen and has a long sandy beach.

Bonaire is 288 km<sup>2</sup> of land with 9,000 inhabitants. The island is very similar to Curaçao. It has a small oil terminal for transshipment, and a well developed diving tourism (1986 figures: some 10,000 divers making 85,000 dives). The coral reefs are among the best developed in the Caribbean. The island has sandy beaches at different locations.

Dutch St. Maarten is 34 km<sup>2</sup> of land with 15,000 inhabitants. The other half of the island is French. The island developed in recent years into a blooming tourist destination where tourists during high season exceed the local population by a factor three. The island has a lot of protected sandy beaches while off shore you find a sandy bottom with turtle grass (*Thalassia*). On certain places you will find well developed coral reef patches.

St. Eustatius, with a land area of 21 km<sup>2</sup> is inhabited by 1,500 persons. Its cultural history can easily be traced through the artifacts all over the island and in the waters. The island has some sandy beaches while off shore there is not much coral reef development because of the sandy and shallow nature of the bottom.

Saba, the smallest island has 13 km<sup>2</sup> of land area and is inhabited by 1,000 persons. Being a steep dead volcano it has no beaches at all. The island has well developed fringing reefs all around.

Aruba was a part of the Netherlands Antilles. As of January 1, 1986 Aruba was separated from the Netherlands Antilles and acquired a *Status Aparte* within the Kingdom of Holland.



## 2. NETHERLANDS ANTILLES SEA TURTLE PROJECT

### 2.1. Past Research

For the WATS I meeting held in Costa Rica in 1983, Gerard van Buurt, Netherlands Antilles national fisheries officer, sent an ad hoc report (1981) on the sea turtles situation based on his knowledge of all Netherlands Antilles islands (Proceedings WATS, Costa Rica 1983, Volume 3, Appendix 7).

In 1983, Anne Barkau Maylan published a paper titled "Marine Turtles of the Leeward Islands, Lesser Antilles" (Atoll Research Bulletin No. 278), where information on the sea turtles of St. Maarten, St. Eustatius and Saba are described.

### 2.2. WIDECAST

In 1985, the first formal contacts were established between the foundation CARMABI (doing research on behalf of nature management) and WIDECAST (Wider Caribbean Sea Turtle Recovery Team & Network Project). CARMABI agreed to join the network and to formulate a recovery action plan for the Netherlands Antilles. Because at that time nobody was actively engaged in sea turtle research, and all data available were rather outdated and scarce, CARMABI decided to start collecting basic data on all islands through a volunteers network.

### 2.3. WATS II

In 1986, through the Netherlands Antilles representative of IOCARIBE, Quirino Richardson, CARMABI received a grant from the WATS II secretary to start collecting recent data on the different sea turtles and their situation in the Netherlands Antilles. Results must be presented at the WATS II meeting, October 1987. CARMABI assigned the marine biologist, Jeffrey Sybesma, as coordinator of the Netherlands Antilles Sea Turtle Project.

An island network was established with volunteers on every island to start collecting sea turtle data regularly and to draw more public attention to the situation of the turtles. Through carefully executed interviews of fishermen valuable information was gathered. By visiting marketplaces, seafood restaurants and souvenir shops additional information was found. Dive operators were asked to stimulate all divers to write down sightings of turtles. Local dive clubs were also encouraged to inform the network about their encounters with sea turtles. Media, like radio, television and newspapers, were also used to encourage the public to send in turtle information.

By means of the WATS II grant it became possible for the Coordinator to visit all islands and to talk with all volunteers. Also it became possible to form a good idea of the local situation and the reliability of the data.

## 3. RESULTS

### 3.1. General Remarks

The results presented in this report are our own observations and data collected by the network and interpreted by the Coordinator and compared with the already existing literature. In general most of the sightings on all islands are green turtles (*Chelonia mydas*) and hawksbill turtles (*Eretmochelys imbricata*). A few reports are on the loggerhead (*Caretta caretta*), mostly in the open sea, and very rare are reports on the leatherback (*Dermochelys coriacea*).

### 3.2. Netherlands Antilles South

#### 3.2.1. Curaçao (Figure 2)

##### 3.2.1.1. Sightings

Sighting reports from all around the island arrived very irregular by different sources. Some locations were mentioned more frequently, like the north west coast where on a quiet day you can see turtles floating at the surface in the fields of drifting *sargassum*. Species often seen are green turtles and hawksbills.

##### 3.2.1.2. Nesting

No nesting occurs anymore in Curaçao. All beaches are disturbed by too many visitors and developments. Turtle tracks have been reported once in 1986 from Klein Curaçao, but the island is too much disturbed by visiting people for turtles to nest quietly (recreational trips and dive trips are organized on a regular basis).

##### 3.2.1.3. Catch

Sea turtles are not caught professionally and are mostly bycatches of fishermen, although quite regularly. There is one specialized dealer on the island. He keeps the turtles alive till they are sold. Demand is not high. The fishermen say they can catch more turtles if necessary (up to 3 a day). There are certain places fishermen are sure to catch sea turtles like St. Joris Baai and the eastern tip of the island. Species caught are green turtles and hawksbills (50/50).

##### 3.2.1.4. Consumption

Turtle meat and soup is offered at a few restaurants on the island. Consumption is not very high. Prices per kilo of meat are around 5 to 10 US dollars, depending on quantity. There is no demand for eggs.

##### 3.2.1.5. Ornaments and Trade

There is some import of turtle meat and shells from Venezuela. Mostly only on request. Regulations in Venezuela forbid export of turtles (CITES) and fishermen know this very well. Whole shells (bigger than 50 cm) are sold for prices around 15 dollars. Shells are not being processed into ornaments.

##### 3.2.1.6. Foraging

One area at the north west coast of the island is considered a feeding area for turtles. In the floating *sargassum* a lot of turtles are seen.

##### 3.2.1.7. Institutes & Addresses

Foundation CARMABI

P.O. Box 2090

Curaçao, Netherlands Antilles

- Scientific Research Institute on behalf of Nature Conservation and Management. Has close contacts with WIDECAST.  
Director: W.L. Bakhuis; network member  
Staff member: John de Freitas; network member  
Staffmember (part time): Jeffrey Sybesma; Coordinator Netherlands Antilles Sea Turtle Project

Netherlands Antilles National Parks Foundation (STINAPA, N.A.)  
c/o CARMABI  
P.O. Box 2090  
Curaçao, Netherlands Antilles

- Administrated at the CARMABI, this organization does nature management of national parks (on land as well as underwater) in the Neth. Antilles  
Director: W.L. Bakhuis; local network member  
Staffmember: Jeffrey Sybesma; Manager Curaçao Underwater Park

Environmental Service  
De Rouvilleweg 41  
Curaçao, Netherlands Antilles

- Governmental department on environmental regulations  
Director: Q. Richardson; official Neth. Antilles representative of IOCARIBE. Local network member

Department of Agriculture, Animal Husbandry and Fisheries  
Klein Kwartier 33  
Curaçao, Netherlands Antilles

- Island Government Department  
Director: R. Winkel  
Fisheries Officer: G. van Buurt; network member

#### 3.2.1.8. Laws and Regulations

Island Reef Management ordinance of 1976. Prohibition of spearfishing. No special protection of turtles, nests and/or eggs.

#### 3.2.2. Bonaire (Figure 3)

##### 3.2.2.1. Sightings

Regular reports come from the dive operators' tourists who dive all along the sheltered coast of Bonaire (West of Bonaire and around Klein Bonaire). Most of the records are hawksbills and green turtles, while loggerheads are sometimes seen from the boats, more in the open sea.

##### 3.2.2.2. Nesting

Records of nesting turtles at beaches known for it (Playa Chikitu, Playa Grandi, Lagoen, Lac and Witte Pan) have been lacking since a few years.

##### 3.2.2.3. Catch

Both hawksbills and green turtles are mostly caught during the period of June till December. The rest of the year catch is limited because of bad water conditions. Annual catch is about 250 turtles. No increase in catch over the years, but the size of the turtles has decreased considerably. Previously the mean length was 1.50 m and the smaller ones were set loose; nowadays all turtles are caught and the have a mean length of 40 cm.

#### 3.2.2.4. Consumption

Bonaire has a local tradition of turtle meat consumption. All catches of turtles are used locally. Turtle steak is served at some known restaurants (5 dollars a meal) and some snack bars offer turtle sate for a dollar a stick.

#### 3.2.2.5. Ornaments and Trade

No ornament trade exists. Locally the shells of the caught turtles are sold.

#### 3.2.2.6. Foraging

Foraging areas are for hawksbill turtles all around the island where they search for food on the reefs. They are sighted regularly by the dive tourists along the coast and around the island of Klein Bonaire. Green turtles are more often seen at the entrance and in Lac Bay where there are floating sargassum fields and turtle grass beds. Sometimes loggerheads are seen in the more open waters.

#### 3.2.2.7. Institutes & Addresses

Foundation MARCULTURA

P.O. Box 43

Kralendijk

Bonaire, Netherlands Antilles

- Governmental research and development foundation specialized in aquaculture

Director: R. Hensen; network member

STINAPA-Bonaire

Karpata Ecological Center

P.O. Box 368

Kralendijk

Bonaire, Netherlands Antilles

- General ecological research field station  
Scientific executive officer: Eric Newton; network member

#### 3.2.2.8. Laws and Regulations

Island Reef Management Ordinance of 1984. Spearfishing is prohibited. Protection of eggs and nests, but not the turtles as such.

### 3.3. Netherlands Antilles North

#### 3.3.1. St. Maarten (Figure 4)

##### 3.3.1.1. Sightings

According to the two dive operators, turtles are frequently (once a week) mostly from the boat on the way dive spot.

##### 3.3.1.2. Nesting

If nesting has occurred, at the moment this will not be the case anymore or hardly. Development of beaches and use for recreational purposes has disturbed possibilities of nesting.

#### 3.3.1.3. Catch

Although sea turtles are seen during boat rides, catching of turtles is very low. Probably because the demand is low. Most frequently seen species are green turtles.

#### 3.3.1.4. Consumption

No indication that turtle meat is sold on markets or special places. There are no restaurants offering turtle steak as a speciality. If there is consumption this is only by the local people, not by tourists. There is one fisherman who sometimes brings in turtles caught near St. Eustatius for local consumption. Prices for turtle meat are around 5 dollars a pound, which is cheaper than snapper or lobster. According to the fisherman labor for turtle meat is harder than for lobster or fish, and prices are lower. Therefore it is not economic to catch turtles.

#### 3.3.1.5. Ornaments and Trade

No indication of selling of shells or ornaments made from turtle shells. Shells found in souvenir shops are imported from other places. Demand by tourists is probably also very low.

#### 3.3.1.6. Foraging

Around the island, especially the bays, turtle grass is common. According to van't Hof (personal comment) *Thalassia* is more abundant than described by Maylan. Also on the offshore reefs (Cupe Coy to Plum Bay, Molly Beday, Pelican Rock, Cow and Calf, Grouper Rock, East of Tintamarre) turtles are often seen by divers.

#### 3.3.1.7. Institutes & Addresses

STINAPA - St. Maarten; Local branch of STINAPA N.A.  
P.O. Box 426  
Phillipsburg  
St. Maarten, Netherlands Antilles

- Mr. Frans van der Hoeven; network member

#### 3.3.1.8. Laws and Regulations

No regulations to protect nests, eggs and/or turtles.

### 3.3.2. St. Eustatius (Figure 5)

#### 3.3.2.1. Sightings

According to the dive operator the same big turtles are often seen on certain locations.

#### 3.3.2.2. Nesting

No nesting along the Caribbean side of the island where the beach has been washed away since a few years probably due to changes in currents. At the Atlantic side (Concordia Bay) there is still a possibility of nesting. Not enough information could be gathered to what extent nesting occurs.

#### 3.3.2.3. Catch

Local catching of turtles is low to nil. Mostly fishermen from neighbouring islands come and fish for turtles also.

#### 3.3.2.4. Consumption

Consumption of turtle meat will be on a low local level. Restaurants are very seldom offered turtle meat by fishermen.

#### 3.3.2.5. Ornaments and Trade

Not existing

#### 3.3.2.6. Foraging

No indication that the foraging areas as described by Maylan have changed.

#### 3.3.2.7. Institutes & addresses

STINAPA - St. Eustatius; local branch of STINAPA N.A.  
c/o Island Government Cultural Department  
St. Eustatius, Netherlands Antilles

- Ms. Myriam Schmidt; network member

#### 3.3.2.8. Laws and Regulations

No existing regulations

### 3.3.3. Saba (Figure 6)

#### 3.3.3.1. Sightings

All around the island sea turtles are seen very regularly, mostly hawksbills. An average of one turtle sighting per three dives has been acknowledged by the Marine Park manager and the two dive operators.

#### 3.3.3.2. Nesting

Because there are no beaches there is no nesting.

#### 3.3.3.3. Catch

Local fishermen (three full-time) do catch sea turtles for their own local consumption, but because of self-regulation this is very low.

#### 3.3.3.4. Consumption

Only the few turtles caught are consumed locally.

#### 3.3.3.5. Ornaments and Trade

None

#### 3.3.3.6. Foraging

The feeding grounds around Fort Bay aren't as extensive anymore as was described by Maylan. A cause for disappearance of this area may be a stone crusher that is adding a lot of silt into the water. Nevertheless you can still find turtles in this area feeding on the algae growing on the bottom. A peculiar thing worth noticing is the confusing talk about turtle grass (*Thalassia*) being the primary food for green turtles. The area considered by the fishermen as the feeding area for the green turtles is indeed a feeding area but doesn't consist of turtle grass at all but of algae. The same we found in an area on the Saba bank, which we explored briefly too. A place where green turtles are seen often and mentioned by the fishermen as feeding grounds for turtles, has a lot of fleshy algae but no *Thalassia*.

#### 3.3.3.7. Institutes & Addresses

STINAPA - Saba; local branch of STINAPA N.A.  
c/o Saba Marine Park  
P.O. Box 18, The Bottom  
Saba, Netherlands Antilles

- Mr. Tom van't Hof; project manager Saba Marine Park; network member

#### 3.3.3.8. Laws and Regulations

Island Reef Management Ordinance of 1987. Catching of sea turtles is prohibited to foreigners. Only island residents are allowed to catch two sea turtles a person a year; no female turtles are to be caught during the period April through November; all turtles caught have to be reported to the Saba Marine Park Authorities; it is prohibited to disturb nests and take out eggs.

## 4. CONCLUSIONS

Since WATS I in 1983 indications are that the sea turtle population of the Netherlands Antilles has decreased. Most possible causes are:

- a) No more nesting on any of the five islands, because of loss of suitable beaches. This is due to a considerable increase in recreation and development activities of coastal areas mostly for tourism
- b) Catching of sea turtles for local consumption, especially in Bonaire, has reduced the size of the catch. This could be an indication that the population is overfished.
- c) Destruction of feeding areas, like in Saba, is probably causing the turtle population to decrease possibly through migration to other areas.

Trade in sea turtle products from the islands to other countries has not been noticed. No ornaments are sold. Shells are not sold on a large scale on the islands. Local consumption of turtle soup and/or meat has not increased. Indications are that selling of meat has reduced because of a lower ratio in income/labor if compared to fish and lobster.

