Sustainable Tourism for the Netherlands Antilles

Discussion paper for the Conference on Sustainable Tourism for the Netherlands Antilles, 10-13 June 1997, Sint Maarten & Saba

★ Environmental Section
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HELAAS MEVROUW SABA IS AL VOOR 5 JAAR VOLGEBOEKT!

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Chapter 1: Introduction

1.1 Why this document

This document is the forerunner to a policy document on sustainable tourism. It tries to provide the stakeholders in tourism and the environment with a vision and a practically oriented direction. Not too many words, but rather a coherent package of activities to be undertaken by the various organizations that are active in the fields of tourism as well as the environment. We have to work towards a sustainable form of tourism, because tourism is the single most important pillar of our economic development and we would like it to remain so. Allowing tourism to destroy the natural environment on which it depends, would mean killing the goose which lays the golden eggs.

Why is there a need for a policy on sustainable tourism? The Government of the Netherlands Antilles has expressed its wish to develop sustainably in the Government declaration of 1994:

'The integration of environment and economic development, as contemplated by the UNCED concept of 'sustainable development', will be the guiding principle for our economic planning and development'

1.2 The outlines of a policy

This general statement was translated in the policy document 'Outlines of the Environmental Policy' (1996-2000) as accepted by the Council of Ministers in September 1996. In the 'Policy Outlines', 'Tourism and the Environment' is addressed as one of the five priority areas for government attention in the coming five years. For sustainable tourism the 'Policy Outlines' suggest the following approach:

Tourism, environment and nature

The goal here is to make tourism sustainable in an ecological way, to balance tourism with its surroundings as much as possible. Because only then, in a clean natural environment, tourism can be sustainable in both an economic as well as in an ecological way. Making tourism sustainable involves many aspects. The Government intends to give the following aspects specific attention:

physical planning

With new touristic developments considerable attention has to be paid to the consequences for the environment. Some islands already have a certain physical planning, in the form of Island Development Plans, that directs the destination of areas. On other islands such planning still has to take shape. For a number of islands a tourism masterplan has been developed. It is evident that tourism development may not occur at the cost of existing unspoiled nature, which is often the reason of existence of tourism in the first place. It should further be prevented that tourism developments limit the freedom of movement of the people of the Netherlands Antilles.

Target groups that should be involved in planning activities are physical planners, environmental departments, tourism organizations and the developers, financers and constructors of hotels and holiday complexes. The Central Government will stimulate the relationship between tourism and physical planning on the different islands, in which attention for environment and nature has an important and integrated position.

environmental management of hotels

In international context, in the area of environmental management of hotels, recently a number of good initiatives has been started. These initiatives, among others of the International Hotel Association (IHA), the Inernational Hotels Environment Initiative (IHEI) and of the UN Environmental Program (UNEP), provide a contextual package of environmental measures in the area of waste, water and energy, that is directly applicable for hotels.

Hotels will be stimulated to indeed follow through with these initiatives, in order to make this economically important branch more environmental friendly. This will be done in close cooperation with the branch organizations and, as a role model, with individual hotels.

Tourism development projects will be stimulated to take into account several environmental measures, like good planning of water and energy consumption and waste and waste water treatment in the initial planning phase.

Given the increasing interest of the tourist in the environment, such a coordinated and maybe even standardized approach can put the Netherlands Antilles on the map as an environmental friendly destination.

waste

Within the environmental management of the tourism sector, waste takes up an important place. In a dialogue with hotels, air and cruiselines, the Government works towards a decrease of the amount of waste, towards separation of waste at the source and towards advancement of recycling. Hotels will be stimulated to set up a waste management policy following these guidelines, supported by the many good examples and initiatives which already exist internationally in this area.

Concerning waste of cruiseships, the composition of the waste package and the amount of waste determine the question whether or not the island can receive the waste.

The islands will be stimulated, and where needed assisted, to initiate dialogues with the touristic branch organizations about the handling of this important environmental problem. The Central Government will be available in this process as advisor and will in consultation with the islands support initiatives.

nature

Great numbers of tourists that want to experience the natural beauty of the Netherlands Antilles from upclose, irrevocably have an impact on this nature. Therefore is it important to carefully manage vulnerable and frequently visited nature.

This is not to say that tourism has only negative consequences for nature. For tourism can make an important contribution to the management of the nature as well, for example through entrance fees for protected areas or through fees for for instance marine tourism.

The Central Government will stimulate the islands in creating protected areas, in the management of these areas, especially in relation to the use of these areas by visitors and in the development of systems of visitor users fees contributing to the management of the nature.

transportation

In general, a minimal influence of tourism on environment and nature is the outset of this Policy. This is also true for the transportation of tourists to, on and away from their holiday destination. It is not the intention to pursue an active policy in this area. However developments that may contribute to a decrease of the environmental consequences of holiday transports are closely monitored and where possible stimulated. Some thoughts in this respect may be to stimulate the deployment of the newest generation of low noise and low energy airplanes, a better flight planning and of cruise ships that cause less air pollution through environmentally cleaner energy sources (e.g. low sulfur fuel oil).'

1.3 Towards sustainable tourism

When working towards sustainable tourism the three big questions are: is tourism on the Netherlands Antilles sustainable in its present form, will tourism remain sustainable in its future form, and how can we make sure it does.

In order to address these questions it is always a good idea to lean back and take a close look at the definitions, in this case of 'sustainable development' and of 'sustainable tourism development' before we go any further.

The definition of 'sustainable development' is somewhat complex. The most quoted definition is that of the World Conservation Union (IUCN) that states:

'Sustainable development is a process which allows development to take place without degrading or depleting the resources which make the development possible. This is generally achieved either by managing the resources so that they are able to renew themselves at the same rate as which they are used, or switching from the use of a slowly regenerating resource to one which regenerates more rapidly. In this way, resources remain able to support future as well as current generations.'

When looking for a definition of 'sustainable tourism development', the most workable definition seems to be that of the World Tourism Organization (WTO) that reads:

'Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems.'

For the purpose of this document, we will not deal extensively with the 'human' aspects of sustainable tourism, but rather focus upon the more 'material' side. In other words, although we realize that tourism may have far reaching social implications, this document, which is primarily based upon the responsibilities of the Minister for Public Health and the Environment, mainly addresses the environmental issues of sustainable tourism.

It is important to realize the magnitude of tourism on our islands. In the table below you will find the numbers of tourists that visit our islands, divided in cruise and residential tourists. It should be noted that the amount of time these two categories spend on the island may differ substantially: the cruise tourist stays approximately 6 hours; the length of stay of residential tourists varies between 8 days on Bonaire and 5.4 days on Saba (dive tourists).

Number of residential and cruise tourists, all islands 1995

	Residential tourists	Cruise tourists	Total
Bonaire	59,410	10,718	70,128
Curaçao	223,788	171,675	395,463
St. Maarten	479,655	564,251	1,043,906
Saba	12,354	12,644	24,998
Statia	8,800	4,703	13,503
Total	528,140	763,991	38,501

Source: CPA, CBS, SHTA, TDF, TCB, Framhein 1995
Box 1

Now that we know what we are -and also what we are not- talking about, the next question is how do we approach this complex issue of sustainable tourism and on which particular aspects do we focus in an attempt to approach the issue in a somewhat systematic way?

1.4 The structure of this document

The approach that we have adopted in this document is that we assume that physical and tourism planning are prerequisites for sustainable tourism (Chapter 2: Planning for the future). From that rather abstract approach we start to follow the tourist, analyze his behavior and his possible impacts on the environment. We pick up the trail when the tourist flies to the Caribbean (Chapter 3: Grab a plane to the Caribbean) and arrives on the island. Some of the tourists decide to take a cruise. Their impacts on the environment are analyzed in Chapter 4: Cruisin' the Caribbean.

Others settle down in their hotel and use the hotel facilities (Chapter 5: Welcome to your green hotel). Next we follow the tourists on their excursions to the seaside (Chapter 6: Lets go to the beach) and on their excursions 'in the wild' (Chapter 7: Tourism and biodiversity; a natural partnership). We then follow the tourist to the dining table (Chapter 8: Caribbean Cuisine: Food for thought) and into the souvenir shop (Chapter 9: Living memories). Finally we look at ways to convince the various target groups to make sustainable tourism a reality (Chapter 10: How to get sustainable tourism across).

Bonaire, the future in figures

Calculation that 'proves' why no more hotel room capacity should be added to already existing facilities.

Number of rooms available by the year 2000

1,122	Units currently (Dec. 1996) available to tourists for short term rental.
403	Units announced for expansions of existing properties
96	Units announced for new projects
1,621	Total units available on island by the year 2000

Number of tourists needed to fill room capacity: (Average length of stay is 8 days, average 2.2 persons per occupied unit and 25% of the tourists are staying at non paying accommodation)

Number of units	1100	1300	1500	1600
Total persons at 100% occ.	147,217	173,983	200,750	214,133
Total persons at 70% occ.	103,052	121,788	140,525	149,893
Total persons at 60% occ.	88,330	104,390	120,450	128,480
Total persons at 50% occ.	73,608	86,992	100,375	107,067

Tourist arrivals and projections in future

	1994	1995	1996	1997	1998	1999	2000	2005
Arrivals	55,820	59,410						
Trend			65,000	69,000	73,000	78,000	82,000	103,000
Low			63,000	64,000	66,000	67,000	68,000	70,000
High			67,000	74,000	82,000	90,000	98,000	149,000

In the longer term a room occupancy level of at least 60% over the year, preferable 70% is needed to ensure satisfactory profitability. The estimates indicate that to fill 1,100 units (current capacity) to 60%, 88,330 arrivals are needed. In 1996 a level of 65,000 arrivals was estimated. In other words, current occupancy levels are less than 60%, even nearer to the 50% level.
To achieve 60% occupancy on an accommodation stock expanded to 1,600 units, tourist arrivals of 129,000 are required, twice the level of 1996. To achieve 70% occupancy, a level of tourist arrivals of 150,000 would be required.
For an average of 70% room occupancy at the current (1,100 units) capacity, 103,052 tourist arrivals would be needed, which on the basis of the TCB's analysis of the 'trend' projection will not be achieved by the year 2000, if 'low' projections of TCB is realized, then realization of such occupancy would not even be in sight in the year 2005.

Overall the supply side analysis suggests that there is already some overprovision of capacity and that the situation is not likely to improve over the period to 2000 if further additions to the total capacity occur as expected.

Source: Bonaire Tourism Strategic Plan
Box 2

Chapter 2: Planning for the future

2.1 Introduction

The title of this chapter should better read: 'planning and tourism', for it is essential that tourism development is based on extensive planning. This planning should encompass the various aspects of tourism including of course its economics expressed in real figures and hard dollars. But there are aspects other than hard figures involved. Space for instance is a very scarce commodity on our islands. Together we need to decide what to do with the limited space we have available for development. Should it be used to accommodate industry, or agriculture, set aside as protected nature or earmarked for residential development. For this we need a system of physical planning.

2.2 Physical planning and tourism

Physical planning is in different stages of planning and implementation on the various islands of the Netherlands Antilles. Curaçao has recently successfully completed the whole cycle of drawing up an Island Development Plan(EOP). This included a number of opportunities for public participation which have been gratefully used by the parties involved. Real estate owners, developers and action groups have all had the opportunity to voice their opinions in various stages during the planning process.

Other islands are not as far advanced. Bonaire will shortly be treading the same path as Curaçao and has been able to learn from the strong and weak points in the process on that island. It is envisaged that Bonaire will draw up a series of smaller land use plans, which will of course together form a coherent physical plan for the whole island.

Sint Maarten is taking a somewhat more globally orientated course and has chosen to develop a structure plan as first step along the planning route. Saba and Statia have yet to start the physical planning process.

In all physical planning procedures, tourism and its further development takes up an important position. Not surprisingly: tourism takes up a lot of space, it competes for the prime locations, beach front for instance, and it should be kept separate from non compatible designations such as industry or even housing.

It is essential that planning where possible precedes tourism development. The reality however may be different: a great number of tourism facilities and tourism activity centers already existed before planning even began. One of the rules of tourism planning is: try to concentrate rather then spread tourism, an important rule, also in the environmental context, as we will later see.

2.3 Tourism planning

Physical planning helps to determine the future use of the limited space on our islands. The tourism sector is a very important beneficiary of physical planning. After the physical planning process comes the question: what sort of tourism do we want in the limited available space we have set aside for tourism? That is the moment when tourism master plans come on to the stage. Every island has one. These master plans try to describe the most desirable way for tourism to develop. The time horizon of the plans is mostly 10-20 years. In the majority of cases, the environment is an important element in the tourism masterplans. Bonaire and Saba are leaders in this respect. The strategic objective for tourism development in Bonaire can be stated as being:

'To assist the people of Bonaire to benefit on a sustainable basis from the promotion and development of tourism by providing an optimum level of economic contribution consistent with the overall protection of Bonaire's environmental assets, human resources and lifestyle.'

Source: Bonaire Tourism Strategic Plan

Although the master plan in theory describes what should happen where and when, often the planners are overruled by the developers and their investors. That fact of course confronts the Island Government with the difficult task of keeping these proposed developments within the limits of the masterplan and to guide developers along the narrow path of sustainability.

An important element in tourism planning is the concept of carrying capacity. Saba's Integrated Tourism Development Plan describes this concept as follows:

'The carrying capacity is a function of the island's size, the tolerance of its resources to the tourist use, the number of tourists, the type of use, the design and management of the tourist facilities and the attitude and behavior of the tourist and tourism management.'

Source: Saba Integrated Tourism Development Plan

2.4 Planning on a shared vision

If physical planning helps us to decide what to do where, tourism planning describes the type of tourism activities that will take place in the space earmarked for tourism.

But an even greater sense of direction will be established when we manage to develop a shared idea on what sort of future in general is wanted for the islands in terms of sustainable development, including tourism.

It is interesting to take a closer look at the process which is currently taking place on Bonaire. The population and politicians on Bonaire are discussing a shared image of the future: a vision. The core of Bonaire's vision as it is presently being discussed is: 'Growth whilst maintaining our nature and our culture'. Growth is not a target as such but should contribute to better living conditions and the well-being of the

population. Growth in quality rather then in quantity. Nature and culture form the core elements in the policy plan aimed at achieving this vision, this vision of sustainable tourism is shown in Box 3.

