Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles

Conclusions and Recommendations

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Panel

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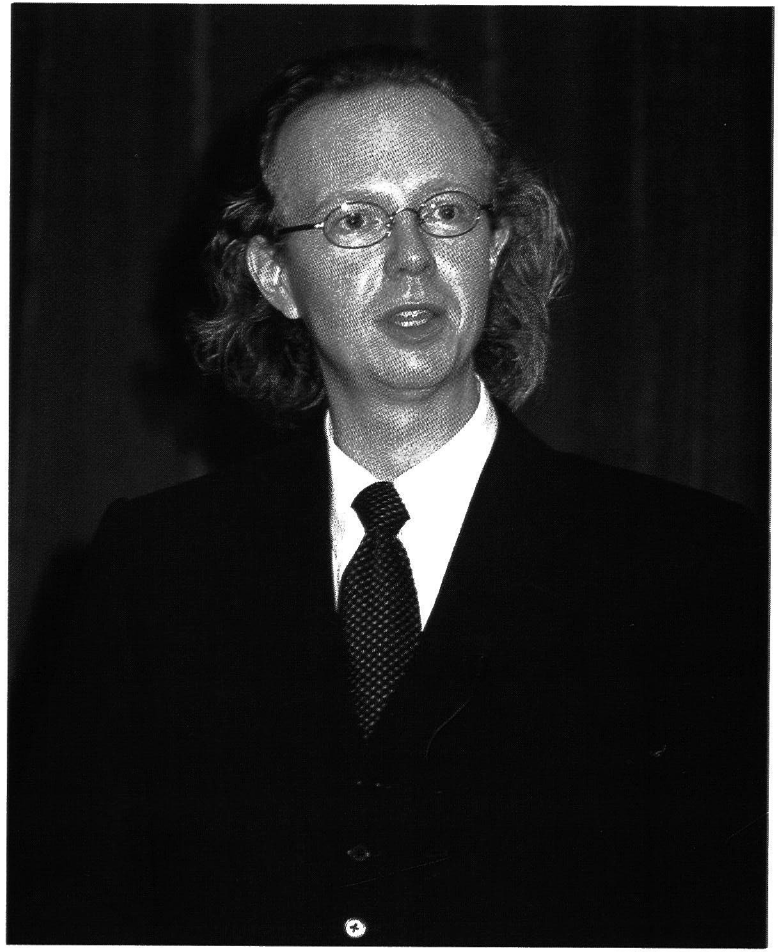
Drs. Gustaaf De Monie – Policy Research Corporation N.V.



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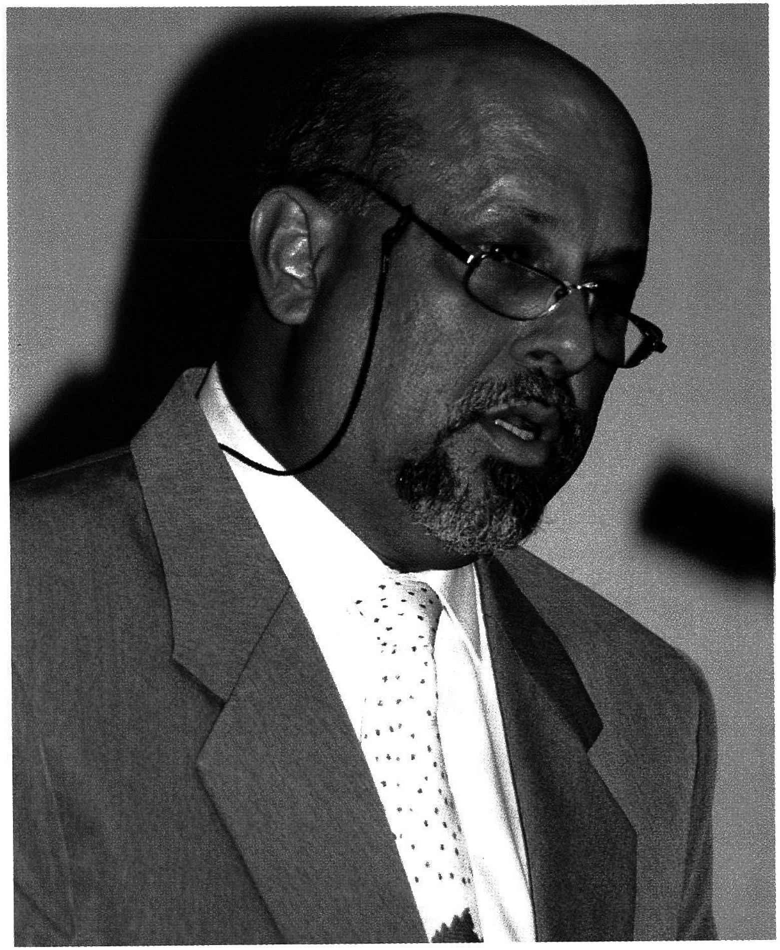
Dhr. Ramon R. Chong – Dienst Economische Zaken



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Policy Research Corporation *N.V.* based in Antwerp, Belgium, specialises in providing both economic and management consulting support to public and private decision makers. *Policy Research* aims to produce ***scientifically reliable*** studies which are at the same time ***practical*** and ready for implementation. The studies are often considered projects, with the formulation and ***implementation*** of policy recommendations as the main trademarks of the company. Over the last decade, *Policy Research* has become a recognised 'think-tank'. The main areas of expertise are transport economics, government policy and strategic management. Many of the studies, both carried out for governments and private companies, prove to be extremely influential.

Prof. Dr. Chris Peeters is Executive Director and President of the Board of Directors of Policy Research. Prof. Peeters also teaches public finance, international finance, maritime economics and transport economics at the Faculty of Applied Economics of the University of Antwerp, where he is attached to the Department of Transport Economics. Prof. Peeters is a well-known expert on the maritime industry and on policy analysis in general, and is an external advisor to several public and private policymakers. He is the author of influential strategic papers and scientific publications, including an analysis of the Dutch shipping industry and policy.

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PREFACE

WORD FROM THE AUTHORS

From the *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* (A-EIS), the fundamental importance of the maritime sector for the Antillean economy is apparent. The maritime sector of the Netherlands Antilles accounts for a total value added of 621 million NA*f*. Nearly 11 700 jobs depend on the maritime sector. On Curaçao, 11% of total employment is related to the maritime sector. For the other islands this figure is even higher: 17% for Bonaire, and 19% for the Windward islands. The maritime sector generates a total backflow of over 132 million NA*f*. to all levels of government. Moreover, the analysis has shown that there is potential to further increase this economic significance.

Qualitatively the maritime sector is even more important: the island economies of the Netherlands Antilles depend on the maritime sector to provide production factors and consumer goods. Moreover, the maritime sector is strongly linked with other sectors in the economy.

It should be stressed that *qualitatively* the maritime sector is even more important: island economies like the Netherlands Antilles largely, if not completely, depend on the maritime sector for the provision (and export) of raw materials, semi-manufactured articles, capital goods and consumer goods. Moreover, as is shown in this report, the maritime sector has strong linkages with other (sub)sectors, such as free zone trading activities and cruise tourism. Because of the strong linkages with the rest of the economy, an integrated approach for the study of the maritime sector and its potential is chosen.

The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* has provided decision-makers with an insight in the composition of the maritime sector and its economic significance. Moreover, the study has identified the strengths and weaknesses of the sector and its sub-sectors. In order to further develop the maritime sector, policy alternatives were developed and evaluated. Based on the *ex ante* evaluation of the policy scenarios, the A-EIS project has resulted in a large number of detailed and concrete policy recommendations for all levels of government involved. The policy recommendations are presented in **implementation matrices**, which do not merely contain policy recommendations, but a concrete plan for their implementation as well.

The recommendations constitute a FRAMEWORK POLICY with MARITIME FOCUS, and will generate considerable economic growth.

In summary, this report presents a **ready-to-implement plan** for the further development of the maritime sector of the Netherlands Antilles. The expected effects are quantified beforehand, and show that the implementation of a *FRAMEWORK POLICY with MARITIME FOCUS* will generate over **3 600 jobs** and nearly **200 million NAf. in value added**. Finally, the **additional backflow** to the government of over **40 million NAf.** a year is expected to easily outweigh the costs related to the *FRAMEWORK POLICY.*

The implementation of the recommendations should be done by the Beleidscoördinatiecommissie (BCC), also known as the IDB Task Force, but requires the support of all other parties involved.

By means of the *bottom-up approach*, *Policy Research* has succeeded to provide the policy makers of the Netherlands Antilles with a **basis for the further implementation** of these recommendations. The top priority for the government of the Netherlands Antilles should now be to institutionalise the '*Beleidscoördinatiecommissie*' (BCC), better known as the *IDB Task Force*, as a central government body. The BCC should co-ordinate and monitor the implementation process of the A-EIS project. Moreover, it is of the utmost importance that *Key Players* in the various sub-sectors assume their responsibility to take the lead in further developing their sector, building on the **momentum of the A-EIS project**. In short, the time to study is over, the time to take action has come.

Prof. Dr. Chris Peeters

ACKNOWLEDGEMENTS

Policy Research Corporation N.V. would like to thank all *Key Players* that actively collaborated with by providing relevant input information, discussing related issues with the project team or any other action that assisted the latter in carrying out the study.

A special word of gratitude goes to Mr. Jochem Goslinga, Advisor to the Minister of Traffic and Transport of the Netherlands Antilles. The entire research team thanks him for supporting and facilitating the field research missions of *Policy Research* and especially for the immaculate organisation of three crucial workshops on Curaçao, in co-operation with Pro Business and Curaçao Inc.

Many thanks to Prof. dr. Diana Phillips (University of Antwerp) for revising the text.

Finally, the authors would like to thank the entire staff of the *Policy Research* for their valuable and highly appreciated contribution to the *Economic Impact Study (EIS®) for Maritime Sector of the Netherlands Antilles.*

STRUCTURE OF THE REPORT: GUIDE FOR THE READER

This Final Report consists of two volumes:
- *Volume I 'EIS® Results';*
- *Volume II 'Cruise and Container Markets'.*

The *Final Report* of the *Economic Impact Study (EIS®) for Maritime Sector of the Netherlands Antilles* consists of two volumes:

- *Volume I 'Conclusions and recommendations'*, focusing on all aspects of the internal situation on the Netherlands Antilles: the country's general economic performance, its maritime sector and related government policies and the economic impact of the five policy scenarios and, finally, conclusions and recommendations;
- *Volume II 'Cruise and Container Markets'* presents an elaborate (external) analysis of the maritime situation in the Caribbean region, focusing on trends and developments in cruise (tourism) and container shipping.

The most important conclusions and recommendations are presented in the Executive Summary.

Both volumes are preceded by an *Executive Summary* comprising the most important aspects and conclusions of the study.

The policy recommendations are presented in detail in implementation matrices, which do not merely contain policy recommendations, but a concrete plan for their implementation as well (see Chapter XI).

For more detailed information on a subject, references are made to the relevant chapter of the report in the last column of the implementation matrices.

The general conclusions and recommendations of the project are presented in *Chapter XI* of *Volume I.* The policy recommendations are presented in implementation matrices, which do not merely contain policy recommendations, but a concrete plan for their implementation as well. As such, the implementation matrix identifies the responsible level(s) of government and provides an overview of the concrete actions required. Moreover, the implementation matrix allots priorities to the execution of the proposed measures. Finally, the matrices contain '*Milestones*', which reflect recommendations with respect to the timing of the implementation phase. For more detailed information on a subject, references are made to the relevant chapter of the report in the last column of the implementation matrices.

Finally, the text boxes serve as a guide to the reader.

Finally, the text boxes in the margin of the report contain the 'thread' of the presented information. As such they can be read separately and serve as a guide to the reader.

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EXECUTIVE SUMMARY

ES.1. INTRODUCTION

The Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles (A-EIS project) is commissioned to Policy Research Corporation N.V. by the Ministry of Traffic and Transport of the Netherlands Antilles.

The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* (A-EIS project) was commissioned to *Policy Research Corporation N.V.* by the Ministry of Traffic and Transport of the Netherlands Antilles. Moreover, the Steering Committee, which was installed to support and monitor the research efforts, also includes representatives of other federal departments and of the Island Territories of Curaçao, Bonaire, Sint Maarten, Statia and Saba. The study is financed by the Dutch Ministry of Transport, Directorate General Freight Transport.

The A-EIS project has been carried out on the basis of an elaborate bottom-up approach, comprising the collection of both qualitative information and cost structure data on all five islands of the Netherlands Antilles. Moreover, the bottom-up approach contributes to developing a basis for the implementation of the recommended policy measures.

The A-EIS project has been carried out on the basis of an elaborate *bottom-up approach*. The bottom-up approach comprises the large-scale collection of both qualitative information and cost structure data on all five islands of the Netherlands Antilles. In addition to the collection of data and information, the bottom-up approach also contributes importantly to the development of a *basis for the implementation* of the recommendations proposed in the study.

Input-Output analysis is used to calculate both the present economic significance of the sector and the effects of alternative sets of policy measures.

The collected cost structure data is an essential input for the *Input-Output analysis*, used to calculate the current economic significance of the maritime sector of the Netherlands Antilles. The Input-Output models are also used to quantify the effects of five alternative sets of policy measures. These policy scenarios are evaluated on the basis of their economic effects in terms of value added, employment, backflow to the government and spending impact.

This Executive Summary provides policy makers and other interested readers with an overview of the most important outcomes, conclusions and recommendations of the A-EIS project.

ES.2. CONCLUSIONS

There is a need for restructuring the Netherlands Antillean economy. In this economy, the maritime sector plays an important role.

The macro-economic analysis of *Chapter II* shows that the economy of the Netherlands Antilles, and especially of Curaçao, is in need of a restructuring and stimulation programme on the basis of an '*Inspiring Plan*'. A first conclusion of the *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* is that the maritime sector is very important, both in terms of its strategic position within the islands' economies, and in terms of its economic significance (see *Chapter III*). The current economic significance of the maritime sector is summarised in *Table ES.1*.

ES.2.1. CURRENT ECONOMIC SIGNIFICANCE

The maritime sector of the Netherlands Antilles accounts for a total value added of 621 million NAf. Nearly 11 700 jobs depend on it. Moreover, the maritime sector generates a total backflow to government of 132 million NAf.

The results in *Table ES.1* clearly demonstrate the fundamental importance of the maritime sector for the Antillean economy. The maritime sector of the Netherlands Antilles accounts for a total value added of 621 million NA*f*. Nearly 11 700 jobs depend on it. On Curaçao, 11% of total employment is related to the maritime sector. For the other islands this figure is even higher: 17% for Bonaire and 19% for the Windward islands. The maritime sector generates a total backflow to all levels of government of over 132 million NA*f*.

Qualitatively the maritime sector is even more important: the island economies of the Netherlands Antilles depend on the maritime sector for provision of production factors and consumer goods. Moreover, the maritime sector has strong links with other sectors of the economy.

It is emphasised that *qualitatively* the maritime sector is even more important: island economies like the Netherlands Antilles largely, if not completely, depend on the maritime sector for the provision (and export) of raw materials, semi-manufactured articles, capital goods and consumer goods. Moreover, as is shown in this report, the maritime sector has strong links with other (sub)sectors, such as free zone trading activities and cruise tourism. Because of the strong links with the rest of the economy, an integrated approach for the study to the maritime sector and its potential has been chosen.

Table ES.1 : Current significance of the maritime sector of the Netherlands Antilles, 1997.

Value added (000 NA*f*.)	*direct*	*indirect*	*induced*	*total*	*% GDP*
Curaçao	146 779	45 236	186 822	**378 837**	**± 12%**
Bonaire	27 998	2 624	20 614	**51 236**	**± 19%**
Windwards	78 391	27 122	85 654	**191 167**	**± 25%**
Total	253 168	74 982	293 090	621 240	

Employment	*direct*	*indirect*	*induced*	*total*	*% empl.*
Curaçao	2 353	570	3 247	**6 170**	**± 11%**
Bonaire	185	81	744	**1 010**	**± 17%**
Windwards	1 977	402	2 114	**4 493**	**± 19%**
Total	4 515	1 053	6 105	11 673	

Backflow (000 NA*f*.)	*direct*	*indirect*	*induced*	*total*
Curaçao	31 636	9 964	41 438	**83 038**
Bonaire	2 874	418	4 512	**7 804**
Windwards	17 081	5 832	18 891	**41 804**
Total	51 591	16 214	64 841	132 646

Source : Policy Research Corporation N.V.

ES.2.2. *POLICY SCENARIOS*

This economic significance may be further improved by new policy measures. To this end, five scenarios will be considered by Policy Research:
1. *CONTINUATION of present policy;*
2. *LAISSEZ-FAIRE policy;*
3. *REGISTER PLUS policy;*
4. *INTEGRATED maritime policy;*
5. *FRAMEWORK policy.*

Moreover, an in-depth analysis of the maritime sector has shown its potential for even greater economic significance. In *Chapters V* to *IX*, alternative sets of policy measures are introduced and discussed in a qualitative manner. In *Chapter X*, the impact of the most important measures has been quantified in the EIS® analysis. Inconclusion, the following policy scenarios were considered for each of the five islands:

1. the *CONTINUATION* of the present maritime policy;
2. the introduction of a *LAISSEZ-FAIRE* policy, which would imply that no specific measures were taken (or continued) to support the maritime sector;
3. the introduction of a *REGISTER PLUS strategy*, with more attention being paid to the image of the register of the Netherlands Antilles in terms of the level of service and the quality of the ships in the register;

4. the introduction of an *INTEGRATED MARITIME POLICY* aimed at developing actual shipping and related activities in the (ports of the) Netherlands Antilles;
5. the introduction of a *FRAMEWORK POLICY with MARITIME FOCUS*, combining the *integrated maritime policy* with an improved *general economic policy*.

The following package is recommended:
- *a FRAMEWORK POLICY with MARITIME FOCUS;*
- *an INTEGRATED MARITIME POLICY;*
- *a REGISTER PLUS approach.*

In principal, the measures recommended by *Policy Research* are included in the *FRAMEWORK POLICY with MARITIME FOCUS* scenario. This implies the introduction of an *INTEGRATED MARITIME POLICY*, including a *REGISTER PLUS* approach, in combination with an improved *GENERAL ECONOMIC POLICY*. A detailed description of these scenarios and the included policy recommendations, is presented in *Chapters V* to *IX*.

These recommendations built on an extended Input-Output analysis the outcomes of which are summarised in Table ES.2.

By means of Input-Output analysis, the effects of the considered policy scenarios on the economic significance of the maritime sector were modelled and estimated. To this end, three separate Input-Output models were used for Curaçao, Bonaire and the Windward islands respectively. The results of the analysis are presented in detail in *Chapter X*, and summarised in *Table ES.2*.

As shown in this table, the FRAMEWORK scenario will generate a strong increase in economic activity. Moreover, this increase is considered ***sustainable****.*

In general, a FRAMEWORK policy is
- *incentive-driven;*
- *transparent;*
- *cluster-oriented;*
- *stability-enforcing.*

The introduction of the *FRAMEWORK POLICY with MARITIME FOCUS* may realistically be expected to result in the following objective:

> *the expansion of sustainable economic activity in the maritime sector, in the form of additional value added and employment on the five islands of the Netherlands Antilles.*

The *FRAMEWORK POLICY* is:

- *incentive-driven*: the government should not step into the shoes of the entrepreneur, because it does not possess the necessary market information;
- *transparent*: a *FRAMEWORK POLICY* consists of clear and straightforward measures. As a result there is no room for 'perverse' strategies of individual companies aimed at obtaining exceptional or special government support;
- *cluster-oriented*: a *FRAMEWORK POLICY* is often aimed at a cluster of activities. The maritime sector in the broad sense used

in the A-EIS project is such a cluster. All activities will directly and indirectly benefit;

- *stability-enforcing*: it is important to build a long-term 'partnership' between the government and the maritime sector in order to solve its problems. The *FRAMEWORK POLICY* represents a long-term vision and commitment providing the sector with a competitive and stable business environment.

Table ES.2 : Comparison of the policy scenarios with the continuation of the present policy, 2005.

	Curaçao		*Bonaire*		*Windward Islands*		*Netherlands Antilles*	
	Difference	*Index*	*Difference*	*Index*	*Difference*	*Index*	*Difference*	*Index*
Current								
Value added (000 NAf.)	-22 892	94%	-3 364	91%	-79 347	71%	-105 603	85%
Employment	-421		-96		-1 796		-2 312	
Backflow (000 NAf.)	-5 281		-690		-17 407		-23 377	
Continuation								
Value added (000 NAf.)	0	100%	0	100%	0	100%	0	100%
Employment	0		0		0		0	
Backflow (000 NAf.)	0		0		0		0	
Laissez-faire								
Value added (000 NAf.)	-47 837	88%	0	100%	0	100%	-47 837	93%
Employment	-818		0		0		-818	
Backflow (000 NAf.)	-10 531		0		0		-10 531	
Integrated								
Value added (000 NAf.)	85 262	121%	1 393	104%	87 259	132%	173 913	124%
Employment	1 375		46		1 979		3 400	
Backflow (000 NAf.)	17 999		289		19 157		37 445	
Framework								
Value added (000 NAf.)	100 214	125%	2 258	106%	89 689	133%	192 160	126%
Employment	1 593		67		2 027		3 687	
Backflow (000 NAf.)	21 121		464		19 668		41 253	

Source : Policy Research Corporation N.V.

Moreover, a *FRAMEWORK POLICY* is based on the principles of subsidiarity and limited government intervention. Consequently, these effects are expected to be sustainable and can be accomplished with relatively limited (financial) efforts.

Compared to CONTINUATION, the FRAMEWORK scenario may generate an additional ***192 million NAf.*** *value added,* ***3 600 jobs****, and* ***41 million NAf.*** *backflow to the government.*

In comparison with the *CONTINUATION* of the present policythe *FRAMEWORK POLICY with MARITIME FOCUS* will generate a **nearly 200 million NA*f*.** in additional value added, in the period until 2005, which is the contribution to the country's Gross Domestic Product. Moreover, the *FRAMEWORK POLICY* is expected to create **more than 3 600 additional jobs** throughout the Antillean economy. Finally, the **backflow** to the government will increase by **more than 40 million NA*f*.** each year as a result of the introduction of a *FRAMEWORK POLICY.*

ES.2.3. *GENERAL CONCLUSIONS*

Clearly, the most favourable effects on the development of the maritime sector are expected from the implementation of an *INTEGRATED MARITIME POLICY*, preferably supported by an improved *general economic policy*. The introduction of a *FRAMEWORK POLICY with MARITIME FOCUS* is therefore strongly recommended by *Policy Research* for all islands of the Netherlands Antilles.

The recommended policy should be incorporated into an 'Inspiring Plan' for the economy of the Netherlands Antilles. This is the responsibility of the national and the Island Governments.

Moreover, the recommendations for the maritime sector should be incorporated into the overall '*Inspiring Plan*' for the restructuring and stimulation of the economy of the Netherlands Antilles. It is the responsibility of the central government and the respective Island Governments to develop this plan. This should be done in close consultation with the private sector, the Dutch government and international organisations such as the International Monetary Fund (IMF) and the Inter-American Development Bank (IDB).

A similar approach is recommended for some other key sectors.

As indicated, this study has resulted in concrete recommendations for the maritime sector. In order to follow up the more general recommendations of the IDB report (1997), a similar approach is recommended for other sectors, such as the financial offshore sector, tourism, telecommunication, manufacturing, and fishery.

ES.3. POLICY RECOMMENDATIONS

The concrete policy recommendations and the underlying considerations following from the conclusions of the A-EIS project are discussed in detail in *Chapters V* to *IX*. Moreover, the policy recommendations are presented in implementation matrices in *Chapter XI*. An implementation matrix does not merely contain policy recommendations but a concrete plan for their implementation as well. As such, the implementation matrix identifies the level(s) of government responsible and provides an overview of the concrete actions required. Moreover, the implementation matrix shows the order in which the proposed measures should be implemented. Finally, the matrices contain '*Milestones*', which make recommendations with respect to the timing of the implementation phase. In this *Executive Summary* the most important recommendations are highlighted.

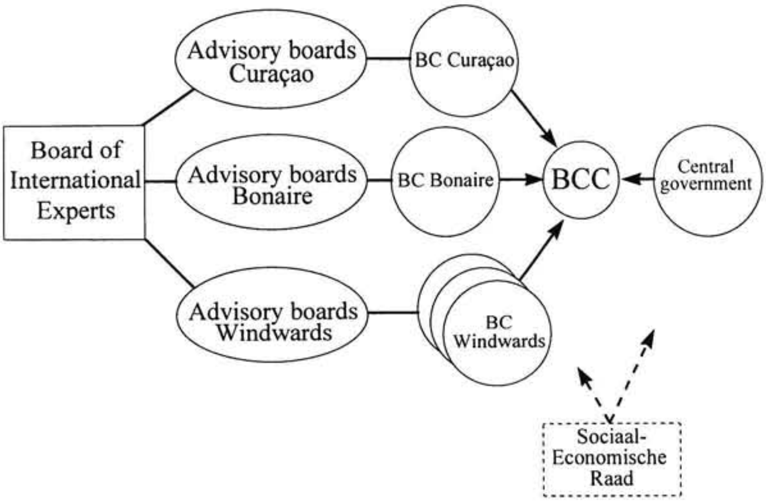
ES.3.1. NATIONAL GOVERNMENT

ES.3.1.1. Government structure

Most important at the national level is the institutionalisation of the IDB Task Force (or BCC) as a central government body for the execution of economic policy.

Top priority should be given to adjusting government structure by means of the institutionalisation of the '*Beleidscoördinatiecommissie*' (BCC) or *IDB Task Force* as a central government body for the execution of economic policy. The BCC should be responsible for the co-ordination of economic policy in the Netherlands Antilles. This implies that the BCC will not just be responsible for the maritime sector, but should also monitor and stimulate the development of other sectors. One of the other principal tasks of the BCC is to reduce and bypass bureaucratic obstacles or 'red tape'. The already existing BCC should remain a part of the Ministry of Economic Affairs, but co-ordinate the policies of all other Ministries and other governmental organisations such as the National Bank. Moreover, the BCC should be the link between the national and Island Governments with respect to economic policy. The proposed government structure is presented in *Figure ES.1*.

Figure ES.1 : Government structure



Source : Policy Research Corporation N.V.

The BCC
- *co-ordinate the economic policies of ministries and government levels;*
- *execute the recommendations of the A-EIS study;*
- *remain part of the Department of Economic Affairs;*
- *consist of one or two officials, supported by an advisory board and a group of civil servants.*

More details are given in Figure ES.1.

This BCC will be set up around one or two high-calibre officials of the Department of Economic Affairs. They will be supported by an interdepartmental group of civil servants of the *Services for Economic Affairs* of all five islands. The Island governments should also be supported by sector-related *Advisory Boards* made up by Antillean and international experts. These specialised *Advisory Boards* can provide the Island Governments with the indispensable sector-specific expertise. In addition to these 'local' Advisory Boards, *Boards of International Experts* can provide the credibility and countervailing power which is sometimes necessary to withstand pressures from powerful private parties.

In line with the IDB track for the restructuring and stimulation of the economy of the Netherlands Antilles, the BCC should be responsible for the monitoring and co-ordination of the execution of the recommendations of the A-EIS study.

ES.3.1.2. General economic policy

Further points of attention for the national level are:
- *the implementation of the IDB recommendations;*

As was mentioned above, a solid economic development will support the growth of the maritime sector. The government of the Netherlands Antilles is therefore urged to continue and speed up the implementation process of the general recommendations of the Inter-American Development Bank.

ES.3.1.3. Attraction of foreign investment

– the attraction of foreign investment by promotional activities, the reduction of bureaucracy, and fiscal measures;

In order to revive the Antillean economy, the attraction of foreign investment is essential. To this end, a streamlined promotional organisation should be installed at the national level. Moreover, foreign investors in any sector should be attracted by the introduction of a new taxation system, the simplification of investment procedures (reduction of 'red tape'), the granting of tax holidays and subsidies related to the training and education of local employees. The previous government practice of providing investment guarantees to (foreign) investors should be discontinued.

ES.3.1.4. Registration of ships

– the establishment of a ship's register that is characterised by high quality standards, independence of the Dutch register, high service levels and active promotion.