## 5. ACKNOWLEDGEMENTS

I would like to express my gratitude to all persons on all islands who helped me in gathering the data and information to write this National Report. I would also like to thank IOCARIBE (Sea

Grant Program; Sea Turtle Survey Grant) for their financial support. Finally I would like to thank WWF-NL for making it possible to attend the second Western Atlantic Sea Turtle Symposium in October 1987 in Puerto Rico to present these data.

## **6. FIGURES**

- 6.1. Fig. 1. Location of islands of the Netherlands Antilles
- Fig. 2. Curaçao. Arrows indicate former nesting areas
- Fig. 3. Bonaire. Arrows indicate former nesting areas with G. for Green turtles and H. for Hawksbill turtles
- Fig. 4. St. Maarten. Arrows indicate former nesting areas (according to Maylan)
- Fig. 5. St. Eustatius. (according to Maylan) fig. 6. Saba. (according to Maylan)

## **7. APPENDIX**

Progress reports and interim reports.



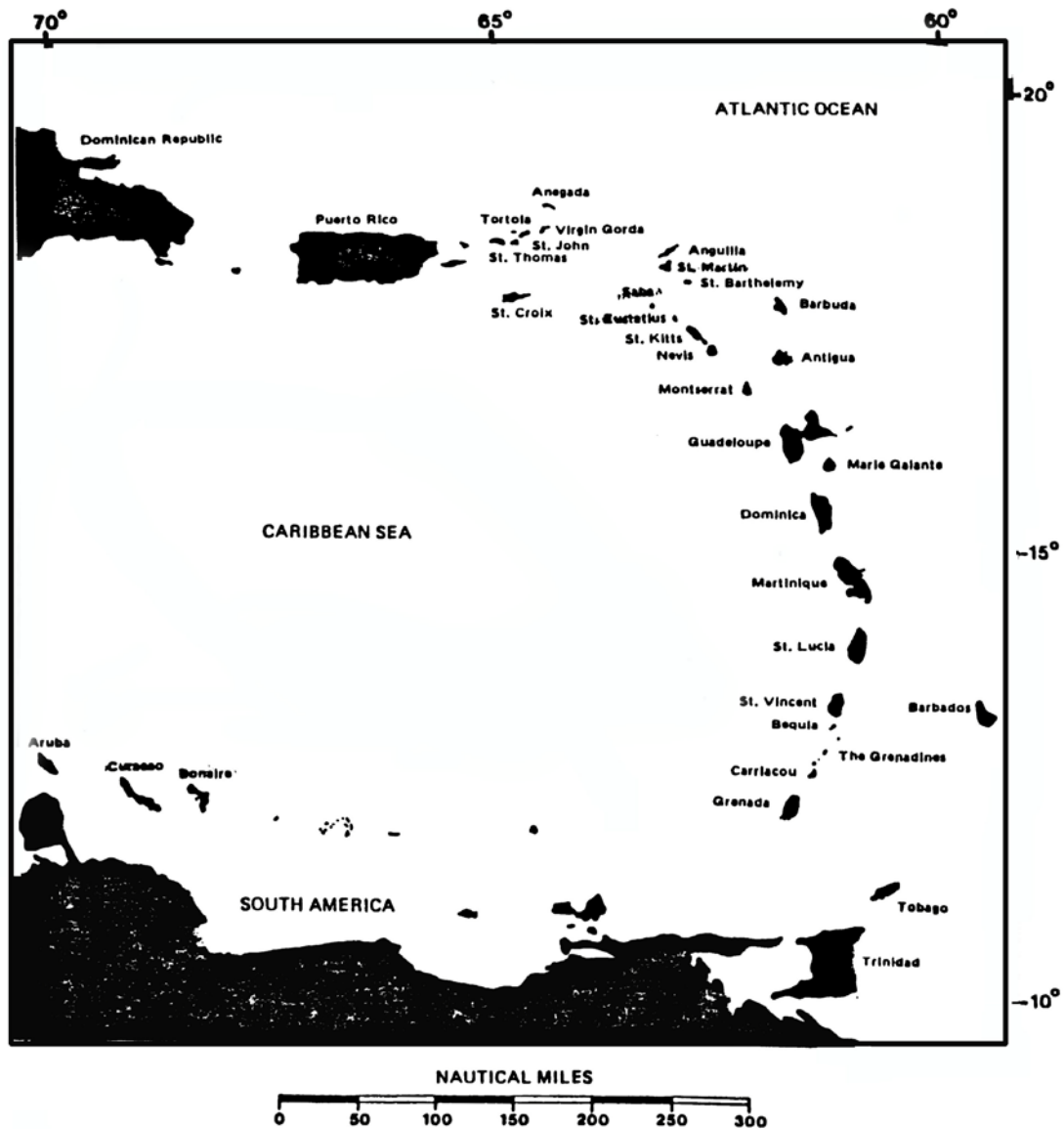


Figure 1.

*Editor's note (2009):* Maps and figures are reprinted exactly as they appear in the original document; we regret the poor quality exhibited in some cases.

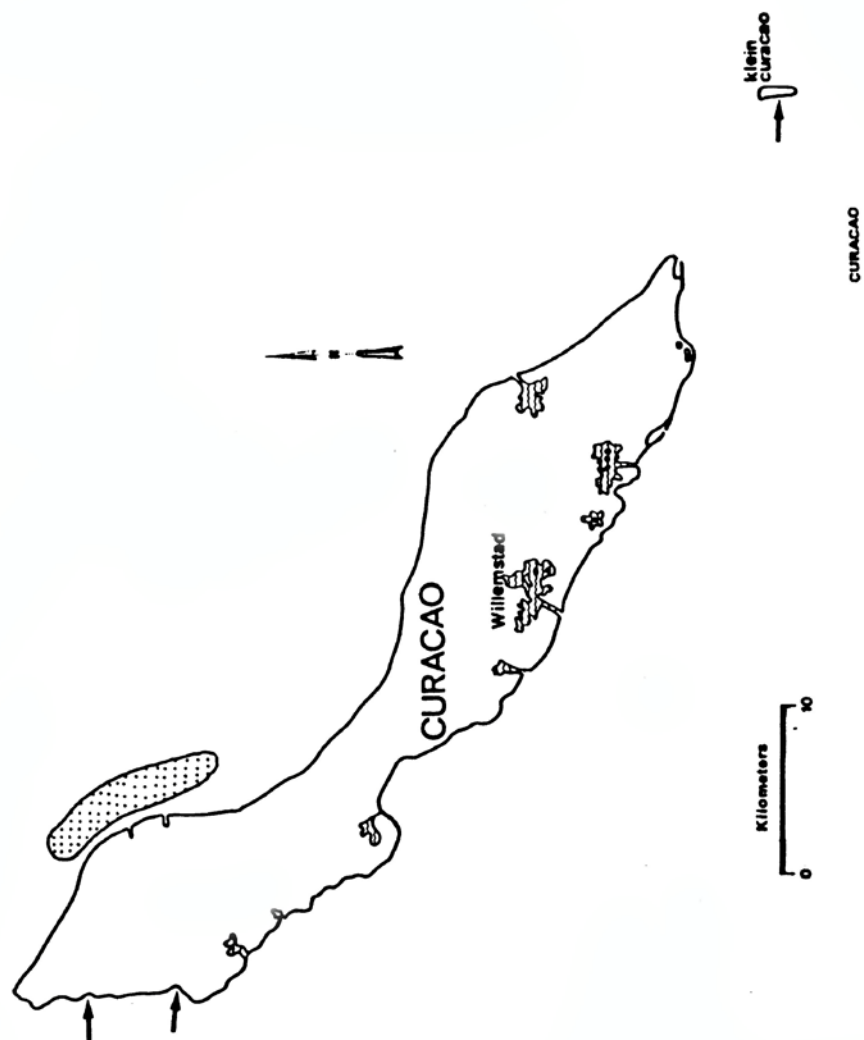


Figure 2.

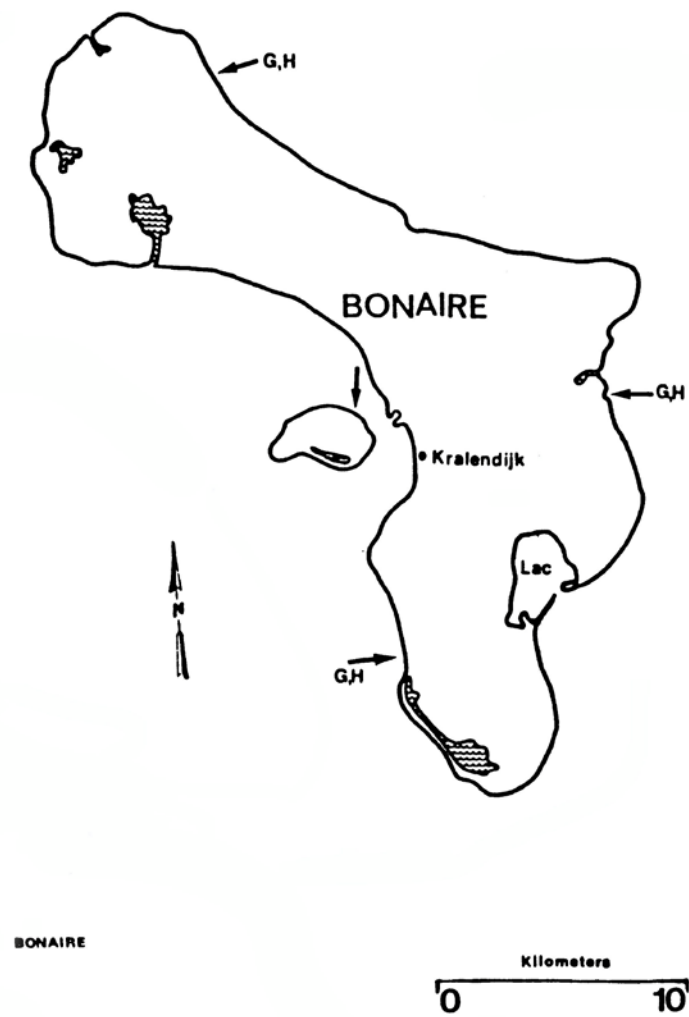


Figure 3.

Figure 4.

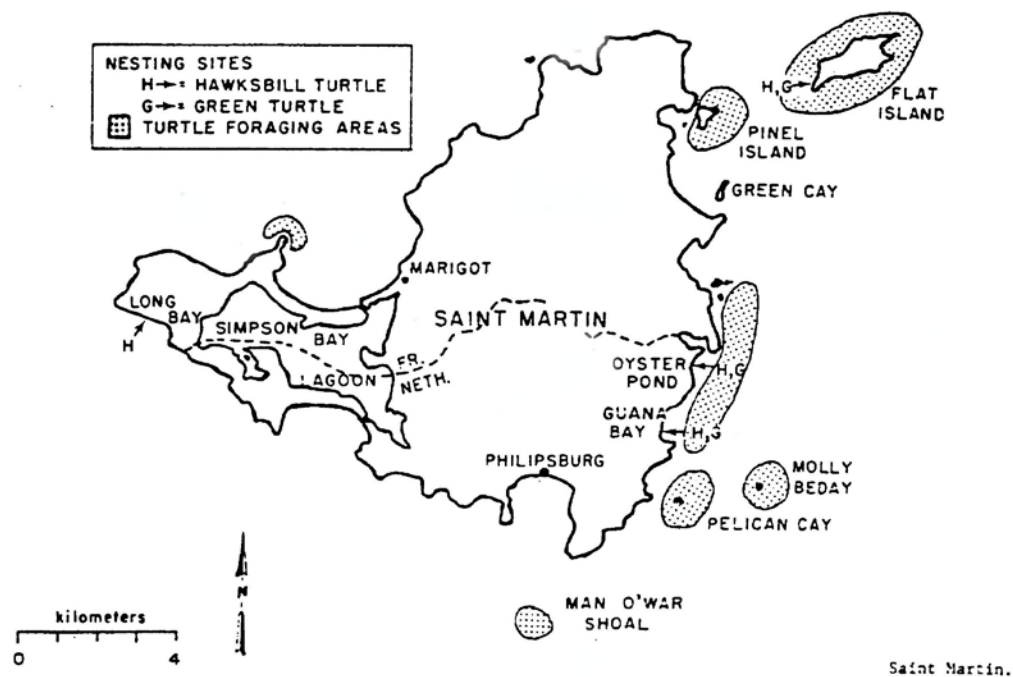


Figure 5

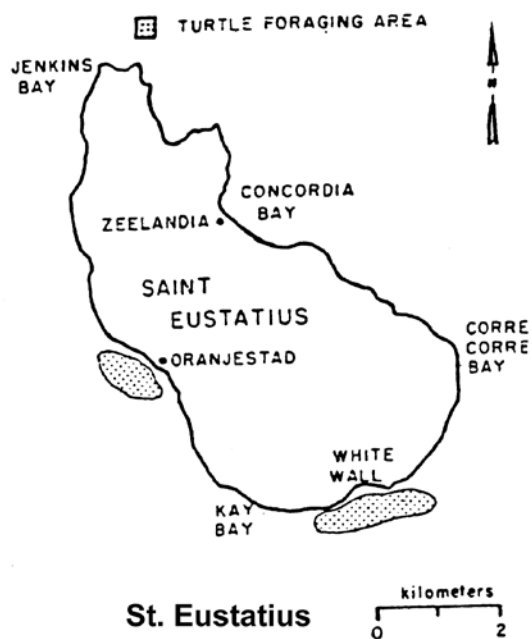
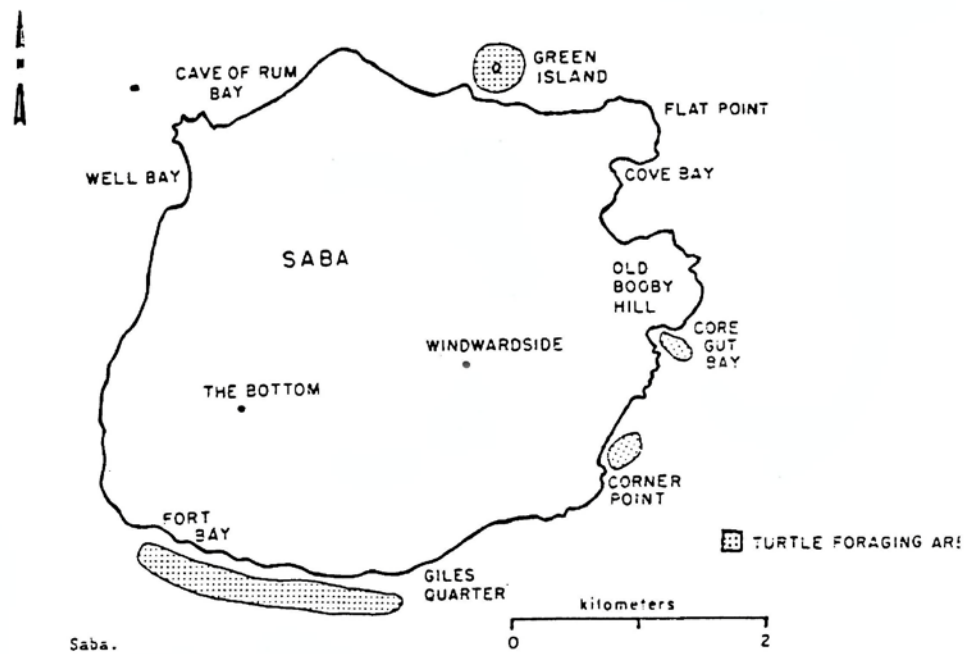


Figure 6.