A Vision of Sustainable Tourism in Bonaire in the Year 2007

- The island in 2007 has some of the best managed natural assets in the Caribbean, many say the best. The Marine Park is self financing, well respected and indeed well loved (it has now been in operation for over 30 years), while land size zoning introduced in 1997 has succeeded in containing urban sprawl and protecting the natural state of much of the island.
- The growth in tourist accommodation on the island has been restrained, but there has been some expansion in smaller hotels, often locally owned and managed, plus a continuous program of upgrade, and occasional extensions to existing hotel properties. The island has been concentrating now for nearly ten years on maintaining the quality of its existing accommodation offer, and further expansion is not planned, even though there is a great deal of investor interest.
- Population and employment have slowly risen, but with the steadier and more controlled growth that has taken place, the crime and drug situation is now fully under control, and a range of programs for protecting and nurturing the island's cultural patrimony have served not only to interest tourists, but also to reinforce the cultural identity of younger Bonaireans.
- Incomes for Bonaireans have risen substantially, and by the year 2007 many are securing senior positions in the tourism private sector.
- All in all, Bonaire remains in the year 2007 a great place to live in. It has a strong economy, the island is well planned, its nature is fully protected, it got its act together in time, and has managed to avoid many of the problems experienced elsewhere.
- Tourists love Bonaire's clean, tranquil and peaceful atmosphere. Diving is still big business, but just as many these days come to loaf on a beach, or go cycling or hiking, explore its natural and cultural attractions, its museums and interpretation centers.
- Lots of foreign investors want to get in on this carefully nurtured bit of paradise, but the Bonaireans always gently say the same thing: Thanks, but no thanks. We like it the way it is and intend to keep it that way.

Source: Bonaire Tourism Strategic Plan
Box 3

2.5 Limits on growth

All this planning may lead to the conclusion that tourism development or tourism related activities have reached the limits of their sustainability.

As we have seen in Chapter 1, Bonaire is carefully coming to the conclusion that increasing the occupancy rate of the existing ooms will already bring too many people to the island for the total (eco)system to sustain. Consequently increasing the number of hotel units would be extremely undesired. This however does not have to mean the end of tourism development perse. If quality from now on comes before quantity, a golden future awaits the island. Other islands will in the near future have to ask themselves the same question: Is there room to grow in quantity or do we decide to grow in quality? And this quality growth should certainly encompass investments in the greening of hotels and the conservation of nature.

2.R Recommendations

- ***physical planning is a must for sustainable (tourism) development***
- ***nature should form a key element for tourism planning***
- ***care for the environment should form a truly integral part in tourism planning***
- ***a common vision on sustainable (tourism) development helps to achieve sustainable tourism***
- ***a 'no grow' scenario in quantity terms is a real option when striving for sustainable tourism***

Chapter 3: Grab a plane to the Caribbean

3.1 International Transport

Islands can only be reached by boat or by air. This simple logic narrows down the means involved in transporting tourists to the Netherlands Antilles. Passenger transport by boat to our islands has a sort of 'tidal' history. And these past years the tide has been rather low. When we exclude cruise tourism (which is dealt with in Chapter 4), transportation of tourists to our islands by boat is virtually non existent.
Air transportation thus is 'the' way to reach our islands. That goes for the local inhabitant, for the visitor on business, as well as for the tourist.

Commercial landings of Aircraft, all islands

	1991	1992	1993	1994	1995
Curaçao	10,896	10,680	10,543	10,370	16,980
Bonaire	7,651	7,770	7,380	7,604	8,176
St. Maarten	22,340	26,046	26,952	29,039	47,711
Statia	1,955	2,356	2,266	2,761	2,010
Saba	1,867	2,388	2,343	2,065	2,022

Source: CBS
Box 4

Air transportation is also the most energy consuming and polluting form of transportation, as shown in the box below.

Modality index energy and emissions*

Modality	Category	Nmbr. of pax/ Occ. (%)	Energy use (MJ/km)	CO2 (g/pkm)	Nox (g/pkm)	VOS (g/pkm)	CO (g/pkm)
Private cars	All	1.63	1.69	116.0	0.9	0.5	3.2
	Holiday	2.50	1.16	75.6	0.6	0.3	2.1
Motors	All	1.16	1.65	128.4	0.3	4.1	17.2
Mopeds	All	1.09	0.81	54.1	0.1	5.5	9.2
Busses	All	13.6	0.95	64.4	1.1	0.3	0.3
	PublicTransport	11.0	1.30	99.0	-	-	-
	Touringcar	0.7	0.27	22.0	0.5	0.1	0.1
Trains	All	-	0.70	50.0	0.1	0.1	-
	Intercity	44%	0.70	51.0	0.1	0.0	0.0
	HST	65%	0.65	48.0	0.1	0.0	0.0
Airplanes	Boeing 373-300	71%	2.00	146.0	0.4	0.0	0.2

Source: VROM, the Netherlands, * preliminary figures
Box 5

However if we want tourism - and it is not so much a question of want, but more of economic need - we will have to accept the air pollution caused by air transportation as a fact.

Passengers traveling by air, all islands

	1994	1995	1996
Curaçao	1,190,000	1,198,000	1,209,000
Bonaire	296,000	328,000	346,000
St. Maarten*	647,721	533,335	438,179
Statia	24,210	20,556	19,912
Saba	14,823	12,354	11,802

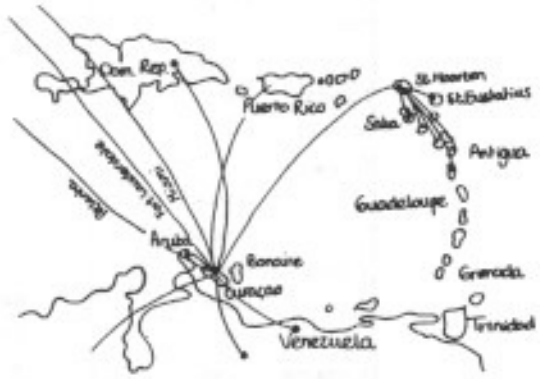
Various sources
* Including St. Martin
Box 6

There are however possibilities to lower the negatives impacts of air transportation on the environment:

First there is the airplane itself. New airplanes use less kerosene than older types and thus pollute less. New airplanes also produce less noise, as standards for noise production worldwide are become stricter by the day.
Then there is the occupancy rate of the aircraft: it is relatively more fuel-economic (and thus friendlier to the environment) to fly a plane full of passengers, then to fly a half-full plane.
Finally there is the routing of the aircraft: relatively speaking take off and landing consume enormous amounts of energy. The routing of the aircraft should be based on a hub and spoke system (see Box 7)

Hub and Spoke System

Generally when making use of a hub and spoke system in airtransport, this means that the main supply of airpassengers is to one, for a specific area central, airport (the hub). There the passengers for the other destinations within the area (the spokes) change to smaller airplanes before continuing their journey.
For the Netherlands Antilles this means that Curaçao could become the hub for the Leeward islands and St. Maarten could fill the same function for the Windward islands.



Basically the hub and spoke system precludes the landing of large aircraft on islands which are less then 100 km apart.

Box 7

Tourists traveling by air, all islands

	1994	1995	1996
Curaçao	226,134	223,788	214,325
Bonaire	55,820	59,410	
St. Maarten*	565,386	460,087	341,180
Statia	10,700	8,800	
Saba	14,539	12,354	

Various sources
* Including St. Martin, period Jan./Nov.
Box 8

3.R.1 Recommendations international transportation

- ***promote the use of the newest types of aircraft, as these produce less noise and use less energy and thus have a lower contribution to the atmospheric pollution***
- ***fill up aircraft as much as possible to prevent empty flying***
- ***adopt the hub and spoke system thus no landings and take offs of large planes for short distance flights***

3.2 On island transportation

On some of our islands the growing numbers of tourists who wish to be independent and want to satisfy their appetite for adventure, combined with the limited island road systems, forms a serious problem.
The large numbers of rental cars in addition to the local traffic cause traffic congestion which hampers other economic traffic. In their quest for adventure, rental cars and their drivers may contribute to the disturbance of nature and all rented petrol or diesel powered rented cars contribute towards the air pollution; finally parking space takes up vast areas of valuable land around hotels and other tourism activity centers.

3.R.2 Recommendations on island transportation

public transport

- ***public transportation should be promoted for use by tourists; promotion should include better information about routes, timetables and prices of public transportation;***
- ***airport-hotel-airport transportation should be organized by hotels on a collective basis***
- ***taxi's should be well organized and hooked into a radio network***
- ***taxi prices should be publicized and realistic***
- ***the number of taxi's should be limited***

car rentals

- ***the number of rental cars should be limited per island***
- ***electrical cars should be promoted as alternatives to petrol or diesel powered rental cars (see box 9)***

Alternative transportation

- ***car rental firms as well as specialized transportation outlets should offer alternative means of transportation, varying from electric motorbikes, bicycles, roller skates, to electric boats and canoes***
- ***rental firms should promote packages of various forms of transportation to promote alternative transportation, a network of cycle tracks etc. should be created and maintained***

Toyota

Toyota is momentarily testing its newest invention: the battery powered Toyota Funcruiser RAV4 EV. One of the test grounds is the British Island of Jersey. The project is sponsored by the Jersey Island Government, five hotels and the Electricity Company. The electric Toyota runs 200 kilometers on its 24 batteries that are charged during the night. The new car has the modern comforts such as airco and power steering and - brakes.

Source: Toyota
Box 9

3.3 Alternatives

As a valid alternative between the islands of the Dutch Caribbean, especially between the separate islands of the Leeward islands and between the different Windward islands, a network of regularly scheduled boats with passenger accomodation could be developed. Although this means of transportation is not as fast as by air, forming a part of a well organized total holiday package would not be a problem. By doing so pressure on existing transportion systems could be better spread causing less congestion. If marketed well, boat trips as another means of transport could in this way add to the meaning of a paceless and leisure like holiday, like we have been promoting the Caribbean for some time now; especially when the boat used is a sailboat. From an environmental point of view, sailboats would be the least damaging to the environment.

Arriving air passengers per airline

St. Maarten 1996*

ALM	37,030
American Airlines	148,366
Winair	41,948
LIAT	32,995
Air St. Barths	1,092
Air Guadalupe	32,568
Air France	34,677
Charters	73,847
BWIA	5,691
Continental	11,854
KLM	9,308
Private	8,803
Total passengers	438,179

Source: SHTA, TCB
Includes St. Martin
Box 10

Bonaire 1995

ALM	34525
KLM	9959
Air Aruba	9326
Avensa	2427
Charters	1647
Private air	1519
Other air	4
Other sea	2
Total	59409

Chapter 4: Cruisin' the Caribbean

4.1 Introduction

The Caribbean region is the world's most popular cruise line destination. According to the Caribbean Tourism Organization, in 1994 there were approximately 8.3 million passenger visits to the Caribbean. Cruise tourism has known an explosive growth over the last ten years. Where on some islands cruise tourism was an unknown phenomena until some ten years ago (like Bonaire), other islands like Sint Maarten have a longer history of cruise tourism. Many ships come yearly to our ports to unload their main cargo: the cruise tourist.

Cruise calls per island

Year	Curaçao	Bonaire	St.Maarten	Statia	Saba
1984	198				
1985	167				
1986	191	6	311		
1987	193	21	452		
1988	226	50	478		
1989	227	76	497		
1990	265	53	596		
1991	289	48	542	50	33
1992	271	69	568	53	21
1993	273	58	659	42	43
1994	256	61	626	34	28
1995	238	39	473	23	25
1996	187	31	473	14	N.I.

Source: CPA, CBS, SHTA, TDF Statia
Box 11

Although the number of ships that call on our islands has more or less stabilized, the number of visitors that they bring, has steadily grown over the years. This can mainly be attributed to the fact that the modern generation of cruise ships can accommodate more passengers. Where a few years ago a ship carrying around 800 passengers was 'a big one', nowadays 1200 passengers is no exception for a cruise ship.

Cruise passengers per island

Year	Curaçao	Bonaire	St.Maarten	Statia *	Saba
1991	161,294	12,476	502,214		10,237
1992	161,835	28,176	469,667		7,702
1993	182,924	16,410	659,943		9,090
1994	160,510	11,902	718,553	4,595	14,153
1995	171,675	10,718	564,251	4,703	12,644
1996	173,044	14,934	675,351	4,513	12,455

Source: CPA, CBS, SHTA, TDF * includes yachts etc.
Box 12

Cruise tourism in the Caribbean is a seasonal activity with its peak in the winter months of the Northern Hemisphere. The Northern summer is the low season for cruise tourism to the Caribbean.

Cruise calls per month, per island, 1996

Month	Curaçao	Bonaire	St.Maarten
Jan	29	6	65
Feb	23	3	65
Mar	28	9	65
Apr	21	0	60
May	6	0	25
Jun	4	0	19
Jul	5	1	19
Aug	9	4	19
Sep	9	4	14
Oct	11	0	26
Nov	17	2	49
Dec	25	2	47
Total	187	31	473

Source: CPA, CBS, SHTA, TCB
Box 13

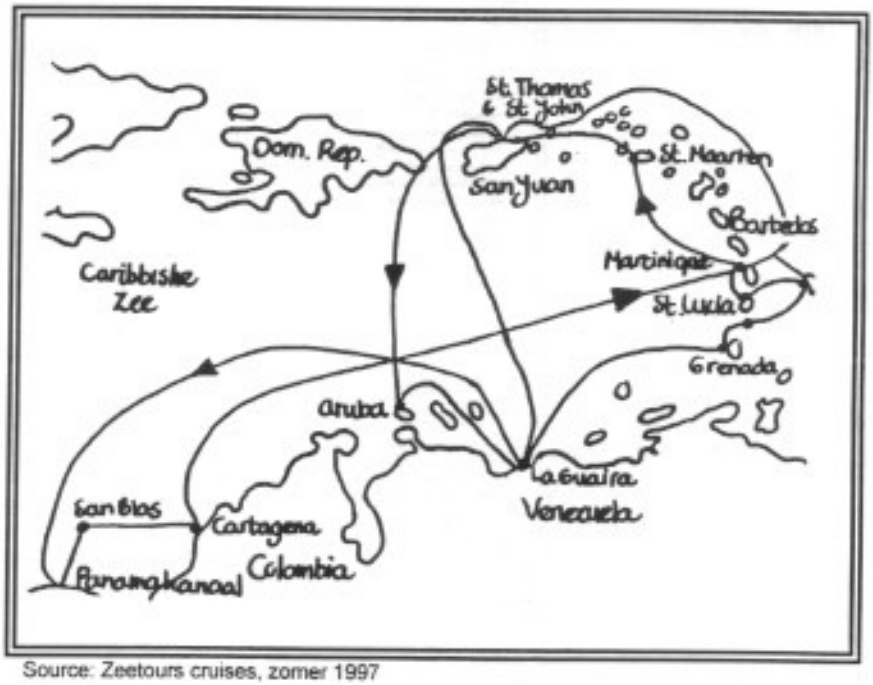
What sort of tourist is the cruise tourist that comes to our islands? The Curaçao Cruise Tourism Strategy 1993 tells us:

'The Curaçao cruise tourism market is gradually shifting towards the budget and mass market as a result of the present cruise line mix which is calling at Curaçao. The current cruise passenger mix is very satisfied with the Curaçao experience. However, the perception and criteria of passengers from different market segments can vary dramatically, as is illustrated by one of the reasons why the Royal Viking Line and Crystal Cruise (luxury market) stopped calling at Curaçao in '92 and '94 respectively: its passengers noted a slow, but noticeable deterioration of the general appearance of the city (especially litter)'.