Although the economic significance of the ship's register and the related offshore sector is rather limited, the issue is high on the political agenda. In order further to develop this subsector, the ship's register should be reorganised into a service-oriented one-window operation. The Shipping Inspectorate of the Netherlands Antilles (SINA) is not expected to be willing and able to become the operator of the register. The maritime financial offshore sector should therefore consider taking the initiative of jointly operating the one-window register. In principle, the register should aim for the higher end of the market and attract as much tonnage as possible, with international safety and environmental standards as important constraints. The register should be operated completely independently from the Dutch register. For purposes of marketing, the Netherlands Antilles should use a separate flag, underlining its independent position within the Dutch Kingdom. The improved register should be actively promoted.

ES.3.2. ISLAND TERRITORY OF CURAÇAO

There are two basic priorities for this island.

The priority tracks of maritime policy for Curaçao should concern port organisation and cruise tourism.

ES.3.2.1. Port organisation and container transhipment

The first priority concerns port organisation, with the port changing from 'tool port' to 'landlord port' status.

Contrary to the present situation, the port of Willemstad should be operated as a 'landlord port'. In order to realise a landlord port model, the existing concession agreements between the public Curaçao Ports Authority (CPA) and the private stevedoring company Curaçao Port Services (CPS) should be revised.

This can be achieved by a revision of the concession between CPA and CPS, which is due in 2001 and should be put on the agenda in 1998. The revised concession should give CPS the incentive to attract more sea-to-sea container transhipment.

In order to provide the CPS shareholders with more incentives to pursue a pro-active and 'state of the art' transhipment marketing strategy, the revision should aim to increase the share of fixed components in the stevedore's cost structure. Higher fixed costs will induce CPS to achieve economies of scale by increasing the number of containers handled. As the growth potential of local cargoes is limited, the stevedore will have to realise the scale increase by attracting sea-to-sea transhipment. In turn, the larger the scale of the container operation, the greater the chances of the port of Willemstad to attain the status of 'subregional hub', which is of fundamental importance from the macro-economic point of view. The excellent organisation of the container terminal, its high productivity in regional terms, and the favourable perception by international shipping lines are important assets which will help it to achieve this status.

Failure to achieve subregional hub status is expected to result in the loss of most direct calls by international shipping lines. As a result, the Curaçao economy will not benefit from the world-wide decrease in shipping rates induced by new systems of multi-layered feedering. Moreover, the loss of direct calls could even lead to an absolute increase in freight rates, causing inflation and a deterioration of the competitive position of the island. Trade sectors, and especially the free zone in the port of Willemstad, would suffer most from such a development.

The first opportunity to revise the agreements will present itself in July 2001. It is recommended that an early start should be made on preparations and negotiations.

ES.3.2.2. Cruise tourism

The second priority concerns cruise tourism. This requires more than the construction of the mega cruise pier and the reduction of harbour tariffs.

Another top priority for Curaçao is to continue to develop cruise tourism. The importance of developing cruise tourism has already been recognised by the CPA and the Island Government, as proved by the recent decision to build a mega cruise pier and introduce attractive harbour tariffs for cruise vessels.

It also involves:
- *developing more tourist attractions;*
- *improving the attitude towards tourists;*
- *intensifying the co-operation with CTDB, SCG and the cruise lines.*

In addition, the Island Government should aim to improve the 'product Curaçao' by providing additional attractions. Another important aspect is to improve on pervasive negative attitude towards providing services to tourists through elaborate training and education programmes. Moreover, if co-operation is essential to become a preferred cruise destination in the Deep Caribbean, this will require further co-operation, both at island level, between the CPA and the Curaçao Tourism Development Bureau (CTDB)[1], and internationally, e.g. in the Southern Caribbean Group (SCG). In general, all investments made on behalf of cruise tourism should be made in close consultation with the cruise lines and their umbrella organisations.

ES.3.3. Island Territory of Bonaire

Just as for Curaçao, there are two basic priorities.

With respect to maritime policy, the priorities for the Island Government should be to improve the (physical) organisation of the port and to attract additional cruise vessels to the island.

ES.3.3.1. Port of Kralendijk

The first priority concerns the port. Improved port organisation will serve as a basic condition for relieving congestion and making the port more attractive for cruise tourism.

The port infrastructure of Kralendijk should be modified in order to relieve congestion (at the South pier) and make the port more attractive for cruise tourism. Moreover, a clear structure for the organisation of the port is recommended: the Island Government, represented by an upgraded Bonaire Port Authority (BPA), should remain responsible for the management, operation and development of the port.

1 Already institutionalised in the Curaçao Cruise Action Group.

The port should be operated as a 'landlord port', with the Island Government as the owner of the port infrastructure. The port infrastructure (piers and quays) should be operated as a common user facility, accessible to licensed stevedoring companies and their accredited employees.

ES.3.3.2. Cruise tourism

The second priority concerns the cruise tourism itself. The current efforts of the BCA should be continued, and extended by
- *improving the functioning of the port;*
- *intensifying the co-operation with SCG and the cruise lines.*

In order further to stimulate cruise tourism on Bonaire and attain a level of nearly 50 000 passenger visits in 2005, the Island Government, BPA and Tourism Corporation Bonaire (TCB), co-operating in the Bonaire Cruise Association (BCA), should:

- continue to improve the product Bonaire (island-related factors) along the lines of their current efforts. This implies an upgrading of the port area, the improvement of restaurants and shopping facilities, the promotion of attractions and the provision of additional attractions, and training programs for taxi-drivers and employees in tourism-related jobs. As indicated, all actions should be taken in consultation and co-operation with cruise lines;
- improve the organisation and the facilities of the port of Kralendijk (port-related factors);
- further increase existing international co-operation with respect to developing itineraries and promoting ports in the Deep Caribbean as cruise destinations, e.g. through the Southern Caribbean Group.

ES.3.4. ISLAND TERRITORY OF SINT MAARTEN

The priorities of the Island Government of Sint Maarten with respect to maritime policy, should concern investments in and the organisation of the port, and the further development of cruise tourism on the island.

ES.3.4.1. Port of Philipsburg

The first priority concerns the port. A 'Co-ordinator for Maritime Affairs' should develop and follow up a policy for all three Windward islands.

Within a *Co-ordinator for Maritime Affairs* the *Service for Economic Affairs* should be made responsible for the development of a port and maritime policy, and for providing the players in the port with guidance and objectives. The Co-ordinator would also be responsible for the other Windward islands.

A new multi-purpose cargo terminal and cruise pier should be
- *built in phases;*
- *managed by a private terminal operator;*
- *operated as a 'common user facility'.*

The cruise pier should be operated by the SMPA.

The newly-constructed multi-purpose cargo terminal and cruise pier should be owned by the Island Government. The Sint Maarten Port Authority (SMPA) should remain responsible for the technical and nautical management as well as for safety in the port. Moreover, the SMPA should operate the new cruise pier and collect the head tax and other port charges.

The construction of a multi-purpose cargo terminal in the port of Philipsburg should be executed in phases, depending on the development of local and especially transhipment cargoes. The new multi-purpose terminal should be operated as a common user facility. The Island Government should therefore lease out the terminal to a Terminal Operating Company (TOC) on the basis of a revenue-sharing formula.

ES.3.4.2. Cruise tourism

The second priority concerns cruise tourism. Rather than building a new pier, which has a lower priority the following problems should be tackled first,
- *traffic congestion should be relieved;*
- *the public facilities should be upgraded;*
- *the local employees should be further trained to provide excellent service.*

However, the construction of the new cruise pier is not rejected, provided that funds are also available to solve the land-side problems facing the development of cruise tourism on Sint Maarten.

Notwithstanding its expected positive effects, the projected construction of a new cruise pier is not considered to be a top priority. Instead of building a new pier, the possibility to restore the old pier should be examined, while alternative plans for the development of the port should be considered. Top priority should be allotted to the introduction of a number of *flanking measures* in order to maintain the existing basis for cruise tourism.

It should be emphasised that the construction of the new cruise pier is not rejected, provided that funds are also available to solve the land-side problems facing the development of cruise tourism on Sint Maarten. For instance, a new traffic plan should be drawn up for the town of Philipsburg in order to solve the existing problems of congestion. Moreover, the quality of all kinds of facilities in the port and town of Philipsburg to be upgraded, *e.g.* more public phones, automatic teller machines (ATM), sanitary facilities and rubbish disposal points.

The education and especially the training of personnel is an important factor as well. The people of Sint Maarten have a favourable attitude towards cruise tourism, and are generally considered by cruise passengers as very nice and helpful. Nevertheless, employees in service professions can be trained to provide more information and a higher level of service. An important occupational group in this respect are the island's taxi-drivers. In co-operation with cruise lines, the island should train its taxi-drivers to act as tour-guides as well.

Especially the latter priority needs the attention of the government. It requires the development of a balanced labour market program.

Finally, the development of cruise tourism on Sint Maarten will have a substantial impact on the island's entire economy. The expected effects on the labour market require special attention by the Island Government and make an active labour market policy necessary. In order to be able to meet the future demand for qualified personnel, the development of a balanced programme of education and training projects is essential.

ES.3.5. *ISLAND TERRITORY OF STATIA*

The basic priorities concern the development of three new maritime activities.

At present, the maritime sector of Statia is small. Considering the current idle capacity of the port, the (autonomous) development of the Statia economy will not require large investments in port infrastructure. With respect to maritime policy, the priorities for the Island Government of Statia should therefore concern the possible development of new maritime activities, such as inter-island shipping, yachting and fishery.

ES.3.5.1. *Inter-island shipping*

The first activity is inter-island shipping. A scheduled shipping line may attract the 'overflow' of tourists from Sint Maarten, which may have a significant impact on the island economy.

The connections between Sint Maarten and the other Leeward islands, more specifically Statia and Saba, are mostly unscheduled or tourism-related. Only 'irregular' cargo services exist between the Dutch and other Windward islands. It is recommended to further investigate the potential for inter-island shipping connections between the Dutch and other Windward islands. Especially with respect to the transportation of tourists (and irregular cargo), a number of feasibility studies should be carried out. On the basis of these studies it should be decided whether it would be feasible to set up a *pilot project*. Especially the possible creation of an overflow of tourists from Sint Maarten to neighbouring islands, such as Saba and Statia, should be investigated. Modest numbers of tourists will already have a considerable impact on the economy of these small islands.

ES.3.5.2. Marine tourism: yachting and small cruise vessels

The second activity is yachting and windjammer tourism. This requires:
- *the development of marina infrastructure;*
- *the improvement of the island's attractiveness to tourists.*

Investments could be considered for two specific market segments: yachting and small cruise vessels (windjammers).At present, the port of Oranjestad lacks even the most basic facilities to accommodate yachts and small cruise vessels. In principle, the Island Government could take the initiative to develop and co-ordinate such a project. The development of marina infrastructure can be considered a government task just like the provision of 'normal' port infrastructure. In addition to improving the island's port infrastructure, the 'product Statia', the '*Historical Gem*', has to be improved as well, in order to attract yachts and small cruise vessels. Co-operation with the other (Dutch) Windward islands is crucial in this respect.

ES.3.5.3. Fishery

The third activity is fishery. Ecologically justified fishing on the Saba Bank could generate about 100 jobs on Statia and Saba.

At present, only a handful of fishing boats from Saba and Statia are operating on the Saba Bank, although its economic potential is significant. The Dutch government introduced an 'Economic Fishery Zone of the Netherlands Antilles and Aruba' in 1993 to protect the economic and ecological importance of the Saba Bank. The Saba Bank could generate 1 000 to 1 500 tons of fish each year, providing jobs for over a hundred people on Saba and Statia.

It is outside the scope of this study to formulate detailed recommendations for the development of the fishing sector and the processing of its proceeds. However, the sector certainly seems to have potential and relatively limited funds would be required to develop it. Support for the fishing sector would include minor investments in facilities in the ports of Saba and Statia.

ES.3.6. ISLAND TERRITORY OF SABA

As for Statia, the basic priorities concern the development of three new activities.

At present, the maritime sector of Saba is virtually non-existent, while the (autonomous) development of the Saba economy will not require large investments in port infrastructure, considering the current idle capacity of the port. As for Statia, the priorities for the Island Government of Saba should therefore concern the development of new maritime activities, e.g. inter-island shipping, yachting and fishery.

ES.3.6.1. Inter-island shipping

The first activity is inter-island shipping. A scheduled shipping line may channel an 'overflow' of tourists from Sint Maarten, which may have a significant impact on the island's economy. The island's environmental assets warrant a sustainable and therefore gradual and limited development of tourism.

As indicated, Sint Maarten boasts a huge number of (cruise) tourists in the high season. Small ferries from Sint Maarten to Saba already carry about 50 day trippers and divers each way per day. Clearly, the possibilities of increasing the overflow of tourists to Saba should be investigated. Modest numbers of tourists would already have a considerable impact on the economy of these small islands. In the case of Saba this would also have an impact on the environment of the island, which is its most important asset with respect to tourism. In order to protect the environment, the Island Government has wisely chosen a path of selective tourism development laid down in the 'Integrated Tourism Development Masterplan'. The number of tourists is consciously limited, while only sustainable activities are promoted.

ES.3.6.2. Marine tourism: yachting and small cruise vessels

The second activity is yachting and windjammer tourism. This requires a series of feasibility studies for further investments.

The number of cruise ship calls has been in decline for some years, to a large extent as a result of increased competition by alternative destinations. In order to facilitate visits to Saba by ferries and cruise vessels (windjammers), a single-point mooring buoy was installed. The present port infrastructure apparently hampers the development of yachting and cruise tourism on Saba. In order to assess to which extent investment in the port is justified, feasibility studies into the various investment alternatives have to be carried out.

ES.3.6.3. Fishery

The third activity is fishery. Ecologically sustainable fishing of the Saba Bank could generate about 100 jobs on Statia and Saba.

At present, only a handful of fishing boats from Saba and Statia are operating on the Saba Bank, although its economic potential is significant. The Saba Bank could generate 1000 to 1500 tons of fish each year, providing jobs for over a hundred people on Saba and Statia.

As indicated, it is outside the scope of this study to formulate detailed recommendations for the development of the fishing sector and the processing of its proceeds. However, the sector certainly seems to have potential and only relatively limited funds would be required to develop it. Support for the fishing sector would include minor investments in facilities in the ports of Saba and Statia.

ES.3.7. THE DUTCH GOVERNMENT AND THE KINGDOM

The recommendations are divided into three categories.

The recommendations are divided into three categories: 'development policy', 'maritime issues' and 'general principles for the government of the Kingdom'.

ES.3.7.1. Development policy

The first category is 'development policy', of which the most important elements are
- *streamlining of the application procedures for the funding of development projects;*
- *support for the updating and streamlining of the overall legislation.*

The functioning of the existing channels for the funding of development projects through the *Cabinet for Netherlands Antillean and Aruban Affairs* (KabNA)[2] and the Department for Development Cooperation (DEPOS) should be improved where possible. At present, the application procedures frequently take a long time. On the one hand this is caused by incomplete information provided by the applicants. On the other hand, the existing procedures often leave room for debate and discussion. By evaluating projects on their individual merits, using a uniform instrument on the basis of objective (economic) arguments, the KabNA's task can be facilitated considerably. The development of a uniform project evaluation methodology is therefore recommended.

The Netherlands should provide the Netherlands Antilles with support in updating the overall legislative framework, when requested by the Antilles. In this respect it is very important to set objectives before new legislation is developed or legislation of the Kingdom is adopted. The Netherlands should avoid overburdening the Antillean administration with new legislation. The principle of subsidiarity should be applied, which implies that new legislation should be introduced at the lowest governmental level possible.

2 The name of KabNA will be changed in the course of 1998, when the organisation will become a Directorate of the Ministry of Internal Affairs.

ES.3.7.2. Maritime issues

The second category is 'maritime issues', of which the most important element is guidance in establishing an independent ship's register.

As indicated, with respect to maritime affairs, the most eye-catching aspect of the relationship between the Netherlands Antilles and the Netherlands is the registration of ships. The Netherlands should facilitate and support the increased independence of the ship's register of the Netherlands Antilles.

To this end, some of the existing legislation at the level of the Kingdom will have to be either changed or abolished, especially legislation concerning the safety and manning aspects of sea-going vessels.

Moreover, the Statute of the Kingdom (Koninkrijksstatuut) already permits the introduction of legislation which would grant the countries the right to use separate (trading) flags. Such legislation should be introduced to allow the private operator of the Antillean ships' register to pursue a powerful marketing strategy.

ES.3.7.3. General principles for the government of the Kingdom

The third category is 'general principles for the government of the Kingdom'. This especially concerns the attitude of the Dutch government towards the Netherlands Antilles. The country should be regarded as a 'favoured developing country' rather than a 'former colony'.

In general, the Dutch government and its civil servants should consider and treat the Netherlands Antilles as any other favoured developing country, not as a former colony. This also means that the Dutch government should no longer respond to Antillean demands for support, on the basis of its colonial past. This requires a change to a more objective and detached attitude. Moreover, it has to be understood that solutions to Dutch problems will not always work in the Netherlands Antilles. The nature and scale of the problems are completely different. Furthermore, the government of the Netherlands (as well as the Netherlands Antilles) should avoid entering into emotional discussions as in the debate on the registration of ships.

ES.4. CLOSING REMARKS

This study provides a large number of concrete policy recommendations laid down in a ***ready-to-implement plan*** *for the development of the maritime sector of the Netherlands Antilles.*

The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* has provided decision-makers with an insight into the composition of the maritime sector and its economic significance. Moreover, the study has identified the strengths and weaknesses of the sector and its subsectors. In order further to develop the maritime sector, policy alternatives have been developed and evaluated. Based on the *ex ante* evaluation of the policy scenarios, the A-EIS project has resulted in a large number of detailed and concrete policy recommendations for all levels of government involved.

The recommendations constitute a FRAMEWORK POLICY with MARITIME FOCUS, and will generate considerable economic growth.

In summary, this report presents a **ready-to-implement plan** for the further development of the maritime sector of the Netherlands Antilles. The expected effects have been quantified beforehand, and show that the implementation of a *FRAMEWORK POLICY with MARITIME FOCUS* will generate over **3 600 jobs** and nearly **200 million NA*f*. in value added**. Finally, the **additional backflow** to the government of over **40 million NA*f*.** a year is expected easily to outweigh the costs related to the *FRAMEWORK POLICY*.

The recommendations should be implemented by the Beleidscoördinatiecommissie (BCC) a.k.a. the IDB Task Force, but will require the support of all other parties involved.

By means of the bottom-up approach, *Policy Research* has succeeded in providing the policy makers of the Netherlands Antilles with a **basis for the further implementation** of these recommendations. The top priority for the government of the Netherlands Antilles should now be to institutionalise the '*Beleidscoördinatiecommissie*' (BCC), better known as the *IDB Task Force*, as a central government body. The BCC should co-ordinate and monitor the implementation process of the A-EIS project. Moreover, it is of the utmost importance that *Key Players* in the various subsectors should assume their responsibility and take the lead in the further development of their sector, building on the **momentum of the A-EIS project**.

I. INTRODUCTION

I.1. GENERAL INTRODUCTION: GOAL OF THE RESEARCH PROJECT

The Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles (A-EIS project) is commissioned to Policy Research Corporation N.V. by the Ministry of Traffic and Transport of the Netherlands Antilles.

The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* (A-EIS project) was commissioned to *Policy Research Corporation N.V.* by the Ministry of Traffic and Transport of the Netherlands Antilles. Moreover, the Steering Committee, which was installed to support and monitor the research efforts, also includes representatives of other federal departments and of the Island Territories of Curaçao, Bonaire, Sint Maarten, Statia and Saba. The study is financed by the Dutch Ministry of Transport, Public Work and Water Management, Directorate General for Freight Transport.

Throughout the project, *Policy Research* has benefited from the excellent co-operation of the persons involved (see the list in *Annex A*). *Policy Research* wishes to thank the more than 150 interviewed *Key Players*, the members of the *Steering Committee* and the *Preparatory Committees*, the participants in the workshops and finally, *the Dutch Ministry of Transport*.

I.1.1. BACKGROUND

The A-EIS project took off in March 1997.

The A-EIS project took off during the *Workshop* 'Scheepvaartsector Nederlandse Antillen', which was held, 1997 in Willemstad, Curaçao on March 26 and 27.

Progress Report I was presented on May 1, 1997. It contained a detailed explanation of the methodology used in the A-EIS project.

A Steering Committee and PREPCOMs (Preparatory Committees) were installed to provide the research team with practical support and sounding boards.

On August 22, 1997 a *Steering Committee* was installed, consisting of representatives of the Central and Island Governments, as well as the Dutch government. In this first meeting the methodology, presented in *Progress Report I*, was discussed in-depth. The *Steering Committee* played a central role in supporting the research team. Furthermore, the *Steering Committee* was instrumental in the preparation of the implementation of future policy measures.

Preparatory Committees (PREPCOMs) were installed, consisting of *Key Players* representing the interests of all five islands. The task of these PREPCOMs was to provide the research team with a sounding board for their ideas and with support for the preparation of the workshops.

Following field and desk research and on the basis of the formulated scenarios the preliminary results and recommendations were presented at the November 1997 workshop on Curaçao.

For the field research, the research team visited the Netherlands Antilles in May and June and at the end of August of 1997. Furthermore, a second research team visited a number of Caribbean countries (the Netherlands Antilles, Guadeloupe, Jamaica, Florida, the Bahamas and Panama) for the external analysis in the course of September and October 1997. The preliminary results and recommendations of *Progress Report II* were presented at the second *Workshop* on November 26, 1997.

After the second workshop, considerable time was devoted to further detailing on the policy scenarios, incorporating the remarks made in the course of the second workshop. Then, after additional desk research, the final EIS® results were calculated.

A final field trip took place in March 1998.

During the first week of March 1998, a research team visited the Netherlands Antilles to collect additional information, prepare the third and last workshop and monitor the proceedings of the PREPCOMs. Furthermore, to facilitate the implementation of the policy recommendations, key-players in the political field were contacted and informed about the past, present and future of the A-EIS project.

In the last phase the final conclusions and recommendations were drawn up by means of a policy matrix to be used for implementation.

The final results and recommendations were presented at the third workshop in April 1998. The Final Report will be delivered on May 1, 1998.

The final results and recommendations were presented at the third workshop in Willemstad, Curaçao on April 16, 1998. On the basis of the discussions and additional information, the final results and recommendations are now published in this *Final Report*, delivered on May 1, 1998.

I.1.2. *GOALS OF THE RESEARCH*

The EIS® for the Maritime Sector in the Netherlands Antilles aims to:
- *quantify the economic significance of the maritime sector;*
- *develop and evaluate alternatives for the future maritime policy in the Netherlands Antilles.*

The A-EIS project has the following main goals:

1. to evaluate the structure and quantify the current economic significance of the maritime sector in the Netherlands Antilles;
2. to develop maritime policy scenarios and evaluate these policy alternatives in terms of potential economic impact.

The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* aims to provide the maritime sector and the relevant government agencies with the foundations for the development and implementation of a Master Plan (an 'inspiring vision') for the maritime sector.

I.1.3. *POLICY ALTERNATIVES*

Five policy alternatives are formulated and evaluated:
- *the CONTINUATION of the present policy;*
- *the introduction of a LAISSEZ FAIRE policy;*
- *the introduction of REGISTER PLUS policy;*
- *the introduction of an INTEGRATED MARITIME POLICY aimed at attracting onshore maritime activity;*
- *the introduction of a FRAMEWORK POLICY with MARITIME FOCUS, combining the integrated maritime policy with a new general economic policy.*

As was mentioned above, one of the aims of the study is to develop alternatives for maritime policy in the Netherlands Antilles. The policy options that are presented in this *Final Report* represent alternative reactions to the current problems in the maritime sector:

1. *the CONTINUATION* of the present policy;
2. the introduction of a *LAISSEZ-FAIRE* policy, which would imply that no specific measures were taken (or continued) to support the maritime sector;
3. the introduction of a *REGISTER PLUS strategy*, with more attention for the image of the register of the Netherlands Antilles in terms of the level of service and the quality of the ships in the register;

4. the introduction of an *INTEGRATED MARITIME POLICY*, aimed at developing actual shipping and related activities in the (ports of the) Netherlands Antilles;
5. the introduction of a *FRAMEWORK POLICY with MARITIME FOCUS*, combining the integrated maritime policy with a new general economic policy.

I.2. SHORT OVERVIEW OF THE APPLIED METHODOLOGY

Policy scenarios are drawn up on the basis of an elaborate policy analysis and Strategic Interviews with Key Players.

These policy scenarios are developed on the basis of an elaborate analysis of the current situation in the sector, the present maritime policy and the institutional framework. Furthermore, the qualitative results of the *Strategic Interviews* with '*Key Players*' in the maritime sector constitute the empirical basis for the development of future scenarios.

The effects of the scenarios are quantified on the basis of Input-Output Analysis, calculating the direct, indirect and induced effects of the maritime sector.

The effects of the policy scenarios are quantified using Input-Output analysis as well as some additional calculations. For each sector of the economy, an Input-Output model calculates the direct and indirect output generated by (a change in) demand in the economy. It systematically takes into account the impact on the supplying sectors and on the sectors supplying the supplying sectors, and so on. It thus analyses the full economic impact of an activity. Moreover, the results can easily be translated into, for example, impact on employment, backflow to government treasuries, external trade and expenditures (the so-called induced effects).

As explained, the EIS® methodology uses existing Input-Output tables as a starting point. Earlier research has indicated that data in Input-Output tables published by National Statistical Offices are generally less reliable with regard to service industries, and particularly shipping[1]. Furthermore, the existing Input-Output tables are usually not sufficiently detailed.

1 See Peeters (1992).

Additional information is needed to modify existing Input-Output tables. Two basic methods of gathering this information are considered:
- *top-down;*
- *bottom-up.*

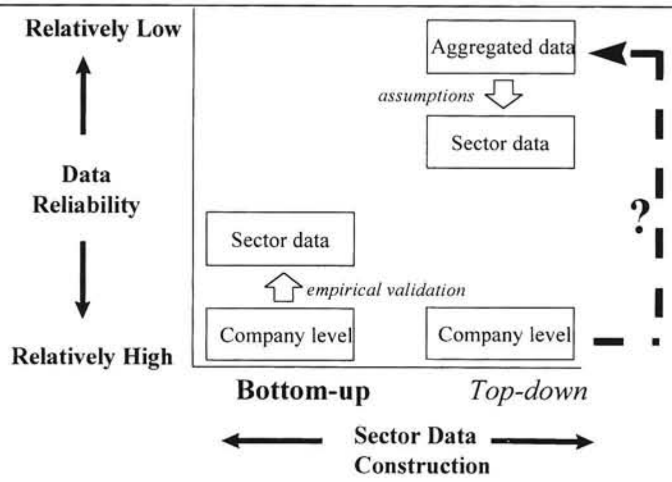
For an adequate estimation of the economic impact, the reliability problems involved must be solved first. The best way of doing this is by collecting additional information. Principally, there are two methods of collecting this information (see *Figure I.1*):

- top-down;
- bottom-up.

The bottom-up approach allows for a tailor-made evaluation of a sector in function of the policy measure or problem under consideration.

The bottom-up approach builds on data collected at the level of the individual firm. This allows sectors and subsectors to be defined in function of the policy issues that are analysed. The researchers are not limited by insufficient data, as they themselves collect all required data. The constraints of predetermined sector classifications are thus avoided.

Figure I.1 : Bottom-up versus top-down.



Source : Policy Research Corporation N.V.

The bottom-up method is labour-intensive but has the benefit of delivering reliable results.

The bottom-up method is labour-intensive. Belgian and Dutch cases, however, have shown that the alternative top-down approach can also be very expensive[2]. The bottom-up approach starts from company data and aggregates to the desired sector or subsector level. This is a direct way, which generates more reliable results.

2 See Peeters (1992) and Peeters *et al.* (1994).

When the data is collected at the source, no disagreement about its reliability can exist. In the analysis of policy issues, agreement on basic data is essential, especially for the successful implementation of new measures.

In the EIS® for the Antillean maritime sector, the bottom-up approach consists of:

The bottom-up approach consists of:
- *the gathering of cost structure data;*
- *the construction of modified columns and rows for the Input-Output tables.*

- **data collection**: the collection of the actual *cost structure data* at the company level, necessary to make modifications to the original Input-Output table. Additional *strategic information* on flagging and location decisions was collected in face-to-face interviews with strategy makers. The stated behaviour was checked for consistency and reliability by comparing it with historical data on flagging-out;
- **data processing**: the collected cost structure data is used to add new columns and rows existing Input-Output tables, thereby upgrading their overall quality.

More (mathematical) details covering methodological topics can be found in *Annex B*.