**NETHERLANDS ANTILLES**

**SEA TURTLE RESEARCH PROGRAM**

**1987**

**Visit to Bonaire, Netherlands Antilles**

**Official Report**

## NETHERLANDS ANTILLES SEA TURTLE RESEARCH PROGRAM

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Second Western Atlantic Turtle Symposium (WATS II)

Funding: Sea Turtle Survey Grant for the Netherlands Antilles

Visit: Leeward Islands: Bonaire

Date: May 12 and 13, 1987

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### 1. INTRODUCTION

In 1986 we were invited to participate in the second Western Atlantic Turtle Symposium (WATS II) to be held in Puerto Rico coming October 1987. We were requested to gather recent data on the sea turtles' situation around the islands of the Netherlands Antilles.

Before our participation in WATS II, we were already gathering data on sea turtles around the islands through an informal network of enthusiastic volunteers (Netherlands Antilles Sea Turtle Research Program). WATS II, therefore, fits well in our program and is an extension to our original plans.

The network of enthusiastic volunteers is the best way that data on all Netherlands Antilles islands could be gathered. Nevertheless problems occurred. Some of the volunteers were very productive while others never responded although they had volunteered. A visit by the coordinator to all the islands was planned as part of the program to gather as much additional and reliable sea turtle information as possible.

By means of the survey grant provided by IOCARIBE, through Sea Grant funding, a first trip by the coordinator was made from March 10 to 17, 1987. Goals for this trip were:

1. To (re)establish a solid network by contacting previous volunteers and look for new persons for continuous and reliable input of data from all islands
2. To evaluate existing data and correct these data through meetings with the network representatives on all islands
3. To gather supplementary data and information during the short visit to the different islands.

### 2. GENERAL ISLAND INFORMATION

The Leeward islands of the Netherlands Antilles are formed by Curaçao and Bonaire. (Aruba separated since a year and forms a status apart within the Kingdom of Holland, and is not a part of the Netherlands Antilles any more). The islands are not located in the hurricane belt.

Bonaire is  $\pm$  260 square kilometers with a population of 10,000. The principal sources of income for the island are salt mining, diving tourism and oil transshipment facilities. Nature has been the island's biggest asset and is the major attraction for the tourists to come to this island. On land the typical dry tropical arid vegetation is protected through a National Park called Washingtonslagbaai, while the island is the only breeding site for the Southern Caribbean flamingo population. The breeding grounds are protected by means of a sanctuary and are situated in the middle of the Salt Mining Company's ponds. A good example of sound co-existence of technology and nature conservation. Around the island all the reefs are protected by means of the Bonaire Marine Park. Sound exploitation and use of the coral reefs, which are among the best developed in the Caribbean, started more than 10 years ago. Today the island handles around

10,000 divers a year with a total of 100,000 dives, and is the no. 3 destination of North American divers in the Caribbean. Most of the dives are done around the island of Klein Bonaire and on the reefs at the lee side of the island where the water is calm throughout the year. Reef conservation legislation is the best of the Netherlands Antilles. A weakness in this legislation is that concerning turtles; only egg poaching is prohibited. Catching of turtles is not prohibited (except with the use of spearguns).

### **3. KEY PERSONS**

Meetings were held with Eric Newton, a marine biologist working for the Island Government and who is in charge with Karpata Ecological Centre (headquarters of STINAPA-Bonaire) and the Bonaire Marine Park manager.

Also a lot of information was supplied by Roberto Hensen, marine biologist and director of MARCULTURA, a foundation that specializes in breeding of conch, shrimps, tilapia, aquarium fish and other (profitable) to be cultivated marine flora and fauna.

Both persons were willing to participate in the Netherlands Antilles Sea Turtle Network.

### **4. VISIT BY THE COORDINATOR**

During his visit the coordinator was directed to go to Cay at Lac Bay, where it is known that most of the turtles are caught. A conversation with Mr. Domacasse, an old and experienced fisherman, was most informative. Together with additional information by Newton and Hensen we gathered the following data:

- Sea turtles are seen throughout the year by fishermen and sportsdivers. Green turtles and hawksbill turtles are frequently seen on the coral reefs while loggerhead turtles tend to swim more in the open sea. Leatherback turtles have been reported but are rare.
- At Lac Bay (Cay) a shallow inner bay with turtle grass, sea turtles are caught professionally by fishermen through the use of gill nets. This is done during the month of June to December. The other months are more difficult because of rough water, hard blowing wind, disturbing seaweed and bad visibility in the water. Annual catch is in the order of 250 turtles a year. Although the total of turtles caught has not increased in the years, the size of all turtles has decreased considerably. The mean length of turtles was around 1.50 m some 6 years ago and at that time the fishermen let loose the smaller ones; nowadays they catch all turtles having a mean size of about 40 cm. The captured turtles are laid on their back in the sun till they are sold, causing tourists to protest.
- Nesting of turtles have been reported at Playa Chikitu, Playa Grandi, Lagoen, Lac and Witte Pan, but this is a long time ago, and today this is not the case anymore.
- Most of the turtles are used for local consumption. A few primitive snack bars are located at Lac Bay but at the time of this visit only one was open. The menu showed turtle steak for Naf. 8,- a meal or turtle sate for Naf. 2,- a stick. Turtle food nevertheless could be offered only in the weekend because of the season (May). A few restaurants in town are reported to offer turtle food as well.
- Export of turtle meat is low and if any it is transported to Curaçao where sea food prices are higher. Ornament trade does not exist, only the shells are sold locally to interested parties. A 35 cm shell was offered for a price of Naf. 5,-. Import of turtle meat is nil. There might be an occasional Venezuelan fisherman that offers turtles caught at the Aves islands, but this is not regular.



## **5. CONCLUSIONS**

1. The island of Bonaire is the only island of the Netherlands Antilles that catches turtles professionally in relative big numbers.
2. The size of the catch has been lower in the last few years, which could be an indication of a decreasing and over exploited sea turtle population.
3. Caught turtles are for the local market only.

## **6. RECOMMENDATIONS**

1. The island of Bonaire Government should draft better legislation to protect the sea turtle population from being over exploited. Regulations like minimum size, season, quota, etc. could be enforced.
2. The island should reserve special sea turtle nesting beaches like the sandy beaches in the Slagbaai- Washington National Park. These beaches should be prohibited for recreation and other disturbing activities, while close turtle monitoring should be done by park personnel.
3. Consumption patterns should be altered through campaigns to protect the turtles. This could be done through publicity campaigns and educational programs.

## **7. FURTHER ACTIONS**

1. Activities should be started to inform the public about the endangered status of the sea turtles population in the Netherlands Antilles. This could be done by developing a local sea turtle poster that can be distributed on all islands. Costs could be covered out of left over Sea Grant funding.
2. A presentation (paper) will now be prepared out of the reports and data from the Netherlands Antilles network for the coming October WATS II meeting in Puerto Rico.

## **8. ACKNOWLEDGEMENTS**

I wish to thank IOCARIBE (Sea Grant Program; Sea Turtle Survey Grant) for their financial support. Also, I would like to thank all people that helped me in gathering information on the beautiful island of Bonaire.

Willemstad, May 18, 1987

*Coordinator,  
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**NETHERLANDS ANTILLES**  
**SEA TURTLE RESEARCH PROGRAM**  
**1987**

**Visit to the Netherlands Antilles Leeward Islands**  
**St. Maarten, Saba and St. Eustatius**

# NETHERLANDS ANTILLES SEA TURTLE RESEARCH PROGRAM

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Second Western Atlantic Turtle Symposium (WATS II)  
Partial use of Sea Turtle Survey Grant for the Netherlands Antilles  
Visit: Leeward Islands Netherlands Antilles  
Date: March 10 to 17, 1987

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## 1. INTRODUCTION

### 1.1. General

In 1986 we were approached by the organization of WATS II to help gather data on sea turtles around the islands of the Netherlands Antilles. For financial support we were granted a research survey grant. (Services contract ; Sea Grant Program; July 8, 1986).

This visit to the Leeward islands is part of our efforts to collect the data requested and according the contracts objectives for getting the grant.

### 1.2. Objectives for the visit to the Leeward Islands

It is most important because of the nature of the five different islands of the Netherlands Antilles to have on every island a reliable representative. We started by sending information and a formal letter to already known people on different islands, asking them for their cooperation and help in collecting data. Some people became very active and sent in data regularly while others didn't responded at all. Because it is very important to have good, reliable local representatives it is necessary to stimulate them through a visit by the coordinator for evaluating the situation and to help wherever possible. It is also important for the coordinator to have a good idea what the local situation is on every island and to form his own opinion about the possibilities a representative has on its own island. The coordinator can, of course, never gather enough data during such a short visit about the local situation of the sea turtles but a first impression is very well possible.

## 2. ST. MAARTEN

### 2.1. General

St. Maarten has become in a few years a most wanted tourist island in the Caribbean. Maybe because of its two nationalities, half French, half Dutch, it has become the destination for the better situated North American and French tourists. Big hotels and condominium complexes have arisen in the last few years like mushrooms, and during the high season, starting in November through April, there are more tourist on the island than local residents that total around 60,000. Especially the Dutch side has not been able to follow this growth orderly, causing a sort of free-for-all resulting in serious problems concerning road maintenance and development, living space and rents, crime and prices of a lot of things. Because of this fast development all beaches are being disturbed by bathing tourist while construction of big hotels is more common than not.

### 2.2. Key Persons

When I started to establish contacts for sea turtles data collecting I used the list of STINAPA which stands for Netherlands Antilles National Parks Foundation. My new contact

will be Mr. Frans van der Hoeven, who very enthusiastically agreed to help collect data on sea turtles. I discussed with him the different methods we used in Curaçao like contacting fishermen, going to fishmarkets, contacting and stimulating local dive operators to keep records, finding out if there are restaurants that offer turtle meat and how much they sell, and use of other types of propaganda to get the local population interested.

### 2.3. Coordinators Impressions

- St. Maarten is a very crowded and tourist-minded island. Everything is centered around the wealthy and good paying tourist, which is the one and only major income for the island population. For example it is almost impossible to pay with the official currency, the guilder, because all transactions are done in dollars. Prices of everything are far higher than on the other islands.
- Because of the disturbancy of the sandy beaches nesting for turtles is almost impossible, and reports of such will be rare.
- On the market of Marigot, the French side capital, at that time only fish was being sold and no turtles.
- Fresh fish is also being sold along the road to the airport(\$6,00/ kilo) together with conch (\$4.00/kilo), but no turtles. In the shops of Philipsburg, capital of the Dutch side, you must look hard to find shells for sale and it looks that these are not sold often.
- The waters around the island of St. Maarten and especially the bays have abundant growth of seagrass, according fishermen. According Van 't Hof is the amount of *Thalassia*, turtle grass, more than pointed out in the paper of Maylan (1983). This is the feeding ground of the green turtle, commonly called the green back. The dive operators see them often. The second species reported is the hawksbill but not so often as the green turtle. Other species are very rarely seen.
- No island legislation exist to protect sea turtles and spearfishing is not prohibited.
- I have obtained a cruising guide to the St. Maarten area where information on the condition of the the bottom of the bays is described. This can therefore be an indication if turtlegrass and turtles are to be found.

## **3. SABA**

### 3.1. General

Saba is a small rustic steep mountain rising up from the deep. Inhabited by only a 1,000 persons, it is not spoiled by mass tourism and industrial development. Can you imagine an airport the size of a stamp and a place where all the roads are being cleaned by hand every day? That's Saba!

### 3.2. Key persons

Because of its natural state a proposal by STINAPA to establish an underwater park was granted by the Island Government and is now being executed. The project leader is Tom van 't Hof whom I approached to help me in gathering data on sea turtles. He already has sent in some valid information which is used in the Interim Report.

Mr. van 't Hof approached both dive operators and asked them to gather data on sea turtle sightings in a log. Both started very optimistically but after a while lost interest. The counterpart of Mr. van 't Hof showed me during an early snorkel trip the exact location where every morning turtles green turtles feed. And indeed I saw in only half an hour 7 medium sized greens.

### 3.3. Coordinators Impression

- Saba is a manificent island on land as well as in the water.
- Impressing formations of volcanic origin covered with a lot of soft and hard corals in crystal clear water are to be found in a dozen dive locations which will be protected in the future through mooring bouys made by the Saba Marine Park. One special dive site called 3d Encounter is something every diver should see.
- It appeared to me, and this was also agreed by personal observations of Mr. van 't Hof, that the location where the greens feed and what the fishermen referred to as turtle grass is no "grass" (*Thalassia*), but other fleshy algae. It is my impression that green turtles do not only feed on turtle grass but on other algae as well.
- Although there are sightings of hawksbill turtles, all of the turtles I have seen during my short period were green turtles.

## **4. SABA BANK**

### 4.1. General

The Saba bank lies off shore of Saba and is well documented in a paper by J. van der Land (1976). Because the fishermen told us that they see green turtles on specific places we asked them to bring us to these locations. We made three scuba dives and several short snorkel trips.

### 4.2. Key Persons

As key person for the Saba bank I asked Mr. van 't Hof to provide me with all information he could gather about turtles on the bank for me in the coming future.

### 4.3. Coordinators Impression

The Saba bank consists of different habitats. From a more soft coral and sponges community via an abundant algae habitat to a plain sandy community. Places where turtles are frequently seen have a dominant algae, soft coral composition, but no turtle grass (*Thalassia*). Again I do not think that fields of *Thalassia* will be found on the Saba bank, and fishermen refer to algae instead of grass. also Van der Land does not mention *Thalassia*.

## **5. ST. EUSTATIUS**

### 5.1. General

Statia, as local people call this island, has a very interesting historical background that tends to influence life today. A lot of the historical remains on land and underwater attract the attention of visitors and residents alike and divers look for old wrecks and artifacts. Fortunately the Island Government prohibits all removal of these artifacts.

## 5.2. Key Persons

I was very lucky to get to know Ms. Lynette Bryce from the Historical Foundation who has a beautiful museum on the island. Through her secretary, Mr. Ellis Lopes, I was introduced to Ms. Myriam Schmidt who works for the cultural department of the Island Government. She also told me that just last week the local STINAPA branch was elected and that their first project will be to try to protect the Mountain Quill's rainforest through a national park. Also they want to have an under water park established to protect the historical monuments in the sea. I gave a short presentation about STINAPA and its 25 years of existence, wished them good luck and promised them all cooperation from our part. I asked them to help me with the gathering of data on sea turtles. I also spoke with Mike Guderian, owner of dive operation Surfside Statia, and asked him about turtles. He sees them regularly and knows a few big ones (Green turtles) which sleep under his boat every night.

## 5.3. Coordinators Impression

It is my believe that in Statia not much turtle fisheries is done by the local fishermen. A local gourmet restaurant owner told me that he in the last five years has only been approached to buy turtle meat twice.