This last sentence brings us to the relationship between cruise tourism and the environment, the theme of this chapter.
There will most certainly be environmental guidelines and programs developed by particular cruiselines and the cruise industry in general. Unfortunately these were not available for inclusion in this document and could therefore also not be screened for their applicability and actual application in the Antillean context. In our future policy we hope to be able to include positive recommendations in this respect.

4.2 Getting to the ship

Cruise passengers fly to the ports of embarkation of the various cruise lines. The environmental effects of international transportation are dealt with in Chapter 3. The islands of the Netherlands Antilles are generally not used as ports of embarkation by the cruiselines for a number of reasons. It is not likely that this situation will change in the near future. Main ports of embarkation are presently in Florida and San Juan. The environmental aspects of international transportation in connection with cruise tourism are therefore minimal for the Netherlands Antilles. On a regional scale however they are important enough to be realized and dealt with.



Source: Zeetours cruises, zomer 1997
Box 14

4.3 Waste

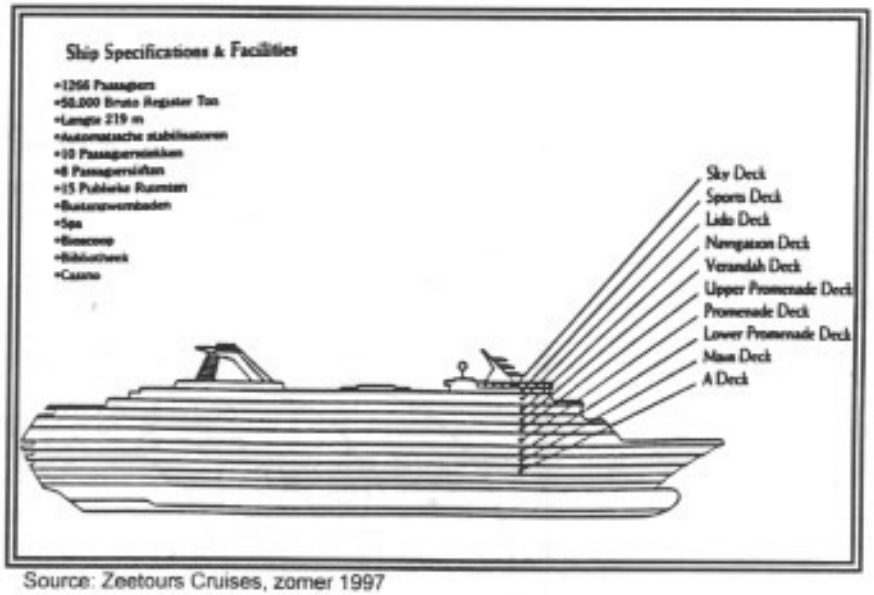
Cruise ships are floating villages. They roduce minimally the same amount of waste that the same number of people (passengers and crew added) would produce in their normal lives ashore and most likely a lot more. Evidently a number of waste categories do not exist on board, where others are very prominently present. Packaging materials is one of them, mainly originating from the food and beverage sector and the bargains bought ashore.

On the basis of a number of international conventions such as the Convention on Marine Pollution (MARPOL) and the London Dumping Convention (LDC) cruise ships are not allowed to dump their waste and waste water overboard like in the old days. The Netherlands Antilles are party to these international conventions. Consequently the rules set by the convention should be applied strictly in our waters.

Now that the ships are obliged to keep their waste and waste water aboard, it becomes necessary for port of call to receive the cruise ships waste and dispose of it in an organized manner. Officially all international ports are required to have a reception facility under the MARPOL convention. Unfortunately

the ports of the Netherlands Antilles that are catering to cruise ships cannot provide a watertight package of waste and waste water facilities guaranteeing the optimal disposal. For instance wastewater from cruise ships on Curaçao is, after careful unloading from the cruise ship, discharged into the sea at the 'shoot' on the North side of the island.

Ports that have an effective garbage disposal facility for cruise ships are popular amongst cruise lines. Barbados for instance has a smokeless incinerator for cruise ships garbage disposal, in line with the MARPOL convention and is also for that reason becoming a favorite port of call for cruiselines.



Source: Zeetours Cruises, zomer 1997
Box 15

4.4 Fuel

Cruise ships mainly run on bunker, a type of diesel fuel. As in the case of other regional seas, like for instance the North Sea, it might be worth to look into the possibility of convincing cruiselines to use low sulfur bunker as a fuel source the Caribbean Sea. The use of low sulfur bunker contributes to the global reduction of SO2. Also stench and soot levels tend to go down when low sulfur bunker is burned in the ships engines.
The storage and transportation of bunker and bunkering process itself have great risks for the marine environment. Oil contingency plans in case of spills of bunker should be in place and tested regularly. The cruise captains themselves have great responsibilities in this respect and should maintain regular contacts with the harbor authorities to discuss and practice oil spill emergencies.

4.5 Activities

The average time that a cruise tourist spends ashore is around 6 hours. Over 90 % of all cruise tourists go ashore when their ship is in port, but only around 25-30 percent go on tours and excursions. The rest of the cruise tourists go shopping.
Shopping is thus by far the most important activity that cruise tourists undertake while on our islands, followed by sightseeing and shore excursions. These shore excursions take the cruise tourists around the island showing them the sights. But also more active excursions are being offered such as water sports, more particularly scuba diving and snorkeling, visits to beaches and nature walks. Cruise tourists, when actively visiting nature, may contribute to the pressures on biodiversity, described in Chapter 7.

4.6 Shopping

Shopping cruise tourists on first sight don't seem to have much impact on the environment. They may go to the toilet once or twice during their six hours ashore and they may consume food or drink that is packed and served in disposable containers thus adding to the waste accumulating on the island. But the most important aspect may well be the packaging material of the items that tourist buy. In a number of cases this packaging material remains behind in the shops to end up on the landfills; in other cases the packaging materials are taken aboard and eventually end up in the ships waste, which is unloaded in the next port of call to end up on the landfill of that island.
To prevent the waste from cruising the Caribbean preventive action should be taken along the lines of the Government Policy on waste: we should try to prevent certain harmful packaging materials from coming to our islands. What comes here in terms of packaging should be recyclable and should actually be recycled. Packaging materials which can not be prevented, and cannot be recycled should be carefully disposed off.
Something else to keep in mind in the context of environmental aspects of shopping are the 'souvenirs from nature'. This is described in Chapter 9.

4.R Recommendations

- ***the construction of megapeers and other mooring facilities for cruise ships has a negative impact on the environment in general and biodiversity in particular; environmental impact assessments should be a compulsory step in their planning process***
- ***on island transportation of cruise passengers may have negative impacts on the environment (traffic) and the landscape (roads): landing points close to shopping centers are therefore recommended***
- ***the use of sulfur low bunker by cruise ships should be promoted***
- ***bunkering facilities should be closely monitored because of the extremely negative impact of oil spills on the marine environment***
- ***waste and waste water from cruise ships should only be unloaded at ports of call that can really deal with the waste in a sustainable manner***
- ***packaging materials harmful to the environment should be prevented***
- ***'watertight' reception facilities, in accordance with the regulations of the MARPOL convention, should be set up urgently in all ports catering to cruise tourism***
- ***cruise tourists should be informed about the beauty and vulnerability of each islands biodiversity and environment***

Source: CTDB
Box 16

Chapter 5: Welcome to your green hotel

5.1 Introduction

A number of good handbooks have been written by various international organizations and initiatives have been taken, all of which have one goal: an environmentally friendly hotel. All aspects of this 'greening your hotel strategy' are carefully explained step by step in these documents. Not only does greening your hotel help the environment, it also contributes to lower energy and water bills which are a very prominent item on the hotel budget of our islands. What is more, if done well, it makes your guests more comfortable.

It is beyond the scope of this document to repeat all the good ideas which have been brought forward concerning greening your hotel. We will simply highlight the most important recommendations and refer to the excellent handbooks of UNEP's Industry and Environment Office, the International Hotel Environmental Initiative the International Hotel Association and the Caribbean Hotel Association/CAST.

Question of course is: if all these great publications already exist, why do the hotels not apply them more often?

The answer to this question includes:

a) there is hardly any pressure from the various governments to be active in the environmental field
b) hotel managers are not aware of the economic and other benefits of environmental upgrades
c) the pressure from the consumers angle to green the hotels has not yet reached our part of the Caribbean in full force.

At the end of this chapter you will find a listing of useful publications in this respect.

Room inventory per island, 1996

	Rooms
Curaçao	2,621
Bonaire	1,120
St.Maarten	2,747
Statia	77
Saba	118

Average lenght of stay per island, 1996

	Nights
Curaçao	7.7
Bonaire	8.1
St.Maarten	8.2
Statia	N.I.
Saba	* 5.4/3.1

Source: CTDB, SHTA, TCB, TDF, Framhein 1995

* Dive tourists/other stay over tourists Box 17

5.2 Constructing a green hotel

The publications on 'greening your hotel' normally do not gointo the selection of the site, nor the drawing and construction of new hotels. The climate of our islands with sun and wind as two dominant factors, makes building an ecofriendly hotel relatively easy.

The basic rule is to keep the sun away from the inside of the buildings and use the cooling effect of the wind to the maximum. Energy and water inputs and their use and reuse should be well planned. As their availability is based upon fossil fuels, they are limited and 'making' energy and water requires a lot of fossil energy and money. Also bringing water and energy to the often remote hotels is generally a costly affair. The alternative to expensive central production based on fossil fuels may therefore well be to decentralize production, using wind and solar power to a maximum, producing them where they are needed.

Of course the outputs hotels and their effect on the environment should also be considered. New hotels for instance should be hooked up to a common sewage system or have their own wastewater treatment installation, called 'package treatment plant'. The concentration of tourism facilities has advantages in this respect.

Guidelines and criteria for ecofriendly construction of new hotels and other tourist facilities have been developed in industrialized countries. These criteria will have to be modified for the Antillean situation and included in the island building regulations and other legal mechanisms. The latest developments in sustainable building and architecture, such as new building methods and easy reparability, are important for the construction of eco hotels, considering the great contribution of waste of building activities.

5.3 Greening an existing hotel

Starting from scratch definitely has its advantages over refurbishing and equipping existing hotels with the latest techniques of green hotel management: there is no need to close down sections of the hotel and keep dust and noise levels low in order not to scare the guests away. However, the reality is that tourist accommodation is already well developed on our islands therefore a coordinated approach to systematically upgrade existing hotels seems a logical course of action. As is the case for new hotels, the government should stimulate the greening of hotels by introducing fiscal incentives. The water and energy sector within the hotels will without doubt be the first in need of 'greening'. Investments in this sector will pay off relatively quickly because of the high water and energy tariffs.

5.4 Energy

The use of the sun as perpetual source of energy is minimal in the hotel sector on the Antilles. Only a handful hotels are actively using solar energy. This is strange considering the fact that the Caribbean region with it's 5.5 peak sun hours per day is one of the best solar areas in the world. The warm water used in hotel rooms could easily and cheaply be produced by solar power, although kitchen water needs some extra heating. The question is why haven't the hotels collectively switched to solar yet? There the answer may well be that hotels are waiting for large scale refurbishing activities. Hopefully by that time they will have done their home work: passive solar energy is cheap, easy to install and to maintain and a lot better for the environment.

Techniques to turn solar energy into electricity are not yet in a stage of development that they can be used commercially in the hotel sector; storage of the energy produced during the day is still a problem. Exceptions are the so called stand alone applications like lanterns and pumps.

Wind energy is also used minimally on the Netherlands Antilles. Kodela on Curaçao has the only large scale wind energy operation running in the Caribbean although it has been calculated that islands like Saba and Statia could easily be self-sufficient in energy by installing one or two windmills - with a conventional back up of course. Depending on their physical location - in terms of wind availability and the landscape - individual hotels may very well consider setting up their own wind energy production. In such cases a contract with the utility company for delivery of overproduction to the 'net' will help both sides. Again here the availability of 'green funds' (see Box 23) will stimulate investments in wind energy. Especially hybrid installations - a combination of sustainable techniques (wind, solar etc.) with conventional back up - offer an excellent perspective.

Holiday Beach Hotel, Curaçao

Possible energy savings

No.	Measure	Potential savings/year in Nafl	Investment	Pay back period
1	Low-energy bulbs	18,500	40,000	directly
2	Low-energy spots	1,800	920	directly
3	Switch off maintenance rooms	400	57	2 months
4	Use of walk-in coolers	7,000	250	2 weeks
5	Use of dishwasher	2,000	-	directly
6	Pool filter	2,800	57	1 week

Source: Water & Energy Audit CHATA 1996, MiNa Fund project.
Box 18

5.5 Water

Water is used in enormous quantities by hotels. It is also often carelessly used. First of all large quantities go to waste without having been used at all. For a flush of the toilet the amount of water depends on the product to be flushed. A relatively simple system gives a choice to the user: large or small quantity. Also the re-utilization, especially of grey water, is not implemented on a large scale on our islands. True, a number of hotels use their waste water for irrigating in the gardens, but this rather low quality application could also come after first having used the water for the second time in a separate toilet flushing system.