I.3. STRUCTURE OF THE REPORT AND ANNEXES

This Final Report consists of two volumes:
- *Volume I 'Conclusions and Recommendations';*
- *Volume II 'Cruise and Container Markets'.*

This *Final Report* presents the economic impact of five policy scenarios developed by *Policy Research* with respect to the future of the maritime sector of the Netherlands Antilles. The *Final Report* consists of two volumes:

- *Volume I 'Conclusions and Recommendations'*, focusing on all aspects of the internal situation on the Netherlands Antilles: the country's general economic performance, its maritime sector and related government policies and the economic impact of the five policy scenarios; finally, conclusions and recommendations are made;
- *Volume II 'Cruise and Container Markets'* presents an elaborate (external) analysis of the maritime situation in the Caribbean region, focusing on trends and developments in cruise (tourism) and container shipping.

The structure of Volume I is as follows:
- *the* ***macro-economic performance*** *of the Antillean economy;*
- *the* ***current situation in the maritime sector*** *of all five islands;*
- *the* ***external analysis with respect to cruising and container shipping;***
- *a detailed* ***description of the policy scenarios*** *for the five different islands;*
- *the* ***quantitative results*** *of the formulated policy scenarios;*
- ***conclusions and recommendations.***

After this introductory chapter, the structure of *Volume I* is as follows:

- the **macro-economic performance** of the Antillean economy is analysed in *Chapter II*. This chapter provides a framework for the analysis of the maritime sector. In the course of the field research it appeared necessary to have a general framework for reference. During the analysis of the available information and the evaluation of policy scenarios this impression was confirmed: a large number of maritime problems cannot be solved without taking the general economic structure and situation into consideration;
- the **current situation in the maritime sector** of all five islands of the Netherlands Antilles will be described in *Chapter III*;
- *Chapter IV* contains a summary of the results and conclusions of the **external analysis with respect to cruising and container shipping**. As indicated, the external analysis and its results are presented in-depth in *Volume II 'Cruise and Container Markets'*;
- *Chapters V to IX* provide a detailed **description of the policy scenarios** for the five different islands of the Netherlands Antilles. The scenarios are developed on the basis of the macro-economic analysis of the Netherlands Antilles, the internal analysis of the maritime sector and the external analysis of the Caribbean region;
- *Chapter X* presents the **quantitative results** of the formulated policy scenarios, namely their resulting economic impact. On the basis of their economic impact the scenarios are evaluated; then the *preferred scenarios* for the different islands are chosen;
- furthermore, **conclusions and recommendations** for the implementation of the preferred scenarios will be formulated in *Chapter XI*. Mainly by means of a so-called policy matrix. For each policy objective, it contains recommendations, required actions, responsibilities, and priorities (top, high, moderate and low).

The main body of the report is preceded by an *Executive Summary*. In addition to the main body of the *Final Report* a number of Annexes are included:

- *Annex A* contains a list of the *Key Players*, both in and outside the Netherlands Antilles, with whom *Strategic Interviews* were held. The composition of the *Steering Committee* and the *Preparatory Committees* is also listed;
- *Annex B* provides an overview of the methodology applied for this project;
- *Annex C* presents some additional *Figures* concerning *Chapter II* of the report;

- *Annex D* outlines alternatives for the organisation of the ships' register of the Netherlands Antilles;
- *Annex E* deals with the topic of inter-island shipping;
- *Annex F*, finally, gives the references of the literature and statistical sources used.

The text boxes serve as a guide to the reader.

The text boxes in the margin of the report contain the 'thread' of the presented information, and serve as a guide to the reader.

II. MACRO-ECONOMIC PERFORMANCE OF THE NETHERLANDS ANTILLES

II.1. GENERAL OVERVIEW

The Netherlands Antilles is a five-island country in the Caribbean. It consists of Curaçao, Bonaire, Sint Maarten, Statia and Saba. Curaçao is the main island.

The Netherlands Antilles is a five-island country within the Dutch realm[1]. It is organised around two hubs in the north-eastern and southern Caribbean, separated by about 850 kilometres. The Windward islands, east of Puerto Rico, consist of Sint Maarten[2], Saba and Statia; the Leewards, situated to the north of Venezuela, are made up of Curaçao and Bonaire. The total land area of the Antilles is 800 square kilometres and average temperatures on the islands approach 30 °C all year round. The population is about 207 000 and is growing at a moderate rate[3]. The greater part of the Antillean people reside on Curaçao, as can be seen on *Figure II.1.* The official language is Dutch. Papiamentu, English and Spanish are widely spoken.

The Netherlands Antilles have few natural resources. Oil refining and tourism impose pressure on its ecosystems.

The islands of the federation have few natural resources at their disposal. Only 8 percent of the land is arable. Moreover, from July to October the Windward islands are subject to hurricanes. Tourism, combined with the burden of oil refining and high population density[4], puts pressure on the fragile ecosystems on which the islands are based. The country has been slow in developing an environmental awareness and damage has already been inflicted.

1 Aruba left the Netherlands Antilles on January 1, 1986 to obtain autonomy ('status aparte') within the Kingdom of the Netherlands.

2 Sint Maarten shares one island with the French territory of St. Martin.

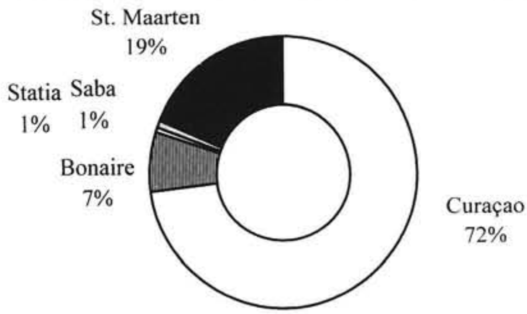
3 2.5 percent a year in 1995 (source : Central Bureau of Statistics).

4 341 persons per square kilometre on Curaçao and 1 134 on Sint Maarten. For the Netherlands Antilles as a whole, the figure is 259 (source : CBS).

The level of infrastructure is relatively high. Its sectoral structure is limited in variation.

In general, the level of physical infrastructural facilities is reasonably high compared to other countries in the region. In some cases though[5], the infrastructure risks to deteriorate due to heavy utilisation. The sectoral structure is limited in variation, compared to an industrialised country (see *Table II.4* where an aggregation is made to nine sectors). Given the relatively small population, the domestic market cannot but be limited. An immediate consequence of this situation is that international trade is extremely important if the economy is to flourish.

Figure II.1 : Population Shares in 1995 (in percentages)



Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

The economy of the Netherlands Antilles is on a downward slope. The overall picture is quite dismal.

Overall economic performance is on a downward slope, unemployment and real interest rates are high and chronic budgetary and external imbalances exist. The situation is accompanied by a growing threat of social instability, which results in a quite dismal overall picture of the Netherlands Antilles economic situation[6].

5 Such as roads.

6 Although the five islands are very different as to economic structure, much of what will be said about Curaçao will determine the overall result. However, when data is available, justified attention will be given to the other islands.

In this Chapter the macro-economic performance of the Netherlands Antilles will be described in general terms[7]. Seven topics will be discussed, notably :

1. gross domestic product;
2. investments, savings and consumption;
3. the public sector;
4. the labour market;
5. the capital market;
6. entrepreneurship;
7. the balance of international payments.

Final inferences will be drawn in *Chapter II.3*.

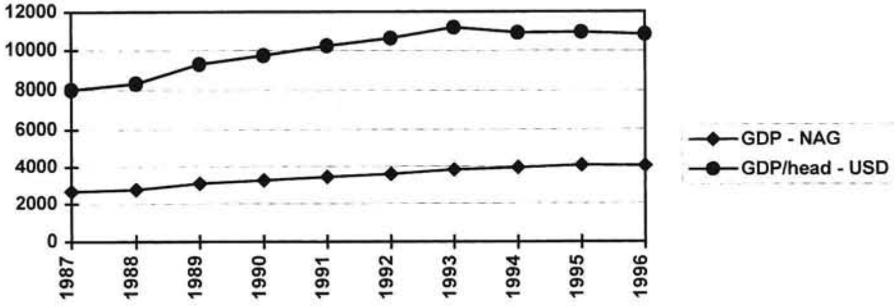
II.2. THE MACRO-ECONOMY - ENDOWMENTS AND IMPERFECTIONS

II.2.1. GROSS DOMESTIC PRODUCT

There have been signs of a slowdown in total economic achievement since 1994. Worse still, the evolution of real GDP has turned a peak as can be seen on *Figure II.2*. Furthermore, it follows from *Figure* II.3 that the share of Curaçao in GDP amounts to some 74 percent while Bonaire takes up 6 percent. The Windward Islands account for the remaining 20 percent. Thus, the pace of overall economic activity of the Antilles is set by the developments on Curaçao. This fact is important when examining figures on the Netherlands Antilles as a whole.

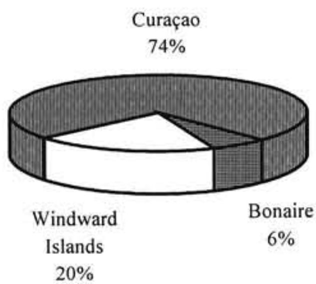
7 This Chapter draws on several sources : CIA World Factbook, IMF, The World Bank, Bank of the Netherlands Antilles, Central Bureau of Statistics, Inter-American Development Bank, Curaçao Chamber of Commerce, Dienst Economische Zaken Nederlandse Antillen, Micro Macro Consultants and *Policy Research* field investigations.

Figure II.2 : Real and nominal GDP (mln. NA*f*), 1987-1996 (1987=100)



Source : Policy Research Corporation N.V., based on Central Bureau of Statistics, National Accounts and Micro Macro Consultants

Figure II.3 : GDP shares, 1995 (in percentages)



Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

The negative evolution of real GDP is caused by economy-wide imbalances. Nonetheless, the Netherlands Antilles enjoy a remarkably high standard of living.

As will be discussed later in this Chapter, the slowdown is caused by structural imbalances in more than one segment of the economy. In addition, the hurricane that struck Sint Maarten in September 1995 caused a downturn in the important local tourism industry. Nonetheless, the islands of the Netherlands Antilles enjoy a remarkably high standard of living compared to the Caribbean as a whole. At a fixed rate of 1 US$ =1.78 NA*f*, GDP per head was almost 11 000 US$ in 1996[8]. In *Table II.1* the gap between the Antilles an the rest of the Caribbean countries is evident. As a result, a cheap production appa-

8 Since May 1987 (source : CBS)

ratus as well as a low price level in the services sector, notably tourism, are impossible.

Table II.1 : GDP per capita in 1994 (US$)

Country	GDP/capita	% Neth. Ant.
Antigua & Barbuda	6 970	66.23
Bahamas	6 770	64.33
Barbados	6 530	62.05
Belize	2 210	21.00
Domenica	2 830	26.89
Domenican Republic	1 320	12.54
Grenada	2 620	24.90
Guyana	530	5.04
Haiti	250	2.38
Jamaica	1 420	13.49
St. Kitts & Nevis	4 760	45.23
St. Lucia	3 450	32.78
St. Vincent & Grenada	2 120	20.14
Suriname	880	8.36
Trinidad & Tobago	3 700	35.16
Netherlands Antilles	10 524	100
Region	1 226	

Source : Policy Research Corporation N.V., based on The World Bank

II.2.2. Investments, Savings and Consumption

The low level of investment is caused by two reasons :
- *complex and lengthy administrative procedures;*
- *a slowing economy.*

A downturn in investment is one factor in the vicious circle of a slowing economy. This evolution in gross and net investment is examined in *Table II.2*. Given the limited resources of the country, there is a strong reliance on foreign investments. Moreover, the Antillean incentives framework for new investment involves complex and lengthy administrative procedures, which are not attractive to investors and raise the risk of investment. As a result, 'Projects in the pipeline' is a typical phrase among public servants and investors. In many cases existing plans to invest are only 'waiting' to be realised at short term[9]. A solution is to be expected from a *Structural Adjustment Programme* and *'Reinventing Government'* (see *Chapter II.2.3.2*), which should to induce substantial investments in projects and activities that are profitable and create employment (see *Chapter II.3.2*)[10].

Table II.3 demonstrates that the savings are plummeting, preventing *domestic* money from being invested.

Table II.2 : Gross and Net Investment in current prices (mln. NA*f*), 1988-1993

		1988	*1989*	*1990*	*1991*	*1992*	*1993*
(1)	Gross Fixed Capital Formation	612.5	771.7	766.5	814.2	803.3	790.0
(2)	Increase in Stocks	49.3	102.0	65.3	83.9	74.7	19.3
(3)=(1)+(2)	Gross Investment	661.8	873.7	831.8	898.1	878.0	809.3
(4)	Consumption of Fixed Capital	294.0	322.0	330.7	379.6	400.9	471.6
(5)=(3)-(4)	Net Investment	367.8	551.7	501.1	518.5	477.1	337.7

Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

Table II.3 : Savings and Consumption in current prices (mln. NA*f*), 1988-1993

		1988	*1989*	*1990*	*1991*	*1992*	*1993*
(1)	Government Final Consumption Expenditure	692.7	764.7	834.8	844.7	898.7	1045.0
(2)	Private Final Consumption Expenditure	1701	1813	1976	2019	2104	2220
(3)	Savings	529.7	601.4	424.9	456.9	464.0	304.6
(4)=(1)+(2)+(3)	*Disposable Income*	*2924*	*3179*	*3236*	*3321*	*3466*	*3569*
(5)=(3)/(4)	*Savings Ratio*	*0.18*	*0.19*	*0.13*	*0.14*	*0.13*	*0.09*

Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

Transportation, offshore finance and tourism are important sectors. In terms of value added and foreign exchange earnings, they rank among the highest.

Labour-intensive tourism, particularly on Bonaire and Sint Maarten, and offshore banking and finance on Curaçao[11], are considered to be the mainstays of this economy which are closely linked to the outside world[12]. The other important industries are oil refining on Curaçao, petroleum transhipment facilities on Curaçao and Bonaire and light

9 See Dienst Economische Zaken (1997), p.23-4.

10 See DEZ (1997), p.4.

11 Per 31 December 1995 21 176 offshore financial companies were registered with the Commercial Register in Curaçao.

12 See *Chapter II.2.7*

manufacturing on Curaçao[13]. *Table II.4*, *Table II.5* and *Figure II.4* investigate the position of the sectors in terms of value added and foreign exchange earnings.

Table II.4 : Value Added in the different sectors (mln. NA*f*), 1993

	Neth. Antilles	%	Curaçao	%	Bonaire	%	Windwards	%
Agriculture, fishing and mining	34.9	*0.9*	14.6	*0.5*	15.2	*6.4*	5.1	*0.7*
Manufacturing	229.9	*6.0*	200.0	*7.1*	8.9	*3.7*	21.0	*2.7*
Electricity, gas and water	135.7	*3.6*	106.3	*3.8*	10.7	*4.5*	18.7	*2.4*
Construction	251.9	*6.6*	174.3	*6.2*	22.1	*9.3*	55.5	*7.2*
Wholesale and retail trade	768.4	*20.2*	545.4	*19.5*	23.7	*10.0*	199.3	*25.9*
Hotels and restaurants	189.8	*5.0*	83.1	*3.0*	20.6	*8.7*	86.1	*11.2*
Transport, storage and communication	**507.1**	*13.3*	**353.3**	*12.6*	**55.6**	*23.4*	**98.2**	*12.8*
Banking, insurance and business services	871.7	*22.9*	694.1	*24.8*	36.8	*15.5*	140.8	*18.3*
Other services	370.1	*9.7*	252.1	*9.0*	21.8	*9.2*	96.2	*12.5*
less : interest banking industry	-227.3	*-6.0*	-172.7	*-6.2*	-11.4	*-4.8*	-43.2	*-5.6*
(1) Total industry	*3132.2*	*82.3*	*2250.5*	*80.4*	*204.0*	*85.8*	*677.7*	*88.0*
(2) Total government	*674.6*	*17.7*	*548.6*	*19.6*	*33.7*	*14.2*	*92.3*	*12.0*

Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

Table II.5 : Value Added per employee in the different sectors (NA*f*), 1993

	Neth. Antilles	Curaçao	Bonaire	Windwards
Agriculture, fishing and mining	43 734.3	34 679.3	127 731.1	19 029.9
Manufacturing	288 095.2	475 059.4	74 789.9	78 358.2
Electricity, gas and water	170 050.1	252 494.1	89 916.	69 776.1
Construction	315 664.2	414 014.3	185 714.3	207 089.6
Hotels and restaurants	237 844.6	197 387.2	173 109.2	321 268.7
Transport, storage and communication	635 463.7	839 192.4	467 226.9	366 417.9
Banking, insurance and business services	1 092 355.9	1 648 693.6	309 243.7	525 373.1

Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

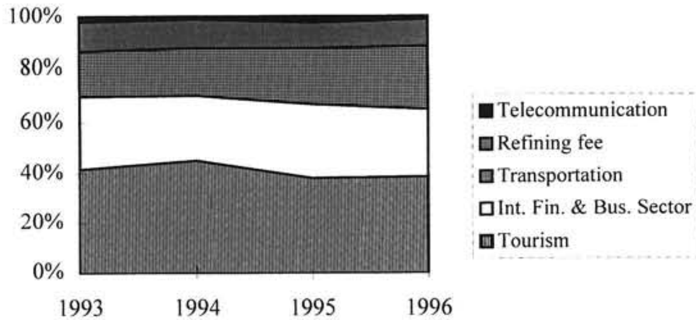
It follows that the sectors of *Transport, storage and communications*, *Banking, insurance and business services* and *Tourism* rank among the highest when considering value added[14]. The transport sector shows its importance by accounting for 13.3 percent of value added

[13] Food processing, paint, paper, plastic, soap, vehicle parts, electronic assembly, batteries, skin lotion, liqueurs, beer.

[14] Reflected in the *Hotels and restaurants* sector.

and 16.6 percent of foreign exchange earnings in 1993. Moreover, it shows the second highest value added per employee. This sector will be treated in great detail further on in this study.

Figure II.4 : Composition of foreign exchange earnings from the service sector (in percentages)



Source : Policy Research Corporation N.V., based on Bank of the Netherlands Antilles

II.2.3. THE PUBLIC SECTOR

II.2.3.1. The Nature of the Operation of Government

The public sector operates at a Central Government and an Island Government level.

The public sector has a federal structure with two layers. It operates at a Central Government level and an Island Government level ('Eilandraad' and 'Bestuurscollege') with the Island Government of Curaçao in a dominating position. The Netherlands Antilles, formerly a colony of the Netherlands, achieved autonomy of Government in 1954, but remain an integral part of the Kingdom of the Netherlands.

The economy is more oriented towards the public sector than towards free enterprise.

In 1993 the public sector was the third largest contributor to GDP, with a value added share of 17.7 percent and employing about 20 percent of the total active population. Public expenditures jumped from 34.5 percent in 1990 to 42.3 percent of GDP in 1996 (see *Table C.1* in Annex C) which is a high end average: government is relatively 'big' on the Antilles[15]. The orientation of the economy seems to be in favour of public sector activity and is, generally spoken, weakly orientated towards entrepreneurship.

Beyond its value added contribution, the public sector influences economic activity by operating as an employer of the last resort. There are indications that the sector is largely driven by the objective of providing employment rather than by the demand for services and efficiency considerations[16]. Hence, the sector does not concentrate on its core activities, such as creating legal and operational frameworks and stimulating investments.

II.2.3.2. Public Finance

The budget deficit and the debt ratio are increasing but not altogether disastrous : 5.1 and 66 percent of GDP in 1996. On the other hand, the danger of a snowballing debt is imminent.

As for the budgetary situation of the Netherlands Antilles, the evolution of revenues and expenditures cannot be overlooked. Although rising, revenues are surpassed by rapidly increasing expenditures. For 1996, this results in a deficit of 204.1 million NA*f* (see *Table C.1* in *Annex C*), which accounts for 5.1 percent of GDP. This rising – primarily domestic (see *Table II.6*)– debt is another cause of the high interest rates prevailing on the Antilles.

Moreover, the budget deficit, and as the implicit interest rate on public debt are higher than nominal GDP growth. These two facts, combined with a negative primary budget balance mean that the danger of a snowballing public debt is imminent[17].

A 'general' Structural Adjustment Programme (SAP) is presented by the governments to remedy this situation.

The first serious steps towards remedying this situation have been taken this year via definitive Structural Adjustment Programme (SAP) for the *entire* economy. The SAP was drawn up by the Central Government and the Island Governments, assisted by the IMF. It covers the IMF programme as well as recent recommendations by external auditors. As immediate implementation would impair eco-

[15] In 1996, Sweden had 64.7 %., the United States 33.3 % (source : IMF).

[16] Productivity in the public sector rises much more slowly than in private business, a phenomenon known as 'Baumol's disease'

[17] A snowballing debt feeds itself in an exponential way when certain conditions are met. See also Goudswaard (1994), p. 27-30.

nomic development and social welfare, the programme is being extended by one year[18]. The general recommendations were presented, by Dutch and Antillean officials, on September 9th 1997 but detailed policy measures and the path to be followed towards a solution still have to be designed.

Table II.6 : Total Public Debt and guarantees (mln. NA*f*), 1994-1996

				% changes	
	1994	*1995*	*1996*	*1995*	*1996*
Domestic debt	1899.4	2027.1	2119.1	6.7	4.5
Foreign debt	683.7	724.1	662.7	6.0	-8.5
Total debt	**2582.8**	**2751.2**	**2781.8**	**6.5**	**1.1**
% of GDP	*65.3*	*65.9*	*66*	*	*
Guarantees	324.0	399.5	391.7	23.3	-2.0
Total debt and guarantees	**2906.8**	**3150.7**	**3173.5**	**8.4**	**0.7**
% of GDP	*73.5*	*75.4*	*75.2*	*	*

Source : Policy Research Corporation N.V., based on Bank of the Netherlands Antilles

II.2.3.3. Content and Direction of Financial Flows

The so-called 'Eilanden Regeling Nederlandse Antillen' (ERNA) determines the financial flows between Curaçao and the Central Government. Up to 1996, Curaçao was a net payer but it will become a net receiver.

The responsibilities within the fiscal system lie with the Central Government as well as with the Island Governments. The Central Government, however, collects only indirect taxes, whereas the Island Governments collect the direct taxes. In view of the so-called "Eilanden Regeling Nederlandse Antillen (ERNA)", 25 percent of the principal amount of the income and profit taxes collected by Curaçao has to be transferred to the Central Government[19]. According to the same regulation, 50 percent of import/export/transhipment duties, turnover taxes and excise duties collected in Curaçao by the Central Government has to be transferred to the Island Government of Curaçao[20]. The result of this arrangement is a net flow from the Island

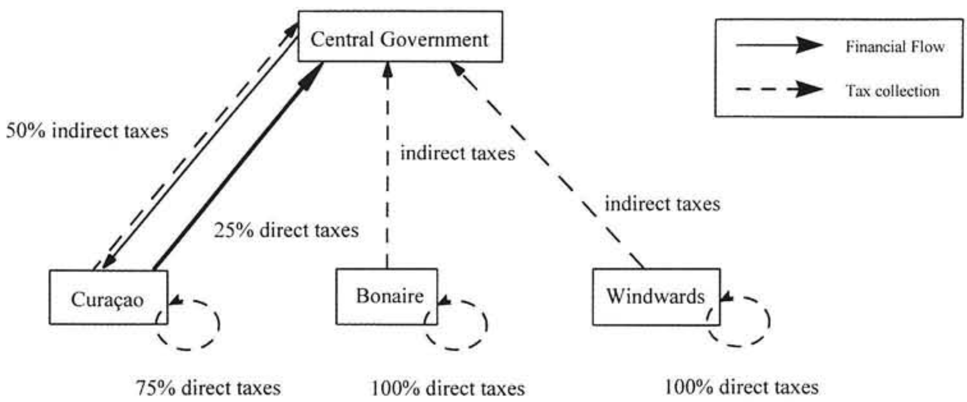
18 See Verslag vergadering 'Ambtelijke Beleidsdialoog' (10/7/97), p. 1-2.

19 Tax without island surcharge. These surcharges are considered to be additional income for the islands and a means to diversify indirect tax tariffs in order to attract investors. In practice, each island sets the maximum surcharge on indirect taxes allowed by the Central Government to cover its budget deficits. The surcharges on direct taxes are the same for each island.

20 See ERNA, art 86-7.

Government of Curaçao to the Central Government. The actual payments will be deferred to next year[21]. By levying a General Spending Tax[22] though, income from indirect taxes is likely to increase more rapidly than direct tax income. Then, the net payments to the Central Government will be replaced by net incomes for Curaçao. The flow of tax revenue between the islands and the Central Government are presented in *Figure II.5*.

Figure II.5 : Tax distribution between the Central Government and the Island Governments



Source : Policy Research Corporation N.V.

By regulation of the ERNA, a Solidarity Fund was installed but never really implemented. This resulted in an uncovered budget deficit for Bonaire, Statia and Saba.

For reasons of budgetary support a Solidarity Fund was installed (see *Figure II.6*). It is funded by the Governments of the Netherlands Antilles (55 percent), the Netherlands (20 percent) and Aruba (25 percent) with the aim of financing the structural budget deficits of Bonaire, Statia and Saba. This regulation was written down in the ERNA[23], but has not been implemented yet[24]. In 1985 an agreement between the three parties was reached, stipulating that, as of 1986, fixed amounts would be distributed: 14 million NA*f* to Bonaire and 3.5 million NA*f* each to Saba and Statia. Because the –structural–

[21] See ERNA, art. 88.

[22] As of 1 July 1996. In Dutch it is called 'Algemene Bestedingsbelasting' (ABB). It is levied on the import of goods into the Leeward Islands, on the manufacture of local goods and on certain specific services. See also *Chapter I.2.7*.

[23] See ERNA, art. 110, par. 2-3 and art. 111, par. 1.

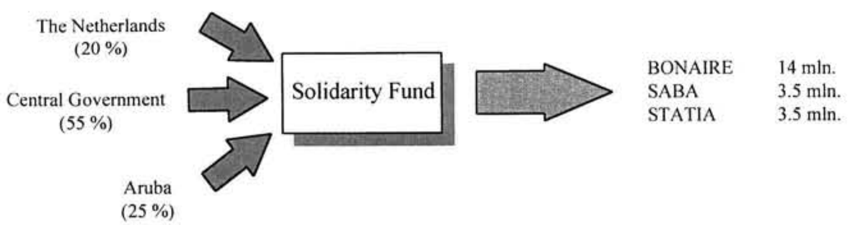
[24] The draft law has still not been passed because of disagreements on the ratio of distribution (50/20/25).

deficits surpassed donations, this situation has so far resulted in a cumulated uncovered deficit of nearly 46 million NA*f*.

Taxation accounts for 80 percent of government income. Non-tax revenues are important only for the Central Government.

A major part of government income on the Antilles consists of taxes. As can be seen on *Figure C.1* (see *Annex C*), taxation accounts for 80 percent of government income, even in Bonaire where grants are reduced in favour of tax revenues[25]. Non-tax revenues are a substantial income component for the Central Government[26]. *Figure C.2* and *Figure C.3* in *Annex C*, show Curaçao's dominance with regard to tax income, in absolute terms as well as per capita.

Figure II.6 : The Solidarity Fund



Source : Policy Research Corporation N.V.

Curaçao is a major contributor to the Central Government's tax income.

Furthermore, some inferences with regard to the redistribution of tax income can be drawn from the three figures in *Annex C*. First, Curaçao accounts for the larger part of the Central Government's tax income; data analysis shows it to be 60 to 70 percent of the Central Government budget during the last four years. Second, together with analysis of direct tax income, *wage* taxation on Curaçao and Sint Maarten has increased. This has led to a higher wage cost (see *Chapter II.2.4.1*).

25 Almost entirely originating from the so-called Solidarity Fund. These grants play an important role in the composition of the Bonaire budget.

26 Dividends, fees, charges, sales,...

There is little room for policy-making on the Netherlands Antilles, although there are some sources of investment money apart from official budgets.

On the expenditure side, the proportion of personnel costs to current expenditures was 51 percent in 1996[27]. Interest payments are an important part as well as spending on goods and services. Current expenditures take up about 90 percent of total outgoing government money and fixed engagements exist within capital expenditures (see *Table C.1* in *Annex C*). Consequently, there is bound to be only limited room for policy-making although there is some. Apart from the official budget, other sources of investment capital exist[28]. These are mostly allocated to specific projects.

II.2.4. *THE LABOUR MARKET*

The labour market is rigid and protected. Without co-operation between the government on the one hand and social partners on the other hand, this situation will continue.

The labour market is characterised by a high degree of rigidity and protection[29]. The procedure for granting work and residence permits to foreigners is lengthy, which hampers the use of foreign labour[30]. These complex procedures encourage workers to immigrate and work illegally. Measures are therefore in place to prevent this illegal immigration.