Nesting by turtles can most likely occur at the Atlantic side of the island, but on the calm south side no more nesting can occur because the sandy beach has been washed away by the water in the last few years, most porbably because of shifts in current patterns.

The turtles that are seen in Statia tend to be bigger than on the other islands.

## 6. **CONCLUSIONS**

My conclusions of this visit are that I met my objectives as I have planned to do. I established a network of persons that I know personally now on all three islands of the windward Netherlands Antilles that can help me in gathering data on sea turtles. I have a pretty good impression about local situation concerning the turtle environments, like fisheries pressure, recreation, demand for restaurants and the sort.

## 7. **RECOMMENDATIONS**

I would like to follow up on this visit by a second short visit in August to gather the last data before writing a scientific paper to present at WATS II in Puerto Rico in October. Also it would like to print stickers for the dive operators that they can use as give aways to serious divers that bring in reports of turtles sightings. By means of this we will keep the divers and the operators motivated to continue recording data.

## 8. **REFERENCES**

- Eiman, W.J. (editor). 1983. St. Maarten / St. Martin Area + St. Kitts & Nevis Cruising Guide Virgin Island Plus Yacht Charters, Inc.
- Maylan, A.B. 1983. Marine turtles of the Leeward islands, Lesser Antilles. Smithsonian Institution, Washington, D.C., U.S.A.
- Van der Land, J. 1979. The Saba Bank- A large atoll in the Northeastern Caribbean. FAO Fisheries Report No.200

## 9. ACKNOWLEDGEMENTS

I like to express my gratitude to all persons that helped me in gathering this information. Without them it would have been impossible.

Willemstad, March 24, 1987

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## STATISTICS

Saba Sea Turtle Data Collection by Saba Deep, Sea Saba and the Saba Marine Park

### Results

1. Total of Sea Turtle Sightings from October 1986 till July 1987: 115

- a) excluding sightings of turtles in turtle feeding area
- b) not very exact because of irregular gathering of data and irregular dive trips by Operators (depends on season)

2. Distribution of Sea Turtle Sightings

1986					1987					
Oct. 03	Nov. 22	Dec. 16	Jan.	Feb. 05	Mar. 04	Apr. 09	May 07	Jun. 15	Jul 31	Aug 02 till 10 <sup>th</sup>
3	22	16	---	5	4	9	7	15	31	2

- a) the same comments as 1

3. Size Distribution of all Sea Turtle Sightings

>10"	11"-20"	21"-30"	>31"
(>25 cm)	(26-50 cm)	(52-75 cm)	(> 76 cm)
10	62	33	10

4. Species Distribution

Hawksbill:	103
Green Turtle:	11
Loggerhead:	1

- a) Sightings of Turtle Feeding Area not included

5. Turtle Feeding Area

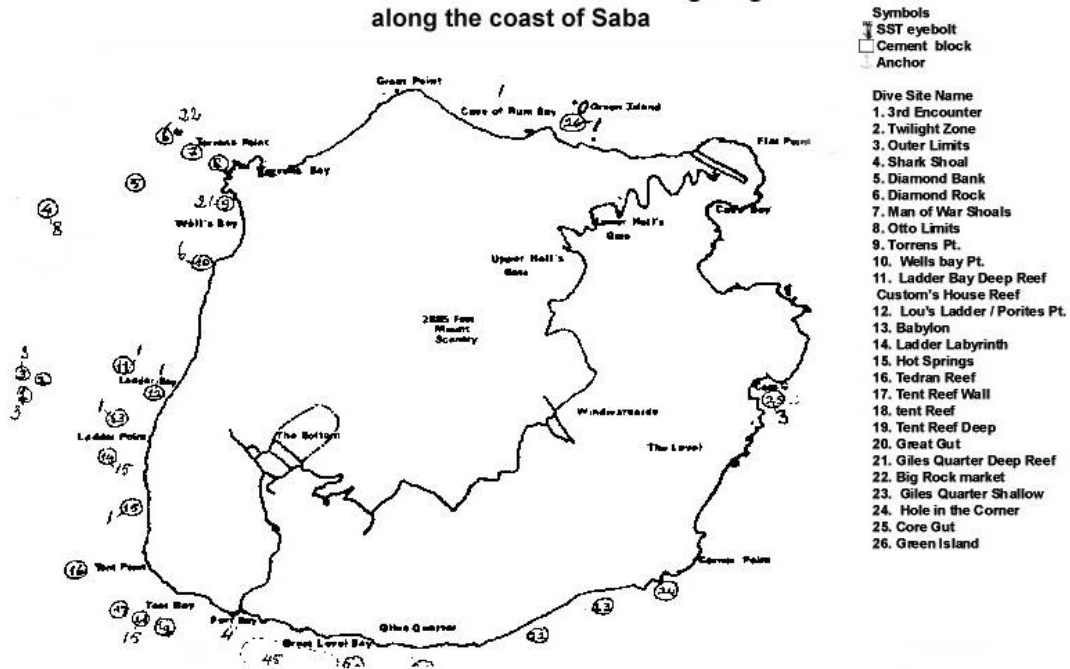
Giles Quarters-Fort Bay: Daily counts between 6-18 sea turtles, mostly green turtles

6. Distribution of Sea Turtle Sightings along Saba's Coast  
(See map)



## Saba Marine Park: Moorings

Distribution of sea turtle sightings  
along the coast of Saba



## **Netherlands Antilles Sea Turtle Research Program**

### **Interim Report**

#### **GENERAL**

The Netherlands Antilles Sea Turtle Program started to run in the beginning of 1986 when all island representatives were informed about the program. Requests to collect data and to start local programs to gather these data were actually initiated in August 1986. Also a grant from Watts II for the purpose of their program was approved during this period. It is therefore impossible to give a lot of information on the sea turtle situation in the Netherlands Antilles as per end of September when I asked all participants to send in their findings. We therefore want to stress that this interim report is just a very preliminary report and is only written to inform all participants in the research program that we certainly need more data and that efforts should be continued on all islands. For locations see enclosed maps

#### **CURACAO**

##### **1. Interview at the local market**

Interviews at the local market showed that there are only a few people who deal in sea turtles. They get their turtles from one specific address on the island. Requests for turtle meat or shells must be given in advance. Prices for shells range in the order of Naf. 15; for shells smaller than 50 cm to Naf. 25,- and up for larger ones. Meat price varies (according to the amount of meat ordered). At the floating market (Venezuelan fishermen) one can get turtles only by ordering well in advance. These turtles are shipped in from Venezuela. Overall impression is that the local demand for turtle meat and shells is very low. Demand for eggs is nil. Species involved are the green turtle and hawksbill on a 50/50 basis.

##### **2. Interview of local fishermen at one of the largest landing sites (Caracas Baai).**

Fishermen indicated that captured sea turtles are sold through one dealer on the island. They collect the turtles alive and keep them in captivity till a customer comes who can choose out of the living stock. According to the dealer they can supply up to 5 to 6 turtles a day if necessary, because fishermen keep catching them regularly, mostly at the eastern part of the island and in St. Joris Baai, the biggest inner bay at the north coast. Due to a low demand the supply of turtles is low though. There are three restaurants at the most on the island that serve turtle soup and/or meat. Prices are around Naf. 10,- to 20,- a kilo. Species are green turtle and hawksbill on a 50/50 basis.

##### **3. Sightings**

From February to October 1986 we received very irregular reports on sightings of sea turtles. In total we were informed of 35 sightings all around the island with a concentration at Oostpunt, St. Joris Baai, Wacao and Boca Tabla. Species mostly were not identified but are most probably either Green turtle or Hawksbill. In October one person reported strange tracks in the sand of Klein Curaçao, a small island off the eastern coast of Curaçao, which could have been from a nesting turtle.

##### **4. Public Relations**

We kept informing the public of the island about the endangered situation of the sea turtles. For example we went on local television and published articles in the local newspapers.

#### **BONAIRE**

In Bonaire cooperation was asked from the biologists E. Newton and R. Hensen to collect data. So far we have not received their data. Past experience (by myself) shows that around the

island of Klein Bonaire you can easily encounter Hawksbill turtles and also at Lac Baai at the eastern side of the island of Bonaire. In the near future I will go to the island to interview fishermen and other knowledgeable people.

#### ST. MAARTEN

No data were sent to us by Mr. J. Vliegen who is the local investigator for St. Maarten.

#### ST. EUSTATIUS

We do not have a representative on this island so we do not have access to data from this island.

#### SABA

Report by Tom van 't Hof, local investigator. At the beginning of September the two dive operators of Saba were asked to report turtle sightings to the local coordinator (van 't Hof). Posters were distributed and information aired by radio. They saw 17 turtles in total which equals about 1 sighting per three dives. Most of the turtles were hawksbill turtles (also two green turtles, and even one leatherback). No reports on landings or nesting.

#### FUTURE ACTIVITIES

All local investigators are asked to continue gathering data on sea turtles. By starting local information programs they should keep the public involved in sending their sightings to them. In the near future I will visit Bonaire and in March 1987 I will go to the islands of St. Maarten, St. Eustatius and Saba to collect more specific information. It is very important to have this up to date information because in October of next year there will be the second Western Atlantic Turtle Symposium (WATS II) in Puerto Rico, where we could present our findings and get an overall picture of the sea turtle situation in the Caribbean.

Willemstad, December 4, 1986

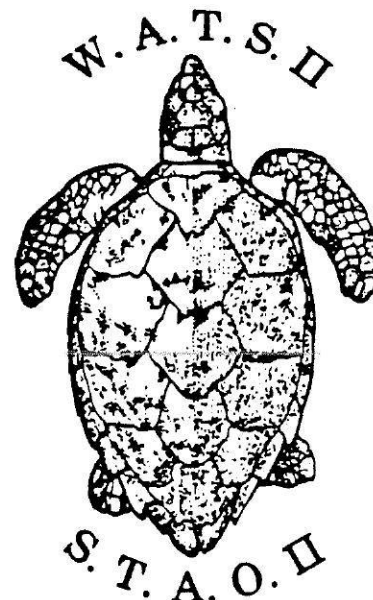
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Netherlands Antilles*

# WATS II REPORT/DATA SET

National Report to Wats II Netherlands Antilles

Jeffrey Sybesma

12 October 1987



**WATS2 057**

WESTERN ATLANTIC SEA TURTLE SYMPOSIUM II  
OCTOBER 1987

NETHERLANDS ANTILLES  
NATIONAL REPORT

by

JEFFREY SYBESMA

SECOND WESTERN ATLANTIC SEA TURTLE SYMPOSIUM  
OCTOBER 11-16, 1987

NETHERLANDS ANTILLES  
NATIONAL REPORT

by

JEFFREY SYBESMA

CARMABI, POBox 2090  
Curaçao, Netherlands Antilles

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1. Introduction

1.1. Geographical position, geological situation and socio-economic profile of the Netherlands Antilles (figure 1)

The Netherlands Antilles consists of five islands<sup>1</sup>, inhabited by approximately 200.000 people. Curaçao and Bonaire are called the Leeward Islands (described in the WATS I proceedings as Neth. Ant. South); while St. Maarten, St. Eustatius and Saba are the Windward Islands of the Netherlands Antilles (described as Neth. Ant. North).

Curaçao, the biggest island has a land area of 444 km<sup>2</sup>. It is the most populated with 160.000 people. Being the center of the Central Government it generates income through oil refining, harbor activities like container movements and drydockfacilities, off-shore banking and financing and tourism. The coastal zone is divided in a steep rocky north coast with rough water and a quiet south coast also consisting of rocky shores but intersected by natural harbors, rubble beaches and small sandy beaches. The whole coast of the island is covered by healthy fringing reefs which are best developed at the calm south coast. Three km to the south east of the east point of Curaçao lies a small island called Klein Curaçao. It is an uninhabited island, which is only infrequently inhabited by fishermen and has a long sandy beach.

Bonaire is 288 km<sup>2</sup> of land with 9000 inhabitants. The island is very similar to Curaçao. It has a small oilterminal for transshipment, and a well developed diving tourism (1986 figures: some 10.000 divers making 85.000 dives). The coral reefs are among the best developed in the Caribbean. The island has sandy beaches at different locations.

Dutch St. Maarten is 34 km<sup>2</sup> of land with 15.000 inhabitants. The other half of the island is French. The island developed in recent years into a blooming tourist destination where tourists during high season exceed the local population by a factor three. The island has a lot of protected sandy beaches while off-shore you find a sandy bottom with turtle grass (Thalassia). On certain places you will find well developed coral reef patches.

coral reef patches.

St. Eustatius, with a land area of 21 km<sup>2</sup> is inhabited by 1500 persons. It's cultural history can easily be traced through the artifacts all over the island and in the waters. The island has some sandy beaches while off shore there is not much coral reef development because of the sandy and shallow nature of the bottom.

Saba, the smallest island has 13 km<sup>2</sup> of land area and is inhabited by 1000 persons. Being a steep dead vulcano it has no beaches at all. The island has well developed fringing reefs all around.

[<sup>1</sup> Aruba was a part of the Netherlands Antilles. As of January 1, 1986 Aruba got seperated from the Netherlands Antilles and acquired a Status Aparte within the Kingdom of Holland ]

## 2. Netherlands Antilles Sea Turtle Project

### 2.1. Past Research

For the WATS I meeting held in Costa Rica in 1983, Gerard van Buurt, Netherlands Antilles national fisheries officer, sent an ad hoc report (1981) on the sea turtles situation based on his knowledge of all Netherlands Antilles islands (Proceedings WATS, Costa Rica 1983, volume 3, appendix 7).

In 1983, Anne Barkau Maylan published a paper titled "Marine Turtles of the Leeward Islands, Lesser Antilles" (Atoll Research Bulletin no. 278), where information on the sea turtles of St. Maarten, St. Eustatius and Saba are described.

### 2.2. Wide Cast

In 1985 the first formal contacts were established between the foundation CARMABI (doing research on behalf of nature management) and WIDECAST (Wider Caribbean Sea Turtle Recovery Team & Network Project). CARMABI agreed to join the network and to formulate a recovery action plan for the Netherlands Antilles. Because at that time nobody was actively engaged in sea turtle research, and all data available were rather outdated and scarce, Carmabi decided to start collecting basic data on all islands through a volunteers network.

### 2.3. WATS II

In 1986, through the Netherlands Antilles representative of IOCARIBE, Quirino Richardson, CARMABI received a grant from the WATS II secretary to start collecting recent data on the different sea turtles and their situation in the Netherlands Antilles. Results must be presented at the WATS II meeting, October 1987. CARMABI assigned the marine biologist, Jeffrey Sybesma, as coordinator of the Netherlands Antilles Sea turtle Project.

An island network was established with volunteers on every island to start collecting sea turtle data regularly and to draw more public attention to the situation of the turtles. Through carefully executed interviews of fishermen valuable information was gathered. By visiting marketplaces, sea food

restaurants and souvenir shops additional information was found. Dive operators were asked to stimulate all divers to write down sightings of turtles. Local dive clubs were also encouraged to inform the network about their encounters with sea turtles. Media, like radio, television and newspapers, were also used to encourage the public to send in turtle information.