A recently carried out study by EcoVision under the Auspices of CHATA and financed by the MiNa Fund in three hotels on Curaçao comes up with a series of recommendations that will quickly lead to enormous water savings. (see Box 19 & 20)

Holiday Beach Hotel, Curaçao

Estimation of water use

Where	Number	Quantity	Use	Total/year (in m3)	Nafl.
Garden	1			5,000	31,120
Pool	1			2,000	12,837
Sink rooms	130	8 l/min.	15 min/day	5,700	16,105
Shower rooms	130	25 l/min.	15 min/day	17,800	21,935
Toilets rooms	130	18 l/time	6 x /day	5,150	14,004
Mop water				250	778
Public toilets	20	18 l/time	20 x /day	2,000	5,853
Public sinks	20	12 l/min.	10 min/day	900	1,945
Public showers	2	10 l/min.	20 min/day	300	2,723
Laundry	1		12 h/day	7,000	1,945
Kitchen	6	12 l /min.	3 h/day	500	24,507
Estimated total				48,900	134,750

Source: Water & Energy Audit CHATA 1996, MiNa Fund project
Box 19

Holiday Beach Hotel, Curaçao

Possible water savings per year

No.	Measure	Potential savings/year in Nafl	Investment	Pay back period
1	Water saving shower heads	70,000	6,400	1 month
2	Perlators	25,000	440	1 week
3	Tap adjustment	1,000	-	directly
4	Toilet dams	3,300	-	directly
5	Water recycling	110,000	100,000	1 year
6	Efficient laundry	10,450	-	directly
7	Use of dishwasher	2,000	-	directly
8	Solar water heater	40,000	85,000	2 years

Source: Water & Energy Audit CHATA 1996, MiNa Fund project.
Box 20

5.6 Waste

Waste is an important environmental factor in the hotel and restaurant sector. The per capita waste production of a hotel and it's restaurants is much higher than the waste production at household level. The main reason for this is the extremely high volume of packaging material produced by this sector.

Afval in hotels (project milieuzorg programma's hotels Curaçao)

Door de leerstoel voor Milieu en Ontwikkeling en de Waste Group (VoMil, Selikor, Curaçao Limpi I Bonita) is een onderzoek uitgevoerd naar de afvalproductie in de horeca. Hierbij is ook een hotel onder de loep genomen. Grotere hotels (ca. 200 kamers) produceren meer dan 5 m3 afval per dag. Dit is 150 m3 per maand. Het afval kan worden aangeboden in 1100 L containers. Deze moeten dagelijks worden geledigd. De kosten hiervoor bedragen per maand Nafl 6.644,-. Per jaar betekend dit ca. **Nafl 80.000,-.**

Door bepaalde afvalstoffen gescheiden aan te bieden kan de hoeveelheid afval sterk verminderen. Zo kan bijvoorbeeld karton apart worden bewaard en aan een recycle bedrijf worden aangeboden. Deze komt bij flinke porties het afval gratis ophalen. Op deze wijze kan zeker 15% van het afval apart worden gehouden en worden gerecycled (voorzichtinge inschatting). Ook kan het tuinafval apart worden gehouden en zelfs op het eigen terrein worden gecomposteerd. Dit kan opnieuw een forse hoeveelheid afval besparen (naar schatting 15%).

Verder kunt u denken aan een veelheid van preventiemaatregelen waarmee afval voorkomen kan worden: kiezen van bulkverpakkingen, hardplastic bekers en 'glazen' op het strand in plaats van cups etc.

Alleen deze genoemde maatregelen zijn al goed voor zo'n 35% besparing op de hoeveelheid afval. Als deze recycling- en preventiemaatregelen serieus worden uitgevoerd betaalt het hotel nog Nafl 4.514,- per maand, ofwel **Nafl 54.000,-** per jaar (in kosten vertaald een besparing van ruim 30%, ca. 25.000,- per jaar)

Wanneer daarnaast van een perscontainer gebruik wordt gemaakt, kan zeer sterk op de inzamelkosten worden bespaard. Met een perscontainer kan ca. 6m3 geperst afval worden afgevoerd. Dit komt overeen met ca. 18m3 normaal afval. Het afval wordt zeer hygiënisch in een apart compartiment opgeslagen en kan geen geur veroorzaken. Er zijn zelfs containers die geheel geurloos zijn omdat er een anti-geurstof aan het afval wordt toegevoegd. De inzamelfrequentie kan drastisch omlaag, tot ca. 8 keer per maand. Voor de afvoer van de perscontainer door Selikor moet dan nog Nafl 1.840,- per maand worden betaald (**Nafl 22.000,-** per jaar).

Een 6m3 container kost ca. Nafl 35.000,- en heeft een terugverdientijd van 1 jaar. Perscontainers kunnen ook gehuurd worden (Nafl 400,- per maand).

Source: EcoVision, Curaçao
Box 21

Basically the use of environmental unfriendly packaging materials should be discouraged, packages should be recyclable and really be recycled. (see also schedule in Chapter 10)

5.7 The hotel garden

The tropical atmosphere of our islands is enhanced by the gardens that surround the hotels. Water makes the difference between a lush green garden and an arid garden more fit to our dry climate and featuring natural plants.

One basic rule however for hotel gardening is to choose plants that need the least water. Second rule is to ban hose pipes and sprinkler watering and go over to controlled drip irrigation. This way nutrients and water are delivered to the plant in the most efficient way for them to be taken up instead of leading to the sea. Also the evaporation losses are lowest this way. The use of mulch keeps the humidity close to the ground. The drip or sprinkler systems can be switched off in the wet season. If the garden is watered, recycled water is to be preferred over piped water, not only for cost price reasons.

This is not the case if hotels have package plants. Hotels which produce grey water from their package plants may have more water than they know what to do with. In that case it is better to 'zone': arid gardens closer to the shore and most lush gardens at the back of the property. Typically where the receptions are located, because they form the hotels 'calling card'.
The quality of the recycled water and whether or not the water reaches the sea or not should be monitored closely: any form of eutrophication is detrimental to the coral reef.
Important is not to use black water for irrigation. Black water still contains bacteria, viruses etc. and can be hazardous to your health.

5.8 Environmental care systems

The greening of our hotels doesn't stop with reducing the water or energy consumption. There are numerous other aspects of hotel management that have a direct or indirect impact on the environment. All these aspects are encompassed in recent research under the auspices of the CHATA and financed by the MiNa fund. This research attempts tie all environmental aspects together and manage them through an Environmental Care System. The purpose of the research is described as follows:

'The project intends to give first impulse to environmental care programs at ten hotels, following the Caribbean Hotel Association's (CHA) seminar 'The Green Hotelier'. At first particularly CHATA members will be involved, but the intention is to make the results from this research available to the whole branch through articles and possibly a workshop.'

The outcome of this research will be widely published to help other islands in their efforts to also green their hotels.

Useful recommendations for in the kitchen

- Turn everything off that is momentarily not in use
- Use always the smallest pan or oven possible
- Keep the ovens clean
- Make sure oven doors close well
- Put as much as possible in the oven at once
- Use also the warming up time of the oven for food preparation
- To put the oven higher for warming up is pointless, it will not go faster
- Use gas instead of electricity as much as possible
- Only turn on one frying pan if possible
- Keep the covers on the pans
- Use a (low energy) microwave oven to defrost
- Cook dinner at the lowest temperature needed
- Put often used things in a small fridge, not in de walk in cooler
- Put often used things in front in the fridge
- Make sure that the condensers of fridges can release their warmth
- Close refrigerators
- Do not put warm food in the fridge, let it first cool off outside the fridge
- Wash vegetables in a bowl, not under a running tap
- Close the tap when not in use

Source: EcoVision, Curaçao, MiNa Fund project Water & Energy Audit.
Box 22

5.9 Green management

It is however most important that the hotel management believes in the process of greening the hotel. They will have to inspire their staff to make the dream of a green hotel come true. The reality is harsher. Greening your hotel will be do or die: when the customer starts to select his holiday destination on environmental criteria - and the first waves of these new bread of tourists are rolling in - it will be too late if proper action has not been taken. It is therefore an absolute ust for our hotels to go green: after all it will bring in customers and thus money. Governments should assist where they can but the sector itself will have to actually do it.

Investors with a green conscience

The Dutch government recently made investments in green funds fully tax-deductible, in an attempt to attract money for sustainable investments form the Dutch public. And it worked. So well, in fact, that fierce competition now surrounds green projects

The return on sustainable investments is just too low for a long-term mortgage. But since 1995, things have been better. In January of that year the government introduced a tax scheme to encourage green investment. Basically, anyone who invests in green shares of certificates pays no tax on the dividend and interest he receives, no matter how high the investment. This has helped the banks attract a great deal of "green money", which they are allowed to invest only in green projects approved by the government.
Up to now, these have mainly involved wind and solar energy and organic farming. But forestry, nature conservation and eco-friendly technology projects are also eligible.
Companies have to meet a whole range of requirements to qualify for a "green certificate". The money has to be invested in the Netherlands. The project must not be so profitable that it could be funded in the normal way. But it has to make a certain amount of profit, because the government is offering no guarantees. The banks bear the risks themselves. The projects also have to be technically innovative. Banks cannot slap a green sticker on any old project. They have to ensure that at least seventy per cent of the invested money is spent within two years on government approved green projects. They are free to use the other thirty per cent as they see fit.

The environmental bees have certainly started buzzing around the financial honey pot. Eight green funds were established in the first year, with 1.5 billion guilders' worth of planned investments. More than 850 million guilders' worth of projects have already been approved.
Most of the investments will be spent on sustainable energy - wind turbines being most popular - and organic farming. Forestry and nature conservation, sustainable housing and innovative environmental technology, the other projects eligible for a green label, have attracted little interest.

Source: Environmental News from the Netherlands **1997** no. 1.
Box 23

Hotelfonds volgens regels Groenconcept

WILLEMSTAD - Storten in een fonds op gunstige belastingvoorwaarden, daarop is het voorstel van gedeputeerde Etienne Ys gebaseerd, dat volgende week in het BC wordt behandeld, volgens het principe van 'groen investeren' dat wereldwijd aan bekendheid wint. Ys hoopt hiermee noodlijdende hotels een wisse dood te besparen en nieuwe hotels een kans te geven.

Met zoveel financiële nood in de hotelsector (de meeste hotels hebben flinke belastingschulden en immer moeite om het hoofd boven water te houden) is snelle actie noodzakelijk, zo meent de gedeputeerde.
Ys ontwikkelde een plan voor financieringsmogelijkheden, dat gestoeld is op hetzelfde principe als het 'groen investeren'. Door uit de particuliere sector onbelast geld te trekken, moet een fonds gecreëerd worden waaruit hotels in financiële nood goedkoop kunnen lenen of een herstructurering van de uitstaande leningen kunnen krijgen.

In de komende week zal het BC zich uitspreken over het voorstel van Ys, waarna het ter uiteindelijke beoordeling aan het Land zal worden voorgelegd.

Source: Beurs en Nieuwsberichten, 02/05/1997
Box: 24

The Central Government and the Government of the Netherlands are presently looking into the possibilities of making Dutch Green Funds available for green investments on our islands. The greening of hotels is a real option in this context.

5.R Recommendations

- ***criteria for ecofriendly hotel building should be developed and widely distributed and enforced***
- ***a joint development program for ecofriendly hotel construction and management should be formulated per island. Hotels, hotel associations and governments should cooperate closely in this effort.***
- ***green funds and other fiscal mechanisms should be made available to the hotel sector to stimulate the greening of hotels***
- ***the existing green-your-hotel handbooks should be put into practice, hotel associations can play a key role in this process***
- ***hotel waste should be prevented and where possible recycled***
- ***hotel gardens should be landscaped so to make them as environmentally friendly as possible***
- ***environmental care systems for hotels should be further developed and introduced***
- ***the hotels of the Netherlands Antilles should join the CHA Green Hotel Program, a quality label for environmentally well managed hotels***

Ecosuite bij van der Valk

Sinds kort kan de milieubewuste toerist ook bij Van der Valk terecht. Op het Antilliaanse eiland Bonaire welteverstaan, waar suite 005 van het Plaza Resort is omgebouwd tot 'eco-suite'.
Daarmee loopt het hotel vooruit op de geleidelijke aanpassing van alle kamers. Suite 005 moest klaar zijn toen begin januari de Koninkrijksmilieutop in het hotel werd gehouden en de Nederlandse milieuminister De Boer er een kijkje kwam nemen.
In de eco-suite van Van der Valk gaat de energievretende airconditioning pas draaien als een elektronisch oog de binnenkomst van de gast heeft geregistreerd. Dan floepen ook de (energiezuinige) lampen aan. Verder is het dak zo geïsoleerd dat de tropenhitte nauwelijks in de gekoelde kamer kan binnendringen, en is het toilet voorzien van een waterbesparend reservoir.
Is de eco-suite bezet? Geen probleem, want ook op de andere kamers denkt Van der Valk aan het milieu. Zo krijgen fraaie koralen in zee minder waswater over zich heen sinds het hotel het beddengoed nog maar om de twee dagen verschoont. En wie per se elke dag tussen de schone lakens wil kruipen, kan dat bij de receptie opgeven.
De vernieuwingen hebben niet alleen te maken met de liefde voor het milieu. Ad van de Valk geeft eerlijk toe dat de energieprijzen op de Antilliaanse eilanden 'waanzinnig hoog' zijn (water is bijvoorbeeld bijna vier keer zo duur als in Nederland) zodat de hotels alleen nog maar rendabel kunnen werken wanneer zij minder water en elektra verbruiken. De kosten van de verbouwing tot eco-suite (4,700 gulden) haalt Plaza Resort Bonaire er dan ook over anderhalf jaar al uit.