Moreover, labour mobility is low, especially in the Public Sector. This lack of mobility, together with the shortage of skilled workers causes a mismatch between supply and demand with regard to labour. Furthermore, a consultative structure of workers and employers is not part of tradition. However, both parties realise that if something is to be done about the present situation, co-operation between workers and employers is essential. This changed attitude is reflected in the *'Akuerdo di Amandelweg'*, which is an agreement on increased co-operation reached by the 'social partners' (i.e. workers and employees) in September 1997.

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[27] For the Central Government, this figure was as high as 58 percent. It is striking that subsidies to public companies on Curaçao are surprisingly large. See Bank of the Netherlands Antilles (1997a), p.95

[28] 'Het kabinet voor de Nederlandse Antillen' (KabNA), the European Development Fund, the Social Development Fund for the Netherlands Antilles (SofNA), etc. See DEZ(1997), annex II, p. 2.

[29] The labour market is governed by laws which were introduced following riots in reaction to lay-offs from the refinery in Curaçao in 1969 and 1985.

[30] See 'Landsverordening toelating en uitzetting' (PB 1966, 17) and 'Landsbesluit Toelating' (PB 1985, 57).

II.2.4.1. Labour Costs

High wage levels and low productivity hamper the competitive position of the Antillean economic sectors.

In general, wage levels in the Netherlands Antilles are high. The average wage cost is about 30 000 US$ in the government sector and 15 000 US$ in the business sector[31]. In 1992, the relative unit labour cost was nearly 14 percent higher than in a highly industrialised European country like the Netherlands. The Antillean unit labour cost was 2.3 times *lower* than in the Netherlands but was offset by the reduced labour *productivity* of the Antillean worker. The calculations in *Table II.7* were carried out using the 1992 exchange rate of 1 NA*f*=1.02 NLG[32].

Table II.7 : Unit Labour Cost Relative to the Netherlands, 1992 (NLG)

	The Netherlands Antilles	The Netherlands	Antilles-Netherlands ratio
labor cost/employee	24 605	56 288	0.44
			÷
value added/employee	40 585	105 809	0.38
			=
relative unit labor cost	*	*	**1.14**

Source : Policy Research Corporation N.V., based on National Accounts

Since labour productivity has decreased by 14% over the last five years[33], all of this has an adverse impact on costs. Protective measures compound the existing problems. In turn, costs are further driven up in a small market where economies of scale in industrial sectors are virtually absent. Meanwhile, if other countries focus on market orientation and liberalisation, Antillean competitiveness with respect to these issues will decrease year by year.

31 Curaçao Chamber of Commerce (1996), p.XXI.

32 These estimates are meant to give only a rough and general idea of the Antillean situation. The calculated ratio is bound to differ for the sectors and between the islands.

33 See Inter-American Development Bank (1997), p. 9 and DEZ (1997), p.2.

II.2.4.2. Employment and Unemployment

Unemployment is high, but compared to other Caribbean countries fairly average. The overall participation rate is normal.

Unemployment is problematic on the Netherlands Antilles. In 1992, it amounted to 15.3% of the labour force (see *Table II.8*). Compared to other Caribbean countries, however, this rate is fairly average(see *Table II.9)*. The participation rate is also on average, although the 50.% in Sint Maarten is unusually high[34].

Table II.8 : Unemployment on the Netherlands Antilles and its Islands

	Netherlands Antilles	Bonaire	Curaçao	Saba	Statia	St. Maarten
	1992	*1994*	*1995*	*1992*	*1992*	*1992*
Labour force	87 756	5 948	62 236	547	867	19 366
employed	74 322	5 617	54 060	524	817	16 911
unemployed	13 434	331	8 176	23	50	2 425
unemployment rate	15.3	5.5	13.1	4.2	5.8	12.5
participation rate	42.3	41.8	41.1	45.6	45.6	50.2

Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

Table II.9 : Indicators for some Caribbean Countries, 1994

	Population ('000)	Inflation (%)	Unemployment (%)	Deficit (% GDP)	Current Account balance ('000 000 USD)
Netherlands Antilles	*207	**2.7	***15.3	*4.6	136.2
Bahamas	273	1.3	15.0	1.1	-149.8
Barbados	265	0.5	17.1	1.1	19.7
Dominican Republic	7600	14.3	30.0	-3.6	-213.0
Haiti	7035	42.6	*	-4.2	4.2
Jamaica	2496	35.1	15.3	4.2	-5.4
Trinidad/Tobago	1292	8.5	18.5	-3.1	104.0
Antigua	65	3.5	6.7	-7.0	-27.9
Dominica	71	1.6	9.9	-12.1	-20.9

* = 1996, ** = 1995, *** = 1992

Source : Policy Research Corporation N.V., based on IMF and Central Bureau of Statistics

34 The labour force as a percentage of the total population.

Youth and female unemployment are a problem, especially on Curaçao.

Although youth unemployment is a problem on Curaçao[35], incentives introduced in 1989 to stimulate employment for men and women under twenty-five have not been implemented[36]. In general, men are increasingly better off than women; on Curaçao the unemployment rate among women (17 percent) is almost twice as high as among men. Social problems arise, with many single mothers surviving on a low income. Naturally, the low employment rate causes a narrow tax base and a high social security burden. Thus, public finance is being destabilised even further.

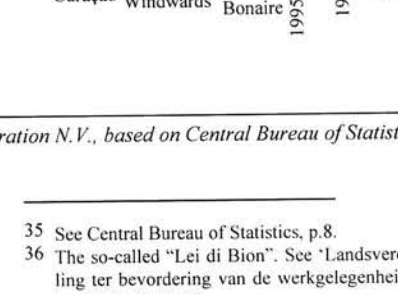
II.2.5. THE CAPITAL MARKET

II.2.5.1. Inflation

Inflation is rising , albeit on a moderate level. Compared to neighbouring countries it is clearly below average.

Inflation is on an upward slope on Curaçao and the Windwards (see *Figure II.7*), albeit at a moderate level. It seems to be a cost push inflation given rising petrol prices, the increase of labour cost and decreasing labour productivity as well as international[37] effects.

Figure II.7 : Percentage changes in consumer prices, 1985-1995



Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

35 See Central Bureau of Statistics, p.8.

36 The so-called "Lei di Bion". See 'Landsverordening ter invoering van een regeling ter bevordering van de werkgelegenheid van werkzoekenden van 18 tot 30 jaar' (PB 1989, 74).

37 Higher foreign producer and export prices. (See Chamber of Commerce (1996), p. lXX)

Compared to other Caribbean countries the inflation rate is, with a few exceptions, clearly below average, as can be inferred from *Table II.9*[38].

II.2.5.2. Monetary Developments

The Central Bank has set a credit ceiling but has not made a distinction between consumptive and investment credit.

Given the fixed exchange rate of the NA guilder (NA*f*) to the US dollar, the cash reserve instrument is the most important monetary tool in the Antillean economy. Prompted by concern about their foreign exchange reserve position, a letter of intent was signed by the Central Bank, the Central Government and the Island Government of Curaçao on the 9th of May 1996. This confirmed their commitment to implementing the SAP negotiated with the IMF mission. Because the targets for monetary policy had not altogether been met by the end of 1996, the Central Bank decided further to restrain credit growth. It is the intention of the Bank to continue to urge banks to be cautious about the extension of credit for consumptive purposes and to encourage loans for productive purposes[39]. Until now, though, little distinction has been made between consumptive and investment credit. The credit ceiling continues to be one absolute figure.

The contracting money supply as an indicator of the level of transactions can be attributed to the economic downturn in 1996[40]. *Table II.10* presents an overview of the money supply and its components.

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38 See The World Bank (1996), p.25. Suriname suffers 587% while St. Vincent has 0.4%.

39 See Bank of the Netherlands Antilles (1997b), p.45

40 See Bank of the Netherlands Antilles (1997b), p.46

Table II.10 : The Money Supply and its Components (mln. NA*f*), 1994-1996

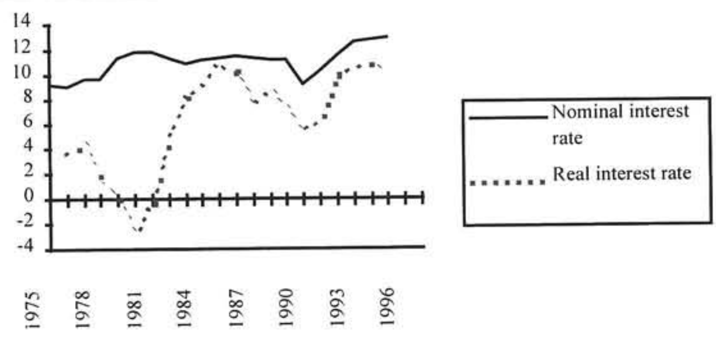
	1994	*1995*	*1996*
Coins and notes with the public	196.2	206.5	191.6
Demand deposits held by the public	815.0	871.9	802.4
NA*f*	671.8	684.8	646.0
foreign currency	143.2	187.1	156.4
Money (M1)	1011.2	1078.4	994.0
Time deposits	335.3	350.1	400.3
Savings	1101.5	1132.8	1098.5
Near money	1436.8	1482.9	1498.8
Money supply (M2)	**2448.0**	**2561.3**	**2492.8**

Source : Bank of the Netherlands Antilles

Higher domestic borrowing by the government has contributed to upward pressure on nominal interest rates.

The aforementioned expansion of the public sector has resulted in higher domestic borrowing by the Government, contributing to upward pressures on nominal interest rates (see *Figure II.8*) and partially crowding out private sector investment. Curbing the budget deficit could help to lower interest rates, reduce debt service obligations and improve the investment climate more vigorous.

Figure II.8 : Evolution of Interest Rates, 1975-1995 (in percentages)



Source : Policy Research Corporation N.V., based on IMF

The oligopoly of local banks makes lending inefficient and expensive.

The banking sector comprises both offshore and onshore banks. The latter are trading banks and mortgage banks. An oligopoly of three local banks in a closed system results in restricted competition. Together with local customs of granting credit[41], this leads to inefficient and expensive lending. Finally, the spread on capital cost is recouped from the client[42].

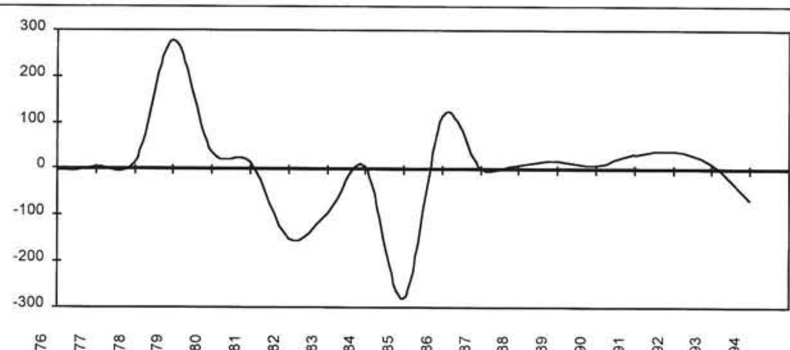
II.2.6. ENTREPRENEURSHIP

II.2.6.1. The Importance of Foreign Investment

The Antillean investment context is neither transparent nor predictable. This has led to a downturn in foreign investment, although action has been taken on some points.

Again, given the fact that the Netherlands Antilles has a small and open economy, the importance of foreign capital being invested in the local economy is difficult to underestimate. But, as was mentioned before, the investment context on the Antilles is neither transparent nor predictable. This is likely to increase costs, which in turn will lead to a reduction in both domestic and foreign investment. The path of the foreign investment curve since the latter half of the previous decade (see *Figure II.9*) clearly shows about the structural problems of investment in the Antilles.

Figure II.9 : Evolution of Foreign Investment in current prices (mln. US$), 1976-1994



Source : Policy Research Corporation N.V., based on IMF

As a result, the Antillean Department of Economic Affairs (Dienst Economische Zaken, DEZ) conducted an inquiry named 'Red

41 Trustworthiness and guarantees play a key role in the Antillean banking system. Moreover a spread between short-term and long-term credit does not exist. Finally, the transformation margin is high (6 to 8 percent).

42 See Dienst Economische Zaken (1997), p.6

Tape'[43] in 1996 and action was taken on a certain number of points. These include quick granting of a business licence, a new Residence Act and faster granting of residence and working permits. Nonetheless, it has to be realised that these facilities regarding permits are only *one* of the issues considered in an investment decision. The fiscal climate, interest rates, cost and education level as well as labour productivity also play their part[44].

II.2.6.2. Developing Local Initiative

Local initiative is restrained due to the moderate state of education. In addition, highly educated Antilleans do not return to their country after completing higher education elsewhere.

It is deemed to be difficult to stimulate local initiatives for economic activities due to the state of education on the islands. The primary school level shows only a moderate record, the second and tertiary levels are confronted with a significant number of drop-outs. This leads to a shortage of qualified management personnel and skilled professionals, in spite of high education expenditures. Also, a significant number of highly educated Antilleans do not return to their home country, but stay in the Netherlands or the United States after completing a college or university education.

Some negative local attitudes and aversions are hampering the development of local initiative.

Furthermore, the development of local initiative risks being hampered by some negative attitudes of the Antilleans. The complex permit procedures are based on a certain aversion to foreigners. Even more dangerous to local initiative in the long term is the aversion to rendering services. Another typical Antillean phenomenon is the 'don't-say-no' culture, which might frighten off foreign partners and investors, because in some cases appointments and confirmations are not kept.

II.2.7. The Balance of International Payments

The balance of payments shows a large structural trade deficit, not sufficiently offset by services or capital account surpluses.

The balance of payments (BOP) for the Netherlands Antilles (see *Table II.11*) economy has been deteriorating. A large trade deficit is not or not sufficiently being offset by services surpluses. Although private and official capital is flowing in, the capital account does not

43 A synonym for bureaucracy.

44 The SAP intends to remedy existing problems relating to these issues. Unless it is made operational, the general framework alone will not suffice.

succeed in curbing the current account deficit. This results in a further loss of reserves, the import cover[45] –a mere 1.5 months– becoming dangerously short[46].

The structural trade deficit is caused by the scarce natural resources of the Netherlands Antilles.

The *current account* almost entirely explains the deterioration of net international reserves. The large merchandise deficit is easily explained by the nature of the country's resources. On the Netherlands Antilles, virtually everything has to be imported, including all energy[47]. Almost all consumer and capital goods are imported, with Venezuela and the United States[48] as major suppliers[49]. Exports consist largely of oil and oil products from the refinery on Curaçao[50].

A ban on imports, would however generate an extra, possibly inflationary, demand for domestic goods. But with import penetration[51] at more than 60 percent of GDP and very low import compressibility[52], this is simply impossible. Import restrictions by means of additional duties and quotas to protect local manufacturing, are in force, whereas export duties are non-existent[53]. Under pressure of Southern Member States of the EU, the European Commission has been reviewing the preferential trading status of the Netherlands Antilles with the EU under the OCT (Overseas Countries and Territories) arrangements[54] since 1996. Its view was to impose limits on exports of rice and sugar. This has resulted in the collapse of the rice and sugar handling business to a downfall. Finally, it can easily be inferred

45 The ratio of official reserves to imports, expressed in months. Thus, the import cover indicates how many months a country can pay for its imports with official reserves held constant.

46 The international standard is three months.

47 The main imports into Curaçao include food, machinery, transport equipment and consumer goods.

48 This must be obvious given an exchange rate pegged to the dollar and the geographic proximity of the USA.
Trade relations with the USA are governed by the Caribbean Basin Economic Recovery Expansion Act.

49 US 32%, Venezuela 26% and the Netherlands 11 % of total imports (source : CIA Factbook '95)

50 See Chamber of Commerce (1996), p. XXI

51 Imports of goods and services as a percentage of GDP or total final demand.

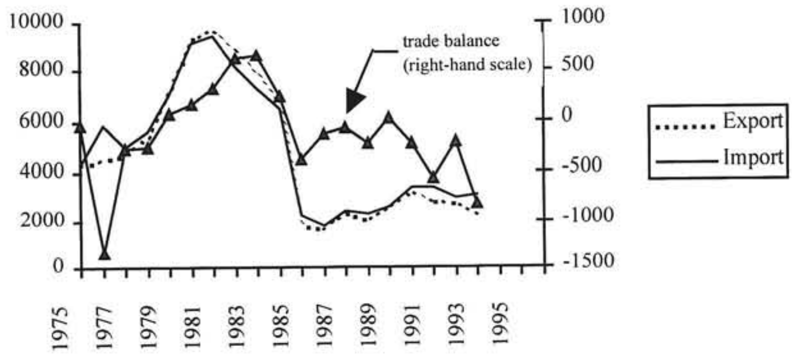
52 The extent to which there are non-essential goods which need not be imported in times of stress on the balance of payments.

53 On Curaçao and Bonaire import duties on products such as bread, beer, tobacco, cars, petrol, etc vary from 5 to 25.5%. The Leewards have import duties only for natural gas. See International Bureau of Fiscal Documentation (1997), p.85. and PB 1975, 219, p.131d-f)

54 The Netherlands Antilles are an associate member of the EU.

from *Figure II.10* that the trade balance has shown a deficit since the latter half of the eighties.

Figure II.10 : Evolution of Trade (mln. NA*f*), 1975-1993



Source : Policy Research Corporation N.V., based on IMF

On the *services account*, the dropping share of the *international finance and business* sector is prominent while tourism on Sint Maarten is still below the pre-hurricane level of 1995. It is not a coincidence with regard to the situation of the BOP that these two sectors are the main generators of foreign exchange. On the basis of the figures in the balance of payments, transportation is doing well. The bunker sales of the oil terminal on Statia are booming while ship repair and storage show falling revenues[55]. These items will be treated in more detail further in this study.

The *capital account* shows significant net borrowing activities from abroad. Deferred amortisation payments to the Dutch government are the reason of the increased surplus on the official capital balance. As the exchange rate of the Netherlands Antilles guilder is pegged to the US dollar, the recent appreciation of the latter against other curren-

55 See Bank of the Netherlands Antilles (1997b), p. 38.

cies has negatively affected the international competitiveness of the Antillean economy[56].

Table II.11 : Balance of Payments* (mln. NA*f*), 1994-1996 (a minus sign denotes an increase in reserves)

* cash basis

	1994	*1995*	*1996*
Current account	**-129.7**	**-29.9**	**-424**
Goods	*-1940.2*	*-2168.3*	*-2217.9*
Exports	428.6	377.1	402.8
Imports	2368.8	2545.4	2620.7
Services	*1945.8*	*2245.3*	*1900.3*
Receipts, of which	3002.3	3491.6	3152.9
Transportation	454.9	557.5	609.6
Travel	1143.2	1004.5	984.9
Int. Fin. & Business	649.7	800.3	712.9
Investment & labor income	218.2	208.7	239
Expenditures, of which	1056.5	1246.3	1252.6
Travel	364.9	397.2	455.8
Int. Fin. & Business	176.6	200.1	244.9
Investment & labor income	112	177.7	128.4
Unilateral Transfers	*-135.3*	*-106.9*	*-106.4*
Capital account	**2**	**134.7**	**322.7**
Private capital	*26.8*	*65.3*	*213.3*
Official capital	*-24.8*	*69.4*	*109.4*
Statistical discrepancies	**-8.5**	**3.4**	**9.1**
Change in reserves	**136.2**	**-108.2**	**92.2**
with commercial banks	37.3	-12.4	14
with Central Bank	98.9	-95.9	78.2
Memorandum Items			
Official reserves (excl. gold)			
in millions NAG	320.7	416.5	338.3
import cover in months	1.6	2.0	1.5

Source : Policy Research Corporation N.V., based on Bank of the Netherlands Antilles

56 The rationale for the fixed exchange rate is questionable from the point of view of inflation and labour market (in)flexibility. See IMF, World Economic Outlook 1998.

In order to improve the balance of payments, sectors generating foreign exchange should be stimulated.

From the analysis of the balance of payments it follows that it is important to stimulate sectors generating foreign exchange. The stimulation of tourism, transportation and finance contributes to an improvement in BOP. The fact that these sectors create a substantial amount of value added makes another case for giving them additional attention.

II.3. CONCLUSIONS

The economy of the Netherlands Antilles is in a suboptimal state.

The macro-economic situation of the Netherlands Antilles is critical. The labour and capital market, the legislative framework, public finances and the balance of payments are in a suboptimal state. This has led to a slowdown in economic achievement with unemployment, insufficient investments, budgetary problems and decreased international competitiveness as the main results.

Many of the problems which arise are caused by structural shortcomings. This situation is reversible.

Worse still, many of these problems are caused by structural shortcomings. Solutions must therefore be defined in the framework of a thorough restructuring of the economy. Given the limited socio-economic dimensions of the country, a reorganisation should not at all be impossible: the situation is still reversible.

It is now important to develop, within the general framework of a solution, policy recommendations and a path to be followed. This study intends to do so for the maritime sector of the Netherlands Antilles.

During the last ten years workers and employers on the one hand and politicians on the other have held diverging opinions about which key issues should be focused on in the the economic framework within the Netherlands Antilles. On September 9, 1997, the aforementioned general conclusions were accepted and general recommendations were presented. But this is only a first step. It is of the utmost importance that these conclusions should form the basis of detailed and practical recommendations concerning each sector of the Antillean economy. The goal of this study is to work out the policy recommendations *and* the path to be followed with regard to the maritime sector of the Netherlands Antilles.

To this end, an inspiring maritime vision, broadly supported, would help.

The implementation of these policy recommendations by the government should be facilitated by drawing up a plan, which includes an *inspiring maritime vision*. For this to be realised, the social partners, will more than ever, have to support the plan.

III. INTERNAL ANALYSIS: THE MARITIME SECTOR OF THE NETHERLANDS ANTILLES

III.1. INTRODUCTION

III.1.1. SUBSECTORS OF THE MARITIME SECTOR

This chapter gives an overview of the maritime sector on the respective islands of the Netherlands Antilles.

Chapter III describes the current status and significance of the maritime sector in the Netherlands Antilles. Moreover, it reflects the findings of the field research concerning these activities. In this first paragraph the subsectors distinguished in the *Economic Impact Study* (EIS®) are presented. Subsequently, the maritime sector on each of the islands is outlined on the basis of this subdivision.

The following subsectors are distinguished in the quantitative analysis of the EIS®:
- *shipping;*
- *port-related services;*
- *shipping agents;*
- *ship repair;*
- *register-related services;*
- *free zone;*
- *oil refining, storage and transhipment.*

In principle, the following subsectors are distinguished in the quantitative analysis of the EIS®:

- *shipping*: this subsector consists of actual shipping companies, in other words companies that own and/or operate ships;
- *port-related services*: this subsector consists of port authorities, terminal operators and miscellaneous services that are related to the operation of ports (such as towage, pilotage, supplies, classification and loss survey);
- *shipping agents*: this subsector consists of shipping agents. These companies represent (foreign) shipping lines and operate as cargo brokers. Furthermore, they provide services to ships calling at ports in the Netherlands Antilles;
- *ship repair*: this subsector incorporates the Curaçao Dry Dock company (CDM);

- *register-related services*: this subsector consists of the services that are related to the operation of a shipping register (such as inspection, trust, law and notary services);
- *free zone*: this subsector reflects trading activities in the free zone 'Koningsplein'. Because of its close relation to the port and especially the container terminal, the free zone is considered as part of the maritime sector;
- *oil refining, storage and transhipment*: this subsector consists of oil refineries and oil storage and transhipment terminals.

These subsectors are explicitly taken into account in the Input-Output analysis. To this end separate columns have been built into the system of Supply & Use tables to represent these subsectors.

Besides these sub-sectors, some other maritime activities are taken into consideration. The most important of these is cruise tourism.

Furthermore, *cruise tourism* is taken into consideration in the EIS® in an alternative way: this subsector is not represented in the Supply & Use system by means of a separate row and column because it includes activities of a range of sectors, such as restaurants, the retail trade, entertainment and hotels. Nevertheless, the EIS® is able to quantify their impact of cruise tourism. By means of the closed Input-Output analysis which calculates the direct, indirect and induced effects of the expenditures of cruise tourists on the islands.

The above presented subdivision is the starting point of the analysis, based on and fully applicable to the situation on Curaçao. For the other islands it is necessary to deviate from this subdivision for a number of reasons:

- either the distinction between the subsectors is not as clear-cut as the subdivision suggests;
- the subsector concerned does not exist at the particular island;
- the subsectors concerned were too small, or too few questionnaires were completed in the subsectors statistically to warrant the inclusion of separate columns.

For statistical reasons, a number of diverse maritime activities are aggregated into one sub-sector 'maritime activities' for Bonaire and the Windward islands.

For Bonaire and the Windward islands a sub-sector '*Maritime Services*' is therefore built into the Supply & Use tables. This sub-sector is an aggregate of all types of activities in the ports of these islands: agents, stevedores, port authorities, *etc*. The limited number of companies and their relatively small scale make it impossible from a statistical point of view to distinguish more clear-cut subsectors, as was done for Curaçao. In the subsequent paragraphs the sub-sectors on the different islands are described and, if necessary, clarified. First, the overall economic significance of the maritime sector is discussed.

III.1.2. *CURRENT SIGNIFICANCE OF THE MARITIME SECTOR OF THE NETHERLANDS ANTILLES*

The current economic significance of the maritime sector of the Netherlands Antilles is presented in *Table III.1*.

Table III.1 : Current significance of the maritime sector of the Netherlands Antilles, 1997.

Value added (000 NA*f*.)

	direct	*indirect*	*induced*	*total*	*% GDP*
Curaçao	146 779	45 236	186 822	**378 837**	**± 12%**
Bonaire	27 998	2 624	20 614	**51 236**	**± 19%**
Windwards	78 391	27 122	85 654	**191 167**	**± 25%**
Total	253 168	74 982	293 090	621 240	

Employment

	direct	*indirect*	*induced*	*total*	*% empl.*
Curaçao	2 353	570	3 247	**6 170**	**± 11%**
Bonaire	185	81	744	**1 010**	**± 17%**
Windwards	1 977	402	2 114	**4 493**	**± 19%**
Total	4 515	1 053	6 105	11 673	

Backflow (000 NA*f*.)

	direct	*indirect*	*induced*	*total*
Curaçao	31 636	9 964	41 438	**83 038**
Bonaire	2 874	418	4 512	**7 804**
Windwards	17 081	5 832	18 891	**41 804**
Total	51 591	16 214	64 841	132 646

Source : Policy Research Corporation N.V.

The maritime sector plays an essential role in the economic development of the Netherlands Antilles. The importance of the sector is confirmed by the results of the EIS®.

The maritime sector is of strategic importance to the five island economies of the Netherlands Antilles an it plays an essential role in its economic development. The importance of the sector is confirmed by the results of the *Economic Impact Study* (EIS®). The EIS® enables policy makers to evaluate both the direct and indirect economic impact of the sector. These indirect effects consist of the intermediate purchases made by the sector for its production process. Moreover, the EIS® is able to determine induced effects as well. These are the effects of the spending of public and private income generated and earned in the maritime sector.

The maritime sector of the Netherlands Antilles accounts for a total value added of 621 million NAf. Nearly 11 700 jobs depend on the maritime sector. Moreover, the maritime sector generates a total backflow to government of 132 million NAf.

The maritime sector of the Netherlands Antilles accounts for a total value added of 621 million NA*f*. Nearly 11 700 jobs depend on it. On Curaçao, 11% of total employment is related to the maritime sector. For the other islands this figure is even higher: 17% for Bonaire and 19% for the Windward islands. The maritime sector generates a total backflow to all levels of government of over 132 million NA*f*.

It will be possible to increase its present economic significance even more in the future by taking advantage of opportunities in cruise tourism, fishery and yachting.

III.2. THE MARITIME SECTOR OF CURAÇAO

III.2.1. ECONOMIC SIGNIFICANCE: OVERVIEW

An overview of the maritime sector and its subsectors on Curaçao is provided in *Table III.2* and *Table III.3*.

Table III.2 : Total economic significance of the maritime sector of Curaçao, 1997.

	direct	*indirect*	*induced*	*total*	*%*
value added (000 NAf.)	146 779	45 236	186 822	**378 837**	**12%**
employment	2 353	570	3 247	**6 170**	**11%**
backflow (000 NAf.)	31 636	9 964	41 438	**83 038**	

Source : Policy Research Corporation N.V.

Table III.3 : Subsectors of the maritime sector of Curaçao, total effects (direct plus indirect plus induced) 1997.