By means of the WATS II grant it became possible for the Coordinator to visit all islands and to talk with all volunteers. Also it became possible to form a good idea of the local situation and the reliability of the data.

### 3. Results

#### 3.1. General remarks

The results presented in this report are our own observations and data collected by the network and interpreted by the Coordinator and compared with the already existing literature. In general most of the sightings on all islands are Green turtles (*Chelonia mydas*) and Hawksbill turtles (*Eretmochelys imbricata*). A few reports are on the Loggerhead (*Caretta caretta*), mostly in the open sea, and very rare are reports on the Leatherback (*Dermochelys coriacea*).

#### 3.2. Netherlands Antilles South

##### 3.2.1. Curaçao (figure 2)

###### 3.2.1.1. Sightings

Sighting reports from all around the island arrived very irregular by different sources. Some locations were mentioned more frequently, like the North-West coast where on a quiet day you can see turtles floating at the surface in the fields of drifting Sargassum. Species often seen are Green turtles and Hawksbills.

###### 3.2.1.2. Nesting

No nesting occurs anymore in Curaçao. All beaches are disturbed by too many visitors and developments. Turtle tracks have been reported once in 1986 from Klein Curaçao, but the island is too much disturbed by visiting people for turtles to nest quietly (recreational trips and dive trips are organized on a regular basis).

###### 3.2.1.3. Catch

Sea turtles are not caught professionally and are mostly bycatches of fishermen, although quite regularly. There is one specialized dealer on the island. He keeps the turtles alive till they are sold. Demand is not high. The fishermen say they can catch more turtles if necessary (up to 3 a day). There are certain places fishermen are sure to catch sea turtles like St. Joris Baai and the eastern tip of the island. Species caught are Green turtles and Hawksbills (50/50).

###### 3.2.1.4. Consumption

Turtle meat and soup is offered at a few restaurants on the island. Consumption is not very high. Prices per kilo of meat



are around 5 to 10 US dollars, depending on quantity. There is no demand for eggs.

3.2.1.5. Ornaments and trade

There is some import of turtle meat and shells from Venezuela. Mostly only on request. Regulations in Venezuela forbid export of turtles (CITES) and fishermen know this very well. Whole shells (bigger than 50 cm) are sold for prices around 15 dollars. Shells are not being processed into ornaments.

3.2.1.6. Foraging

One area at the North-West coast of the island is considered a feeding area for turtles. In the floating Sargassum a lot of turtles are seen.

3.2.1.7. Institutes & addresses

- Foundation CARMABI  
POBox 2090  
Curaçao, Netherlands Antilles  
Scientific Research Institute on behalf of Nature Conservation and Management. Has close contacts with WIDECAS.  
Director: W.L. Bakhuis; network member  
Staffmember: John de Freitas; network member  
Staffmember (part time): Jeffrey Sybesma; Coordinator Netherlands Antilles Sea Turtle Project
- Netherlands Antilles National Parks Foundation (STINAPA N.A.)  
c/o CARMABI, POBox 2090  
Curaçao, Netherlands Antilles  
Administred at the CARMABI, this organization does nature management of national parks (on land as well as underwater) in the Neth. Antilles.  
Director: W.L. Bakhuis; local network member  
Staffmember: Jeffrey Sybesma; Manager Curaçao Underwater Park
- Environmental Service  
De Rouvilleweg 41  
Curaçao, Netherlands Antilles  
Governmental department on environmental regulations  
Director: Q. Richardson; official Neth. Antilles representative of IOCARIBE. Local network member
- Department of Agriculture, Animal Husbandry and Fisheries  
Klein Kwartier 33  
Curaçao, Netherlands Antilles  
Island Government Department  
Director: R. Winkel  
Fisheries Officer: G. van Buurt; network member

3.2.1. 8. Laws and Regulations

Island Reef Management Ordinance of 1976.  
Prohibition of spearfishing. No special protection of turtles, nests and/or eggs.

3.2.2. Bonaire (figure 3)

- 3.2.2.1. Sightings  
Regular reports come from the dive operators' tourists who dive all along the sheltered coast of Bonaire (West of Bonaire and around Klein Bonaire). Most of the records are Hawksbills and Green turtles, while loggerheads are sometimes seen from the boats, more in the open sea.
- 3.2.2.2. Nesting  
Records of nesting turtles at beaches known for it (Playa Chikitu, Playa Grandi, Lagoen, Lac and Witte Pan) have been lacking since a few years.
- 3.2.2.3. Catch  
Both Hawksbills and Green turtles are mostly caught during the period of June till December. The rest of the year catch is limited because of bad water conditions. Annual catch is about 250 turtles. No increase in catch over the years, but the size of the turtles has decreased considerably. Was the mean length 1.50 m and were the smaller ones set loose again, nowadays all turtles are caught and have a mean length of 40 cm.
- 3.2.2.4. Consumption  
Bonaire has a local tradition of turtle meat consumption. All catches of turtles are used locally. Turtle steak is served at some known restaurants (5 dollars a meal) and some snack bars offer turtle sate for a dollar a stick.
- 3.2.2.5. Ornaments and trade  
No ornament trade exists. Locally the shells of the caught turtles are sold.
- 3.2.2.6. Foraging  
Foraging areas are for hawksbill turtles all around the island where they search for food on the reefs. They are sighted regularly by the dive tourists along the coast and around the island of Klein Bonaire. Green turtles are more often seen at the entrance and in Lac Bay where there are floating sargassum fields and turtle grass beds. Sometimes loggerheads are seen in the more open waters.
- 3.2.2.7. Institutes/addresses  
• Foundation MARCULTURA  
POBox 43, Kralendijk  
Bonaire, Netherlands Antilles  
Governmental research and development foundation specialized in aquaculture  
Director: R. Hensen; network member  
  
• STINAPA-Bonaire; Karpata Ecological Center  
POBox 368, Kralendijk  
Bonaire, Netherlands Antilles  
General ecological research field station  
Scientific executive officer: Eric Newton; network member
- 3.2.2.8. Laws and regulations  
Island Reef Management Ordinance of 1984

Spearfishing is prohibited. Protection of eggs and nests, but not the turtles as such.

3.3. Netherlands Antilles North

3.3.1. St. Maarten (figure 4)

3.3.1.1. Sightings

According to the two dive operators, turtles are seen frequently (once a week) mostly from the boat on the way to a dive spot.

3.3.1.2. Nesting

If nesting has occurred, at the moment this will not be the case anymore or hardly. Development of beaches and use for recreational purposes has disturbed possibilities of nesting.

3.3.1.3. Catch

Although sea turtles are seen during boat rides, catching of turtles is very low. Probably because the demand is low. Most frequently seen species are Green turtles.

3.3.1.4. Consumption

No indication that turtle meat is sold on markets or special places. There are no restaurants offering turtle steak as a speciality. If there is consumption this is only by the local people, not by tourists. There is one fisherman who sometimes brings in turtles caught near St. Eustatius for local consumption. Prices for turtle meat are around 5 dollars a pound, which is cheaper than snapper or lobster. According to the fisherman labor for turtle meat is harder than for lobster or fish, and prices are lower. Therefore it is not economic to catch turtles.

3.3.1.5. Ornaments and trade

No indication of selling of shells or ornaments made from turtle shells. Shells found in souvenir shops are imported from other places. Demand by tourists is probably also very low.

3.3.1.6. Foraging

Around the island, especially the bays, turtle grass is common. According to van 't Hof (personal comment) Thalassia is more abundant than described by Maylan. Also on the off-shore reefs (Cupe Coy to Plum Bay, Molly Beday, Pelican Rock, Cow and Calf, Grouper Rock, East of Tintamarre) turtles are often seen by divers.

3.3.1.7. Institutes/addresses

- STINAPA - St. Maarten; Local branch of STINAPA N.A.  
POBox 426, Phillipsburg  
St. Maarten, Netherlands Antilles  
Mr. Frans van der Hoeven; network member

3.3.1.8. Laws and regulations

No regulations to protect nests, eggs and/or turtles.

3.3.2. St. Eustatius (figure 5)

- 3.3.2.1. Sightings  
According to the dive operator the same big turtles are often seen on certain locations.
- 3.3.2.2. Nesting  
No nesting along the Caribbean side of the island where the beach has been washed away since a few years probably due to changes in currents. At the Atlantic side (Concordia bay) there is still a possibility of nesting. Not enough information could be gathered to what extent nesting occurs.
- 3.3.2.3. Catch  
Local catching of turtles is low to nil. Mostly fishermen from neighbouring islands come and fish for turtles also.
- 3.3.2.4. Consumption  
Consumption of turtle meat will be on a low local level. Restaurants are very seldom offered turtle meat by fishermen.
- 3.3.2.5. Ornaments and trade  
Not existing
- 3.3.2.6. Foraging  
No indication that the foraging areas as described by Maylan have changed.
- 3.3.2.7. Institutes/addresses  
• STINAPA - St. Eustatius; local branch of STINAPA N.A.  
c/o Island Government Cultural Department  
St. Eustatius, Netherlands Antilles  
Ms. Myriam Schmidt; network member
- 3.3.2.8. Laws and regulations  
No existing regulations
- 3.3.3. Saba (figure 6)
- 3.3.3.1. Sightings  
All around the island sea turtles are seen very regularly, mostly hawksbills. An average of one turtle sighting per three dives has been acknowledged by the Marine Park manager and the two dive operators.
- 3.3.3.2. Nesting  
Because there are no beaches there is no nesting.
- 3.3.3.3. Catch  
Local fishermen (three full-time) do catch sea turtles for their own local consumption, but because of self-regulation this is very low.
- 3.3.3.4. Consumption  
Only the few turtles caught are consumed locally.
- 3.3.3.5. Ornaments and trade  
None
- 3.3.3.6. Foraging  
The feeding grounds around Fort Bay aren't as extensive

anymore as was described by Maylan. A cause for disappearance of this area may be a stone crusher that is adding a lot of silt into the water. Nevertheless you can still find turtles in this area feeding on the algae growing on the bottom. A peculiar thing worth noticing is the confusing talk about turtle grass (Thalassia) being the primary food for Green turtles. The area considered by the fishermen as the feeding area for the green turtles is indeed a feeding area but doesn't consist of turtle grass at all but of algae. The same we found in an area on the Saba bank, which we explored briefly too. A place where Green turtles are seen often and mentioned by the fishermen as feeding grounds for turtles, has a lot of fleshy algae but no Thalassia.

3.3.3.7. Institutes/addresses

- STINAPA - Saba; local branch of STINAPA N.A.  
c/o Saba Marine Park  
POBox 18, The Bottom  
Saba, Netherlands Antilles  
Mr. Tom van 't Hof; project manager Saba Marine Park;  
network member

3.3.3.8. Laws and regulations

Island Reef Management Ordinance of 1987  
Catching of sea turtles is prohibited to foreigners. Only island residents are allowed to catch two sea turtles a person a year; No female turtles are to be caught during the period April through November; All turtles caught have to be reported to the Saba Marine Park Authorities; It is prohibited to disturb nests and take out eggs.

4. Conclusions

Since WATS I in 1983 indications are that the sea turtle population of the Netherlands Antilles has decreased. Most possible causes are:

a) No more nesting on any of the five islands, because of loss of suitable beaches. This is due to a considerable increase in recreation and development activities of coastal areas mostly for tourism.

b) Catching of sea turtles for local consumption, especially in Bonaire, has reduced the size of the catch. This could be an indication that the population is overfished.

c) Destruction of feeding areas, like in Saba, is probably causing the turtle population to decrease possibly through migration to other areas.

Trade in sea turtle products from the islands to other countries has not been noticed. No ornaments are sold. Shells are not sold on a large scale on the islands.

Local consumption of turtle soup and/or meat has not increased. Indications are that selling of meat has reduced because of a lower ratio in income/labor if compared to fish and lobster.

5.

Aknowledgements

I would like to express my gratitude to all persons on all islands who helped me in gathering the data and information to write this National Report. I would also like to thank IOCARIBE (Sea Grant Program; Sea Turtle Survey Grant) for their financial support. Finally I would like to thank WWF-NL for making it possible to attend the second Western Atlantic Sea Turtle Symposium in October 1987 in Puerto Rico to present these data.

6.

Figures

6.1.

- fig. 1. Location of islands of the Netherlands Antilles
- fig. 2. Curaçao. Arrows indicate former nesting areas
- fig. 3. Bonaire. Arrows indicate former nesting areas with G. for Green turtles and H. for Hawksbill turtles
- fig. 4. St. Maarten. Arrows indicate former nesting areas (according to Maylan)
- fig. 5. St. Eustatius. (according to Maylan)
- fig. 6. Saba. (according to Maylan)

7.

Appendix

Progress reports and interim reports

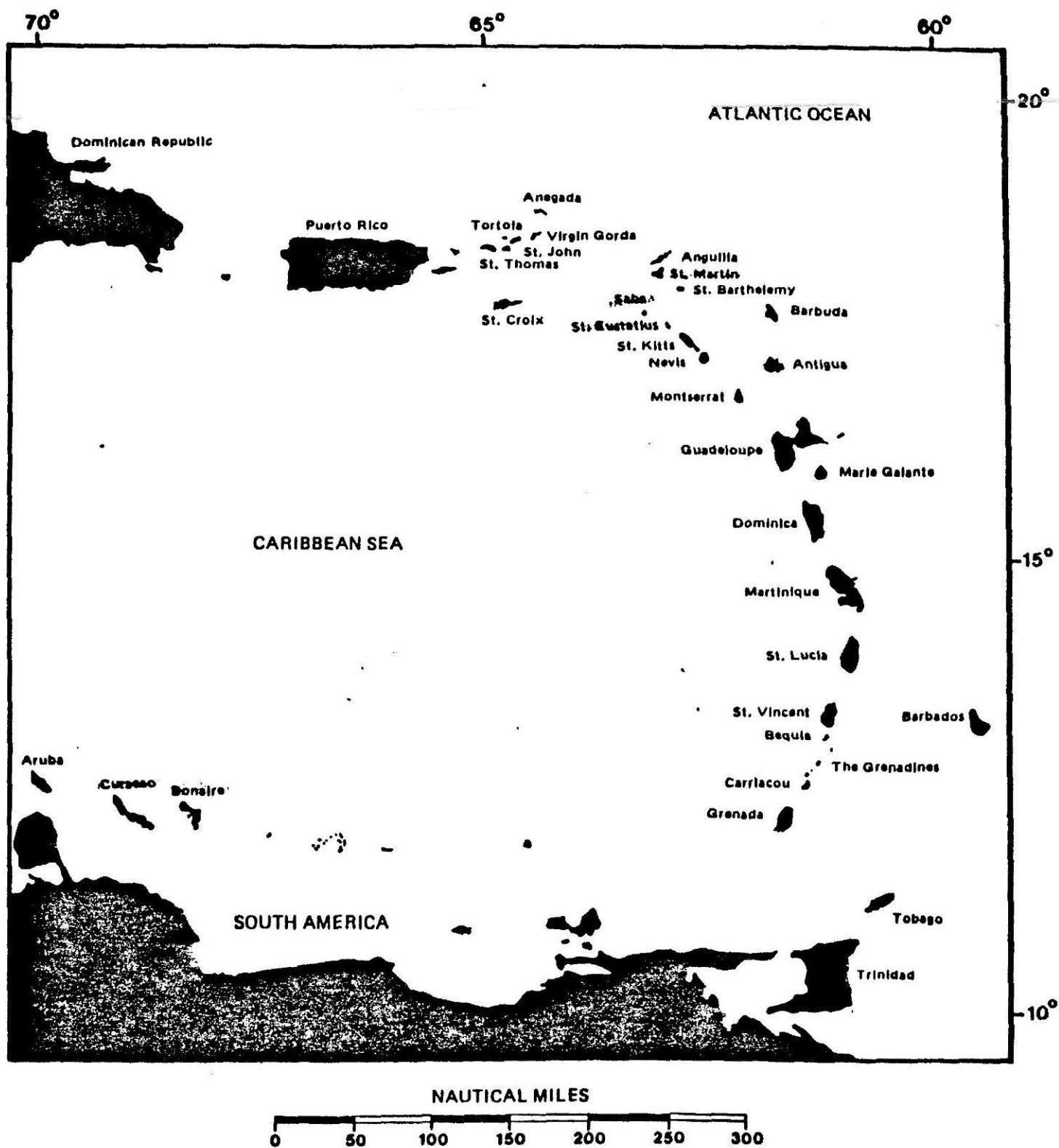


Figure 1.