Source: Trouw 18/01/97
Box 25

Environmental handbooks for green hotels

- **Environmental Management Toolkit for Caribbean Hotels**, C.H.A. Environmental Manual, Caribbean Hotel Association,1995.
- **Environmental Action Pack for Hotels, Practical Steps to Benefit Your Business and the Environment**, the International Hotel Association, 1995, ISBN 1-899159-01-0.
- **Energie- en Water Audit**, Curaçao Hotel and Tourism Association, MINa Fund Project 96/11, by EcoVision, January 1997,

Box 26

Chapter 6: Lets go to the beach

6.1 Tropical beaches

An important part of the tropical holiday promise is the sandy white beach bordered by coconut palms. The Netherlands Antilles don't have endless beaches, but they do have exquisite beaches and bays with a great variation in character and size. Saba and seasonally Statia are not so well thought of beach-wise, but they compensate fully with their lush green nature. Although beaches are still one of the greatest selling points of a holiday in the tropics, we should realize that the attraction of a sunny beach holiday may be dwindling. The sun and the human skin may seem an attractive partnership, but recent views on the effects of sun radiation on the skin may in future make the tourists want to move their chairs more into the shade of the coconut palm. (see Box 26)

Advies KNMI: 'Geniet, maar zon met mate'

Argeloos genieten van het Oranjezonneje kan niet meer, want vanaf Koninginnedag gaat het KNMI de 'zonkracht' bij het weerbericht vermelden. De zonkracht is een getal tussen de 0 en 10 dat de hoeveelheid ultraviolet licht (UV) op die dag aangeeft. UV is de component van het zonlicht die in gepaste dosering zorgt voor het bruin worden van de huid, maar vaker acute verbranding bij de doorsnee vakantieganger veroorzaakt.
Erger is dan dat zonnebrand in de jeugd waarschijnlijk een belangrijke factor is bij het later ontstaan van melanoom. Dit is een vrij zeldzame, maar moeilijk te behandelen vorm van huidkanker. 'Gewone' huidkanker, die bij tijdige behandeling vrijwel nooit fataal is, wordt jaarlijks bij zo'n twintigduizend mensen geconstateerd. Naar schatting 90 procent van de gevallen is een gevolg van jarenlang te veel zonnen.
Met de zonkracht kan de bewuste zonner, afhankelijk van het huidtype, uitrekenen hoelang hij of zij onbeschermd in de zon kan blijven. Op een echte topdag in de zomer zou de gemiddelde Nederlander (huidtype 2) bijvoorbeeld maar een kwartiertje veilig in de zon kunnen.
Dat lijkt heel kort, en dat is het ook, want deze getallen gelden voor iemand die dat jaar nog helemaal niet in de zon is geweest. In de praktijk zal iemand die bruin wil worden al in het voorjaar, op dagen met een lage zonkracht, een basis gelegd hebben, zodat hij daarna veel langer veilig in de zon kan.
Het vermelden van de zonkracht in het weerbericht zal daarom hoogstens bijdragen aan het besef dat ongelimiteerd bakken op het strand helemaal niet zo gezond is. Voor mensen die toch al hun gezond verstand gebruikten bij bruin worden betekenen de cijfers niets nieuws.
Ondanks alle alarmerende berichten over het dunner worden van de ozonlaag, is in Nederland nog geen toename van de hoeveelheid UV gemeten. Het KNMI registreerd sinds een paar jaar continu de hoeveelheid UV die hier het aardoppervlak bereikt, maar kan daarin nog geen duidelijke trend ontdekken. Natuurlijk is er wel een grote variatie per dag en in de loop van het jaar, afhankelijk van de bewolking en hoe hoog de zon aan de hemel staat.
Juni en juli zijn de maanden met gemiddeld het meeste UV. De temperatuur zegt niets over de intensiteit van het UV: daarom lukt verbranden op de wintersport zo goed.

Source: Algemeen Dagblad, May 1997
Box 27

6.2 Natural beach

Beaches are the border between the marine environment and the land. Together with the salina's and lagoons they form the stepping stone for the life in the sea to reach the land. Sea turtles for instance use our beaches to lay their eggs and sea birds use them to nest on. It is therefore essential that part of our beaches be protected in their natural state to safeguard this important habitat. In beach areas where tourism is permanently present, peaceful coexistence with nature is an important theme. For instance, in areas where sea turtles occur,

special attention should be given to coastal lights in order not to distract sea turtles from finding their way towards the sea. In other countries like Malaysia, sea turtles and especially the young ones hatching, have become a major tourist attraction. Other human interference with beaches, such as sand mining should be totally banned in order to safeguard the integrity of our precious beaches.

6.3 Natural or man made

After hurricanes or storms beaches may disappear. The coastal environment is a highly dynamic environment. In some cases, like on Statia and Bonaire, we even have seasonal beaches, which wash away and come back every year depending on the winds and the current.

Where natural beaches disappear after a storm there is a strong pressure, especially from the hotel and tourism sector, to restore them. If it comes to giving nature a helping hand by reconstructing the beach, a lot can be said in favor of this wish. However we have to realize that these geological processes are natural phenomena and -with all our knowledge- they are still pretty hard to predict. In the case of man made beaches, we therefore often end up carrying water or rather sand to the sea and that is exactly where the problem lies: Artificial beaches are a potential threat especially to the coral reefs and their associate marine life. Where sand is dredged from the sea bottom, a high degree of siltation may occur, depending on the technique used. This silt may end up covering reefs, suffocating and killing them.

After the sand has been transported to the beach wind and water will sweep it towards coral reefs with the same detrimental effect. Any form of beach construction should therefore be subject to a set of strict rules. As a prerequisite it is recommended that an environmental impact assessment be carried out before any 'beach building' is undertaken in order to be able to guide or regulate or in some cases even decide against this activity. After Luis, Sint Maarten is going through a series of beach building activities and is developing a simple set of guidelines which may prove to be helpful to other islands Sint Maarten already does have guidelines concerning development activities on the beach itself. (see Box 28).

6.4 Beaches, a public domain!?

Public Notice (Aug. 1994)

The executive Council of the Island Territory of Sint Maarten hereby makes known that they have established a policy concerning the use of beaches.

The policy states that:

1. The beaches must be useable for everyone, both local residents and tourists alike, for recreative purposes.
2. Developments that, physically, have a negative influence on the recreative use of the beaches, will be opposed
3. The beaches will be protected against natural and human influences, that sever their recreational and nature functions

The policy concerns:
the strip of sand with a width of at most 50 meters, of which the surface consists of natural sea sand situated along the sea, or, in absence of natural sea sand, the strip of land with a width of 25 meters from the high water line, situated along the public waters.

The consequences of this policy are that the Island Government will strive to ensure that:

ad 1. The beaches are openly accessible for the general public, which means that there must be a wide access that is free from physical and mental barriers (levers, hotels etc.)

ad 2. No construction works or activities, that occupy the space on the beach in a way that restricts normal use of the beach for others, will occur on the beach
The standpoint of the Island Government is that, construction works on the beach are annoying and disfiguring to the surroundings. It is not desirable for dwellings, hotels, businesses, etc. to be built or situated on the beach.

Ad 3. The beaches will be protected against pollution, disturbance, destruction, etc., and against erosion, hurricanes etc.

Summary:
The main objective of the policy is protection of the recreational value of the beaches. Besides that, the nature value of the beaches should be protected as much as possible. If necessary the nature value of (a) certain beach(es) can, possibly temporary, be placed above the recreational value.

Consequently, in the future the Island Government will not permit construction works or activities on the beach, unless justified by special circumstances. These special circumstances must be in the general interest of the island.

The Executive Council of the Island Territory of Sint Maarten:
The (act.) Is. Secretary, R.A. Boasman,
The Lt. Govenor, D.L. Richardson.

Source: St. Maarten Guardian, aug. 1994
Box 28

The Central Government is the owner of all of the beaches of the Netherlands Antilles unless these beaches have been sold to Island Governments or private entities. The Island Governments have been formally mandated to manage the coast line with regards to tourism, environmental issues and protection of natural resources. As none of our beaches have been set aside by law as public domain, this means that private

owners are allowed to close their beaches to the general public.
Nevertheless, as said before, since the Central Government is the owner of all beaches, the general policy is to keep all beaches open for the public.
Of course there are practical exceptions to this rule where, for instance public order plays a role. For example the nudist beach on Bonaire is kept visually and consequently physically separated from the public beach to prevent breaching of morality rules.
But as a general rule for the Netherlands Antilles every beach, also the beaches in front of the hotels, are public. Many hotels are not too happy with non-hotel guests mingling amongst their clientele on 'their' beaches. To scare 'strangers' off, they -by the way rightfully- charge non hotel guests a fee for using the hotels facilities such as toilets and beach chairs.
For those beaches which are located on private property, or can only be accessed by means of private property, it is not unlawful to ask a fee for the use of any facilities provided. The level of these fees should however be in proportion to the facilities offered.

6.5 Quality beaches

Part of the expectation of the tourist is that the white sandy beach is clean and the crystal blue water is safe to swim in. Therefore Island Governments and private managers of the beaches and bays, are providing facilities to keep the beaches clean and are occasionally monitoring the water quality. Beach and underwater cleanups are organized yearly by enthusiastic NGO's to clean away the leftovers of tourism. These voluntary provisions and actions have in Europe been translated into a series of quality checkpoints, which together form a European standard under the Blue Flag program. As an extra selling point on the quality side of our islands as tourist destinations, the Netherlands Antilles may consider adopting a similar program for its beaches and bays. An overview of the checkpoints of the Blue Flag program is given in Box 29.

Blue Flag Criteria for Beaches

Any beach is potentially eligible for the Blue Flag. Local authorities interested in participating should begin by examining the level of current use as well as projected use of the beach in the context of its existing infrastructure and services. This should be done both to assess the need for additional services and infrastructure but also to assess the long term impacts, especially in the case of natural beaches where nature and landscape protection should be high priorities.

Environmental education and information

Imperative:

- bathing water quality and Blue Flag information must be published on the beach
- there must be five environmental education activities offered to the public
- there must be information posted or published on protected sites or species in the area of the beach
- there must be prompt public warnings in case of gross pollution or other dangers
- the beach regulations and code of conduct must be posted on the beach

Guideline:

- the community should offer visitors and the local population an environmental interpretation center, ecology center or similar permanent public or school environmental education facility

Environmental management

Imperative:
- there must be an environmental plan for the development and the use of the coastal area of the community
- there must be sufficient litter bins on the beach to keep it clean
- the beach must be cleaned on a regular basis; daily in the peak season
- recreational activities on and in the vicinity of the beach must not interfere with nature protection

Guideline:
- there should be an emergency plan covering response in the case of pollution incidents
- there should not be any algal or other vegetation left do decay on the beach

Water quality

Imperative:
- Compliance with the standards and requirements corresponding to those of the EU Bathing Water Directive concerning the parameters of total and faecal coliform and faecal streptococci. These standards cover fortnightly sampling during the bathing season and compliance with both guideline and imperative values
- the beach area must not be affected by industrial or sewage related waste water
- there must not be any signs of gross pollution from oil, human waste or other sources in the beach area

Safety and services

Imperative:
- the beach must have easy and safe access
- there must be sufficient and clean public toilets by the beach, the sewage disposal of which is controlled
- there must be sufficient lifeguards or lifesaving equipment to ensure response to an emergency anywhere on the Blue Flag Beach
- recreational activities in the beach area must not endanger any beach user
- first aid must be available on the beach
- to access of dogs and domestic animals must be restricted and controlled
- there must not be any camping or unauthorized driving on the beach

Guideline:
- there should be a free source of drinking water
- there should be public telephones available by the beach
- there should be access and facilities for people with disabilities
- the beach facilities should be properly maintained

Source: Awards for Improving the Coastal Environment, Example of the Blue Flag
Box 29

In the Antillean context not all these requirements are relevant and others could be added. Barbecuing on the beach is for instance a national activity, as is camping on the beach around Easter. Barbecuing does impact on the environment and should be regulated. For instance by indicating whether barbecuing is allowed yes or no on a particular beach. Also other disturbing activities on or undertaken from the beach should be regulated where they concern issues of safety. Shade trees and structures may be an issue to include.

The CTDB in its Tourism Master Plan underlines the importance and fragility of the beach:

'However it will be vital to protect and conserve the environment within which these activities take place. For example, the beach is probably the most popular and intensively used recreational area attracting large numbers of locals and tourists, yet it is physically one of the most delicate and fragile environments and is very susceptible to damage. The CTDB aims to establish a Beach Improvement Program, specifically to identify the resource value of the public beach and investigate practical solutions of their conservation and improvement.'

The approach that CTDB proposes, namely to stretch the carrying capacity of the beaches based on a Beach Improvement Program, which envisages also beach enlargements through the addition of sand, has its risks. Adding sand to existing beaches in the past was not very succesful. Not only do these artificial beaches lose their sand to the sea in a few seasons, but the sand also ends up on the coral reefs, suffocating them and thus destroying not only biodiversity, but also the mayor attraction for tourism itself.

6.R Recommendations

- ***set aside natural beaches as protected areas***
- ***develop guidelines to take extra precautions on and around sea turtle nesting beaches***
- ***beaches are public domain and should be open to the public***
- ***user fees for beaches are acceptable related to facilities offered and used***
- ***develop a set of strict rules for any form of beach modification***
- ***environmental impact assessment should be a prerequisite for beach modification activities***
- ***consider the introduction of a beach quality standard for the Netherlands Antilles***

Chapter 7: Tourism and Biodiversity; a natural partnership

7.1 Introduction

As the world population continues to grow, the natural world inevitably is shrinking. But as nature becomes a rare commodity, it also becomes more valuable. These values however do not yet show up in our nation's economic report, because they are hard to express in figures and therefore simply are not part of our cash economy.

What used to be called 'nature' is nowadays is referred to as 'biodiversity': the various species of plants and animals which in their coexistence with non-living surroundings form the ecosystems.

Biodiversity is more formally defined in the Convention on Biological Diversity (CBD) to which the Netherlands Antilles will be a party as soon as the Ordinance on Nature Conservation is approved by Parliament.

The CBD has three objectives: conserving biological diversity; using biological resources sustainably; and ensuring the equitable sharing of benefits arising from any use of such resources. Tourism can make an important contribution to the second objective, 'ensuring that biological resources are used in a sustainable way'. Indirectly tourism may also contribute to the conservation of the resources and -if managed appropriately- also to sharing them equitably.

Tourism which is based on the natural environment is a vital and growing segment of the tourism industry. Growing numbers of vacationers seek recreation in a tropical country - such as the Netherlands Antilles-, and account worldwide for US$ 260 billion of tourism receipts in 1995. These holiday makers want to experience something different from their daily life, something new, something spectacular; they also in most cases want a mix of adventure and relative luxury: a hike through the tropical forest and then a swim in a crystal clear swimming pool, a spectacular night dive with a warm shower afterwards.