	Shipping	*Port-related*	*Agents*	*Dry dock*	*Register - related*	*Cruise tourism*	*Free zone*	*Total*
value added (000 NAf.)	18 572	88 230	24 185	122 194	4 791	32 328	88 536	378 837
employment	264	1 253	368	2 009	81	692	1 503	6 170
backflow (000 NAf.)	3 857	18 194	5 229	27 522	1 028	7 688	19 522	83 038
%	4.9%	23.3%	6.4%	32.3%	1.3%	8.5%	23.4%	

Source : Policy Research Corporation N.V.

The maritime sector of Curaçao accounts for 12% of the island's regional product, and generates over 6 000 jobs.

The maritime sector of Curaçao accounts for a total value added of approximately 380 million Na*f.* or roughly 12% of the regional product of the island[1]. Moreover, directly and indirectly the sector creates over 6 000 jobs, or about 11% of the total employment on Curaçao.

The attention devoted to this sector in terms of government budget and policy is not in line with the actual economic importance of the sector.

On the basis of these figures it may be concluded that Curaçao's maritime sector is of great importance to the island's economy. The attention devoted to this sector in terms of government budget and policy is not in line with its economic importance: at present there is no department of maritime affairs and consequently no maritime policy.

In *Table III.3* the economic importance of the various subsectors of the maritime sector is illustrated:

- the subsector *shipping* accounts for merely 5% of the total value added, which reflects the fact that only a few (small) shipping companies are active;
- *port-related activities*, the subsector primarily formed by Curaçao Ports Authority (CPA) and Curaçao Port Services (CPS), represent about one quarter of maritime activities;
- shipping *agents* in the port of Willemstad account for some 6% of the value added of the maritime sector;

1 The regional product is the regional equivalent of a country's Gross Domestic Product or GDP.

- the importance of the *Curaçao Dry Dock* isobvious: one third of value added and employment is related to this single company;
- the relatively small economic impact of the *ships' register and activities related to it* is striking. The register, and especially the relationship with the Netherlands in this respect, attracts a lot of public and government attention. This is caused by the strong sentiments surrounding the Antillean register, its independent position within the Kingdom, and the political importance attributed to the issue. Despite the fact that these activities account for a marginal 1.3% of total maritime value added, the register is a centre piece in the political debate (with the Netherlands);
- the expenditures of *cruise tourists* visiting Curaçao add another 32 million or 8.5% to the total of value added;
- because of its dependence on the port, the activities of *free zone* 'Koningsplein' are also considered part of the maritime sector. These activities make up another quarter of the total of value added.

III.2.2. *SUBSECTOR SHIPPING*

Curaçao boasts only a few onshore shipping companies, which are mainly involved in inter-island cargo shipping between the Leeward islands.

Curaçao (and the Netherlands Antilles in general) only has a few shipping companies[2]. These small shipping companies are mainly involved in local transport of cargoes to, from and between the islands of the Netherlands Antilles. The analysis presented by *Policy Research* therefore concentrates on the subject of inter-island shipping.

As there are only a few shipping companies on Curaçao, this subsector also includes other deep-sea related activities such as deep-sea towage. The direct output of this relatively small subsector is 11.9 million NA*f*.[3] The merchant shipping companies are basically involved in general cargo and container services to and from the other islands and some major regional ports.

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2 In addition to the small onshore shipping companies, some offshore shipping companies have chosen Curaçao as their principal seat of business, mainly for tax reasons.

3 All values given in this chapter refer to 1997, and are based on the EIS® field research carried out in May - October 1997.

III.2.3. SUBSECTOR PORT-RELATED SERVICES

The subsector port-related activities comprise the Curaçao Ports Authority, stevedoring company Curaçao Port Services and other services such as towage, pilotage, ship classification, and loss survey. Intrinsically, this sector should also include bunkering and ship chandling, but these activities could not be included due to a lack of information on them.

As indicated, the subsector port-related activities mainly consists of the Curaçao Ports Authority (CPA) and Curaçao Port Services (CPS). The economic impact of these two organisations has already been expressed in terms of their contribution to the value added created by the maritime sector. However, their central position in the port and its operations makes their strategic behaviour of even greater importance to the economy of Curaçao.

Among the other services are towage, pilotage, ship classification, loss-survey and technical consulting. Intrinsically, this sector should also include bunkering and ship chandling. Because of the very limited information on these activities, however, it was not possible to include them. The direct output of the services included is 50.5 million NA*f.* for 1997. The total value added[4] generated amounts to almost 90 million NA*f.* Over 1 200 jobs depend on this part of the maritime sector.

a/ Port organisation

On the basis of its organisation, the port of Willemstad can be characterised as a 'tool port'.

Different forms of port organisation can be discerned on the basis of the responsibilities of the port's authority with respect to infrastructure, superstructure and stevedoring. On the basis of *Table III.4.* the port of Willemstad can at present be characterised as a 'tool port'.

Table III.4 : Models of Port Organisation.

	Port Authority responsibilities		
Port Type	Infrastructure	Superstructure (cranes)	Stevedoring
Private port	No	No	No
Landlord port	Yes	No	No
Tool port	Yes	Yes	No
Service port	Yes	Yes	Yes

Source : Policy Research Corporation, based on R. Saundry & P. Turnbull.

4 Direct plus indirect plus induced value added.

Typically, this 'tool port' approach involves a (periodical) competitive tendering process between potential private terminal operating companies, each bidding to lease a specific port facility which also contains quay-side cranes and sheds. This bidding process aims to ensure a form of competition, and therefore the alignment of the micro-economic goals of the operators (profit) and the macro-economic goals of the government (port authority), namely the efficient supply of port infrastructure and services for the benefit of the economy.

The concession agreement between CPA and CPS has created an indefinite stevedoring monopoly.

In the port of Willemstad, the element of tendering, and therefore competition, has been eliminated by two concession agreements and four rental agreements between Curaçao Ports Authority (CPA) and Curaçao Port Services (CPS). The concession agreement grants the CPS the sole right to perform all stevedoring services in the port of Willemstad, now and in the indefinite future (see *Chapter IV.*). In principle, the concession agreement is an 'evergreen' contract.

b/ Curaçao Ports Authority

The CPA oversees all nautical operations and services and owns the island's cruise and container terminals, most quays and property adjacent to the port.

As indicated, the port of Willemstad is managed by the Curaçao Ports Authority (CPA) as a tool port. The CPA oversees all nautical operations and services and owns the island's cruise and container terminals, most quays and property adjacent to the port. It also provides handling equipment such as gantry cranes or container chassis. Property and equipment are leased out to private operators. This is also the case for the container terminal, for which a concession has been awarded to 'Curaçao Port Services'. CPA is responsible for major capital investments to upgrade facilities and services. A more detailed analysis of the role of CPA in the port of Willemstad is provided in *Volume II* of this *Final Report*.

c/ Curaçao Port Services

Curaçao Port Services is a private stevedoring company. The company is a joint venture formed by the stevedoring companies that traditionally operated in the port of Willemstad.

Curaçao Port Services is a private stevedoring company. The company is a joint venture formed by the stevedoring companies that traditionally operated in fierce competition with each other in the port of Willemstad. Due to the small scale of activities in the port, the situation of fierce competition was (deemed) inefficient and therefore replaced by the current stevedoring monopoly of CPS.

The most controversial part of the CPS stevedoring monopoly concerns the handling of containerised general cargo. However, considering the actual volume and cost structure of the container operation, the criticised local container tariffs of CPS can bear the comparison with local tariffs in other Caribbean ports

The concession agreement between CPA and CPS covers stevedoring activities for all cargo types. The most visible and controversial part of the agreement, however, concerns the handling of containers at the Curaçao Container Terminal. As the sole stevedore in the port, CPS has introduced a differentiated pricing system, which is based on the cross subsidisation of transhipment tariffs by the tariffs for local containers. The monopoly position and the alleged 'monopoly pricing' strategies of CPS have resulted in persistent resistance against its position. However, considering the present volume and cost structure of the container operation, CPS's local container tariffs can bear comparison with local tariffs in other Caribbean ports (see *Chapter IV* and *Volume II*).

Moreover, the terminal's reputation with its main users is good. A more detailed analysis of the role of CPS in the port of Willemstad is provided in Volume II of this Final Report.

Moreover, despite some fierce local opposition against the present situation, the terminal's present reputation with its main users is good. Hourly ship-to-shore output levels compare favourably with those in most other Caribbean ports. Security is not a major problem (thefts do not occur) and waiting times have been very limited. Although the port of Willemstad has the potential to become a subregional hub for container transhipment (see *Chapter IV*), at present transhipment accounts for only a small fraction of the activities on the container terminal.

A more detailed analysis of the role of CPS in the port of Willemstad is provided in *Volume II* of this *Final Report*.

III.2.4. *SUBSECTOR SHIPPING AGENTS*

This subsector consists of a number of shipping agents representing international companies in container, bulk and cruise shipping. The prosperity of this subsector is closely related to the level of activity in the port.

This subsector consists of three large and a number of smaller companies, each operating for a handful of the large international liner, bulk, and cruise shipping companies. A number of the agents have a stake in Curaçao Port Services (CPS), the operator of the Willemstad container terminal.

The subsector shipping agents accounts for roughly 7% of the value added and 6% of the employment generated by the maritime sector.

The subsector's turnover (commissions) is estimated at 13.8 million NA*f.* for 1997. The subsector shipping agents accounts for roughly 7% of the value added and 6% of the employment generated by the maritime sector. The prosperity of this subsector is closely related to the level of activity in the port: the more ships that call at the port of Willemstad, the higher their revenues. As a result of this 'dependent' position, the future of the agents in Willemstad is largely determined by factors beyond their own control.

III.2.5. SUBSECTOR SHIP REPAIR

The CDM accounts for nearly one third of the value added of the maritime sector, generating over 2 000 jobs on the island.

The only company in this sub-sector is the Curaçao Dry Dock Company (Curaçao Droogdok Maatschappij, CDM). The economic importance of the Curaçao Dry Dock (CDM) is obvious from *Table III.3*. The CDM accounts for nearly one third of the value added of the maritime sector. In terms of employment the CDM is also a great asset to the Curaçao economy, directly and indirectly generating over 2 000 jobs.

The CDM is a joint-venture company, and is 50% owned by the Island Government of Curaçao. The other 50% are owned by Cuban partners. The joint venture with the Cuban partners was set up on defensive grounds in order to consolidate the competitive position of both wharves. Notwithstanding the government's stake in the dock, the CDM presently operates on a commercially active and competitive basis. Thus, privatisation is not strictly necessary. The dock is faced with two main problems:

- the fact that the CDM has no captive market. This problem can only be solved by a good marketing strategy which decreases the importance of emergency repairs in the dock's order book. Dependence on emergency repairs has fallen considerably: at present, 80% of turnover is generated in planned repairs, based on the competitive position of the CDM;
- in 1996, under pressure from the Island Government of Curaçao and labour unions, the national government of the Netherlands Antilles introduced new labour market legislation which hampers a flexible use of labour and increases the wharf's costs. The labour market should be therefore restructured by introducing modern legislation which ensures a more flexible use of labour without excessively compromising the rights of employees.

III.2.6. SUBSECTOR REGISTER-RELATED SERVICES

The subsector register-related activities consists of the Shipping Inspectorate of the Netherlands Antilles (SINA) and the registry-related services of trust companie and, law and notary offices.

Though the direct output of this subsector is calculated at only 2.7 million NA*f*., it is distinguished as a separate subsector because of its political importance. The subsector consists of the Shipping Inspectorate of the Netherlands Antilles (SINA) and the registry-related services of trust companies and law and notary offices. The subsector currently generates less than a hundred jobs on the island. It needs to be stressed that the above given output is only indicative, because registry-related activities could not always be clearly separated from the total activities of the companies involved. Furthermore, only limited information was available for the law and notary offices.

Notwithstanding its relatively limited economic significance, this subsector is the subject of an animated political debate between the Netherlands and the Netherlands Antilles.

As indicated, the ships' register is the subject of a lengthy political debate between the Netherlands Antilles and the Netherlands. The focal point of the discussion is independent position of the Shipping Inspectorate of the Netherlands Antilles.

Table III.5 : Registration of ships, current situation and comparison with competitors.

	Netherlands Antilles	Panama	Liberia
Activities			
Register	Registrar of mortgages	Registrar of Ships (public)	International Registries Inc.
Bareboat register	SINA	Registrar of Ships (public)	International Registries Inc.
Ship Documents	SINA	Registrar of Ships (public)	International Registries Inc.
Crew Documents	SINA	Registrar of Ships (public)	International Registries Inc.
Radio License	Bureau Telecommunication	Registrar of Ships (public)	International Registries Inc.
Inspections	SINA Class societies	Class societies	Class societies

Source : Policy Research Corporation N.V.

Unlike in some successful 'open registry' countries like Panama and Liberia, the activities related to the registration of ships in the Netherlands Antilles are not streamlined or integrated.

As indicated in *Table III.5* a number of aspects are related to the ships' register. Unlike in some successful 'open registry' countries like Panama and Liberia, the activities related to the registration of ships are not all controlled by one organisation. The ships' register itself is the responsibility of the Registrar of Mortgages (*Dutch*: Hypotheekbewaarder). The technical and safety inspections of the registered ships, as well as the ship and crew documentation, are the responsibility of the SINA. Moreover, radio licences have to be applied for at another government service, the Bureau Telecommunication (*Dutch*: Bureau Telecommunicatie). In addition, in order to be able to register a vessel, shipping companies need a local representative or branch office. These services are rendered by (a specialised part of) the financial offshore sector (trust companies) and law and notary offices. Finally, in order to register, it is necessary to apply for a 'declaration of nationality' (*Dutch*: nationaliteitsverklaring), provided by a local legal court. One of the objectives for the future is to integrate these services into one window for the shipping companies, while simplifying some of the legal procedures.

III.2.7. *CRUISE TOURISM*

Cruise tourism makes an important contribution to the Curaçao economy.

About 250 000 passengers and crew members visit Willemstad each year. The economic impact of their expenditures amounts to 32 million NA*f*. in value added and the creation of 700 jobs on Curaçao. The competitive position of Curaçao as a destination and home port for cruise ships is discussed and evaluated in detail in *Chapter IV*.

The building of a mega cruise terminal on Curaçao is a project worth undertaking. It would improve its attractiveness as a port-of-call and make the Deep Caribbean as a whole more interesting for cruise lines and their customers.

Curaçao is considered to be an outstanding port-of-call. Duty-free shopping, adequate availability of berthing places and the reliability of sailing schedules are the main strong points in relation to its status. Passenger reception facilities, on the other hand, leave much to be desired. The Curaçao Ports Authority recently decided to build a new mega cruise pier on the shoreline west of the St. Anna bay. This pier will enable the arrival of the largest vessels with a capacity of up to 2 500-3 000 passengers. At present the capacity of arriving vessels is between 600-900 passengers on average. Both the improved passenger reception facilities and the building of the new pier constitute an important signal to cruise lines concerning the positive attitude and ambitions of Curaçao with respect to cruise tourism.

Although it may be excluded from of the one-week market from Florida, the development of home port San Juan may get Curaçao back on the schedules of the large cruise lines.

The distance between Curaçao and the Florida ports, combined with the trend of decreasing cruise duration excludes Curaçao from of the one-week market from Florida home ports. However, the likely congestion in the Florida ports may get the island on itinerary schedules for 7-day cruises home porting from San Juan, St. Croix or Barbados instead of Florida. From these home ports cruise ships *can* reach the island in a one-week cruise.

Home porting mass market lines is not a valid option for Curaçao.

On Curaçao, cruise lines and airlines working together could set up home porting initiatives as a joint project.

When it comes to home porting for 'boutique' lines, market credibility does exist with regard to Curaçao.

As a home port for the mass market lines, Curaçao does not offer competitive advantages in comparison with Miami and San Juan. The insufficient cost effectiveness of its airlift capacity is a hindrance factor to Curaçao's becoming a home port for mass cruise tourism. However, when it comes to home porting for 'boutique' lines[5], market credibility does exist for Curaçao. Selecting the right marketing efforts and strategies must generate results.

III.2.8. FREE ZONE 'KONINGSPLEIN'

Thus, with 90 million NAF. in value added and the creation of 1 500 jobs the economic importance of the free zone 'Koningsplein' is obvious,. The efforts of the island government of Curaçao aimed at supporting the further development of the free zone do not reflect this importance.

The activities in the free zone are closely related to the container (transhipment) function of the port. They involve logistic value added services on merchandise, which remain outside the domestic customs area of Curaçao. Though the merchandise itself does not enter the Curaçao economy, the logistic services evidently create value added and employment. The EIS® has calculated that the overall economic significance of the free zone in the port translates into almost 90 million NA*f.* in value added and over 1 500 jobs.

Thus, the economic importance of the free zone 'Koningsplein' is clear. The efforts of the island government of Curaçao aimed at supporting the further development of the free zone do not reflect this importance. Notwithstanding the economic importance of the free zone, decision making on the continued implementation of the relevant fiscal legislation has been dragging on for years. The relevant legislation to continue the free zone facilities until 2015 was only extended in December 1997. This caused uncertainty, both for entre-

5 'Boutique' lines are (often smaller) cruise lines operating in niche markets.

preneurs already located in the free zone, and for potentially interested parties.

In addition, the competitive position and subsequent growth potential of the Curaçao free zone are negatively influenced by other factors:

- the relatively high freight and container handling rates, while the number of chassis is not sufficient to meet demand at all times;
- the relatively high labour costs and low labour productivity;
- the increased competition of large free zones in (regional) hub ports such as Panama, Kingston, Freeport and Trinidad,. which offer free zone traders both economies of scale and economies of scope (number of shipping services).

Nevertheless, the occupancy rate has been over 90% since 1990. As a result, Curinde has decided to develop the first phase of a second free zone near Hato airport.

III.2.9. MISCELLANEOUS ACTIVITIES

III.2.9.1. Oil refining, storage and transhipment

The ISLA refinery is owned by the government of the Netherlands Antilles, and operated by the Venezuelan state oil company PdVSA.

On Curaçao, this sector comprises the ISLA refinery operated by the Venezuelan state petroleum company PdVSA. The refinery itself is owned by the government of the Netherlands Antilles and let to the PdVSA. The rental agreement was recently renewed to cover another 20-year period. Extensive investments are planned for the refurbishing of the refinery.

The costs for these investments, which are to improve the efficiency of the plant and increase its capacity, are borne by the PdVSA and the Antillean government on a 50/50 basis. The refinery, including upgrades and modifications, remains 100% owned by the government. Moreover, investments are necessary in order to meet ever more demanding environmental and safety standards. The costs of these investments are borne exclusively by the Antillean government completely.

The ISLA refinery is one of the mainstays of the Curaçao economy, generating over half a billion NAf. in value added. Total job creation on Curaçao as a result of the ISLA amounts to nearly 8 000.

The refinery is called on by 700 to 800 tankers each year. As such, it makes an important contribution to the activities in the port, of which the shipping agents and the port authority are the main beneficiaries. It is owing to its impact on the other subsectors that the refinery is included in the EIS® for the maritime sector.
Notwithstanding its close relation with the port, the refinery is not included separately in the EIS® calculations. Nevertheless, some tentative calculations were made, in order to indicate the overall importance of the ISLA for the economy of Curaçao. Moreover, the expenditures of the ISLA refinery are included in the EIS® as part of the turnover of the subsector shipping agents (fees) and the subsector port-related activities (port and handling charges).

Directly and indirectly the refinery generates over half a billion NA*f*. in value added. At present, the refinery employs some 1 400 people directly and another 800 through subcontractors. In the coming years these numbers are expected to decrease. Overall job creation on Curaçao as a result of the ISLA amounts to nearly 8 000.

In conclusion, the activities of the refinery are not included in the EIS® for the Curaçao maritime sector. For Bonaire and the Windward islands (Statia) oil storage and transhipment activities are included.

III.2.9.2. Training and education

Maritime training & education on the Netherlands Antilles is very limited.

At present, maritime training & education on the Netherlands Antilles is very limited. The Curaçao nautical school (Zeevaartschool) offers a one-year course for those wishing to become 'able seamen'. After the course, the graduates need 3 years of practical experience in order to qualify as ratings or 'able seamen'. Responsibility for the school is borne by the Dienst Onderwijs of Curaçao. Plans are being implemented to integrate the nautical school into the general polytechnic school.

Currently, there is no course or programme exists for the training of nautical or technical officers. At present, the only course on Curaçao concerns the training of ratings or 'able seamen'.

Currently, there is no course or programme for the training of nautical or technical officers. In the last decade, the interest in maritime education has been marginal. Moreover, the course suffers from high absence rates and a high percentage of drop-outs. The graduates of the course generally end up being employed by the ISLA refinery or CPS. Only a small number of students end up working aboard a ship. Nevertheless, there seems to be a considerable demand basis for seafarers: e.g. the Coast Guard, towing services, the tourist sector, fishery and local shipping companies.

III.2.9.3. Fishery

Some small-scale fishery activities exist on Curaçao, generating (part-time) employment for over 300 people. Fishing activities are mostly limited to the island's coastal waters.

Curaçao boasts a considerable fleet (about 250) of small fishing boats of between 5 and 10 meters, which are built on the island. The fishery sector meets about 50% of local demand. In all, the fishing sector employs about 140 fishermen full time and another 250 people on a part-time basis[6].

The catch is mostly sold on the beaches of the island, and at a small fish auction in Caracas Bay. No fish processing takes place on Curaçao, although this would actually increase the revenue of the sector. The scale of the sector is far too limited for activities like canning to be profitable. Other processing activities, such as the bleeding and cooling (refrigerating) of the catch, are hindered by the limited production of ice in fishing ports. The two machines available are not efficient and break down regularly because of the high temperature of the water on Curaçao. Financial support is needed to solve this problem.

There is, however, potential for fishery outside the coastal waters, e.g. fishing for migrating fish (like tuna) in the Atlantic Ocean.

There is additional potential forfishery outside the coastal waters. Currently, fishing for migrating fish (like tuna) in the Atlantic Ocean is an activity fishermen from the Netherlands Antilles are not engaged in. However, there would appear to be potential additional revenues from tuna fishing for the Leeward islands to generate. In order to become involved in this market, the Netherlands Antilles would have to become a member of ICATT, which regulates fishery on migrating fish in the Atlantic Ocean by setting quotas.

Moreover, there may be potential in combining fishery with tourism.

Finally, no links with tourism have been established yet. There may be potential in offering fishing trips to tourists, and providing more fresh fish to hotels and restaurants. However, overfishing is a poten-

6 Figures from the report 'Projectdossier Vissershavens', LVV-DOW-DEZ (1994).

tial danger, as a result of the low fish stock in the Caribbean region at present. The Food and Agriculture Organisation of the United Nations (FAO) expects a shortage, which will result in an increase in prices.

III.3. THE MARITIME SECTOR OF BONAIRE

III.3.1. ECONOMIC SIGNIFICANCE: OVERVIEW

Only a limited number of subsectors are distinguished for Bonaire for statistical reasons.

An overview of the maritime sector and its subsectors on Bonaire is provided in *Table III.6* and *Table III.7*. As indicated in the introduction to this chapter, only a limited number of subsectors are distinguished for Bonaire for statistical reasons: the number of observations is too small to justify a more detailed subdivision.

Table III.6 : Total economic significance of the maritime sector of Bonaire, 1997.

	direct	*indirect*	*induced*	*total*	*%*
value added (000 NAf.)	27 998	2 624	20 614	**51 236**	**± 19%**
employment	185	81	744	**1 010**	**± 17%**
backflow (000 NAf.)	2 874	418	4 512	**7 804**	

Source : Policy Research Corporation N.V.

Table III.7 : Subsectors of the maritime sector of Bonaire, total effects (direct plus indirect plus induced) 1997.

	Maritime services	*Oil storage & transhipment*	*Cruise tourism*	*Total*
value added (000 NAf.)	9 309	41 139	787	51 235
employment	224	759	27	1 010
backflow (000 NAf.)	1 887	5 752	164	7 803
%	18.2%	80.3%	1.5%	

Source : Policy Research Corporation N.V.

On Bonaire the most important maritime activities are oil storage, shipping agencies and stevedoring.

The total value added generated by the maritime sector of Bonaire is calculated at about 50 million NA*f*., or almost 20% of the island's regional product. A large part of this value added consists of the activities of the oil storage facility, which is distinguished as a separate subsector. The other maritime activities are grouped into one subsector.

III.3.2. *SUBSECTOR MARITIME SERVICES*

The sub-sector maritime services accounts for over 9 million NAf. in value added. Some 220 jobs are related to this subsector, with direct employment of over 80 people.

This subsector, consisting of shipping agents/stevedores and the public *Harbour and Port Service,* accounts for nearly 10 million NA*f*. in value added. Some 220 jobs are related to this subsector, with direct employment of over 80 people. There is one (merchant) shipping company, which is mainly involved in regular inter-island transport of containers to and from Curaçao and Aruba.

a/ Port of Kralendijk

The port of Kralendijk is a small multipurpose port. The port infrastructure comprises three piers:

- the North pier is used mainly by small vessels, two tugs and cruise vessels. The North pier is designated for cruise vessels;
- the middle pier is a ro/ro pier which is hardly used, because of a construction error: the ramp of the pier is too high to be used by the ro/ro vessels of the inter-island shipping operators;
- the South pier is the most intensively used pier: it is used for local ro/ro traffic as well as dry bulk cargoes (mainly rice). Moreover, cruise vessels over 50 000 DWT have to berth at the South pier.

Table III.8 presents the number of container movements in the Port of Kralendijk between 1993 and 1997. Taking into account that all incoming containers will leave the island again (mostly empty), the total number of (ro/ro) TEUs handled in the port is around 5 500 on a yearly basis. This number has been fairly stable over the years. No sharp increase is expected on account of the growth of the population and the local economy. Even if tourism takes off in a spectacular way and the number of containers doubles within the next ten years, no problems need to be expected.

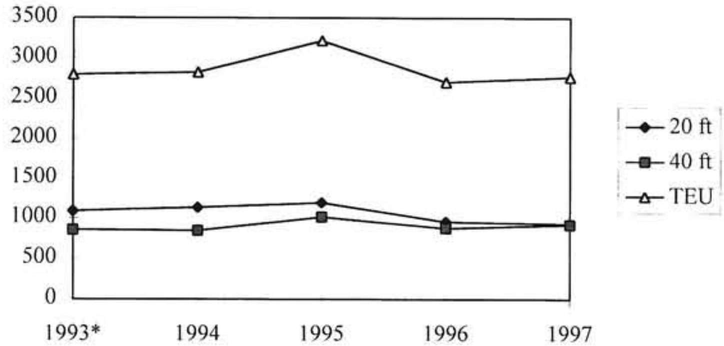
No substantial investments are necessary to increase the cargo handling capacity of the port of Kralendijk.

On the basis of these figures, plans for the construction of a new container terminal outside the port of Kralendijk cannot be justified, also taking into consideration that Bonaire cannot expect to attract any container transhipment. Moreover, the rice imports and exports are expected to be severely reduced as a result of the review of the EU-OCT arrangement. At the moment the number of rice ships calling at the port has dropped from 12 to merely one per month. As a result, the utilisation and congestion of the South pier have decreased.

Table III.8 : Port of Kralendijk, number of imported containers (1993-1997).

	Number		
	20 ft	***40 ft***	***TEU***
1993*	1086	855	2796
1994	1130	847	2824
1995	1191	1012	3215
1996	954	876	2706
1997	931	919	2769

*estimate



Source : Policy Research Corporation N.V., based on Harbour and Pilotage Service.

b/ Shipping agents/stevedores

The small shipping agents on Bonaire are also involved in other activities, such as stevedoring and road transport.

There are a number of shipping agents on Bonaire, with a total estimated turnover of 7.7 million NA*f*. These agencies are also involved in stevedoring activities and local road transport. The operation of the port is characterised by free competition between the incumbent agents/stevedores.

c/ Harbour and Pilotage Service

Through the Harbour and Port Service, the Island Government is responsible for the management, operation and development of the port.

As most of the typical port-related services are performed by the shipping agents, the port authority or *Harbour and Pilotage Service* is the only other entity included in this subsector. Through the *Harbour and Port Service*, the Island Government is responsible for the management, operation and development of the port. The *Harbour and Pilotage Service* consists of two Harbour Masters/pilots, two ratings and one shore hand. Pilotage, especially of tankers at BOPEC, takes up most of the available time of the Harbour Master and his assistant. Consequently, only very little time remains for the management of the port. And there is no coherent port development plan while other elementary tasks cannot be performed either.

Pilotage is compulsory. Cruise vessels pay only one third of the normal pilotage tariff[7]. Two tugs are available in the port of Kralendijk, operated by Bonaire Marine Services N.V. Towage is compulsory for tankers, but optional for other vessels at the discretion of the pilot.