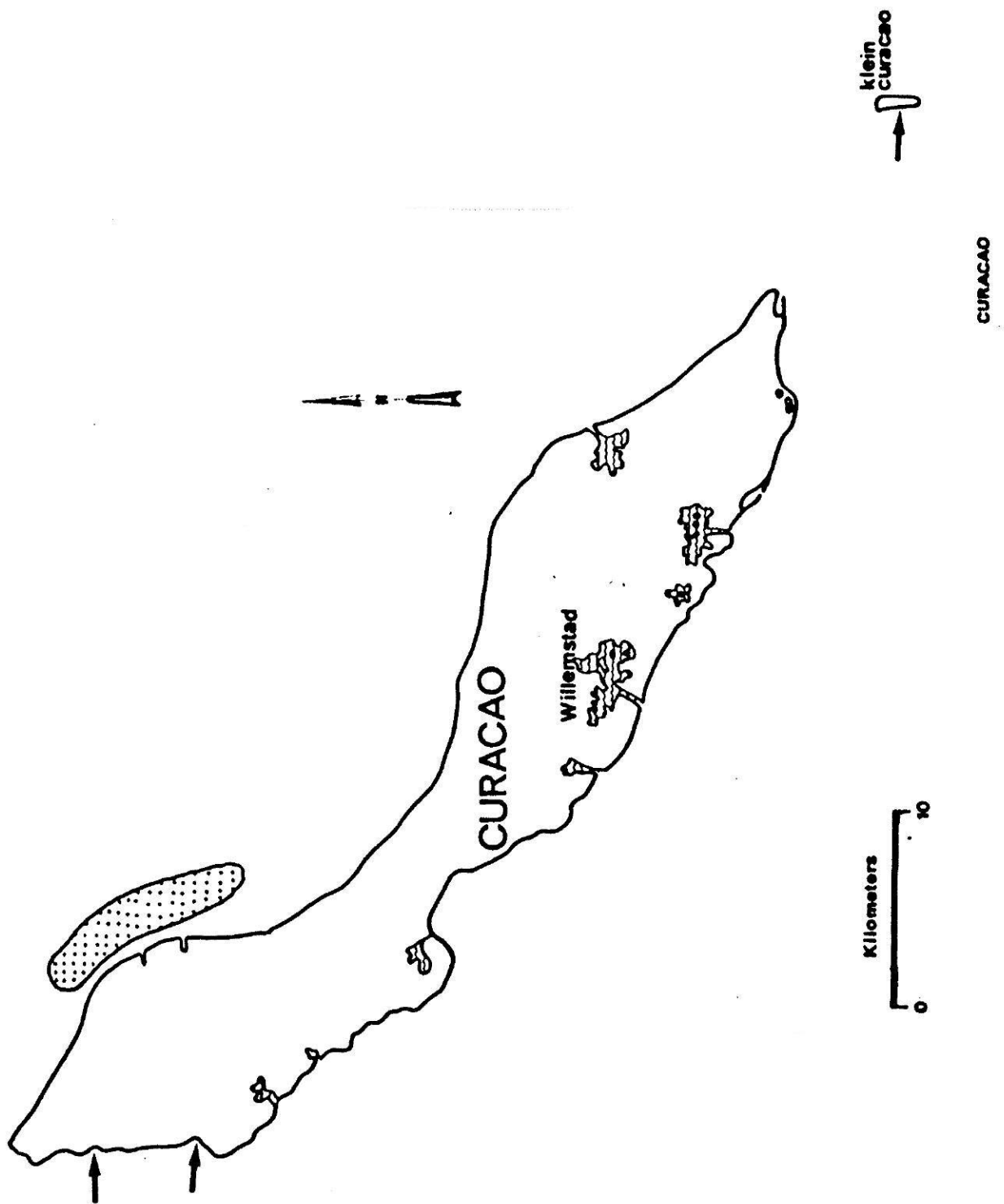


Figure 2.



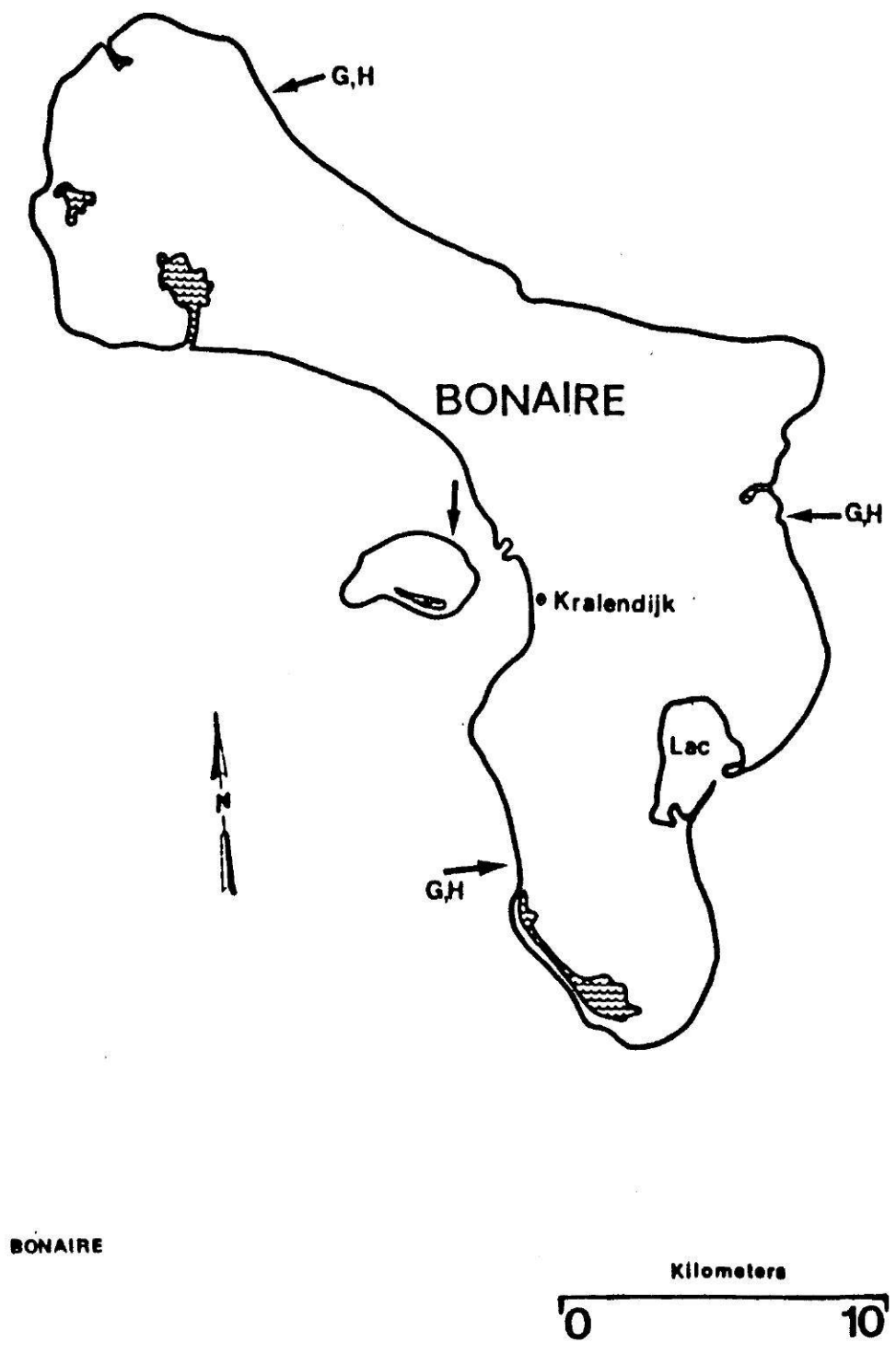
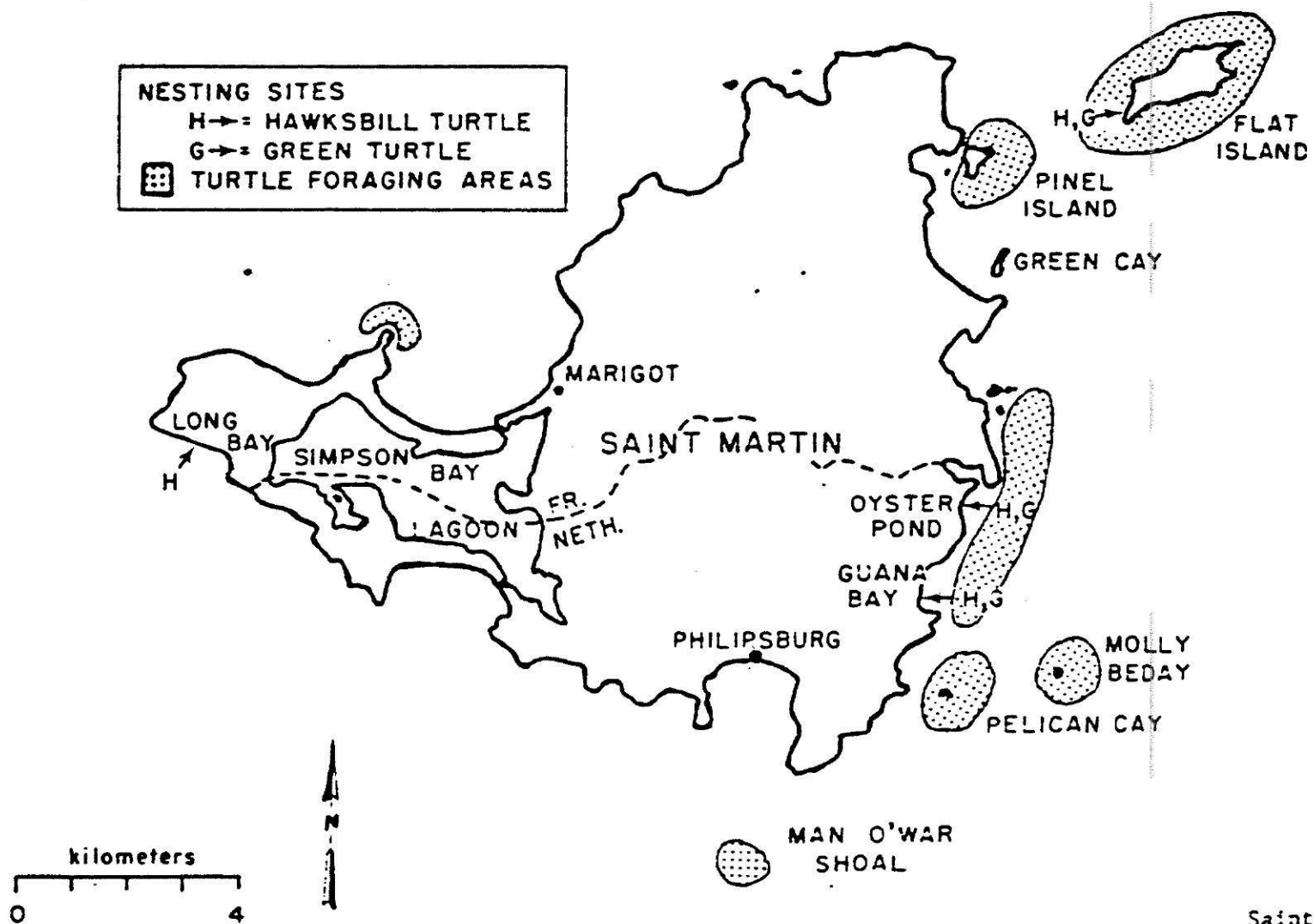
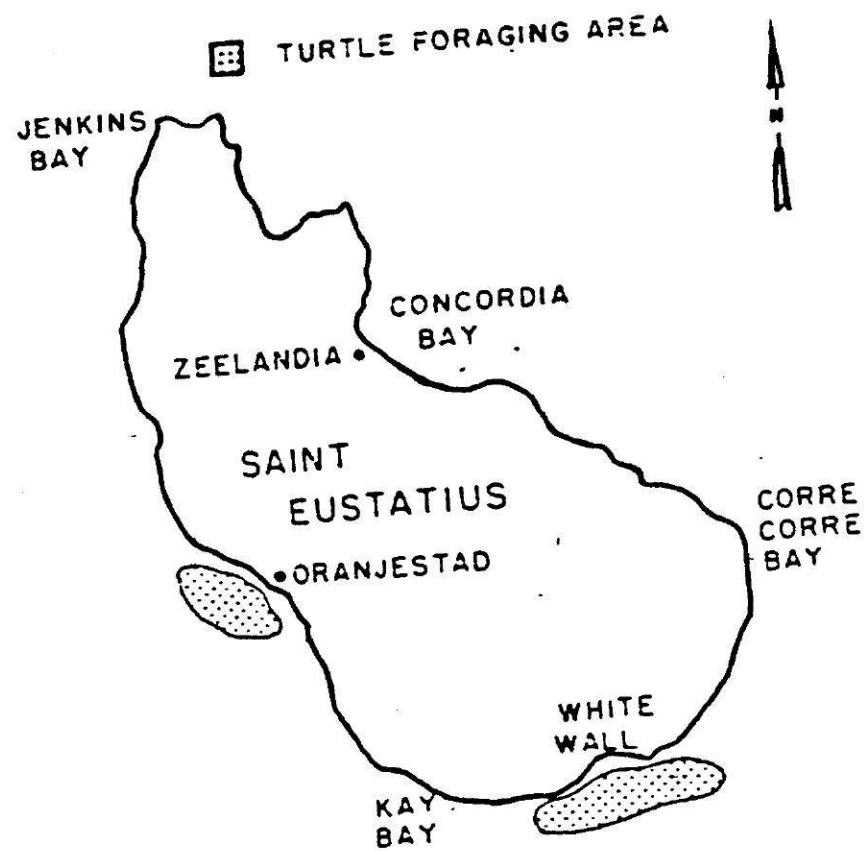


Figure 3.