7.2 Tourism, biodiversity and protected areas

Although almost all countries of the world have created protected natural areas, totaling in size to about the equivalent of Canada, the unprotected natural areas are rapidly shrinking in size. This is also the case on the Netherlands Antilles where the division of large, still in their natural state, estates are the order of the day.

The irony is, that whilst these natural areas shrink in size, the volume of tourism focused on natural areas continues to grow so rapidly, that in some places tourism threatens the very attractions, which brought tourists there in the first place. If not managed properly such dangers loom for instance for Bonaire's coral reefs. The challenge therefor is to enhance the attractiveness of biodiversity for tourism, while avoiding the dangers of over-use.

7.3 Tourism's positive contribution to biodiversity

Tourism based on biodiversity can bring numerous benefits to your country including:

- promoting conservation action by convincing government officials and the general public of the importance of setting aside biodiversity-rich natural areas for generating income from tourism; efforts to secure Klein Bonaire as a protected area are a good example of this category;

- encouraging productive use for conservation of lands which may be rich in biodiversity but are marginal for agriculture and thereby enabling large tracts of land to remain covered in natural vegetation; examples here are the former plantations on Curaçao which could be turned into touristic attractions without loosing their biodiversity;

- stimulating investments in infrastructure and effective management of these natural areas; an example here is the much needed investment in the infrastructure of Bonaire's Washington-Slagbaai Park;

- providing employment opportunities to rural areas, thereby reducing the pressure to cultivate marginal lands or to abandon the countryside for the overcrowded towns (examples here are the trail managers who have been employed on Saba and Statia)

- stimulating secondary industries to support tourism, including providing supplies required by tourist accommodations such as fruits and vegetables at the same time helping towards the reduction of waste and transportation as for example the 'produce to reduce' initiative of the Farmers Coop on Statia.

- bringing in funds for financing nature conservation activities, such as the management of protected areas, education and research.

7.4 How to strike a balance between tourism and biodiversity

There are four general principles for planning tourism development in a manner which is sensitive to biodiversity:

1. **Planning for tourism must be integrated with other planning efforts, as an integral part of a resources management plan founded on sound social and ecological principles**; protected areas which are potential tourist destinations should be well integrated in this planning effort. On most of the islands some kind of physical planning is already on its way. This planning includes tourism development as well as natural areas and their biodiversity (see Chapter 2).

2. **Assess the impacts of tourism development projects on biological diversity**; tourism requires capital infrastructure and inevitably effects the environment, including biodiversity. A good way of getting an insight in the possible effects is to carry out a biodiversity impact assessment. This type of assessment is often seen by developers as yet another bureaucratic hurdle; but a well executed biodiversity assessment is very much to the benefit of both developer and biodiversity. The impacts of construction activities can be disastrous for the terrestrial and marine environment; it is therefore extremely important that these development projects be guided by a set of procedures or regulations. (see box building guidelines)

3. **Determine the level of visitor use the natural area can accommodate, with high levels of satisfaction for visitors and few negative impacts on biodiversity and whilst ensuring that this level is not exceeded**; this carrying capacity is determined by a number of factors such as **environmental factors** (available space and fragility of the ecosystem, distribution of rare plants and animals and the vegetative cover) **social factors** (activity patterns of visitors in time and space; sort of interests and level of nature awareness) and **managerial factors** (such as providing information material, improving the quality of walking trails and policies to encourage off season use).
   Once the carrying capacity has been determined the volume of visitors can be tuned to the capacity by controlling access to the islands in general, by limiting the number of hotel rooms, setting the level of the users fee, focusing advertisements on other targets or activities, as well as by spreading the load of tourists over the season.

On the basis of the determination of their carrying capacity:

4. **Draw up management plans for all natural areas which are visited by tourists, paying special attention to biodiversity concerns.** These management plans (supported by a zoning plan) should guide all developments within the protected area important for biodiversity. Planning specifically for touristic uses is one part of the overall management planning process for the area. Drafting a management plan starts with the collection and analysis of data on biodiversity. Next step is to identify potential resource conflicts and define options for solving them. Developers often seek hotel locations as near to outstandingly beautiful and unique natural sites as possible; this may cause disturbance or damage to the biodiversity or integrity of the protected area. Developments should therefore be preceded by a zoning plan. Next comes the determination of objectives of the area. These objectives serve as indicators for the tourism facilities which are appropriate to a touristic zone. Questions like 'what type of tourism do we go for', 'who is to be the primary beneficiary' , 'to what extend should an area become dependent on

tourism' and 'what scale of tourism should be promoted' are certain categories of objectives to be addressed.

After the plan has been drafted and put into action it is essential to keep a close eye on developments; construction guidelines are a useful tool in this respect. Bonaire is presently developing such guidelines. (see Box 29)

Coastal development guidelines

Building practices

Building and construction practices should aim to minimize all possible negative impacts (sediment, run off, garbage) on the marine environment, particularly the loss of soil by wind and air. The following vehicles have been identified in this context, to limit and prevent marine pollution by building and construction activities:

1. Environmental Ordinances (the Marine Environmental Ordinance)
2. Building code
3. Lease permits
4. Conditions on development or building permits
5. Zoning plan
6. An information booklet with guidelines for constructors/developers

Examples of regulations to be included in the zoning plan are:

- Ideally a set back line should be established with no construction allowed within 50 meters of the high water mark, in beach areas 50 meters from the inland en of the beach.
- No beach creation or replenishment may be allowed, except where it is contained behind a suitably high (sufficient to provide an adequate barrier to storm waves) permanent retaining wall.

Guidelines to be included in the information booklet are:

- No dumping of any material in the sea.
- Facilities must be continuously available on site for the containment and regular collection of building waste and garbage - these must be located as far as possible from the water's edge to minimize the possibility of accidental pollution.
- No dumping of construction material, particularly soil, and or similar within 50 meters of the high water mark.
- No washing down of construction site (e.g. areas used to mix up concrete) or equipment within 200 meters of the coast, especially no oil changing and no cleaning of cement mixers.
- For any work done within 20 meters of the high water mark, the construction site must be completely surrounded by a double silt net set in sufficient depth of water that any sediment produced will be contained within the net..
- For work on a cliff site precautions must include nets placed above the water level to prevent larger debris from falling into the water.
- Any cement used within 20 meters of the high water mark must be prepared at a remote site.
- Riprap used for controlling coastal erosion must be pre-washed at a remote site and placed by a crane (not bulldozer).
- No modifications may be made to the shore line without additional permits.
- Removal of bedrock is strictly prohibited under all circumstances, as bedrock contains the natural accumulation of sand - if removed, this sand is washed onto the reef smothering and killing coral.
- Use of the construction barge requires written permission of the Island Government.
- Additional permits are required to place or remove anything below the high water mark.

In the building or development permits the following rules could be included:

- Where land is cleared, a containment wall or ditch must be in place between the cleared land and the water to prevent or slow storm run off.
- Once land is cleared it must be developed within 1 month in order to minimize soil erosion by wind and water
- No constructions may encroach on or overhang the water.
- Clearing of land must be kept to a strict minimum, with the clearance of more than 500 sq. meters prohibited during the months November till February.
- Vegetative buffers must be planned to control run off and all trees and shrubs with a diameter of more then 5 centimeters must be left in place.
- No hydrocarbon storage facilities within 100 meters of the coast, due to the high toxicity of hydrocarbons to the coral reefs.
- No dredging is allowed in the coastal zone or adjacent salinas as this increases sedimentation levels, reduces the biological oxygen demand (BOD) and releases potentially harmful chemicals into the water.
- Bulldozers or similar may not be used to move material within 20 meters of the high water mark, without direct supervision by public works

Box 30

7.5 Where do the Netherlands Antilles stand?

The nature policy of the Netherlands Antilles aims at conserving natural areas as well as at protecting species. In addition to the protected areas which already exist the Government of the Netherlands Antilles would like to see at least one more natural area of great biodiversity and relatively large proportions be set aside as a protected area on each island. Outside funding is sought for these investments in the future.

Statia's National Parks

Statia has set an extraordinary example in this respect by declaring the Quill as well as the Boven area a legally protected natural area by Island Ordinance of 30 December 1996. These two areas have a great degree of biodiversity and are housing the endemic plant and animal species of the island. Both the Quill and the Boven area qualify as National Parks and will receive this status after the appropriate management of the areas has been secured. The Island Government of Statia has proven great foresight in their planning for the future. With the proper management in place and with two National Parks on the map, Statia can cater for the growing segment of tourists interested in nature oriented holidays.

Box 31

The Nature Policy Plan of the Central Government as described in the Policy Outlines of September 1996 needs to be translated into island Nature Policy Plans by the Island Governments in the coming two years. The Central Government is prepared to assist the islands in drawing up these plans by providing the necessary expertise. In the island Nature Policy Plans, the areas to be set aside for biodiversity conservation should be determined and the route to achieve the protected status should be described. It is evident that where physical planning activities are on their way, the natural area planning should form an integral part of the physical planning process.

As soon as the natural areas have been set aside for biodiversity conservation, management plans will have to be drawn up. Again here the Central Government is prepared to assist the islands. These management plans will be drawn up by the future managers of the areas.

On our islands the management of existing protected nature has largely been delegated to Non Governmental Organizations (NGO's). They are providing their contribution to the conservation of biodiversity with great enthusiasm. However, the income out of their membership or the entrance or users fees of the protected areas only just covers a minimal level of management; this limited management in turn may lead to damage to or even loss of the biodiversity of the natural areas.
Structural financial support from the Island Governments to the day to day management of nature is therefore needed to secure the appropriate level of biodiversity conservation. Island Governments may in turn tap the tourist taxes for this long term investment purpose.
Funds for capital investments inside or in support of protected areas, such as the construction of roads and other infrastructure, are far beyond the reach of these NGO's and should be provided by either the Island Governments or through external funding.

7.6 Conclusion

Tourism and biodiversity are natural partners, and each should benefit from the other if both are properly managed. Sufficient resources must be devoted to managing the natural areas, but It is often difficult to convince the Island Governments to allocate sufficient funds for this purpose. It is however in the interest of both tourism and conservation that the necessary investments are made.
Governments and the NGO's cannot be expected to carry the entire burden themselves, so tourism should do everything in its power to support more effective conservation action. The travel industry including developers, airlines, travel agencies, hotel and resort operators and travel magazines have an opportunity and a responsibility to help maintain the biodiversity on which their business relies.

Finally tourists themselves are becoming more interested and involved in conservation; after all it is they who benefit the most directly from visiting places with outstanding biodiversity. Appropriate education materials, opportunities to participate in conservation action, guides who understand conservation and many other means should be made available to the tourism industry to help tourists help biodiversity.

7.R Recommendations

- *integrate biodiversity conservation into tourism planning*
- *execute biodiversity impact assessments for tourism projects*
- *draw up island nature policy plans identifying protected areas*
- *set aside large and biodiverse areas as protected nature*
- *determine visitors carrying capacity for natural areas*
- *develop systems for contribution of visitors to biodiversity management*
- *formulate management plans for protected areas*
- *encourage islands to finance nature management on structural basis*
- *involve tourists actively in biodiversity conservation*

Chapter 8 : Caribbean Cuisine: food for thought

8.1 Catch of the day, catch of tomorrow?

Species of plants and animals on and around small islands, like the Antilles, are extremely vulnerable, species that don't have a migratory character (like the adventurous tourist) are doomed to become extinct if not properly protected. The historic example here is the Dodo that once thrived on the island of Mauritius but now only figures in our natural history books.
Tourism adds more pressure to the survival of species which are used in the famous Caribbean cuisine. Kadushi or cactus soup may deprive the drier islands of their last remaining natural vegetation and the sopi d'iguana may decimate iguana populations. Fortunately for this plant and this animal tourist have not yet taken a great liking to these 'extreme' dishes, but the story is different for for instance the Karko or Queen Conch alias the *Strombus gigas*.

8.2 The conch

The Conch is widely promoted on the daily menus throughout the Netherlands Antilles. The Conch however is an animal that is threatened with extinction. The situation is so bad that the Convention on International Trade in Wild Animals and Plants (CITES) has decided to put the Conch on their list of species which are strictly protected. The export of species on this list is simply banned. In our waters the Conch has basically disappeared; it has been grossly over fished and most Conch is now imported illegally from surrounding countries. If the Antilles would take the alarming status of the conch seriously, a total ban on collection and consumption should be the way to go. It will however not be an easy task to ban the Conch or Karko from the day to day menu of our islands. Not promoting the consumption of this animal by tourists wil l at least be a first step.

8.3 The sea turtle

The situation for the sea turtle unfortunately does not look much brighter. Tourism has deprived the sea turtles of most of their undisturbed nesting beaches and the few turtles which reach our sandy shores run in danger of ending up in fishing nets and up on the menu: illegal on most islands but still a delicacy for many. Nests are being plundered for the eggs and sea turtle products can still even be found in supermarkets.

Produce to reduce

Sint Eustatius is presently reviving its horticulture. Since the goats are being brought under controll, other sectors of the economy are getting a chance. The purpose of the revival of horticulture is not only to boost the island economy and give a positive to employment; the slogan of the Statia Farmers Union is namely: PRODUCE TO REDUCE: produce horticultural products locally, with minimal chemical inputs, for local and regional consumption, no packaging, minimal transportation and thus minimal environmental pressure. In future, carrots, potatoes, salads, tomato's and many other local horticultural products will carry the quality seal of the Statia Farmers Union.

EC makes error in regulation

WILLEMSTAD - The Executive Council made a mistake in amending the Island Ordinance concerning legal fees, precario rights and retributions. This according to a spokesman. The ordinance states that imported turtle meat must be submitted to an inspection, whilst the Central Government already prohibited import and export these animals and their products five years ago.

Yesterday, the legal committee of the marine environmental organization Reef Care, raised the alarm over the change of the island ordinance. The change concerns the augmentation of the charges for inspection of imported fresh or frozen meat. The types of meat involved are of cattle, calfs, horses, pigs, sheep, goats and turtles. According to Reef Care the last category should be removed, because according to a five year old Central Government rule, all import of this kind of meat to the Netherlands Antilles are been prohibited.
A spokesman of the Executive Council admits that during the adoption of the changes an error in the text occurred. According to him, the newly drawn up text was derived from an old one. "Import of turtle meat is in contradiction with a higher regulation. Since this regulation has been put in force, there has been no import of meat from this species. The ordinance has to be changed. The word 'turtle' must indeed be removed from the list. At the moment the regulation is in process of being adapted."