7 If more than five local residents join or leave the vessel at Bonaire.

III.3.3. SUBSECTOR OIL REFINING, STORAGE AND TRANSHIPMENT

The large oil storage and transhipment facility operated by BOPEC is owned by the Venezuelan state company Petroleos de Venezuela (PdVSA). BOPEC is the largest employer on Bonaire, while it accounts for approximately 15% of the island's regional product.

Bonaire has a large storage and transhipment facility, operated by the Bonaire Petroleum Company N.V. (BOPEC) and owned by the Venezuelan state company Petroleos de Venezuela (PdVSA) since 1989. The terminal has a storage capacity of over 10 million barrels in 23 tanks, while it operates two deep water jetties. Besides simple storage and transhipment, BOPEC offers other services to its clients, such as the blending of oil products, bunkering services, limited ship chandling and the provision and reception of ballast.

BOPEC is the largest generator of value added and employment on the island: the terminal accounts for over 40 million NA*f.* in direct, indirect and induced value added, or some 15% of the island's regional product. The terminal directly employs nearly a hundred people. In addition some 600 jobs are created as a result of indirect and spending effects related to the terminal.

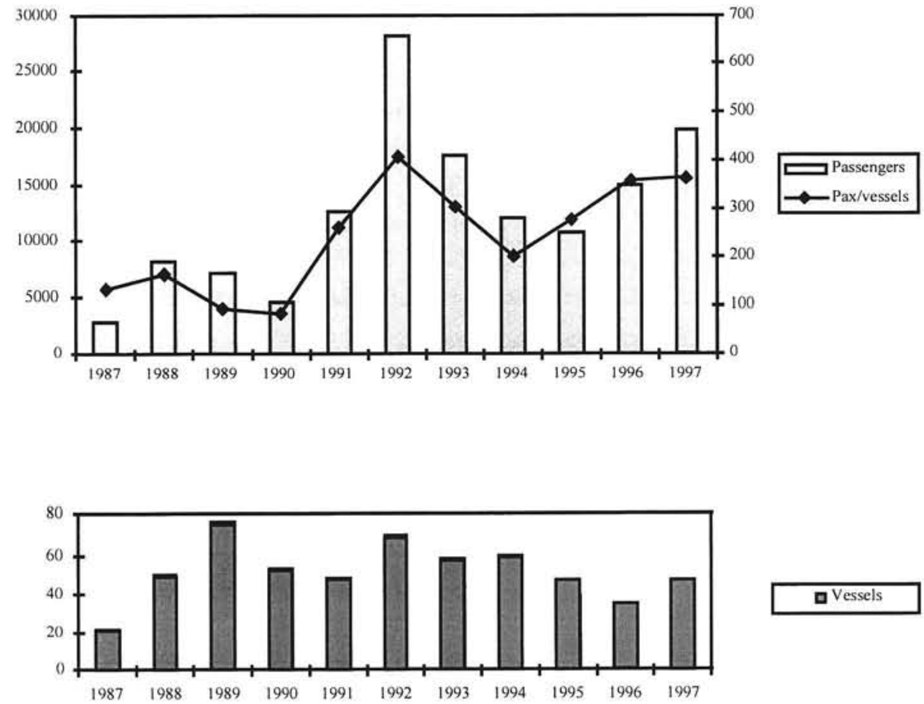
III.3.4. CRUISE TOURISM

The impact of cruise tourism on the island economy of Bonaire is still very modest: the expenditures of the cruise tourist generate 0.8 million NA*f.* in value added, and create some 30 jobs on the island.

The economic impact of cruise tourism on Bonaire is very modest, although there is some potential for further development.

The cruise ships that call at Bonaire are generally small and on average, have carried less than 300-400 passengers over the last decade (see *Figure III.1*). At present, there is no head tax. The number of cruise tourists and crew members who visited Bonaire reached a peak in 1992. The market has been volatile ever since, with about 19 000 visitors in 1997. Moreover, the cruise market is highly seasonal, with hardly any cruise ships calling at Kralendijk between May and November.

Figure III.1 : Cruise vessels and passengers Bonaire (1987-1997).



Source : Policy Research Corporation N.V., based on TCB/Harbour and Pilotage Service Bonaire

In 1997, a small survey was carried out among cruise passengers arriving at the Port of Kralendijk[8]. The results of the survey give a good indication of some of the strengths and weaknesses of Bonaire as a cruise destination. The island tours are a clear asset, because of the friendliness of the people and Bonaire's clean and diverse environment. On the other hand, the shopping facilities in Kralendijk leave much to be desired. Moreover, the cruise passengers would like more variety in restaurants. The fact that Bonaire is a '*Divers' Paradise*' does not seem to add to the island's attraction for (generally older) cruise passengers. The average passenger spent some 45 US$

8 This concerns a small survey conducted by the Tourism Corporation Bonaire (TCB) among passengers of the Statendam.

on the island. A large number of respondents indicated that they would like to visit Bonaire again for a longer vacation.

Moreover, in 1997 a SWOT analysis was performed with respect to Bonaire's position in the cruise market[9]. It confirmed the results of the aforementioned survey and brought some additional information to the fore thought. As one of the Leeward islands situated in the Deep Caribbean (see *Volume II* of this *Final Report*), the geographic position of the island is a constraint on its growth as a cruise destination. The lack of co-ordination in approaching the cruise lines is another weakness. There are major opportunities in participating in regional efforts to attract cruise ships, e.g. in the Southern Caribbean Group. In this respect, it would be useful to bring all existing initiatives together in a master plan for the development of cruise tourism on Bonaire. Moreover, where these are not available, new human and budgetary resources will have to be tapped.

III.4. THE MARITIME SECTOR OF THE WINDWARD ISLANDS

Due to the limited scale of the sector and the low response to the cost structure questionnaire, only three subsectors are distinguished in the EIS®:

- *maritime services;*
- *oil storage & transhipment;*
- *cruise tourism.*

For the Input-Output analysis, all shipping and port-related activities of the Windward islands have been aggregated into one combined maritime services subsector. First of all, this was done because of the lack of information on which to estimate separate input-output tables for the three islands. Therefore, one table was estimated by combining row and column *structure* information from Curaçao with *specific knowledge* about the Windward islands' economy. Secondly, only three subsectors are distinguished because of the limited size of the maritime sector and the limited availability of data at the subsector level.

9 The SWOT analysis was commissioned to Strategic Decisions Inc. by the Tourism Corporation Bonaire (TCB).

III.4.1. ECONOMIC SIGNIFICANCE: OVERVIEW

Table III.9 : Total economic significance of the maritime sector of the Windward islands, 1997.

	direct	*indirect*	*induced*	*total*	*%*
value added (000 NAf.)	78 391	27 122	85 653	**191 166**	**± 25%**
employment	1 978	402	2 115	**4 494**	**± 19%**
backflow (000 NAf.)	17 081	5 832	18 890	**41 803**	

Source : Policy Research Corporation N.V.

Table III.10 : Subsectors of the maritime sector of the Windward islands, total effects (direct plus indirect plus induced) 1997.

	Maritime services	*Cruise tourism*	*Oil storage & transhipment*	*Total*
value added (000 NAf.)	29 258	157 397	4 511	191 166
employment	582	3 602	310	4 494
backflow (000 NAf.)	6 150	34 661	992	41 803
%	15.3%	82.3%	2.4%	

Source : Policy Research Corporation N.V.

The total value added for the maritime sector of the Windward islands is calculated at 191 million NA*f.* or one quarter of the joint regional product of the three islands. Moreover, the sector generates a total of nearly 4 500 jobs. The three subsectors of the maritime sector that have been distinguished for the Windward islands are:

The total value added for the maritime sector of the Windward islands is calculated at 185 million NAf. or one quarter of the joint regional product of the three islands. Moreover, the sector generates a total of over 4 000 jobs.

- *maritime services*, which consist of a combination of the port authorities of the three islands, stevedoring companies and shipping agents. As a result of the relative position of the Port of Philipsburg, this subsector is dominated by companies from Sint Maarten. This subsector accounts for 15% of the value added created in the maritime sector;
- *cruise tourism*. As was the case for Curaçao and Bonaire the economic significance of this subsector is determined on the basis of the spending impact generated by cruise tourists. Clearly, this

subsector mainly concerns the impact on the island of Sint Maarten;

- *oil storage & transhipment*. This sector only comprises the Statia Oil Terminal on Statia. It accounts for 2.4% of the maritime sector's value added, and generates over 300 jobs on Statia.

No or insufficient information was available to make statistically warranted estimates about other activities such as yachting & marinas, maritime tourism (yachting, diving), and ship repair.

III.5. THE MARITIME SECTOR OF SINT MAARTEN

III.5.1. SUBSECTOR MARITIME SERVICES

The subsector maritime services of the Windward islands comprises port authorities, shipping agents and stevedoring companies. Together they generate nearly 30 million NAf. in value added, mostly on Sint Maarten.

No shipping companies are established on Sint Maarten. The subsector therefore consists of the port authorities of the three islands, stevedoring companies and shipping agents. This subsector accounts for nearly 30 million NA*f*. in value added, and creates some 600 jobs.

a/ Port of Philipsburg

The port of Philipsburg is operated by the public Sint Maarten Ports Authority. The capacity and facilities of the port were severely damaged by hurricane Luis in 1995. So far, most of the damage has not been repaired.

The port of Philipsburg is owned by the Island Territory of Sint Maarten. It is managed and operated by the Sint Maarten Ports Authority (SMPA). The port is managed according to the 'landlord port' model: the infrastructure is owned by the government, while the only available crane is privately owned by one of the stevedores.

Plans to upgrade both the cargo handling and passenger reception facilities are currently in the process of being executed. A more detailed analysis of the port of Philipsburg is presented in Volume II of this Final Report.

The capacity of the port was severely reduced as a result of the damage caused by hurricane 'Luis' in 1995. Only 109 metres of quay can be utilised for cargo handling, while the pier formerly used by cruise vessels is no longer operational. Thus, at present no facilities exist for the reception of cruise vessels. Cruise vessels come to anchor at the roadstead of Great Bay, while passengers are brought ashore by means of tenders. Recently, a new tender pier was built in the centre of Philipsburg. Furthermore, the SMPA's plans for the construction of new cruise facilities are being executed: a pier with berthing places for up to five mega cruise ships is being built.

In addition to the cruise pier, a new multi-purpose terminal is included in the construction plans as well. A more detailed analysis of the port of Philipsburg is presented in *Volume II* of this *Final Report*.

b/ Shipping agents/stevedores

The island of Sint Maarten boasts four cargo shipping agents with a total estimated turnover of 5.6 million NA*f*. Two agents are also involved in stevedoring. A third agent is a cruise line specialist, but also performs other activities such as running a travel agency.

As most of the typical port-related services are performed by the shipping agents/stevedores, the SMPA is the only other entity in this subsector.

There are no activities related to the registration of ships on Sint Maarten. These services are only performed on Curaçao. Sint Maarten also has a dry dock and some repair yards for yachts and other small boats. Because of insufficient data, these activities have not been included in the analysis.

III.5.2. CRUISE TOURISM

'Maritime tourism' is a very important, if not the most important contributor to the regional product of Sint Maarten. It consists of cruise tourism and activities related to sightseeing, yachting, marinas and diving.

'Maritime tourism' is a very important, if not the most important, contributor to the regional product of Sint Maarten. The economic impact of cruise tourism on the economy of Sint Maarten is enormous: the expenditures of cruise tourist result in a value added of nearly 160 million NAf. and over 3 500 jobs on the island.

Cruise tourism is the most important component. In 1996, 473 sizeable vessels brought nearly one million passengers and crew members to the island. This indicates a firm recovery from the decline in 1995, caused by hurricane 'Luis'. The economic impact of cruise tourism on the economy of Sint Maarten is enormous: the expenditures of cruise tourists result in a value added of nearly 160 million NA*f*. and over 3 500 jobs on the island.

The other component of this subsector consists of yacht rentals, marinas, diving companies, *etc*. Obviously, 'Luis' also caused considerable damage to the island's marina facilities. Because only very few companies responded to the cost structure questionnaire, however, no statistically warranted analysis of this type of activity can be made. The economic significance of this subsector could therefore not be established.

III.6. THE MARITIME SECTOR OF STATIA

On Statia the most important maritime activity is oil storage.

For the economic analysis, the maritime activities of Statia are aggregated into a combined maritime sector for the Windward islands, see *Chapter III.4*. These activities include the port authority, a few small shipping agents, a relatively large oil storage and transhipment terminal, and some maritime tourism.

a/ Port of Oranjestad

The port, airport, and oil terminal are considered to be the corner stones of the Statia economy. As hardly any manufacturing activities are found on the island, the cargo handled in the port mainly concerns imports for consumption on the island. The island's supplies are provided on a regular basis from Sint Maarten, St. Thomas and Puerto Rico by means of ro/ro containers. The quality and capacity of the port is sufficient to meet the island's cargo transportation needs now and in the foreseeable future.

Considering the small volumes of cargo and passengers, it is not necessary to invest in port infrastructure which would allow larger vessels to call at Oranjestad.

At present, the island population numbers 2 500, as opposed to over 12 000 in the past. In 1996, the total number of incoming (ro/ro) containers on Statia equalled 223 TEU, or about a hundred 40ft ro/ro containers. The current storage area (almost 6 000 m^2) of the port can accommodate nearly 200 of these containers. Furthermore, there is no congestion at the pier. Considering the small volumes of cargo and passengers, it is not necessary to invest in port infrastructure which would enable larger vessels to call at Oranjestad.

The port of Oranjestad lacks even the most basic facilities to accommodate yachts: there are no berthing places, no sanitary facilities, no shops (for provisions), no harbour-front restaurants, *etc*. In the recent past, some tentative plans were put forward to upgrade the port, including the construction of a marina.

b/ Harbour service

The Island Government is responsible for the management, operation and development of the port. In addition, the harbour master also functions as a pilot. Administrative and other executive tasks are performed by the *harbour service* or port authority. These mainly concern the collection of harbour fees and the administration of cargo movements in the port.

c/ Statia Oil Terminal

The Statia Oil Terminal has a storage capacity of 16 million barrels. The SOT is the largest employer on the island, with over 200 direct and subcontracted employees.

The Statia Oil Terminal has a storage capacity of 16 million barrels. Besides oil storage and transhipment, the Statia Oil Terminal (SOT) performs some refining activities, while it also provides bunkers and white oil products to ships calling at the terminal. It employs about 200 people directly and through subcontractors. Evidently, the expenditures made by these workers and their families have a significant impact on the economy of the island: the SOT accounts for a total value added of 4.5 million NA*f.* and indirectly generates another 110 jobs. The Statia Oil Terminal is permitted to perform pilotage and towing services for ships mooring at their jetty and buoys.

d/ Fishery

Currently, only a handful of small fishing boats from Saba and Statia operate on the Saba Bank, generating employment for two dozen fishermen.

Currently, only a handful of fishing boats from Saba and Statia operate on the Saba Bank. Most of the fish on the Saba Bank is caught by foreign fishing boats, to such an extent that the fish stock is dangerously low. In 1993, the Dutch government introduced an 'Economic Fishery Zone of the Netherlands Antilles and Aruba' including the Saba Bank. In this zone, fishery is subject to a system of permits. A large number of foreign requests for permits were filed. However, in order to protect the fish stock and to support the Antillean fishing sector, these requests will be denied. This legislation will have to be enforced by the Coast Guard.

The potential of the Saba Bank is very considerablel. If the newly introduced Economic Fishery Zone can effectively be protected from illegal fishing, the Saba Bank will generate over a hundred jobs on Saba and Statia in due course.

The economic potential of the Saba Bank is significant. If the stock is brought to and maintained at a healthy and sustainable level, the Saba Bank could generate 1 000 to 1 500 tons of fish each year. In an ideal situation the Saba Bank could provide jobs for over a hundred people on Saba and Statia.

III.7. THE MARITIME SECTOR OF SABA

On Saba, the most important economic activity is (niche) tourism. There is hardly any maritime activity on the island.

For the EIS® analysis, the maritime activities of Saba have been aggregated into a combined maritime sector for the Windward islands, see *Chapter III.4*. At present, there is hardly any maritime activity on the island. Existing activities include the port authority, a part-time shipping agent, some maritime tourism and fishery. Due to a lack of information only the Saba Port Authority is included in the quantitative part of the EIS®.

a/ Port of Fort Bay

Port and terminal management are the responsibility of the Island Territory.

Port and terminal management are the responsibility of the Island Territory. As hardly any manufacturing activities are found on the island, the cargo handled in the port mainly concerns imports for consumption on the island. The island's supplies are provided by small conventional cargo vessels, *e.g.* a biweekly service from Puerto Rico (ro/ro containers). Moreover, the port is used by stone barges of the BBW quarry and oil product tankers delivering petrol and diesel fuel for the power plant. The owner of the local supermarket is the only (part-time) shipping agent on the island.

b/ (Maritime) tourism

The current port infrastructure hampers the development of (maritime) tourism on Saba.

Tourism is a vital industry for the economy of Saba and despite calls for diversification, it is the only realistic and sustainable option for the island. Nevertheless, the Island Government has chosen a path of selective tourism development. This strategy is laid down in the 'Integrated Tourism Development Masterplan'. The number of tourists is consciously limited, while only sustainable activities are promoted (e.g. diving, hiking, eco-tourism). Moreover, the present port infrastructure hampers the development of (maritime) tourism on Saba.

Maritime tourism has three main components on Saba:

- passengers of yachts and small cruise vessels (mainly windjammers) calling at the port;
- day trippers visiting the island by ferry[10]. Each day approximately 50 day trippers visit the island;

[10] The Edge and the Voyager I call at the port on a regular basis.

- divers visiting the Marine Park (3 500-5 000 a year). The island has three dive shops. The Marine Park is self-supporting, levying a 3 US$ dive tax and a fee for the Marine Park mooring facility.

The majority of the day trippers visiting the island come in by ferries from Sint Maarten and other neighbouring islands.

Two thirds of the day trippers visiting the island come by sea, mainly on two ferries. The number of cruise ship calls have going down for some years, largely as a result of increased competition by alternative destinations. In order to facilitate visits to Saba by these ferries and cruise vessels (windjammers), a single-point mooring buoy has been installed.

Only a very limited number of stay-over tourists arrive by sea and actually stay ashore. Most of them live aboard the dive boats, which are provisioned in Sint Maarten. At present, their impact on the island's economy is very limited, and can therefore not justify large investments on their behalf.

Plans to develop a marina on Saba are hindered by the fact that a suitable location is hard to find, while the development costs are expected to be high.

Plans exist to develop a marina on the island. Because of the heavy swell it is very difficult to find a suitable location. A relatively large breakwater would be required to protect the marina and make it accessible all year round. The European Union has already granted support of 5 million Na*f.* which is however not enough to cover the costs. Therefore this project has been put on hold for an indefinite period.

There has been a strong increase in the number of yacht calls since 1990, to about 600 in 1995, even despite hurricane Luis. These yachts mostly come from the French side of Sint Maarten, where a well developed charter market exists (over 350 boats in 1995). However, because of the lack of facilities and entertainment in the port, the economic impact of these yachts is very limited[11]. This situation has even led to the recommendation of a cap on yacht calls. An alternative would be to provide the yacht passengers with more possibilities to spend money in the port area.

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11 Economic Analysis of the Saba Marine Park report (R. Framheim, 1995).

c/ Fishery

Currently, only a handful of small fishing boats from Saba and Statia operate on the Saba Bank, generating employment for two dozen fishermen.

The potential of the Saba Bank is very considerable. If the newly introduced Economic Fishery Zone can effectively be protected from illegal fishing, the Saba Bank will generate over a hundred jobs on Saba and Statia in due course.

The situation on Saba with respect to fishery is comparable to that on Statia. Currently, only six fishing boats of 20-40ft from Saba operate on the Saba Bank. The potential of the Saba Bank is very considerable. If the newly introduced Economic Fishery Zone can effectively be protected from illegal fishing, the Saba Bank will generate over a hundred jobs on Saba and Statia in due course. If stock is raised to and maintained at a healthy and sustainable level, the Saba Bank could generate 1 000 to 1 500 tons of fish each year. As mentioned before, the Saba Bank could provide jobs for over a hundred people on Saba and Statia.

d/ Marine Park

One of the island's main attractions is the Marine Park, which is visited by 3 500-5 000 divers each year. However, the multipurpose port of Saba at Fort Bay apparently is a constraint on the development of tourism on the island, as it offers no tourist facilities (shops, restaurants, sanitary facilities, *etc.*).

IV. EXTERNAL ANALYSIS: CONCLUSIONS OF THE CARIBBEAN PORTS SCAN

The following text is a summary, taken from the Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles - Volume II: Cruise and Container markets.

IV.1. THE CRUISE LINE INDUSTRY

IV.1.1. TRENDS AND STRUCTURAL CHANGES IN THE CRUISE INDUSTRY DURING THE PAST DECADE

The cruise industry is one of the fastest growing segments in the leisure industry.

The cruise industry is one of the fastest growing segments in the leisure industry. In addition, it has become greatly diversified in the past decade. New destinations, itineraries and cruise durations are emerging world wide, order books are filled with orders for new mega ships of innovative design, and prices for cruises have dropped dramatically. Cruise operators are prospecting for cheaper destinations, often even calling at their own private islands. Others are tapping new sources of income through the introduction of on-board advertising systems, thereby offering island entrepreneurs the possibility to promote their services and products.

The main findings regarding the cruise industry's development in the past decade are summarised hereafter. Special attention is thereby paid to the Caribbean.

The cruise industry grows at 7.6% per annum on average.

The cruise industry records a compound annual growth rate of 7.6% per annum.

6 to 8-day cruises are the most popular. 2 to 5-day cruises are growing the fastest.

At present the 6 to 8-day cruises are the most popular (about 53% of all cruise passengers). The 2 to 5-day cruise market, however, is the fastest growing market segment (with a compound annual growth rate of 10.3%, compared to an overall growth rate of 7.6%).

Newbuildings for the cruise lines will mainly concern large vessels.

In total, cruise lines have some 28 newbuildings on order for commissioning between 1997-2001. In terms of lower berth capacity,[1] more than 50% of the additional capacity will be on board ships of 2 000 or more lower berths; 85% of the extra capacity will be on ships having 1 500 or more lower berths. These vessels will mainly serve the Eastern, Western and Southern Caribbean. Although the Deep Caribbean may receive some of them, it is likely that without additional passenger receiving facilities, only smaller tonnage will be transferred to the latter destination.

The Caribbean holds approximately 50% of the world cruise market.

According to the Caribbean Tourism Organisation, there were 10.6 million passenger visits to Caribbean destinations in 1996. This is approximately 50% of the world cruise market in terms of passenger visits. It is estimated that about 90% of the cruise passengers in the Caribbean are North Americans.

The Caribbean market doubled in volume over the last decade. It shows promising growth figures.

The Caribbean market grew by a little over 100% in the 1986-1996 period, from some 5.3 million passengers to 10.6 million. This is translated into a compound annual growth rate of 7.2%. Annual growth rates in the first half of this ten-year period were significantly higher than those recorded after 1992. In fact, the Caribbean witnessed a decline in growth between 1993 and 1995. For 1996, however, a growth rate of 11% was recorded. The growth figures for 1997 are also promising, with passenger visits in some destinations increasing by 10 to 20% in the first half of the year.

The top four destinations are the Bahamas, the US Virgin Islands (St. Thomas), Cozumel and Puerto Rico (San Juan). Strong growers are Guadeloupe, Barbados and the Cayman Islands.

The four largest Caribbean destinations in terms of passenger visits are the Bahamas, the US Virgin Islands (St. Thomas), Cozumel and Puerto Rico (San Juan). In 1996, each of these destinations received over 980 000 passengers. The first two, however, show growth rates below the Caribbean average, and have therefore lost market share.

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1 A berth is a bed on a boat.

Strong growers, on the other hand, are Guadeloupe, Barbados, Cozumel and the Cayman Islands.

In recent years itineraries have shifted from Eastern to Western Caribbean destinations.

The Eastern Caribbean caters for most of the Caribbean passenger visits. Its growth rate, however, is below the Caribbean average. Strongly growing segments are the Western and Southern Caribbean. Hurricane damage to Eastern Caribbean ports, as well as the fact that repeat passengers demand new itineraries, may have contributed to the shift in recent years from Eastern to Western Caribbean destinations.

The Deep Caribbean is the smallest segment and shows only moderate growth figures.

The Deep Caribbean is the smallest segment. In addition, it registers only moderate growth rates. With a compound annual growth rate of merely 1.2%, only the Bahamas segment grows more slowly.

Home port San Juan has catalysed the growth in the Eastern and Southern Caribbean.

The development of home-porting activities in San Juan has played a significant role in the growth of the Eastern and Southern, and to a lesser extent the Deep Caribbean market segment. In 1993, some 85% of the passengers for the Eastern Caribbean already home ported from San Juan.

San Juan is ready to take over from congested Florida East Coast home ports.

If the passenger growth forecasts for the region are confirmed, the level of port congestion is likely to increase (in home ports as well as in regular ports-of-call). In addition, ports will have to cope with a growing number of cruise ships carrying over 2 000 passengers. This concentration of passengers will add to congestion. In order to top off the congestion peaks, especially in the main home ports such as Miami and Fort Lauderdale at weekends, new home ports are being developed. At present San Juan is first in line as an alternative for the Florida East Coast home ports. If they set off from these new home ports, cruise lines would be able to offer more creative itineraries. Nevertheless, in the next three years cruise lines do not anticipate great changes in their itineraries.

Polarisation into a mass market and niche markets is likely if overcrowding continues.

The overcrowding may push smaller cruise lines out of the more popular ports, thereby polarising the cruise market into two segments : the mass market versus niche markets. Cruise lines serving these niche markets are often referred to as 'boutique' lines.

The Caribbean market is controlled by five operators.

The Caribbean market is served by some 30 different cruise lines. Five of them control 85% of the market (the largest three accounting for 70%). The Caribbean cruise industry is thus characterised by a high level of concentration on the supply side.

An oligopoly of three cruise lines is emerging.

The three largest cruise lines serving the Caribbean, Carnival Cruise Lines, Royal Caribbean International and Princess Cruise Lines are all in the process of supplementing their fleet with new and larger ships. As a result, a growing oligopoly is emerging. Those cruise lines that are consistently adding to their capacity are reaping economies of scale. Thus, they further strengthen their position, which will eventually result in outpacing their financially weaker rivals.

Private islands, onboard promotion of shops and shore excursions and demands for lower port tariffs are elements of a cruise line's strategy to control costs and revenues.

Profit margins are increasingly commanding the cruise business. As a result, cruise lines not only build larger ships (economies of scale), they also seek better to control other costs, particularly port costs. In addition to demanding lower port tariffs, cruise lines are trying to increase their shore revenue. The concept of "private islands" fits in perfectly with their strategy of gaining more control over costs and revenues. Another source of revenue for cruise lines is the promotion onboard of shops and shore excursion operators. Profit margins are also the reason why cruise ships usually leave the port early in the afternoon. As soon as they are sailing, they are permitted to open their onboard shops and casinos.

The cruise industry wishes to meet changing customer demands, for example by offering holiday packages.

The cruise industry has become highly diversified and reflects the changing holiday patterns of today's market. To comply with the changing demands from their customer base, cruise lines are offering new products. An example of these are the so-called "holiday packages". Tourists are, for example, encouraged to spend a few days in Florida, with a five-to-seven days cruise thrown in. As a result, the attraction of home ports themselves becomes greater, since many passengers choose to spend additional pre- or post-cruise time in or near the port city.

Despite increased competition and reduced profitability, a large number of Caribbean destinations are developing or planning new cruise facilities.

It is to be expected that competition between Caribbean destinations will further increase in the next ten years. Notwithstanding the threats of substitution and increased rivalry among cruise destinations, a large number of Caribbean destinations are developing or planning new cruise facilities.

IV.1.2. The Competitive Position of Curaçao and Sint Maarten

IV.1.2.1. Curaçao

Curaçao is considered to be an outstanding port-of-call. Passenger reception facilities could still be improved.

Curaçao is considered to be an outstanding port-of-call[2]. Duty-free shopping, adequate availability of berthing places and the reliability of sailing schedules are the main strengths in relation to its status. Passenger reception facilities on the other hand leave much to be desired.

Although threatened to be squeezed out of the one-week market from Florida, the development of home port San Juan may get Curaçao back on the schedules.