Figure 4.



Saint Martin.



St. Eustatius.

Figure 5.

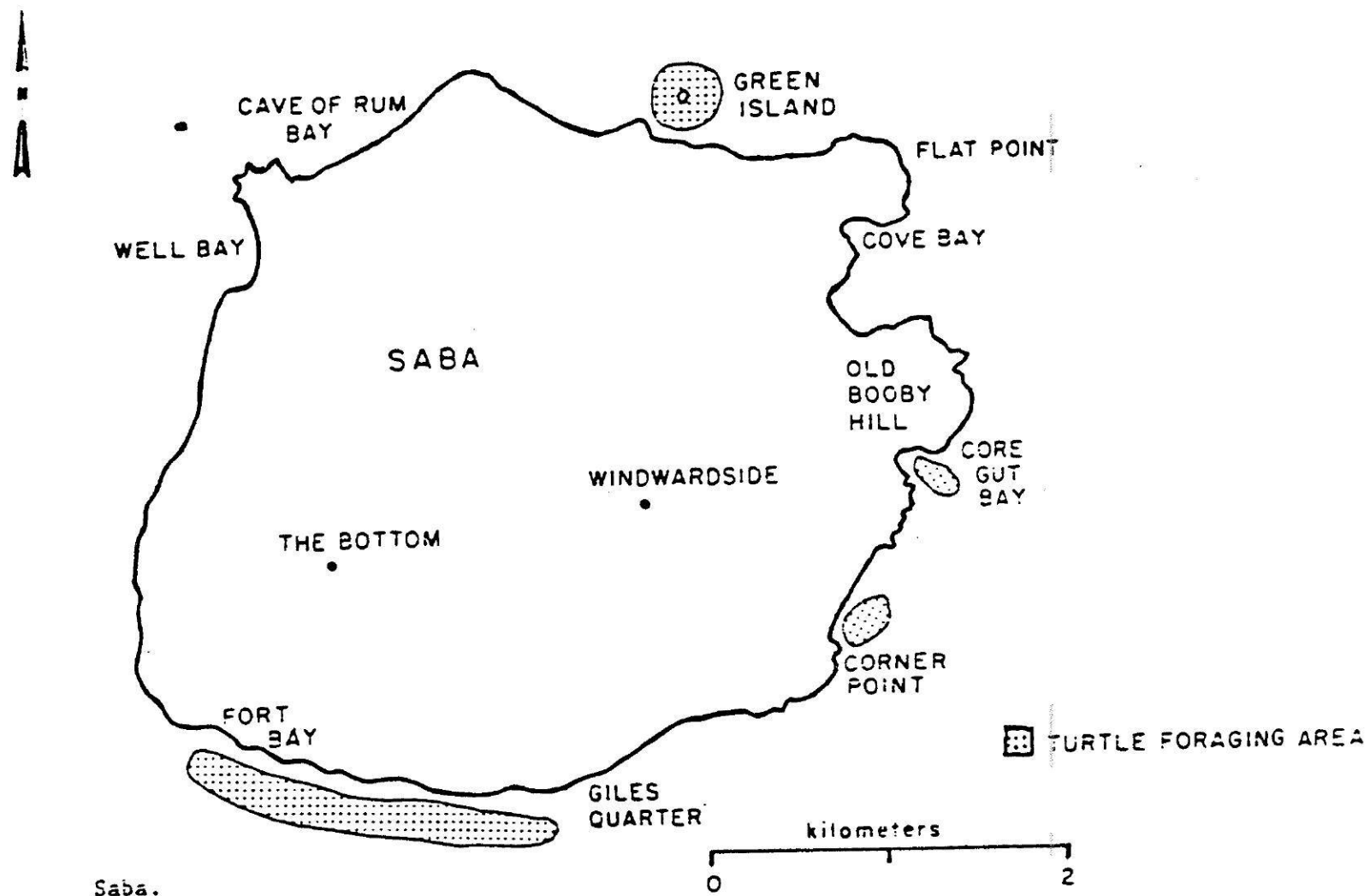


Figure 6.

**NETHERLANDS  
ANTILLES  
SEA TURTLE  
RESEARCH  
PROGRAM  
1987**

**Visit to Bonaire, Netherlands Antilles  
Official Report**

## Netherlands Antilles Sea Turtle Research Program

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### Second Western Atlantic Turtle Symposium [WATS II]

Funding : Sea Turtle Survey Grant for the Netherlands Antilles

Visit : Leeward Islands; Bonaire

Date : May 12 and 13, 1987

---

### 1. Introduction

In 1986 we were invited to participate in the second Western Atlantic Turtle Symposium (WATS II) to be held in Puerto Rico coming October 1987. We were requested to gather recent data on the sea turtles' situation around the islands of the Netherlands Antilles.

Before our participation in WATS II, we were already gathering data on sea turtles around the islands through an informal network of enthusiastic volunteers (Netherlands Antilles Sea Turtle Research Program). WATS II therefore fits well in our program and is an extension to our original plans.

The network of enthusiastic volunteers is the best way data on all Netherlands Antilles islands could be gathered. Nevertheless problems occurred. Some of the volunteers were very productive while others never responded although they had volunteered. A visit by the coordinator to all the islands was planned as part of the program to gather as much additional and reliable sea turtle information as possible.

By means of the survey grant provided by IOCaribe, through Sea Grant funding, a first trip by the coordinator was made from March 10 to 17, 1987. Goals for this trip were:

1. To (re-)establish a solid network by contacting previous volunteers and look for new persons for continuous and reliable input of data from all islands.
2. To evaluate existing data and correct these data through meetings with the network representatives on all islands.
3. To gather supplementary data and information during the short visit to the different islands.

### 2. General Island Information

The Leeward islands of the Netherlands Antilles are formed by Curaçao and Bonaire. (Aruba separated since a year and forms a status aparte within the Kingdom of Holland, and is not a part of the Netherlands Antilles any more). The islands are not located in the hurricane belt.

Bonaire is ±260 square kilometers with a population of 10.000. The principal sources of income for the island are salt mining, diving tourism and oil transshipment facilities. Nature has been the island's biggest asset and is the major attraction for the tourists to come to this island. On land the typical dry tropical arid vegetation is protected through a National Park called Washington-Slagbaai, while the island is the only breeding site for the Southern Caribbean flamingo

population. The breeding grounds are protected by means of a sanctuary and are situated in the middle of the Salt Mining Company's ponds. A good example of sound co-existence of technology and nature conservation. Around the island all the reefs are protected by means of the Bonaire Marine Park. Sound exploitation and use of the coral reefs, which are among the best developed in the Caribbean, started more than 10 years ago. Today the island handles around 10.000 divers a year with a total of 100.000 dives, and is the no. 3 destination of North American divers in the Caribbean. Most of the dives are done around the island of Klein Bonaire and on the reefs at the lee side of the island where the water is calm throughout the year. Reef conservation legislation is the best of the Netherlands Antilles. A lack in this legislation is that concerning turtles, only egg poaching is prohibited. Catching of turtles is not prohibited (except with the use of spearguns).

### **3. Key Persons**

Meetings were held with Eric Newton, marine biologist working for the Island Government, in charge with Karpata Ecological Centre (headquarters of STINAPA Bonaire) and Bonaire Marine Park manager.

Also a lot of information was supplied by Roberto Hensen, marine biologist and director of MARCULTURA, a foundation that specializes in breeding of conch, shrimps, tilapia, aquarium fish and other (profitable) to be cultivated marine flora and fauna.

Both persons were willing to participate in the Netherlands Antilles Sea Turtle Network.

### **4. Visit by the Coordinator**

During his visit the coordinator was directed to go to Cay at Lac Bay, where it is known most of the turtles are being caught. A conversation with Mr. Domacasse, an old and experienced fisherman, was most informative. Together with additional information by Newton and Hensen we gathered the following data.

Sea turtles are seen throughout the year by fishermen and sports divers. Green turtles and Hawksbill turtles are frequently seen on the coral reefs while Loggerhead turtles tend to swim more in the open sea. Leatherback turtles have been reported but are rare.

At Lac Bay (Cay) a shallow inner bay with turtle grass, sea turtles are caught professionally by fishermen through the use of gill nets. This is done during the month of June to December. The other months are more difficult because of rough water, hard blowing wind, disturbing sea weed and bad visibility in the water. Annual catch is in the order of 250 turtles a year. Although the total of turtles caught has not increased in the years, the size of all turtles has decreased considerably. Was The mean length of turtles was around 1.50 m some 6 years ago and at that time the fishermen let loose the smaller ones, nowadays they catch all turtles having a mean size of about 40 cm. The captured turtles are laid on their back in the sun till they are sold, causing tourists to protest.

Nesting of turtles have been reported at Playa Chikitu, Playa Grandi, Lagoen, Lac and Witte Pan, but this is a long time ago, and today this is not the case anymore.

Most of the turtles are used for local consumption. A few primitive snack bars are located at Lac Bay but at the time of this visit only one was open. The menu showed turtle steak for Naf. 8,- a

meal or turtle sate for Naf. 2,- a stick. Turtle food nevertheless could be offered only in the week end because of the season (May). A few restaurants in town are told to offer turtle food as well.

Export of turtle meat is low and if any it is transported to Curaçao where sea food prices are higher. Ornament trade does not exist, only the shells are sold locally to interested parties. A 35 cm shell was offered for a price of Naf. 5,-. Import of turtle meat is nil. There might be an occasional Venezuelan fisherman that offers turtles caught at the Aves islands, but this is not regular.

## **5. Conclusions**

1. The island of Bonaire is the only island of the Netherlands Antilles that catches turtles professionally in relative big numbers.
2. The size of the catch has reduced in the last few years, which could be an indication of a decreasing and over exploited sea turtle population.
3. Caught turtles are for the local market only.

## **6. Recommendations**

1. The island of Bonaire Government should draft better legislation to protect the sea turtle population from being over exploited. Regulations like minimum size, season, quota etc. could be enforced.
2. The island should reserve special sea turtle nesting beaches like the sandy beaches in the Slagbaai- Washington National Park. These beaches should be prohibited for recreation and other disturbing activities, while close turtle monitoring should be done by park personnel.
3. Consumption patterns should be altered through campaigns to protect the turtles. This could be done through publicity campaigns and educational programs.

## **7. Further Actions**

1. Activities should be started to inform the public about the endangered status of the sea turtles population in the Netherlands Antilles. This could be done by developing a local sea turtle poster that can be distributed on all islands. Costs could be covered out of left over Sea Grant funding.
2. A presentation (paper) wil now be prepared out of the reports and data from the Netherlands Antilles network for the coming October WATS II meeting in Puerto Rico.

## **8. Acknowledgements**

I wish to thank IOCaribe (Sea Grant Program; Sea Turtle Survey Grant) for their financial support. Also I would like to thank all people that helped me in gathering information on the beautiful island of Bonaire.

Willemstad, May 18, 1987

Coodinator,  
Jeffrey Sybesma  
c/o STINAPA, POBox 2090, Curaçao, N. A.



**NETHERLANDS  
ANTILLES  
SEA TURTLE  
RESEARCH  
PROGRAM  
1987**

**Visit to the Netherlands Antilles Leeward Islands St. Maarten, Saba and St. Eustatia**

# Netherlands Antilles Sea Turtle Research Program

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Second Western Atlantic Turtle Symposium [WATS II]  
Partial use of Sea Turtle Survey Grant for the Netherlands Antilles  
Visit to Leeward Islands Netherlands Antilles  
March 10 to 17, 1987

---

## 1. Introduction

### 1.1. General

In 1986 we were approached by the organization of WATS II to help gather data on sea turtles around the islands of the Netherlands Antilles. For financial support we were granted a research survey grant. (Services contract ; Sea Grant Program; July 8, 1986)

This visit to the Leeward islands is part of our efforts to collect the data requested and according the contracts objectives for getting the grant.

### 1.2. Objectives for the visit to the Leeward Islands

It is most important because of the nature of the five different islands of the Netherlands Antilles to have on every island a reliable representative. We started by sending information and a formal letter to already known people on different islands, asking them for their cooperation and help in collecting data. Some people got very active and sent in data regularly while others didn't responded at all. Because it is very important to have good reliable local representatives it is necessary to stimulate them through a visit by the coordinator for evaluating the situation and to help where ever possible. It is also important for the coordinator to have a good idea what the local situation is on every island to form his own opinion about the possibilities a representative has on its own island. The coordinator can of course never gather enough data during such a short visit about the local situation of the sea turtles but a first impression is very well possible.

## 2. St. Maarten

### 2.1. General

St. Maarten has become in a few years a most wanted tourist island in the Caribbean. Maybe because of its two nationalities, half French, half Dutch, it has become the destination for the better situated North American and French tourists. Big hotels and condominium complexes has arisen in the last few years like mushrooms, and during the high season, starting in November through April, there are more tourist on the island than local residents that total around 60.000. Especially the Dutch side has not been able to follow this bloom ordently causing a sort of free for all resulting in big problems concerning road maintenance and development, living space and rents, crime and prices of a lot of things. Because of this fast development all beaches are being disturbed by bathing tourist while construction of big hotels is more common than not.

### 2.2. Key Persons

When I started to establish contacts for sea turtles data collecting I used the list of STINAPA which

stands for Netherlands Antilles National Parks Foundation. My new contact will be Mr. Frans van der Hoeven, who very enthusiastically agreed to help collect data on sea turtles. I discussed with him the different methods we used in Curaçao like contacting fishermen, going to fishmarkets, contacting and stimulating local dive operators to keep records, finding out if there are restaurants that offer turtle meat and how much they sell and use of all kinds of propaganda to get the local population interested.

### 2.3. Coordinators Impressions

\*St. Maarten is a very crowded and tourist minded island. Everything is centered around the wealthy and good paying tourist, which is the one and only major income for the island population. For example it is almost impossible to pay with the official currency the guilder, because all transactions are done in dollars. Prices of everything are far more higher than on the other islands.

\*Because of the disturbancy of the sandy beaches nesting for turtles is almost impossible, and reports of such will be rare.

\*On the market of Marigot, French side capital, at that time only fish was being sold and no turtles.

\*Fresh fish is also being sold along the road to the airport(\$6,00/ kilo) together with Conch (\$4,00/kilo), but no turtles. In the shops of Philipsburg, capital of the dutch side, you must look hard to find shells for sale and it looks that these are not sold often.

\*The waters around the island of St. Maarten and especialy the bays have abundant growth of seagrass, according fishermen. According Van 't Hof is the amount of Thalassia, turtle grass, more than pointed out in the paper of Maylan (1983). This is the feeding ground of the green turtle, commonly called the green back. The dive operators see them often. The second species reported is the hawksbill but not so often as the green turtle. Other species are very rarely seen.

\*No island legislation exist to protect sea turtles and spearfishing is not prohibited.

\*I have obtained a cruising guide to the St. Maarten area where information on the condition of the the bottom of the bays is described. This can therefore be an indication if turtlegrass and turtles are to be found.

## 3. Saba

### 3.1. General

Saba is a small rustique steep mountain rising up from the deep. Inhabited by only a 1000 persons, it is not spoiled by mass tourism and industrial development. Can you imagine an airport the size of a stamp and a place where all the roads are being cleaned by hand every day? That's Saba!