Source: Beurs en Nieuwsberichten, 18/02/97
Box 32

8.4 The lobster

Lobster is the third example of a marine species which is presently being heavily overfished. Four basic rules should be set in order to protect lobster populations from overfishing and becoming an endangered species:

a) no egg bearing species may be taken
b) a size limit should be set
c) a bag limit should be set and it should be prohibited for visiting divers to take lobster
d) a closed season should be observed

In addition the status of the Lobster should be carefully monitored, not least of all by the fishermen themselves. Consequently the restaurants will have to explain that 'the Lobster season is yet to begin'. In general a greater variety of coastal fish should be promoted amongst tourists, to prevent overfishing of single species such as the grouper, the parrotfish or red snapper. Close monitoring of fisheries is recommended for all islands in order to keep our coastal fish stocks intact at sustainable levels.

8.R Recommendations

- *encourage restaurants to strike Conch from their menus*
- *take firm steps to ban catch and consumption of sea turtles and turtle products*
- *prohibit lobster with eggs to be taken*
- *introduce a lobster season to allow females lay their eggs*
- *set a size limit for lobster catches*
- *prohibit visiting divers from taking lobster*
- *promote greater variety of fish to take pressure of single species*
- *monitor coastal fish stocks to remain at sustainable levels*

Therefore we advise you and the tourists on our islands to think twice about buying:

9.2 Corals

Coral reefs form the biological basis of many marine communities. Dependent on the health of local corals are the many colorful marine fish that visitors enjoy observing and that provide food and income for local fishermen.
The semi-precious black corals heavily exploited for jewelry, are protected by many Caribbean nations. Yet they are being sold to tourists openly on the tourist markets and in shops. Alive these black corals resemble plants although in fact they are colonies of animals. The black material used in jewelry forms the internal skeletal structure of the living coral and grows very slowly. Even the smallest parts of dead corals, black as well as any other type, are illegal to export.

9.3 Shells

The Queen Conch, a species of great ecological importance to Caribbean sea grass ecosystems, has been over collected in many area s and certainly around the islands of the Netherlands Antilles. Historically -as is witnessed by the presence of fossil remains on the small islands in the Spanish Water on Curaçao for instance, or by the more recent reminders of mass consumption at Lac Cai on Bonaire- the meat of the Queen Conch was a staple food item in the region and is still served legally in the Netherlands Antilles (see Chapter 8). Conch shells have been popular ornaments in Europe and North America. Many Conch populations, such as almost all the populations in the Antilles, have declined to an alarmingly low level and the Government is considering banning the collection of Conch completely.

9.4 Sea turtles

Despite recent initiatives for their protection, sea turtle populations are declining, in some areas severely, throughout the Caribbean and worldwide. Because all sea turtle species are endangered or threatened, they are protected in the Caribbean under domestic and international laws. Yet poaching and illegal commerce as well as stealing the eggs from the nests, remain serious problems. Most sea turtle products offered to tourist in the Caribbean, including stuffed turtles and tortoiseshell jewelry, are made from the highly endangered hawksbillturtle. Any form of export of sea turtles or sea turtle products is illegal under Antillean law.

9.5 Birds

Parrots are colorful, humorous, engaging and frequently endangered species. Many Caribbean islands support small populations of extremely rare parrot pecies. In our case only Bonaire (and since a few years also Curaçao with a small but growing group of escaped Venezuelans species of *Amazona barbadensis*) supports an extremely rare subspecies of the Amazona barbadensis, which has only around 300 individuals remaining in the wild. Many more of them are unfortunately living caged lives on Bonaire and Curaçao. Parrots are taken from the wild as nestlings or smuggled in from other islands or

Chapter 9: Living memories

9.1 Introduction

The Caribbean is not only a region of remarkable beauty, it also contains some of the richest environments on land and under water on Earth. It is the home of six of the worlds seven sea turtle species and 14 percent of the world' s coral reefs. Nearly one third of the plants and animals that live on our islands are very special: they are found nowhere else in the world. No wonder tourists want to take home Caribbean souvenirs made from nature products. But by taking home souvenirs from nature, they are contributing to the extinction of unique species.

Many Caribbean nations, including the Netherlands Antilles, protect their valuable natural resources under domestic laws. An almost as large number of nations is party to an international agreement, the Convention on International Trade in Endangered Species of Wild Flora and Fauna, or in short CITES. This comprehensive wildlife treaty, signed by more then 120 nations, regulates and frequently prohibits trade in threatened wild plant and animal species. The Netherlands Antilles are not yet party to this convention, but the law that will effect our membership lies before Parliament. In the meantime we have already voluntarily agreed to follow the CITES procedures, issuing permits for legal trade in endangered species.

By collecting or purchasing the plants and animals which are protected under CITES, tourists not only contribute to the disappearance of our unique species, but also undermine the wildlife conservation efforts of our governments and the NGO's which support them in nature management. Tourists also risk having their souvenirs seized, having to pay a sizable fine.

Buyer beware

Many souvenirs are made from protected species of wild animals and plants that where acquired illegally. Don't buy protected species of plants and animals or products made from them, unless you are absolutely sure that they come from legally approved sources. Avoid making a foolish damaging purchase; learn as much as you can about what you should avoid buying and : when in doubt don't buy !

Source: CITES/WWF Caribbean brochure
Box 33

the Latin American mainland. Tourists shouldn't be tempted to carry a parrot home. It threatens the parrots survival in the wild and it is illegal. Let us therefore set the good example and keep no caged parrots in or around our hotels and restaurants.

9.6 Plants

Plants are wildlife too. Many species of plant in the Caribbean re endemic and are protected under CITES and our national or Island laws. The Caribbean wildlife authorities, in our case there is concern about the heavily exploited and but often rare and delicate orchids of the Caribbean Forest. Especially the mountain forests of Saba, Statia and Sint Maarten are the habitats of endangered species which are protected under law. The only orchids which you are allowed to export, are orchids that are grown in licensed plant nurseries and that come with an official certificate.

9.R Recommendations

- ***the Netherlands Antilles should become party to CITES as soon as possible***
- ***hotel souvenir shops play an informative role: they should not sell wild plant or animal species or articles made of any endangered species***
- ***hotel gardens do not become more interesting with caged animals***
- ***the souvenir branch should be actively discouraged from selling live or dead (parts of) wild plants and animals***
- ***souvenir trade should be informed about CITES and trade restrictions***
- ***the tourists should be informed about CITES, its reasons and sanctions***
- ***customs staff should be trained in applying the national and island conservation laws and the CITES regulations***

Chapter 10: How to get sustainable tourism across

10.1 Introduction

There are quite a few **target groups** which need to be convinced of the need for sustainable tourism :

First of all the **Government of the Netherlands Antilles**. The Government, by underwriting the Policy Document 'Outlines of the Environmental Policy 1996-2000', has accepted 'Tourism and the Environment' as one of the five priority areas. Under this priority area, the road to sustainable tourism is described in general terms. The next step is to come up with a fully fledged policy on sustainable tourism that is carried by the full width of the Government.

An extremely important target group in this context are the **Island Governments**. Most of them have already accepted the concept of sustainable tourism, be it explicitly or implicitly. Bonaire and Saba are the two islands where governments have given nature and the environment a central role in their tourism planning and policy. Other islands will inevitably follow this example.

Investors and developers are a another target group which needs to be convinced of the need for sustainability in all its aspects and so are **constructors** who realize these developers dreams. **Hotel managers** and their financial bosses are a target group on their own. Not only hotel managers are important, equally important are their staff: **food and beverage managers**, **technical maintenance staff**, **cleaning staff** and other hotel support services. **Restaurants** are another target group, as are **souvenir shops**. Then there are **tourism operators** and providers of all kinds of **tourism supplies, facilities and services**, such as **local or regional transportation** and **laundries**. The **non governmental environmental organizations** already play an important role in assisting the Island Governments in managing nature and they can also form an important bridge to the **general public**. Then there is 'the other side', **international tour operators** who buy the airplane seats from **international transporters** and rooms from the hotels and convince the tourists to come here. Part of 'the other side' is also our network of overseas **tourism promotors**. They are the people that 'sell' our islands to the public. And then there is by far the most important factor in tourism: **the tourist**. All these target groups have their own language and all need to be approached in a different way.

We have the advantage of not being the first to break our heads over making our tourism sustainable. Others have already done a lot of good work in creating awareness materials in this context and in trying to get the message of sustainable tourism across. International organizations such as the United Nations Environment Program (UNEP) and the

Caribbean Tourism Organization (CTO) have contributed to the development of information materials and action packs. So has the tourism industry itself. An example here is the German Travel Group TUI, which by the way since a year or two also owns the Dutch firms Arke and Holland International.
Even national governments such as the Government of the Netherlands have gone as far as to show concern for the environmental effects of their nationals as international tourists.

In this chapter some examples of these messages on sustainable tourism for the various target groups are provided. We have decided not to add too much text, the examples speak for themselves and may inspire us to develop our own messages towards sustainable development for the various target groups.

10.2 Constructors

See Chapter 2: Tourism and Planning

10.3 Hotels

Ecotel 2000, hotel of the future

On November 7,8,9, 1996 the first 'Horeca Ekspo Kòrsou' was held in the International Trade Center in Curaçao. This was the first major event for the hospitality industry in Curaçao. Three days of competitions, seminars, tasting food & beverage, a trade show and product demonstrations.

Unusual was the booth of Ecotel 2000, the environmentally friendly hotel of the future. An initiative of the Environmental Committee of the CHATA. More than 1000 visitors were led through a hotel lobby with a desk made of waste glass and wood. The tour continued through a restaurant with on one side of the table a romantic dinner for two and on the other half the waste that this dinner produces. An eye-opener! Much attention was given to water, a scarce and expensive commodity in the Caribbean. A garden was shown with local plants needing less water, pesticides and fertilizer. Shown were also a reverse osmosis installation making fresh water from sea water and a water recycling installation. Finally a bathroom with water saving appliances such as water-saving taps, shower heads and toilets completed the tour. The lighting, all energy saving type of bulbs, was powered by solar energy. Details were not forgotten: the carpet on the floor was made from sisal (hemp), all paper in the stand was recycled and even the wall covering was cotton.

Source: TradeWind, ALM Inflight magazine, winter 1996/1997, p.30
Box 34

Resume of 'Greening Your Hotel' environmental seminar

As a result of the one day seminar, 'Greening Your Hotel', the participants made the following recommendations to further their individual efforts and ensure success.

1. FOLLOW UP MEETINGS for seminar participants which would allow them a platform for the exchange of information and ideas. These meetings should be set on a regular basis and be facilitated by the CHATA Environmental Committee. This would be an ideal situation to monitor the progress of the participants over an extended time. Each participant should develop and present their 'Environmental Action Plan' at the initial meeting and a progress report every meeting there after

2. TRANSLATION OF MATERIALS. The concept of conversation signage was well received, however the current CHA materials are not adequate due to language differences. Signage for both guests and employees should be translated. This would be an excellent project for CHATA to sponsor, placing the CHATA logo on the signage. Physical samples of the CHA signage will be sent as models.

3. A LIST OF LOCAL CONSERVATION OR ENVIRONMENTAL GROUPS. The participants felt that this would be useful in order to solicit help in certain aspects of the greening. Examples would be the Botanical Gardens could help to identify plants with botanical and common names, Coral Reef protection could provide/ sell posters on coral types and conservation tips to be displayed at activities areas, Limpi Bunita could make a brief presentation on trash for staff to help organize hotel teams for Beach Clean up Days.

4. ENVIRONMENTAL CORNER IN NEWSLETTER. This would be instrumental in updating participants on up coming meetings, Environmental Celebration Days or the distribution of information. Special reports on technologies could be included with price analysis (distributors could provide this information)

5. INDUSTRY MISSION STATEMENT. CHATA as the organizing body of local hoteliers should work with participants and Environmental Committee to develop an industry Mission Statement. The Statement could be patterned after the CHA Charter, page ii of Toolkit. A nicely done Mission Statement could be presented to participating hotels to hang in lobbies as an indication to guests of their environmental business practices. Another larger copy should be made for employee cafeteria or staff areas. The Statement should be accompanied by set of environmental policies for the hotel (developed by each individual hotel).

Furthermore, as the instructor I recommend that the Environmental Committee of the CHATA develops a 'Green Hotelier Award' which recognizes the greatest commitment and progress in environmental practices

The Environmental Committee should also encourage participation on part of local hoteliers in the CHA / American Express Award, which will include a category specifically for the participants of the seminar and be based on new initiatives and commitment.

Source: Kelly Robinson, Environmental Officer, Caribbean Hotel Association.
Box 35

10.4 Food and beverage

A research project by the UNA Chair for Environment and Development and the 'Waste Group' shows the sorts of waste produced by restaurants and comes up with a series of useful recommendations.(see box 36)

Waste	Guests	Company	Government
Glass	Ask for returnable bottles	Use and collect returnable bottles	Implement deposit on bottles, collect glass
Organics	Order what you can eat	Use as animal feed or as compost	Stimulate composting
Tins	Ask for fresh juice	Use fresh juice or other packaging	Initiate collection and processing system
Grease		Collection for processing	Stimulate processing through information
Plastic	Ask for glass or re-usable goods	Avoid use, use as much as possible sustainable materials	Make more expensive through taxes and stimulate use of sustainable products
Aluminum tin	Ask for glass bottles	Do not purchase, otherwise collect	Discourage production and use
Aluminum foil	Refuse as packaging	Reduce use, use alternative	Make more expensive and colle
Foam	Refuse	Use crockery	Make more expensive

Source: UNA Chair for Environment and Development and the 'Waste Group'
Box 36

10.5 Souvenir shops

See Chapter 9: Living memories

10.6 Tour Guides

Bonaire

The Bonaire Tourism and Training Center (BTTC) has recently initiated a new initiative, called the 'Tour Guide' course. In the past when cruise ships called on Bonaire, local people were recruited to make tours around the island with the cruise tourists as uneducated 'tour guides'. There was no need for training and education of those guides, because such cruise calls happened only twice a year. Recently cruiseships have altered their route and are now calling on Bonaire once every two weeks. The need for educated tour guides has become urgent.
The BTTC provides in the necessary education for locals to become a tour guide. The first part of the course addresses issues like 'how to treat tourists', 'how to address them' and 'how to present yourself and the island'.
The second part of the course consists of a separate course 'Tourism Awareness', which is also being performed for the entire Bonairean population. The aim of this course is to let Bonaireans form a clear understanding of certain aspects of the tourism industry and of Bonaire in specific, to make them value and cherish Bonaire and to understand and become aware of the importance of tourism.
The underlying thought is, that the more the people know about the island, the more they will appreciate and love it. The latter will ensure that Bonaireans are willing to put effort in keeping Bonaire, its culture and nature as beautiful as it is now.