The distance between Curaçao and the Florida ports, combined with the trend of reducing cruise duration, is setting Curaçao out of the one-week market from Florida home ports. However, the likely congestion in the aforementioned ports may get the island on itinerary schedules for a 7-day cruise. This is because cruises home porting from San Juan, St. Croix or Barbados instead of Florida *can* reach the island in a one-week cruise.

The building of a mega-cruise terminal on Curaçao is a project worth undertaking. It would improve its attractiveness as a port-of-call and make the Deep Caribbean as a whole more interesting.

Curaçao, located in the Deep Caribbean, would very much improve its attractiveness as a port-of-call by building a mega cruise terminal on the shoreline west of the St. Anna Bay. This is a particularly crucial investment, as an increasing number of larger cruise ships are expected to be deployed on the Deep Caribbean itineraries. From a macro-economic point of view, this project is worth undertaking. By improving its own position, Curaçao would at the same time make the Deep Caribbean region as a whole more attractive. Complementary in this context are the improvements currently pursued by the Colombian port of Cartagena. This port too could well be integrated into a Deep Caribbean itinerary.

2 In 1997, Curaçao registered 216 000 cruise passenger visits.

Home porting mass market lines is not a valid option for Curaçao.

On Curaçao, cruise lines and airlines working together could set up home porting initiatives as a joint project.

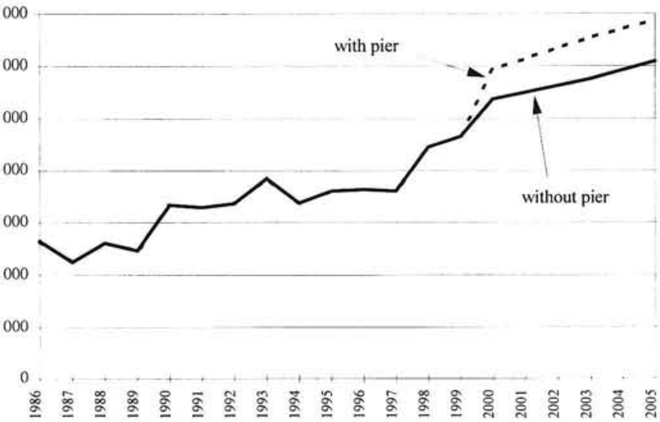
As a home port for the mass market lines, Curaçao does not offer competitive advantages in comparison with Miami and San Juan. The insufficient cost effectiveness of its airlift capacity is a hindering factor for Curaçao's becoming a home port for mass cruise tourism. The development of home porting activities on Curaçao is like the 'Chicken and Egg' problem; what comes first: the cruise lines or the necessary airlift capacity and transport infrastructure? One way to overcome this dilemma is therefore to make the different interests work together and set up home port initiatives as a joint project.

When it comes to home porting for 'boutique' lines[3], market credibility does exist with regard to Curaçao.

When it comes to home porting for 'boutique' lines, market credibility *does* exist for Curaçao. Selecting the right marketing efforts and strategies is bound to yield results, once the mega cruise terminal has been built.

The contribution of value added by cruise tourism to Curaçao's economy, with and without the mega cruise pier, is illustrated in *Figure* IV.1.[4]

Figure IV.1 : Contribution of direct and indirect value added by cruise tourism to Curaçao's economy 1986-2005 (in thousands of US$)



Source : Policy Research Corporation N.V.

3 Cruise lines serving niche markets.

4 It should be emphasised that the calculations are made on the basis of conservative assumptions with respect to the number of passenger visits and spending per cruise passenger.

- *Curaçao should build a mega cruise ship terminal and upgrade the Riffort area;*
- *an integrated cruise and tourism promotion plan for Curaçao should set the framework for the future expansion of the whole leisure sector;*
- *a 'Deep Caribbean Cruise Experience' programme should be designed as a joint undertaking by different islands;*
- *airlines, cruise lines and the public sector should work together to set up home port initiatives.*

The following recommendations are made with regard to Curaçao:

- Curaçao should build its mega cruise pier. However, as was correctly put forward at the final workshop, by using the Otrabanda cruise pier, one of the principal attractions of Curaçao, the experience of entering the Sint Anna bay, is lost. This has to be balanced by offering first-class passenger reception facilities in an attractive environment. In other words: the Riffort area urgently needs to be upgraded;
- co-operation should be increased, not only between the Deep Caribbean ports and interested cruise lines, but also with hotel groups, tourism organisations, travel agencies, airlines, *etc.*; initiatives of the Curaçao Tourism Development Board to this end should therefore be encouraged. In this respect, the initiatives of the Curaçao Cruise Action Group (CCAG) are welcomed; should be continued and increased. The CCAG itself should be expanded to include representatives of both the island government and the private sector;
- an integrated cruise and tourism promotion plan for Curaçao should set the framework for the future expansion of the entire leisure sector. This would involve developing an integrated island tourism policy and drafting a home port business plan; as part of the implementation of this policy, additional information should be collected on cruise passenger satisfaction. Market segmentation and, consequently, targeted promotional efforts are important tools when addressing the wishes of new (younger) and different (more active) categories of cruise tourists;
- a 'Deep Caribbean Cruise Experience' programme should be designed as a joint undertaking of different ports, offering a niche line cruise itinerary and thus shifting itineraries away from more congested market segments, if other ports improve their cruise facilities and service levels. Existing regional co-operation in the *Southern Caribbean Group* should be continued precisely to this end. Curaçao could serve as a home port or port-of-call;
- airlines and cruise lines should work together on Curaçao; this co-operation can be stimulated through the co-ordination of air travel and harbour policies on the Netherlands Antilles.

IV.1.2.2. Sint Maarten

Sint Maarten is considered to be an outstanding port-of-call. Passenger reception facilities could still be improved. Over-crowding and over-commercialisation could jeopardise its position.

Sint Maarten is considered to be an outstanding port-of-call. Duty free shopping, the adequate availability of berthing places and the reliability of sailing schedules are the main strong points in relation to its status. In opposition to these three aces, overcrowding, congestion and over-commercialisation are the negative consequences of its fast growth, both at present and in the future. Moreover, the passenger reception facilities could be improved.

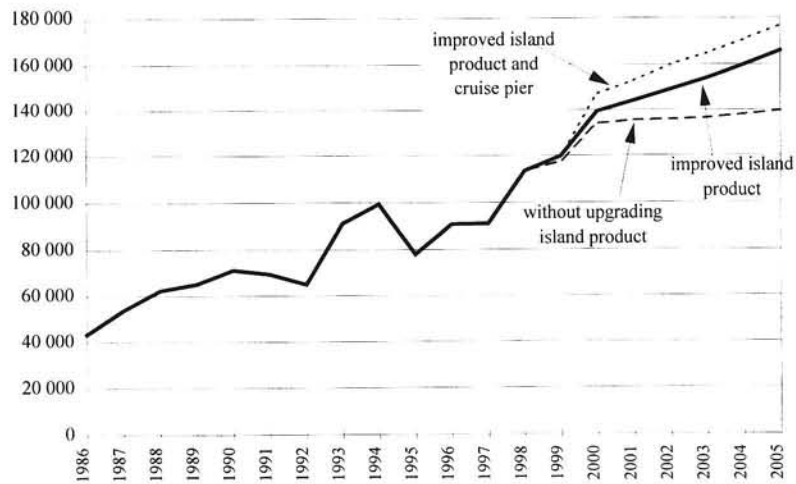
Home porting for mass market lines is not a valid option for Sint Maarten.

As a home port for the mass market lines, Sint Maarten does not offer competitive advantages in comparison with Miami and San Juan.

Although a prerequisite for a growth in passenger arrivals, land-side operations may impede further growth.

Given the substantial contribution of value added to the island economy (see *Figure IV.2*), the considerable attention paid to and efforts invested in the promotion of Sint Maarten for cruise tourism are fully justified. However, the further growth of passenger volumes may be impeded by land-side congestion, which has to be addressed with priority.

Figure IV.2 : Value added contribution by cruise tourism to Sint Maarten's economy 1986-2005 (in thousands of US$)



Source : Policy Research Corporation N.V.

The following recommendations are made:
- *notwithstanding its expected positive effects, the construction of the new cruise pier is not considered a top priority by the cruise lines; alternatives exist;*
- *on Sint Maarten, passengers should be able to and encouraged to fan out across the island or visit neighbouring islands;*
- *a theme park should be opened on Sint Maarten;*
- *airlines, cruise lines and the public sector should work together.*

The following recommendations are made for Sint Maarten:

- notwithstanding its expected positive effects, the construction of the new cruise pier is not considered a top priority (by the cruise lines) for the further development of cruise tourism[5];
- in consultation with the cruise lines, the island should address other problems first to secure the basis for its continued success as a cruise destination. In brief, the growth of cruise tourism is about to reach its limits on the island. If no measures are introduced to improve the 'product Sint Maarten', lower growth rates are to be expected. These expectations are shown by the lower in line in *Figure IV.2*: if the problem of congestion and its other issues related to it are not solved, Sint Maarten could be losing out on over 200 000 additional passengers by 2005;
- for instance, priority should be given to solving congestion in the town of Philipsburg, as well as on the rest of the island, by implementing a traffic plan, providing a wider range of attractions, and improving the quality of taxi service and guided tours;
- moreover, passengers should also be encouraged to fan out across the island or to neighbouring islands by multiple means of transport: taxis, buses, boats, *etc.*;
- on Sint Maarten a theme park for tourists should be opened; the past of the region and the mix of cultures offer possibilities;
- airlines and cruise lines should work together on Sint Maarten; this co-operation can be stimulated through co-ordination of the air travel and harbour policies on the Netherlands Antilles;

If the 'product Sint Maarten' is sufficiently upgraded, the realisation of the middle growth projections in *Figure IV.2*can be realised. The construction of a new cruise pier could add another 100 000 passenger visits.

Solving the land-side problems is considered the highest priority if cruise tourism is to show in a sustainable development. New cruise vessel and passenger reception facilities would further add to the attractiveness of Sint Maarten as a cruise destination.

It should be emphasised that the construction of the new cruise pier is not rejected, provided that funds are also available to solve the land-side problems facing the development of cruise tourism on Sint Maarten. If the congestion problems are not solved and the 'product Sint Maarten' is not upgraded, this development is not expected to be sustainable in the long run. Therefore, solving the land-side problems is considered the highest priority. New cruise vessel and passenger

5 An alternative could be to consider restoring the old pier, while alternative plans for the development of the port should be considered as well.

reception facilities would further add to the attractiveness of Sint Maarten as a cruise destination.

IV.2. THE CONTAINER LINE INDUSTRY

IV.2.1. CONCLUSIONS AND RECOMMENDATIONS WITH REGARD TO THE PORT OF WILLEMSTAD

Like other regions, the Caribbean will eventually be influenced by scale increase and concentration in logistics and maritime transport. Multi-layered transhipment networks will affect its ports. This is accompanied by transhipment flows concentrating on advanced and strategically located terminal facilities.

The Caribbean basin does not escape the major mutations that have globally affected the logistics and maritime transport of general cargoes in the past decades. It may feel the effects of scale increase and concentration later than other regions, but these delayed repercussions have the same causes and the same results as elsewhere in the world. Hence, the development of multi-layered transhipment networks too is also bound to affect Caribbean ports.

The establishment of major hubs in the Bahamas and Panama and the expansion of Kingston's container terminal clearly demonstrate that the concept of 'main hub port' is here to stay. At the same time the direction of transhipment flows is changing. They are concentrating on new and advanced terminal facilities, strategically located in ports where linkages between East/West and North/South routes are feasible and can be efficiently organised.

This evolution will remodel trade routes in the Caribbean and its environment. A transport pattern will develop with main ports feedering subregional hubs, feedering to final destination. Small Caribbean ports will mainly be served by feeder vessels. Medium-sized ports will be able to become feeder ports or subregional hubs, depending on their marketing strategy.

In the Caribbean, the consequences of concentrating the main trade flows on selected hubs have not yet been fully understood. The inevitable scale increases these will entail (in terms of the ship sizes that will call in the region and the probable growth in transhipment volumes) will also result in the remodelling of trade routes. The following routes will be affected: intra-Caribbean routes, the routes between the Caribbean and the United States Gulf, between the Caribbean and Central America and between the Caribbean and the Atlantic seaboard of South America. This will ultimately give rise to a maritime transport pattern in which international cargoes are transhipped in main ports, feedered to subregional hubs and again transhipped and feedered to final destination.

In this transport model small Caribbean ports will mainly be served by feeder vessels whilst medium-sized ports stand gradually to loose most of their direct calls. Thus either they become feeder ports or they implement an aggressive marketing strategy with the aim of becoming subregional hubs. The main hubs in the wider Caribbean region have already been identified, but competition for this business promises to be as fierce as that between the many contenders for a subregional hub role.

In the event of container handling overcapacity in the wider Caribbean region, port dues and terminal handling tariffs will be driven down. Multi-layered transhipment and feedering can remedy this.

Although established Caribbean ports have registered significant increases in container throughput they have achieved this in spite of facilities which often fall short of the minimum requirements set by the shipping lines. This situation may, however, change rapidly with the commissioning of state-of-the-art container terminals both in the Caribbean basin itself, Panama and Colombia. If all container terminal development plans at present under consideration are implemented, the future container handling capacity in the wider Caribbean region could well become substantially higher than handling demand. This over-capacity will drive levels of port dues and terminal handling tariffs down. Only the introduction of multi-layered transhipment and feedering would make it possible to absorb excess handling capacity as it would substantially increase the total amount of handling in the various hub and feeder ports.

The container terminal operations in Willemstad are tailored to a tool port-concessionaire relationship between the Port Authority (CPA) and the operating company (CPS). The concession and rental agreements shaping the relationship do not provide CPS with sufficient financial incentives or autonomy.

Improved operational agreements would further add to existing idle capacity, unless new throughput activity was generated.

The container terminal operations in Willemstad are currently tailored to a tool port-concessionaire relationship between the Port Authority (CPA) and the terminal operating company (CPS) (see *Table V.3 in Chapter V*). The present working framework is set by two concession agreements and four rental agreements. These and the crane rental agreement do not provide the terminal operator with sufficient financial incentives to fully utilise available handling capacity or improve on his operational performance. The terminal operator lacks the encouragement that would allow him to pursue a more aggressive marketing strategy[6] and seek to modernise equipment/systems. Even given the current operational context, the terminal has substantial idle capacity. Improved operational arrangements

6 This marketing strategy should be developed in co-operation with the CPA and the shipping agents.

would significantly increase the intrinsic capacity of the terminal without requiring large new capital investments. They would further add to idle capacity, unless new throughput activity was generated.

At present, the terminal's reputation with its main users is good. However, if Willemstad intends to become a subregional hub, the Curaçao's Container Terminal performance levels must be boosted and operational practices revised. The alternative is overall decline.

The terminal's present reputation with its main users is good[7], considering the fact that the efficiency of a terminal is to a large extent determined by local operating conditions. Hourly ship-to-shore output levels compare favourably with those in most other Caribbean ports. Security is not a major problem (thefts do not occur) and waiting times have been limited. Output levels are, nevertheless, modest when compared to the results obtained by container terminals in other regions of the world.

If the port of Willemstad, and the Curaçao Container Terminal in particular, intends to broaden its commercial base and become a subregional hub, performance levels must be boosted and operational practices revised. It will then be able to cash in on the potential offered by the restructuring of maritime geography (world wide and in the Caribbean). There is no other alternative, unless both the port authority and the terminal operator accepted in future declining market shares, the disappearance of all container transhipment activity and the loss of direct call services. The latter is because the ratio of vessel size to number of exchanges in the port becomes unfavourable to smaller and medium-sized ports.

For Willemstad to become a successful subregional hub, the Port Authority and the Curaçao Container Terminal need to carry out a comprehensive plan of action.

For Willemstad to become a successful subregional hub, the Port Authority and the Curaçao Container Terminal will need to carry out a comprehensive plan of action. This should include the recommenced actions listed in *Figure IV.3*.

Moreover, a modern and pro-active marketing strategy is crucial if subregional hub status is to be achieved. This marketing strategy should build on existing activities (Newsletter, personal visits) and co-ordinated in the Marketing Action Group which was installed in 1993.

7 Willemstad was awarded the title of 'Most Dependable Port' in the Caribbean region for 1996 by the Port Award Committee of the Caribbean Shipping Association.

Figure IV.3 : Recommended actions for the establishment of the port of Willemstad as a subregional container hub

- Development of a general port policy for the Antillean ports based on the imperative goal of realising both macro-economic and micro-economic objectives.
- Preparation of a strategic marketing plan specifically aimed at encouraging major shipping lines/joint services/alliances to call at Willemstad and use the port as a relay to the East Caribbean and Atlantic seaboard of Colombia and Venezuela. This plan should be developed by the CPS, CPA and the shipping agents in the port of Willemstad. The existing Marketing Action Group can provide the basis for an integrated and intensified marketing effort.
- Revision of the concession and rental agreements, so that they become simpler and more effective, and fully contribute to achieving both macro- and micro-economic objectives.
- Restructuring of the container handling tariff, incorporating all supplements for regular activities/services and giving more incentives to carriers bringing in substantial numbers of containers.
- Greater flexibility in allocating berths, cranes and other operational resources in line with carriers' requirements.
- Revision of the labour market legislation and re-negotiation of the present collective labour agreements with a view to making working conditions more flexible, permitting effective 24-hour operations, increasing employment on the terminal and ensuring the long-term expansion of the terminal's activity.
- Gradual increase in the number of ship-to-shore gantries in line with increasing demand and the gradual replacement of the present stacking system (poorly using land areas) by an RTG system (intensively using land areas) if new transhipment flows materialise.

Source : Policy Research Corporation N.V.

To implement them successfully, a change in the perception of the port's and container terminal's role is needed. This vision needs to be shared by all members of the port community so as to anticipate the coming changes.

None of the actions listed in *Figure IV.3* are unrealistic or unfeasible. To implement them successfully, a change in the perception of the port's and container terminal's role is needed. All members of the port community must be convinced that the present state of affairs, possibly satisfactory from a purely micro-economic point of view, cannot be perpetuated. Changes are on the way. If they are timely anticipated and properly accommodated all parties with an interest in the port of Willemstad will ultimately benefit. If changes are neglected, the port and all the members of its community refuse to adapt the new situation, the port's activity, its influence and itseconomic significance will slowly but inevitably decline.

Figure IV.4 : Main principles for the revision of the concession and rental agreements in the port of Willemstad

- CPA is to become a 'landlord' type port with respect to the provision of berths and terminal facilities.
- The concession will be converted into a long-term (not less than 15 years) exclusive licence and leasehold contract for the container terminal and will include the right to manage, operate and promote these facilities.
- The object of the licence and leasehold contract will be the terminal infrastructure and superstructure; it will exclude gantry cranes, HD-mobile harbour cranes and other handling equipment.
- The annual lease rental to be paid by CPS as lessee to the CPA as lessor will be a fixed amount; this fee will also include the rental for all buildings on the terminal.
- The lessee will pay a royalty in excess of a predetermined minimum throughput (the latter should not be less than 2/3 of intrinsic handling capacity to give a proper incentive to the lessee to further increase the terminal's handling activity); hence the licence and leasehold agreement between CPA and CPS would become one of a revenue-sharing type.
- The ship-to-shore gantry cranes, HD-mobile harbour cranes and CPA handling equipment will be transferred from CPA to CPS at market value (to be determined after valuation by an independent expert); the rental agreements for the cranes/other equipment will become redundant.
- In future the procurement of new gantry cranes and accessories such as spreaders will be the responsibility of CPS.
- The concession on the Curaçao Ferry Terminal and the other existing CPA wharves and quays of St. Anna Bay, Waaigat and Schottegat will be separated from the Container Terminal; CPS's monopoly of CPS regarding stevedoring/cargo handling will be rescinded and separate licence and leasehold contracts will be offered through local or international competitive bidding; also bulk handling will no longer remain the exclusive right of CPS either. Moreover, in the contract the CPS could be granted 'first refusal' to perform the stevedoring of bulk cargoes at a price level negotiated by the new operator.
- Inclusion in the CPA/CPS licence and leasehold contract of minimum performance standards (throughput/productivity).

Source : Policy Research Corporation N.V.

To facilitate adaptation to change, the concession and rental agreements should be revised. The main principles are listed in Figure IV.4.

Adaptation to change is never easy. *Figure IV.4* summarises the main principles on which the revision of the concession and rental agreements should be based. This listing also provides an excellent indication of the challenges and difficulties ahead. But a revision of these agreements may still be easier than some of the other recommended actions, which would end traditional attainments and some privileges. For instance, notwithstanding the fact that the first steps in the right direction have already been taken, CPS and the relevant labour unions should come to a (CAO) agreement on the more flexible deployment of labour in order to break away from the current rigid shift system with excessive shift supplements.

It is rational that these principles should not alter CPS's exclusive rights to manage and operate the terminal.

The main principles for the revision of the concession and rental agreements do not infer a change with regard to CPS's exclusive right to manage and operate the container terminal facilities for the first 15 years. This is rational because :

- even if subregional hub throughput is boosted, container handling activity remains too limited to warrant the operation of two or more container terminals;
- tariff levels at the Curaçao Container Terminal are mainly determined by the attainable throughput level and much less by the relative monopoly CPS enjoys;
- rescinding the monopoly with regard to other facilities will expose the ports to a limited degree of competition.

A number of remarks should be made with respect to the recommendations in *Figure IV.4*:

- the gantry and mobile cranes should be transferred from CPA to CPS, though not in exchange for an equity share in CPS. This could easily lead to conflicts of interest, while it would also hinder the recommended development towards a landlord port model;
- the CPS should only consider investing in new or additional gantry cranes and other equipment, if market development warranted it.

To prevent monopoly pricing by CPA the lease contract will have to include a safeguard clause.

Only after the expiration of the first 15-year period would the concession be the subject of (international) tendering. In spite of all these precautions, the risk of monopoly pricing by CPS remains. This is why the lease contract will have to include a proper safeguard clause enabling CPA to keep an appropriate level of control over the handling rates for *local cargo/containers*.

The proposed recommendations are fundamental and radical but necessary. Advantages and prerogatives will be gained and lost, but ultimately both macro-economic and micro-economic optima will be reached.

However fundamental and radical they may be, the proposed recommendations, are necessary to modernise the management and operational arrangements in the port of Willemstad. They are balanced and in line with expected mutations in maritime transport. If implemented, each interest group will benefit although they may as well as some of their advantages and prerogatives. The future prosperity of the port community can no longer be guaranteed by the mere quest for individual short-term targets. On the other hand, the ultimate result of the proposed changes will be the achievement of both macro-economic and micro-economic optima.

IV.2.2. CONCLUSIONS AND RECOMMENDATIONS WITH REGARD TO THE PORT OF PHILIPSBURG (SINT MAARTEN)

Philipsburg is a relatively minor player among Caribbean cargo ports. Nevertheless, there are opportunities.

At present, Philipsburg is a relatively minor player amongst Caribbean cargo ports. In conventional and bulk cargo it annually handles some 27 000 cubic metres of volume cargo and some 250 000 metric tonnes of weight cargo, with 26,700 container moves in 1996 in container cargoes Philipsburg belongs to a group of small to medium sized container ports in the Caribbean that show more ambition than traffic potential. Nevertheless, the restructuring of the geography of container liner shipping and the anticipated development of a multi-layered transhipment and feeder network in the Caribbean basin offer new opportunities to entrepreneurial port and terminal operators, even if their present throughput levels are small.

The port has a certain potential as a subregional hub. Its main strengths are:
- *its proximity to the main North-South shipping routes;*
- *its central position in the Leewards.*

A SWOT analysis covering Philipsburg and the main contenders for a subregional hub status in the Leeward and Windward Islands was carried out. It confirms a certain potential for further container throughput growth as a result of subregional transhipment activity. Philipsburg's main strengths are its proximity to the main North-South shipping routes and its central position with regard to the other Leeward islands.

Other strong points are its:
- *productive handling record;*
- *organisational structure.*

Its most significant weaknesses are:
- *its low centrality to the Windwards;*
- *the distance from the main East-West shipping routes;*
- *the condition of its present facilities.*

In addition a reasonably productive handling record and an effective organisational infrastructure are also considered as strengths by local port interests. The latter demands confirmation as current throughput levels cannot be considered very taxing. The port's most significant weaknesses concern its low centrality with respect to the Windward islands, its distance from the main East-West shipping routes and the condition of its present facilities (hurricane damage, poor road access, draft limitations and limited possibilities for shore-based expansion).

St. Lucia, Puerto Rico, Trinidad and Barbados are major competitors for the sub-regional hub role.

The SWOT analysis further identified ports in St. Lucia, Puerto Rico, Trinidad and Barbados as major competitors for the subregional hub role. Competition from both Pointe-à-Pitre and Fort-de-France cannot be ruled out either, although these ports will primarily target traffic flows to other French-speaking countries in the region.

Annual growth of between 2 and 3% in container throughput is the most realistic forecast. By 2008 Container throughput will thus total only 7 000 container moves more than at present. In 2008 the port of Sint Maarten will still need to accommodate break-bulk and general cargoes.

The demand forecasts for Sint Maarten developed in the 'Cargo Industry Study' acknowledge that strong increases in building and construction supplies are only temporary and economic growth for the country will only average 2% per annum up to 2008. The main growth incentives for local cargo can therefore only come from a much higher level of consumption by tourists (more tourists, more consumption per tourist or both) and much greater demand for housing and new commercial facilities. Of the Cargo Industry Study's three alternative demand scenarios, the moderate scenario with annual growth in container throughput of between 2 and 3% is the most realistic. This will lift the container throughput to some 49 000 TEU by 2008 (approximately 34 000 container moves), of which 2 500 transhipment TEUs (approximately 1 700 container moves). This is only some 7 000 container moves more than the present throughput. In 2008 the port of St. Maarten will still need to accommodate break-bulk and general cargoes. These have been estimated at 21 000 cubic metres of volume cargoes, some 8 000 cubic metres of lumber and 200 000 tonnes of weight cargoes (mainly low value bulk).

None of the forecast activity for 2008 thus warrants the development of a new major 4-berth terminal.

None of the forecast 2008 activity thus warrants the development of a new major 4-berth terminal. Such a terminal, if properly equipped with ship-to-shore cranes and HD-mobile harbour cranes would offer a minimum aggregated handling capacity of at least 300 000 container moves, plus 250 000 tonnes of bulk and 50 000 tonnes of volume cargo and would easily be capable of annually berthing some 1 500 container ships of average length (currently 400 to 500 container vessels are received each year).

Implementing the full terminal lay-out as presented in the Philipsburg master plan 1996 would thus create a facility with a berthing and handling capacity vastly superior to realistic demand forecasts for Sint Maarten. This also holds for optimistic throughput forecasts, predicting throughputs of not more than 47 000 container moves, 29 000 cubic metres of volume cargo and 300 000 tonnes of weight cargo for 2008 per year.

The SMPA basically has two options for providing the necessary handling capacity:

- *rehabilitating the present cargo handling facilities;*
- *building the terminal, as proposed in the master plan, but in phases.*

The SMPA basically has two options for providing the necessary handling capacity. The first is to rehabilitate the present cargo handling facilities. Lack of space, inadequate water depth and the impossibility to expand berth length and area in the future make this option less than acceptable. The second is to build the terminal, as proposed in the master plan, but in phases. In a first phase a berth length of 225 metres could be built, with a total terminal area of some 40 000 square metres (assuming an average depth of ± 175 metres) and a draft alongside of ten metres to allow the berthing of container vessels of up to 1 000 TEU. The terminal should then be equipped with at least an additional HD-mobile harbour crane of minimum 45 tonnes lifting capacity and a minimum of six front-end loaders or reach stackers for container handling. A well-dimensioned gate complex with an adequate number of entry and exit lanes should be provided. Additional smaller handling equipment would complete the outfit of phase I of such a new multi-purpose terminal. The total capital investment required would amount to between US$12 and 14 million.

The new terminal should be managed and operated as a common user facility.

The new terminal should be managed and operated as a common user facility. The SMPA as landlord should therefore lease out the terminal to a Terminal Operating Company on a ten to fifteen year term, on the basis of a revenue-sharing formula. This would imply that, in spite of this TOC's exclusive right to operate the terminal, it would be obliged to serve all shippers, shipping companies and their agents at the terms set in the lease agreement.

The bidding for the lease contract could be reserved exclusively to local interests or could be broadened by making it the international tender competitive.

The bidding for the lease contract could be reserved exclusively to local interests or could be broadened by making it the internationally tender competitive. The latter would improve Philipsburg's changes of attracting an increasing transhipment flow and gradually building up its reputation as a subregional hub for the Leeward and possibly the Windward islands.