### 3.2. Key persons

Because of its natural state a proposal by STINAPA to establish an underwater park was granted by the Island Government and is now being executed. The project leader is Tom van 't Hof whom I approached to help me in gathering data on sea turtles. He already has sent in some valid information which is used in the Interim Report.

Mr. van 't Hof approached both dive operators and asked them to gather data on seaturtle sightings in a log. Both started very optimistically but after a while lost interest.

The counterpart of Mr. van 't Hof showed me during an early snorkel- trip the exact location where every morning turtles green turtles feed. And indeed I saw in only half an hour 7 medium sized greens.

### 3.2. Coordinators Impression

- \*Saba is a manificant island on land as well as in the water.

- \*Impressing formations of vulcanic origin covered with a lot of soft and hard corals in crystal clear water are to be found in a dozen dive locations which will be protected in the future through mooring bouys made by the Saba Marine Park. One special dive site called 3d Encounter is something every diver should see.

- \*It appeared to me, and this was also agreed by personal observations of Mr. van 't Hof, that the location where the greens feed and what the fishermen referred to as turtle grass is no "grass" (Thalassia), but other fleshy algae. It is my impression that green turtles do not only feed on turtle grass but on other algae as well.

- \*Although there are sightings of hawksbill turtles, all of the turtles I have seen during my short period were green turtles.

## 4. Saba Bank

### 4.1. General

The Saba bank lies off shore of Saba and is well documented in a paper by J. van der Land (1976). Because the fishermen told us that they see green turtles on specific places we asked them to bring us to these locations. We made three scuba dives and several short snorkel trips.

### 4.2. Key Persons

As key person for the Saba bank I asked Mr. van 't Hof to provide me with all information he could gather about turtles on the bank for me in the coming future.

### 4.3. Coordinators impression

- \*The Saba bank consists of different habitats. From a more soft coral and sponges community via an abundant algae habitat to a plain sandy community. Places where turtles are frequently seen have a dominant algae, soft coral composition, but no turtle grass (Thalassia). Again I do not think that fields of Thalassia will be found on the Saba bank, and fishermen refer to algae instead of grass. also Van der Land does not mention Thalassia.

## 5. St. Eustatius

### 5.1. General

Statia, as local people call this island, has a very interesting historical background and tend to influence life till today. A lot of historical remains on land as wel as under water attracts the historical interested persons and divers looking for old wrecks and artifacts. Fortunately the Island Government prohibits all taking away of these artifacts.

### 5.2. Key Persons

I was very lucky to get to know Ms. Lynette Bryce from the Historical Foundation who have a beautiful museum on the island. Through her secretary Mr. Ellis Lopes, I was introduced to Ms. Myriam Schmidt, who works for the cultural department of the Island Government. She also told me that just last week the local STINAPA branch was elected and that their first project will be to try to protect the Mountain Quill's rain forest through a national park. Also they want to have an under water park established to protect the historical monuments in the sea. I gave a short presentation about STINAPA and its 25 years of existance, wished them good luck and promised

them all cooperation from our part. I asked them to help me with gathering of data on sea turtles. I also spoke with Mike Guderian, owner of dive operation Surfside Statia, and asked him about turtles. He sees them regularly and knows a few big ones (green turtles) who sleep under his boat every night.

### 5.3. Coordinators Impression

\*It is my believe that in Statia not much turtle fisheries is done by the local fishermen. A local gourmet restaurant owner told me that he in the last five years has only been approached to buy turtle meat twice.

\*Nesting by turtles can most likely occur at the Atlantic side of the island, but on the calm south side no more nesting can occur because the sandy beach has been washed away by the water in the last few years, most porbably because of shifts in current patterns.

\*The turtles that are seen in Statia tend to be bigger than on the other islands.

### 6. Conclusions

My conclusions of this visit are that I met my objectives as I have planned to do.

I established a network of persons that I know personally now on all three islands of the windward Netherlands Antilles that can help me in gathering data on sea turtles.

I have a pretty good impression about local situation concerning the turtle environments, like fisheries pressure, recreation, demand for restaurants and the sort.

### 7. Recommendations

I would like to follow up on this visit by a second short visit in August to gather last data before writing a scientific paper to present at WATS II in Puerto Rico in October.

Also it would like to print stickers for the dive operators that they can use as give aways to serious divers that bring in reports of turtles sightings. By means of this we keep the divers and the operators motivated to keep recording data.

### 8. References:

- Eiman, W.J., editor., 1983

St. Maarten/ St. Martin Area + St. Kitts & Nevis Cruising guide

Virgin Island Plus Yacht Charters, Inc.

- Maylan, A.B., 1983

Marine turtles of the leeward islands, Lesser Antilles

Smithsonian Institution, Washington, D.C., U.S.A.

- Van der Land, J., 1979

The Saba Bank- A large atoll in the Northeastern Caribbean

FAO Fisheries Report no.200

### 9. Acknowledgements

I like to express my gratitude to all persons that helped me in gathering this information. Without them it would have been impossible.

Willemstad, March 24, 1987

Coordinator,  
Jeffrey Sybesma  
c/o STINAPA , POBox 2090, Curaçao N.A.

## SABA Sea Turtle Data Collection by Saba Deep, Sea Saba and the Saba Marine Park

## Results

1. Total of Sea Turtle Sightings

from October 1986 till July 1987

: 115

a) excluding sightings of turtles in turtle feeding area

b) not very exact because of irregular gathering of data and irregular dive trips by Operators (depends on season)

2. Distribution of Sea Turtle Sightings:

Oct. 86	Nov.	Dec.	Jan. 87	Feb.	Mrch.	Apr.	May.	June	July	Aug. (till 10th)
3	22	16	-	5	4	9	7	15	31	2

a) the same comments as 1.

3. Size Distribution of all Sea Turtle Sightings:

> 10"	11"- 20"	21"- 30"	31" >
> 25 cm	26- 50 cm	51- 75 cm	76 cm >
10	62	33	10

4. Species Distribution:

Hawksbill	: 103
Green Turtle	: 11
Loggerhead	: 1

a) Sightings of Turtle Feeding Area not included

5. Turtle Feeding Area:

Giles Quarters - Fort Bay : Daily counts between 6 - 18 Sea Turtles,  
mostly Green Turtles

6. Distribution of Sea Turtle Sightings along Saba's Coast:

See map

institution  
 A turtle sightings  
 along the coast of SABA

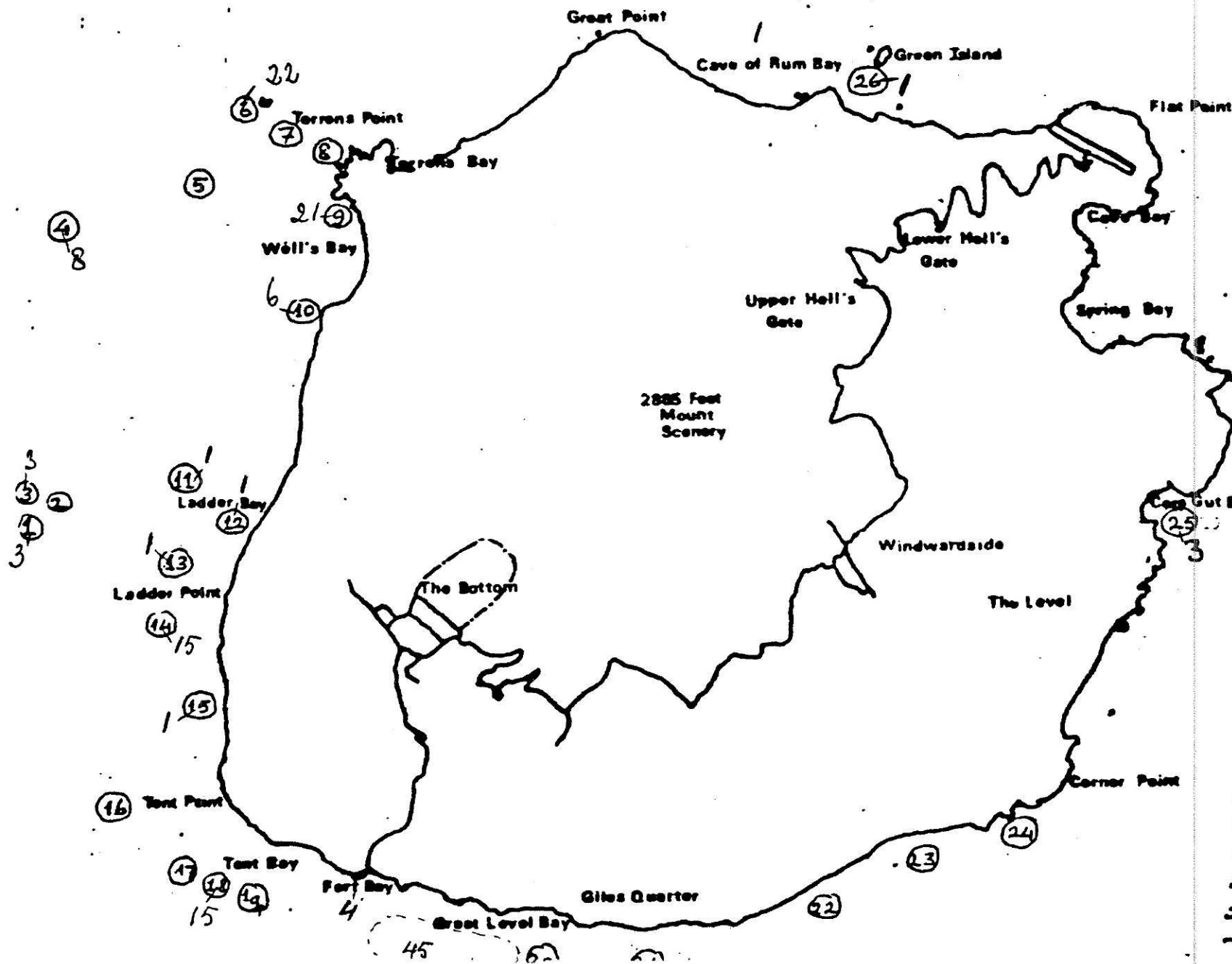
# SABA MARINE PARK : moorings

symbols

- ♀ sst. eyeb  
 □ cement bl.  
 ⚓ anchor

# Dive site name

- 1 3rd Encounter
- 2 Twilight Zone
- 3 Outer Limits
- 4 Shark Shoal
- 5 Diamond Bank
- 6 Diamond Rock
- 7 Man of War Shoals
- 8 Otto Limits
- 9 Torrens Pt
- 10 Well's Bay Pt
- 11 Ladder Bay Deep R.  
Custom's House Reef
- 12 Lou's Ladder /  
Porites Pt
- 13 Babylon
- 14 Ladder labyrinth
- 15 Hot Springs
- 16 Tendran Reef
- 17 Tent Reef Wall
- 18 Tent Reef
- 19 Tent Reef Deep
- 20 Greer Gut
- 21 Giles Quarter Deep R.
- 22 Big Rock Market
- 23 Giles Quarter Shoal
- 24 Hole in the Corner
- 25 Core Gut
- 26 Green Island





**Netherlands Antilles Sea Turtle Research Program  
Interim Report**

**General**

The Netherlands Antilles Sea Turtle Program started to run in the beginning of 1986 when all island representatives were informed about the program. Requests to collect data and to start local programs to gather these data were actually initiated in August 1986. Also a grant from Watts II for the purpose of their program was approved during this period. It is therefore impossible to give a lot of information on the sea turtle situation in the Netherlands Antilles as per end of September when I asked all participants to send in their findings. We therefore want to stress that this interim report is just a very preliminary report and is only written to inform all participants in the research program that we certainly need more data and that efforts should be continued on all islands.

For locations see enclosed maps

**Curaçao**

**1. Interview at the local market**

Interviews at the local market showed that there are only a few people who deal in seaturtles. They get their turtles from one specific address on the island. Requests for turtlemeat or shells must be given in advance. Prices for shells range in the order of Naf. 15,- for shells smaller than 50 cm to Naf. 25,- and up for larger ones. Meat price varies (according to the amount of meat ordered). At the floating market (Venezuelan fishermen) one can get turtles only by ordering well in advance. These turtles are shipped in from Venezuela. Overall impression is that the local demand for turtle meat and shells is very low. Demand for eggs is nil. Species involved are the green turtle and hawksbill on a 50/50 basis.

**2. Interview of local fishermen at one of the largest landing sites (Caracas baai).**

Fishermen indicated that captured seaturtles are sold through one dealer on the island. They collect the turtles alive and keep them in captivity till a customer comes who can choose out of the living stock. According to the dealer they can supply up to 5 to 6 turtles a day if necessary, because fishermen keep catching them regularly, mostly at the eastern part of the island and in St. Joris Baai, the biggest inner bay at the north coast. Due to a low demand the supply of turtles is low though. There are three restaurants at the most on the island that serve turtle soup and/or meat. Prices are around Naf. 10,- to 20,- a kilo. Species are green turtle and hawksbill on a 50/50 basis.

**3. Sightings**

From February to October 1986 we received very irregular reports on sightings of sea turtles. In total we were informed of 35 sightings all around the island with a concentration at Oostpunt, St. Joris baai, Wacao and Boca Tabla. Species mostly were not identified but are most probably either green turtle or hawksbill. In October one person reported strange tracks in the sand of Klein Curaçao, a small island off the eastern coast of Curaçao, which could have been from a nesting turtle.

**4. Public Relation**

We kept informing the public of the island about the endangered situation of the sea turtles. For example we went on local television and published articles in the local newspapers.

**Bonaire**

In Bonaire cooperation was asked from the biologists E. Newton and R. Hensen to collect data. So far we have not received their data. Past experience (by myself) shows that around the island of Klein Bonaire you can easily encounter Hawksbill turtles and also at Lac Baai at the eastern side of the island of Bonaire. In the near future I will go to the island to interview fishermen and other knowledgeable people.

**St. Maarten**

No data were sent to us by Mr. J. Vliegen who is the local investigator for St. Maarten.

**St. Eustatius**

We do not have a representative on this island so we do not have access to data from this island.

**Saba**

Report by Tom van 't Hof, local investigator.

At the beginning of September the two dive operators of Saba were asked to report turtle sightings to the local coordinator (van 't Hof). Posters were distributed and information aired by radio. They saw 17 turtles in total which equals about 1 sighting per three dives. Most of the turtles were hawksbill turtles (also two green turtles, and even one leatherback). No reports on landings or nesting.




## Netherlands Antilles Sea Turtle Research Program

### Future activities

All local investigators are asked to keep on gathering data on sea turtles. By starting local informative programs they should keep the public involved in sending their sightings to them. In near future I will visit Bonaire and in March 1987 I will go to the islands of St. Maarten, St. Eustatius and Saba to collect more specific information. It is very important to have this up to date information because next year October there will be the second Western Atlantic Turtle Symposium (WATS II) in Puerto Rico, where we could present our findings and get an overall picture of the sea turtle situation in the Caribbean.

Willemstad, December 4, 1986

Coordinator,

A handwritten signature in black ink, consisting of a large, stylized 'J' followed by a horizontal line and a checkmark-like flourish.

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