At the moment the BTTC is thinking of establishing some sort of a license for locals, who passed the Tour Guide training. This license will enable them to set up a small scale tour guide corporation, which can aim at residential tourists as well as cruise tourists. Through this initiative not only the awareness of nature and environment will grow among the local inhabitants, also tourists will be made more aware of the natural beauty of Bonaire, which might influence their behavior in a positive way.

Source: Bonaire Tourism and Training Center
Box 37

10.7 International tour operator

An example of a large international tour operator is the German company TUI. This company screens the products it offers for environmental sustainability on a yearly basis. The destinations and hotels included in TUI's program are selected on environmental criteria.

Tourism Destinations, TUI and the Environment

The TUI corporate policy states that 'the protection of an intact nature and environment are of outstanding importance to us'.
It must be our fundamental concern to preserve the natural basic substance of the product we are offering: sea, beach, peace and quiet, landscape, forest, the animal world, nature!
How do we work on this? Our principle of good environmental practice is: do it, act, get on with what can be done, even if they are only small steps down the right road. We look for allies and we support exemplary projects, we use their experience. We cooperate with critics and environmental associations and learn from this. We build up networks. Also, we take part in the public discussion to prove our ecological commitment and we allow others to test our credibility.
With more than 150 TUI-destinations worldwide and even more counting resort areas, with the main emphasis in the Mediterranean basin, TUI resort managers, in the sixth year now, compile a yearly status report on the environmental situation in our holiday areas.
As part of the contract conditions, our hotel partners have to fill in our environmental checklist for hotels every year. TUI's environmental checklists for hotels, clubs and holiday apartments will serve as a basis for a dialogue between contracting managers and hoteliers. Well aware that the practical application of the motto 'Quality thanks to an Unspoiled Environment' can also cause problems, TUI invariably seeks to combine the essential claims involved in operating hotels ecologically with absolutely concrete information about feasibility and the viability of any measures required.
In more than 30 million TUI catalogues we inform our customers in short texts about the regional situation of 'nature and environment' at our destinations. We emphasize environment protecting facts and figures but certainly do not remain silent about environmental problems.
The German customer is thus learning, from year to year increasingly, to differentiate in our catalogues between which destination is more and which is less concerned with the environment! In future, this will be a decisive factor for choosing a holiday at the travel agent's: our marketing research in German speaking regions has clear evidence of this.
The TUI guest questionnaire, which hundreds of thousands of TUI customers are sending to us, shows us that already today, our guests have amazingly accurate notice of the sea-water quality, the beach quality, the landscape and the environmental situation in their holiday region.
In more than 25 international subsidiary companies of TUI - hotel chains, travel agencies, tour operators - we try to demonstrate the sort of vital environmental protection measures we expect from our other contracting partners: saving water and energy, waste avoidance, utilization of non-potable water, through to solar energy and even experience an enormous amount of acceptance and sympathy from the inhabitants and even the media in our destination regions. The reason is they know that it is their future which is at stake - and that of their children.

Source: TUI
Box 38

Tour operators are beginning to include environmental information in their brochures. The environment and nature are becoming strong selling points. The Netherlands Antilles could promote their natural environment even more prominently.
(See box 39)

U VLIEGT MET KLM

AIRMILES Sparen en Genieten

Bonaire

Bonaire is voor duikers één van de meest geliefde bestemmingen ter wereld. Bij de koraalriffen vinden duikers en fotografen een waar paradijs. Ook natuurliefhebbers en rustzoekers zullen hier prima aan hun trekken komen en moeten beslist een bezoek brengen aan het Nationale Park Washington Slagbaai met een zeer gevarieerde flora en fauna. Het eiland staat wereldwijd bekend om z'n flamingokolonie's, waardoor Bonaire ook wel 'Flamingo eiland' wordt genoemd. In het zuiden bevinden zich enorme zoutpannen met de bekende slavenhutjes. Het eiland heeft een dorps karakter en op Bonaire vindt u dan ook geen bruisend nachtleven: de hotels en enkele gezellige restaurantjes en café's in Kralendijk bieden echter genoeg ontspanningsmogelijkheden.

1. CAPTAIN DON'S HABITAT
2. SANDDOLLAR
3. SUNSET BEACH
4. HARBOUR VILLAGE
5. DIVI FLAMINGO

Source: Holland International, zomer 1997
Box 39

10.8 International carrier

German international (mega) tour operator TUI sets a good example by choosing its partners for air transport selectively; and in informing its clients about effects of the various modes of transport they can choose from. Others will no doubt follow this example. (Box 40)

Airplane and Environment

The big airlines cooperating with TUI mainly make use of modern airplanes, equipped with environmental friendly techniques.

Hapag Lloyd has at its disposal 23 aircrafts of the type Boeing 737/500, 737/400 and Airbus A310, which is on of the youngest and most modern fleet in Europe.
Condor mainly makes use of Boeings 767 and 757, which have for instance a fuelconsumption level of only 2,6 l to 3,8 l per passenger per 100 fly-kilometers.
LTU flies with these modern airplanes as well (Boeings 767 and 757) and also makes use of the MD 11 (McDonell Douglas), built after latest acknowledgements.

Because all these types of aircraft have low energy consumption, they produce 20% less Nitrogen oxides, 50% less Carbon monoxide and about 90% reduced and unburned Hydrocarbons!

The reduction of noise nuisance because of the usage of these types of aircraft is about 90%.
Furthermore, many airlines make use of non disposable knives, forks and plates on board of the airplanes, to relieve pressure on the environment. Hapag Lloyd at the time avoids, because of the switch from plastic to non disposable knives and forks, 37 tons of plastic waste yearly. Environmental actions like for instance LTU's initiative to transport back its waste from the Maladives, form a another example of environmental friendly behavior.
TUI's Environmental Officer and Environmental Coordinator keep the lines of communication open with the Environmental Officers of the airlines to initiate further Environmental actions.

Source: TUI
Box 40

10.9 Visitors Governments

Some Governments feel that the responsibilities for their nationals and the impact of their activities stretch beyond national borders. The Netherlands for example have a policy on outgoing tourism and the environment.

The Netherlands

'International tourism is an important growth sector. A healthy and unpolluted environment is essential for this. Slipshod environmental policies would kill the goose that lays the golden eggs. That is why the Netherlands wants to promote sustainable tourism. All parties concerned - the governments, the tourist industry, the transport sector, nature organizations and the customer - will be involved in the debate. The focus will be on the Alps, the Mediterranean, The Netherlands Antilles and Aruba and the developing countries. The aim is to reach agreements on how to limit the damage inflicted by Dutch tourism on nature and the environment abroad and how to reduce the pressure on the environment from transport to and from holiday destinations. The positive effects of international tourism on nature management will be explored and alternatives will be sought for nature-oriented holidays closer to home. The public will be educated by travel brochures that will include information about nature and environment. This might be a first step toward a code for tourism and the natural environment.'

From: Program International Nature Management 1996-2000, the Government of the Netherlands, page 22. Box 41

10.10 The tourist

Informing tourists themselves about nature and the environment helps us to create more understanding and an environmentally conscious attitude. In the hotel room for instance simple suggestions may make a big difference in the consumption of water and energy. Some examples are provided by CHA/CAST.

SLEEP WELL!

Enjoy our environment.
Help us preserve it.

Our policy is to change your bed linen daily.

If you feel this is unnecessry, place this card on your pillow in the morning when your bed is made, we will not change the bedlinen, but we will be able to reduce our use of fresh water and detergent.

THE CHOICE IS YOURS!

The Caribbean Cares

Our Salt Water Seas
Are Special
but
Our Fresh Water
Is Precious
We're happy to serve
drinking water
on request

The Caribbean Cares

Turn it Off!

Our water is a precious commodity. Please help us continue to have an ample supply by using it wisely.

When You Go Out!

The Lights Should Too - Help Us Save Electricity

The Caribbean Cares

Source: CHA/CAST
Box 42

10.11 Conclusion

Getting the message of sustainable tourism across is an important and multi facetted task. Governments, hotel associations, transporters and tour operators should join forces to coordinate and steer awareness activities all in the same direction: towards sustainable tourism. Hopefully this chapter has given some inspiration in that respect.

10.R Recommendations

- ***stimulate hotels to join the Caribbean green hotel program***
- ***promote greening of hotels through environmental awards***
- ***appoint staff members as environmental focal points in your hotel***
- ***develop or use existing (CHA) information materials for the greening of hotels***
- ***inform hotels about fiscal facilities for environmental upgrades***
- ***train hotel staff in environmental awareness***
- ***form environmental committees in the island hotel associations***
- ***use international carriers as providers of information on the environment to tourists***
- ***organize special training programs for tour guides on nature and environment***
- ***develop information material on our nature for cruise tourists***
- ***actively involve NGO's in getting sustainable tourism across***
- ***inform the souvenir branch about 'forbidden souvenirs'***
- ***inform the tourists about 'forbidden souvenirs'***
- ***stimulate international tour operators to include environmental information in their brochures***
- ***the Central Government should coordinate and stimulate awareness activities towards sustainable tourism.***

Appendices

Appendix A: Literature List

Appendix B: List of Abbreviations

Appendix C: Useful Addresses

Appendix A: Literature List

1997 **Bonaire Tourism Strategic Plan**, Tourism Planning and Research Associates, draft January 1997.

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Appendix B: List of Abbreviations

ALM	Antilliaanse Luchtvaart Maatschappij
CAST	Caribbean Action for Sustainable Tourism
BTTC	Bonaire Touism and Training Center
CBS	Central Bureau of Statistics
CHA	Caribbean Hotel Association
CHATA	Curaçao Hotel and Tourism Association
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CPA	Curaçao Ports Authority
CTDB	Curaçao Tourism Development Board
CTO	Caribbean Tourism Organization
EOP	Island Development Plan (Eilandelijk Ontwikkelings Plan)
IHEI	International Hotels Environment Initiative
IUCN	The World Conservation Union
Marpol	Convention on Marine Pollution
MiNa	Environmental Section (Sectie Milieu en Natuur)
MiNa-Fund	Envrionmental Fund for the Netherlands Antilles (Milieufonds Nederlandse Antillen)
NGO	Non Governmental Organization
SHTA	Sint Maarten Hotel and Tourism Association
TCB	Tourism Corporation Bonaire, Bonaire Tourist Office
TDF	Tourism Development Foundation, Statia
UNA	University of the Netherlands Antilles
UNEP	United Nations Environment Program
VoMil	Department of Public Health and Environment (Departement van Volksgezondheid en Milieuhygiëne)
VROM	Department of Housing, Spatial Planning and the Environment (Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer)
WWF	World Wide Fund for Nature

Appendix C: Useful Addresses

Tourism Bureaus

Curaçao Tourism Development Bureau
Pietermaai 19
P.O. Box 3236
Curaçao, N.A.
Tel: (599-9) 4616000
Fax: (599-9) 4615017

Mr. P. Sampson

Bonaire Tourist Office
Kaya Libertador Simon Bolivar 12
Kralendijk
Bonaire, N.A.
Tel: (599-7) 8322/8649
Fax: (599-7) 8408

Mr. R. Pieters, director

Sint Maarten Department of Tourism
Imperial Bldg. W.J. Nisbeth Road
Philipsburg
Sint Maarten, N.A.
Tel: (599-5) 22337/22868
Fax: (599-5) 22734

Mr. C. de Weaver, director

Sint Eustatius Tourism Development Foundation
Fort Oranjestraat
Oranjestad
Sint Eustatius, N.A.
Tel: (599-3) 82213
Fax: (599-3) 82433

Mrs. A. Francis

Saba Tourist Bureau
P.O. Box 527
Windwardside
Saba, N.A.
Tel: (599-4) 62231/62322
Fax: (599-4) 62350

Mr. G. Holm, director

Environmental Focal Points

Netherlands Antilles
Letitia Buth
Jeffrey Sybesma
Nico Visser
Department of Public Health and Environment
Environmental Section
Heelsumstr. z/n
Curaçao, N.A.
Fax: (599-9) 4612154
Tel : (599-9) 4655300

Curaçao
Quirino Richardson
Milieudienst, GGD Curaçao
Groot Davelaar K 22-23
Curaçao, N.A.
Tel: (599-9) 369040
Fax: (599-9) 369195

Bonaire
Eric Newton
DROB/ Eilandgebied Bonaire
Kaya Amsterdam 23
Bonaire, N.A.
Fax: 599-7-6980
Tel : 599-7-8130

Sint Maarten
Mariëtte Smit
VROM, St. Maarten
P.O. Box 943
Sint Maarten, N.A.
Fax: 599-5-25486
Tel : 599-5-24957

Sint Eustatius
Jan Faber
Stenapa
P.O. Box 59
Sint Eustatius, N.A.
Fax: 599-3-82661
Tel : 599-3-82661

Saba
Tom van 't Hof
Saba Conservation Foundation
The Bottom
Saba, N.A.
Fax: 599-4-63299
Tel : 599-4-63348

Hotel Associations

Curaçao Hotel and Tourism Association (CHATA)
Postbus 6115
Curaçao, N.A.
Tel: (599-9) 636260
Fax: (599-9) 636445

Mr. L. Roelofsen, president

Bonaire Hotel and Tourism Association (BONHATA)
Bonaire Shopping Gallery
Kaya Grandi 36
Bonaire, N.A.
Tel: (599-7) 5134
Fax: (599-7) 8534

Mr. H. Gerharts, president

Sint Maarten Hotel and Tourism Association (SHTA)
Postbus 486
Philipsburg
Sint Maarten, N.A.
Tel: (599-5) 20108
Fax: (599-5) 20107

Mr. M. van de Bilt, executive director

Sint Eustatius Hotel and Tourism Association (EUHATA)
Talk of the Town Hotel,
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