A successful bid to become a sub-regional hub also implies a more competitive and simplified handling tariff structure.

For a successful bid to become a subregional hub to be successvul, a more competitive and simplified handling tariff structure would be needed, with all-in rates for work in the first and second shift, covering both the ship-to-shore and the yard activities. It would also be advisable to incorporate the container tax levied on full import boxes into the container handling rates. A revision of the complete tariff is necessary in order to optimise the utilisation of available/future facilities and maximise SMPA revenues while maintaining Philipsburg's competitive edge and removing unnecessary tariff categories.

The cash flow projections need to be redone on the basis of a reworked detailed costing of the phase I multi-purpose terminal development and a re-structured and improved tariff.

Although for the next few years it will be acceptable for SMPA to set the tariff schedule as in the past, this practice should be phased out in order to give the Terminal Operating Company sufficient flexibility to negotiate handling contracts with potential shipping line customers and decide on its own pricing strategy. Only for the handling of local containers should SMPA approval still be required. The SMPA tariff schedule should then cover all port dues such as anchorage, dockage, pilotage, *etc.*).

Finally the SMPA should without further delay develop and implement a realistic marketing strategy for its cargo traffic.

Finally the SMPA should without further delay develop and implement a realistic marketing strategy for its cargo traffic. This strategy need actively to search for new opportunities for trade with the Northern part of Latin America and promote the strengths of Philipsburg in order to attract substantially more subregional transhipment cargoes. After awarding the lease contract to the Terminal Operating Company the marketing strategy for containers, bulk and general cargoes should be jointly implemented and revised in view of the obtained results.

Figure IV.5 : External analysis: conclusions with respect to transhipment on Sint Maarten

- A revised first phase of a new multi-purpose terminal is to be implemented, with an equivalent capacity of approximately 100 000 container moves.
- The first phase of the multi-purpose terminal is to provide 225 meters of berth length with a draft of 10 metres alongside and 40 000 m² terminal area. The required investment in infrastructure and superstructure is estimated at 12-14 million US$.
- The multi-purpose terminal is to be equipped with a second HD-mobile harbour crane and additional reach-stackers or front-end loaders to be provided by the Terminal Operating Company.
- The multi-purpose terminal is to be operated as a common user facility by a single Terminal Operating Company which is obliged to serve all parties on the basis of the terms and tariffs set in the lease agreement.
- SMPA as landlord tenders the multi-purpose terminal either locally or on an internationally competitive basis for a 10-15 year period.
- The lease rent for the multi-purpose terminal is to be agreed on the basis of a revenue-sharing formula.
- The Terminal Operating Company is eventually to set its own tariffs without interference from SMPA or other authorities. Only tariffs for local cargoes would require SMPA approval.
- Other SMPA tariff schedules are to be revised, restructured and simplified.
- SMPA is to develop without delay a realistic marketing strategy to be jointly implemented and occasionnaly revised by SMPA and the nominated Terminal Operating Company.

Source : Policy Research Corporation N.V.

If the recommendations in Figure IV.5 are fully implemented, the Port of Philipsburg will be in a position to gradually develop a multi-purpose terminal with substantial lolo and roro container and trailer capacity.

The outlined development strategy not only fits the requirements of the port operationally. It also considerably reduces the financial risk for both SMPA and the Terminal Operating Company.

From an economic point of view its impact in the medium to longer term could be equally significant.

Figure IV.5 summarises the main recommendations formulated in this Chapter. If they are fully implemented, the Port of Philipsburg will be in a position gradually to develop a multi-purpose terminal with substantial lolo and roro container and trailer capacity. This will enable the port to offer high quality cargo handling services, geared to suitably accommodate the maximum projected container and cargo flows in a first phase. Moreover, as transhipment flows are supply driven the phase I development will allow SMPA and the selected Terminal Operating Company to attract more local transhipment cargoes, whereas in the present conditions the port of Philipsburg is not considered as an alternative. The proposed phased construction will also have the advantage of allowing the tailor-made development of the multi-purpose terminal in line with growing volumes and improved market share.

In the second and final phase of the multi-purpose terminal's expansion (with the addition of another 225 metres of berth), the conversion of part or all of the facilities' berth length and land area into a full-scale container terminal could be envisaged. The outlined development strategy not only fits the requirements of the port operationally. It also considerably reduces the financial risk for both SMPA and the Terminal Operating Company. From an economic point of view its impact in the medium to longer term could be equally significant, with the potential full employment of 150 terminal staff and the creation of value added activities in local and subregional distribution.

POLICY SCENARIOS: INTRODUCTION

1. INTRODUCTION

The current situation in the maritime sector of the Netherlands Antilles was described in *Chapter III*. The results of the external analysis of the competitive positions of Curaçao and Sint Maarten with respect to cruise tourism and container transhipment were summarised in *Chapter IV*. A detailed description of the relevant issues and considerations with respect to the formulation of policy scenarios is presented in *Chapters V to IX*.

The following policy alternatives are distinguished:
- *CONTINUATION of present policy;*
- *introduction of a LAISSEZ FAIRE POLICY;*
- *introduction of a REGISTER PLUS POLICY;*
- *introduction of an INTEGRATED MARITIME POLICY;*
- *introduction of a FRAMEWORK POLICY with MARITIME FOCUS.*

With regard to maritime policy in the Netherlands Antilles, the following policy alternatives are distinguished:

- *CONTINUATION* of the present policy;
- introduction of a *LAISSEZ FAIRE POLICY*;
- introduction of a *REGISTER PLUS POLICY*;
- introduction of an *INTEGRATED MARITIME POLICY*;
- introduction of a *FRAMEWORK POLICY with MARITIME FOCUS*, a combination of an *integrated maritime policy* with an improved *general economic policy*.

Subsequently, *Chapter X* provides a short overview of the definitive policy scenarios which are included in the EIS® calculations. The results of the EIS® calculations are presented in *Chapter XI*.

2. Policy aspects

In order to analyse current and future maritime policy in the Netherlands Antilles it is imperative to first identify the component subsectors of the maritime cluster. In the *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* the following subsectors are distinguished (see *Chapter III*):

The following classification of sub-sectors is used in the EIS®:
- *shipping;*
- *port-related services;*
- *shipping agents;*
- *ship repair;*
- *register-related activities;*
- *free zone;*
- *oil refining, storage and transhipment;*
- *cruise tourism.*

- shipping;
- port-related services;
- shipping agents;
- ship repair;
- register-related activities;
- free zone;
- oil refining, storage and transhipment;
- cruise tourism.

For Bonaire and the Windward islands it is not feasible to use such a detailed subdivision. A number of diverse activities is therefore aggregated into a 'maritime services' sector. As indicated, a detailed description of these subsectors was presented in *Chapter III.*

A number of policy fields can be identified:
- *(port) infrastructure;*
- *fiscal measures;*
- *legislation;*
- *safety and environmental regulation;*
- *training and education;*
- *promotion;*
- *government organisation.*

With regard to the above mentioned subsectors a range of 'policy fields' can be identified, such as:

- (port) infrastructure: planning and government investment;
- fiscal measures aimed at supporting the maritime cluster, e.g. taxation, investment subsidies, Free zone;
- legislation, e.g. with respect to registration, the manning of ships;
- safety and environmental regulation;
- training and education for maritime professions;
- promotion of the Netherlands Antilles and its maritime cluster;
- government organisation: distinction between policy-making departments and operational services, level of decision-making (federal or island), public-owned enterprises (e.g. dry dock).

The described scenarios represent possible paths for the future development of the maritime sector on the Netherlands Antilles. They can thus play an important role when policy decisions are made.

These aspects are the 'bricks' or components of the policy scenarios which will be discussed in the subsequent chapters. The policy alternatives or scenarios will vary on the basis of the way and extent to which these aspects are prioritised and dealt with by policy makers. The described scenarios represent possible paths for the future development of the maritime sector on the Netherlands Antilles. As such they can play an important role when policy decisions are made by providing a number of detailed reference points.

The economic effects of the policy scenarios are calculated by means of Input-Output analysis, and used for the evaluation of the policy alternatives.

In the Economic Impact Study (EIS®) the economic effects of the maritime policy scenarios are calculated *ex ante* by means of Input-Output analysis. These economic effects are expressed in terms of value added, employment, backflow to the government and spending impact. In order to make the calculations, Input-Output tables were modified or developed for the individual islands of Curaçao and Bonaire, and for the Windward islands as a group. Information on the maritime sector and its subsectors, collected by means of cost structure questionnaires, was introduced into these Input-Output tables. The outcomes of the Input-Output analysis are presented in *Chapter X*.

The policy scenarios for the five islands are described in detail in Chapters V to IX.

The starting point for the calculations, however, is the description of the policy scenarios for Curaçao (*Chapter V*). This description includes the federal aspects of maritime policy, *i.e.* the measures and actions which apply for all the islands. In subsequent chapters, specific information is provided on the relevance and applicability of these scenarios with regard to the other islands of the Netherlands Antilles. For the other islands, deviations and specific characteristics are described in detail in the following chapters:

- *Chapter VI* Bonaire;
- *Chapter VII* Sint Maarten;
- *Chapter VIII* Statia;
- *Chapter IX* Saba.

V. POLICY SCENARIOS FOR CURAÇAO

V.1. SCENARIO 1: CONTINUATION

The situation on *July 1, 1997* is used as a reference point for the current situation, and is therefore the basis for the *CONTINUATION* scenario[1]. In brief, this implies that:

- no department of Shipping and Maritime Affairs has been established[2]. This implies that no maritime policy for the Netherlands Antilles has been developed either. All actions to develop maritime activities on the islands are left at the (uncoordinated) discretion of the private sector and the administrative or executive government level (e.g. SINA, ports' authorities);
- no specific policy has been developed for the management and operation of the ports of the Antilles, including investments in port infrastructure. As a result the Ports' Authorities will have to continue to manage without a framework for their planning and actions;
- furthermore, the current position of Curaçao Ports Services (CPS), resulting from the concession agreement with Curaçao Ports Authority (CPA), is maintained;
- as a result no changes are expected in the operation and management of the container terminal. Thus, CPS has no special incentives to pursue a more vigorously transhipment strategy. This lack of stimuli to pursue transhipment cargoes may result in a decrease in container volume, and possibly the loss of most direct calls by container lines (see *Chapter IV.*);

1 Hence, (general economic) policy measures *in the process* of being introduced at that time, are not taken into consideration in the continuation scenario. However, they can be part of scenario 5.

2 Currently steps are being taken towards founding such a department. Nevertheless, at the present time no such department exists.

- in the *CONTINUATION* scenario, the registration process of ships is continued in its present form (see *Chapter III.2.3.*), including the present organisation of the Shipping Inspectorate of the Netherlands Antilles (SINA). Thus, no measures are introduced to further facilitate registration in the Netherlands Antilles;
- the rules and regulations for the registration of ships, including the precondition of having a legal representative in the Netherlands Antilles, remain unchanged[3]. In practice, the owner or bareboat charterer is often a Netherlands Antilles corporation, which meets all the legal requirements of the 'Zeebrievenbesluit', and has been established especially for this purpose;
- the current system of tonnage taxation (0.40 Na*f.* per GT, with a minimum of 1 000 Na*f.*) is continued. Furthermore, the special profit tax tariff (between 7.7% and 9.7%) for shipping and aircraft companies is also continued;
- no investments in port facilities are made on behalf of the cruise industry. In the *CONTINUATION* scenario, only the existing facilities (Prins Hendrikwerf, Matheywerf, *etc.*) are used for the reception of cruise passengers;
- the free zone 'Koningsplein' is continued in its present form, which means that the facilities will be extended beyond 2000[4]. However, the position of the free zone is threatened by a number of factors. At present, the port of Curaçao is already confronted with relatively high transportation costs (freight rates)[5], especially when compared to larger ports in the region. The difference in freight rates can amount to hundreds of dollars per box. This disadvantage will be further aggravated by the loss of most direct calls if no active transhipment strategy is developed by CPS and CPA. Moreover, there is increasing competition of large and fast-growing free zones in the region (Panama, Kingston, *etc.*). These free zones are located in large hub ports (see *Chapter IV*). Combined, these factors will cause a gradual decline of the free zone. In the *CONTINUATION* scenario it is assumed that only 50% of the present free zone activities will remain by 2005;
- the current stake in the Curaçao Dry Dock Company (CDM) is not managed actively. No decision towards privatisation will be made in the near future;

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3 With regard to the process of registration, there are a set of rules and regulations, concerning the ship, (and the nationality of) its owners and its master.

4 It can easily be argued that the free zones on Curaçao are part of a general economic policy. However, because of its interrelation with the shipping activities in the port, the free zone 'Koningsplein' will be considered as part of the maritime sector and will thus included in the EIS®.

5 It is important to distinguish between 'freight rates' charged to the shipper or consignee by the shipping lines, and the 'terminal handling fees' charged by stevedoring companies.

- maritime education and training is continued in its present form and at its present level: the nautical college ('Zeevaartschool') on Curaçao will be continued as part of the general polytechnic school;
- no (concerted) efforts are made to promote the Netherlands Antilles as a maritime centre.

No changes are assumed to occur in the general economic policy of the federal and island governments within the CONTINUATION scenario.

With respect to general economic policy (business climate), this scenario will assume that current conditions will not change (radically): utility prices will remain virtually unchanged, current legislation with respect to residence and working permits will not relaxed, telecommunication tariffs will remain high, *etc*.

V.2. SCENARIO 2: LAISSEZ FAIRE

In a thorough policy analysis the alternative of 'doing nothing' should always be compared to existing or possible 'active' alternatives[6]. In the context of this analysis a *LAISSEZ FAIRE* policy is defined as:

a government attitude characterised by non-intervention: no measures are implemented which support or stimulate the activity concerned, in casu maritime transport. This attitude springs from the principle that the best (macro-)economic results are achieved by means of freely-functioning markets.

A LAISSEZ FAIRE attitude implies that existing measures aimed at or related to the maritime sector will be discontinued and that no new measures are introduced.

The implications of such an attitude are presented in Chapter V.2.

This scenario implies that all existing measures aimed at or related to the maritime sector will be discontinued and that no new measures will be introduced. In brief, there are no special facilities for companies, entrepreneurs or employees in the maritime sector in this scenario. It should be stated that the laissez faire attitude is limited to maritime policy: in other sectors and policy domains the government is assumed to continue its present policies. As indicated, all present measures are assumed to be discontinued and no new measures will be introduced. All port-related services at present performed by government bodies will be left to the private sector. This implies that:

6 It should be noted that in order to realise a laissez-faire policy, one-time action is required, namely the abolition of existing policy measures. In this respect the continuation of the current policy requires less effort, at least initially.

No specific maritime policy is developed.

- no department of Shipping and Maritime Affairs will be established, which means that no maritime policy will be developed to guide the administrative and operational government services and departments;
- the free zone 'Koningsplein', closely related to the shipping activities in the port, is not to be continued after the expiration of the facility in the year 2000[7];
- the current interest in the Curaçao Dry Dock Company will be sold (privatisation). At present, the CDM is already run as if it were a private company. No substantial changes in its operations therefore are expected. Moreover, the sale will only result in a single revenue for the government. Thus, no structural economic impact on public finances is incorporated into the *LAISSEZ FAIRE* scenario as a result of privatisation[8];
- theoretically, there are two options in the *LAISSEZ FAIRE* scenario with respect to the ships' register:
  - i the register is abolished., in which case the current tonnage tax facility will become superfluous. The registration of ships is not a core task for a government (it is not a public good). Therefore, this activity should only be continued if a net macro-economic benefit is generated by it[9]. In the *LAISSEZ FAIRE* scenario this is evaluated;
  - ii the register is privatised. In which case, a concession will be granted to a private operator. The level of the concession fee will depend on the potential of the register. If the register is privatised, the tonnage tax facility will have to be maintained, as well as the special profit tax regime for shipping (and aircraft) companies. Zero or low taxation is a prerequisite for the successful operation of any register, and therefore also when trying to find a private operator. However, in a pure laissez faire policy, the special tax facilities (tonnage tax, special profit tax tariffs) would also be abolished, eliminating the possibility to run a competitive register.

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7 As mentioned before the free zone is considered as part of the maritime sector, not of general economic policy: in a maritime laissez faire it will therefore be discontinued.

8 It is assumed that the CDM's possible future profits will not generate dividend revenues for the government: all future profits will be reinvested in the company. The contribution to profit tax revenues is assumed to be identical for the privatised company. One could argue, however, that the privatised company would generate more profits and therefore higher tax revenues.

9 This does not, however, imply that the activity itself should be profitable.

Moreover, it becomes clear from the analysis of the current situation (see *Annex D*) that even if tonnage tax is maintained, a private operator will not be able to run the register profitably *in its present form*, as it would be very hard to attract sufficient additional tonnage. An upgraded form is only considered in the *REGISTER PLUS* scenario.

Moreover, if the register is privatised, the government will remain responsible and liable, because the national flag (of the Dutch Kingdom) is connected to the registration of ships. This is another reason why the pure *LAISSEZ FAIRE* scenario is based on the abolition of the register, forcing shipping companies to flag their ships elsewhere.

The ship's register is abolished.

In conclusion, the *LAISSEZ-FAIRE* scenario is based on the first alternative: the **abolition of the register**;

- the Shipping Inspectorate (SINA) will become redundant as a result of the abolition of the register. Moreover, activities related to the registration of ships will also disappear (trust companies, notary activities, et cetera);

No investments in port infrastructure are made, neither for cargo handling nor for cruise passenger reception.

- as in the *CONTINUATION* scenario, no public investments in port facilities (pier at Otrobanda) are to be made on behalf of the cruise industry in the *LAISSEZ FAIRE* scenario;
- the training and education of seafarers with government support will be discontinued. Activities in this area will have to be a result of private initiatives only (but are not expected);
- the Netherlands Antilles will not be promoted as a maritime centre, at least not by the public sector. The private sector may still promote the Netherlands Antilles in this respect.

A true laissez faire approach implies the privatisation of the port. However, considering the macro-economic importance of the port to the island's economy this option is considered unsuitable for Curaçao.

In a true *LAISSEZ FAIRE* scenario, the management of the ports is privatised as well[10]. Currently, this is the responsibility of the Curaçao Ports Authority (CPA). The private operator would also become responsible for investments in and the maintenance of port infrastructure. Many different formulas exist for the privatisation of ports[11]:

- in the present situation the port is operated by the public CPA, while the stevedoring or terminal operating activities are performed by the private Curaçao Port Services (CPS). This situation can be described as a 'tool port' type operation(see *Chapter III*);

10 Granting of a concession can in fact not be considered a pure laissez faire policy. A concession agreement will (normally) include terms under which the port has to be operated. Thus, laissez faire implies full privatisation which would result in a situation comparable to the organisation of ports in the United Kingdom.

11 See *Chapter III.2.3*. Also see Cass (1996) and Saundry &Turnbull (1997).

- in a complete *LAISSEZ FAIRE* scenario, the remaining public part is also privatised, including port (safety) management, pilotage[12], tug services, port maintenance, *etc.*. In order to be interested in the relatively small port of Willemstad, any potential private operator will have to be offered the complete package of all port activities and services, probably even including the operation of the (container) terminal facilities. However, the goals and interests of such a monopolistic integrated private port and terminal operator will not necessarily coincide with the macro-economic interests of the island. This is illustrated by the possible negative effects of the continuation of CPS's stevedoring monopoly in its present form (see *Chapter IV and Chapter V.4* of this *Final Report*). The problem is not necessarily in the monopoly position itself, but rather in the unlimited term of the granted concession. By means of a periodical tender procedure, the element of competition could be re-introduced.

As an island economy, Curaçao relies heavily on its port infrastructure. Therefore, a complete *LAISSEZ FAIRE* scenario is considered to be undesirable with respect to the management of the port and the terminals of the port of Willemstad. In the *INTEGRATED MARITIME POLICY* scenario (see *Chapter V.5.*) an alternative for the present situation is formulated.

With respect to general economic policy the same assumptions are made as in the *CONTINUATION* scenario. This will enable decision makers better to compare the results, and answer the question whether non-intervention by the government is to be preferred to its current policy.

[12] The liability problems with respect to a private pilotage service should be solved by means of insurance. This would inevitably lead to higher tariffs for pilotage services.

V.3. Scenario 3: Register Plus

V.3.1. Introduction

The economic significance of the ship's register and its related activities is relatively limited in terms of the value added and employment generated by the sector.

As indicated in *Chapter III*, the economic significance of the ship's register and its related activities is relatively limited in terms of the value added and employment generated by the sector. There are, however, some benefits of a more qualitative nature. The existence of the register and maritime offshore are important for the preservation of maritime knowledge in the Netherlands Antilles. Moreover, the relation with vessels registered in the Antilles could lead to other activities, such as repair and maintenance (e.g. the 'Balder', a giant Semi-Submersible Crane Vessel or SSCV) and fishery activities. Moreover, the international promotion of the ships' register, which is recommended below, could also have positive side-effects for other (maritime) activities in the Netherlands Antilles.

Notwithstanding its limited quantitative economic relevance, the position of the Antillean register and the Shipping Inspectorate of the Netherlands Antilles (SINA) is the subject of lengthy and heated discussions.

Notwithstanding its limited quantitative economic relevance, the position of the Antillean register and the Shipping Inspectorate of the Netherlands Antilles (SINA) has been the subject of lengthy and heated discussions. The costs in terms of budget and time spent on this discussion, and the adverse impact on the relationship between the Netherlands and the Netherlands Antilles, are out of proportion considering the economic importance of the subsector.

Moreover, on both sides emotions play an important role in the discussions.

The relationship between the registers and shipping inspectorates of both countries should be evaluated on the basis of objective, economic principles and criteria, setting aside all emotional considerations.

Moreover, on both sides emotions play an important role in the discussions. For instance, both countries claim they 'have the same rights to use the flag of the Dutch Kingdom'[13]. The Dutch are determined to apply Dutch standards and methods, sometimes because of a paternalistic perception of the Antillean practice. The Antillean position is often ambiguous: they expect support, but reject any interference incompatible with their independent position. Obviously, at present there is no basis for close(r) co-operation. The relationship between the registers and especially the shipping inspectorates of both countries should be evaluated on the basis of objective eco-

13 Which is in fact correct from a legal point of view.

nomic principles and criteria, setting aside all emotional considerations.

V.3.2. Objectives and Competition

The Netherlands Antilles and the Netherlands have different objectives and goals with regard to a ship's register. Since the introduction of the new shipping policy, the goal of the Dutch government has been to attract onshore maritime activities in the Netherlands. The registration of ships is merely one instrument in a complete package of maritime policy measures designed to this end. As a true and traditional maritime nation, the Netherlands are in a position to pursue such a location policy.

The REGISTER PLUS scenario covers a set of measures aimed at stimulating activities related to the registration of ships.

Contrary to the Netherlands, the Netherlands Antilles do not aim to develop substantial onshore maritime. The Antilles are not in a position to pursue such an objective: the country does not have a maritime tradition and is located outside the major shipping regions and routes. The *REGISTER PLUS* scenario therefore focuses on the further development of activities related to the ships' register. The goal of such an *open register policy* is to attract as many ships as possible (under certain quality requirements) in order to generate revenue from registration fees, tonnage tax, inspections, ships' and manning documents, *etc.* (subsector maritime services). Furthermore, some income and employment could be generated in related activities carried out by lawyers, trusts, and public notaries. This type of policy is also pursued in Panama and Liberia.

It is clear that the registers of the Netherlands and the Netherlands Antilles have completely different objectives. As they aim for different parts of the market, the registers should not (or no longer) be considered to be competitive. Therefore, both registers should offer different products, e.g. with respect to safety standards. The Netherlands Antilles set and enforce quality and safety standards at an internationally accepted level. Traditionally, Dutch standards and their enforcement have been even stricter. Insistence on these very strict requirements and high standards is perceived to be of great importance at both policy-making and operational (inspectors) levels in the Netherlands.

Moreover, the registers should use different marketing strategies. In the recent past, the abovementioned differences have not received proper attention when developing new legislation at the level of the Kingdom. For the Antillean register to become a more successful open register, a number of alterations should be considered.
These concern:

- the choice of the *market segment* aimed for: relatively high quality and safety requirements or low quality;
- the *future relationship with the Netherlands* and especially between the Shipping Inspectorate of the Netherlands Antilles (SINA) and the Dutch Shipping Inspectorate (NLSI), and subsequently the choice of flag;
- the *organisation* of the integrated registration services: a public or a private operator.

V.3.3. *MARKET POSITION: HIGH VERSUS LOW QUALITY*

With respect to the registration of ships two alternatives can be considered:
- *an open register aimed at attracting any kind of tonnage, regardless of quality and safety standards;*
- *an open register, in comparison with a strategy aimed at attracting ships of high quality and good safety standards.*

In principle, two alternative market positions are possible:

1. the register of the Netherlands Antilles can aim to become a very large register, regardless of the quality of the registered ships. In other words, the Antilles could choose to become a genuine *flag of convenience* (FOC). In this case, the Antilles and the Netherlands will most certainly have heated discussions about the use of the Dutch flag, and the Antilles may end up having to use the Antillean flag;
2. alternatively the Netherlands Antilles could continue and even strengthen their current policy of having a *'high quality' open register*, operating at the higher end of the market. This strategy aimed at attracting as many ships as possible, although, with solid quality and safety at widely accepted international standards as a prerequisite for registration.

The 'high quality' approach is chosen over the 'flag of convenience' strategy in the REGISTER PLUS scenario.

The first approach is not considered desirable for the Netherlands Antilles:

- the chances of success are fairly limited, as no registers with lower standards than for instance Panama and Liberia have been able to attract a large share of the market on a structural basis[14];
- a 'low quality' FOC strategy would imply breaking with the current strategy. This would mean a complete mental shift for the administration, and fundamental changes in the relationship with the Netherlands. Although a large degree of practical autonomy exists with respect to the safety requirement for ships registered in the Antilles, the Netherlands and the Netherlands Antilles are held by the 'Statuut voor het Koninkrijk' to agree on a 'bandwidth' regarding these safety requirements. The enforcement of these requirements is a national matter. As indicated, a true FOC strategy would most probably result in a conflict between the Netherlands and the Antilles;
- finally, a country is responsible (and liable) for the quality of the ships in its register. A low quality register would bring a relatively large risk of accidents and environmental pollution, and could consequently lead to high claims and a tornished image.

The Netherlands Antilles should aim for the 'high' end of the registration market, competing with registers like Liberia and Panama.

In conclusion, the Netherlands Antilles should aim for the 'high' end of the registration market, competing with the registers of for example, Liberia and Panama. In the subsequent sections, the consequences of opting for this market position are discussed with respect to:

- the flag and the relationship with the Netherlands;
- the organisation of the register and the level of service.

V.3.4. Co-operation versus independence

A number of alternatives can be considered:
- *(close) co-operation between SINA and NLSI;*
- *a separate flag and registration for the Netherlands Antilles;*
- *a (compromise) constellation.*

A number of alternatives concerning the degree of co-operation between the Netherlands Antilles and the Netherlands can be considered:

- (close) co-operation between SINA and NLSI, both using the flag of the Dutch Kingdom. This would imply the continuation of the present (unsatisfactory) situation;

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14 One successful exception, Malta, is at present considering discontinuing its low-quality approach, even though this will probably result in a loss of tonnage.

- a separate flag and registration for the Netherlands Antilles, with a completely independent position of the Netherlands Antilles with respect to safety standards and inspections;
- a (compromise) constellation, in which both countries use the flag of the Dutch Kingdom, but without any organisational and political ties.

V.3.4.1. Close co-operation

For quality and efficiency reasons, the Netherlands Antilles could opt to continue to use the flag of the Dutch Kingdom.

Following the 'high quality' strategy, the Netherlands Antilles could opt to continue to use the flag of the Dutch Kingdom, in order to support this image of quality. In this context, the option of increasing co-operation between the NLSI and the SINA with respect to inspections and the monitoring of safety standards could be considered. Closer co-operation might even result in increased efficiency and economies of scale.

In opposition to market perception, the relevant Dutch policy makers are not convinced by the quality of the Netherlands Antilles' register.

As indicated, the Netherlands Antilles' register scores well on market perception with respect to 'quality', ranking above the likes of Panama and on a par with Liberia. However, one should keep in mind that, from the point of view of the relevant Dutch policy makers, the quality of the ships in the registers of the Netherlands Antilles and Liberia is not high (by Dutch standards).

Closer co-operation between the two registers and inspectorates means two differentiated registration products under the same flag, appealing to a larger population of ship owners. But when the difference in quality standards is limited, the differentiation would be too small to discern and promote two products.

Closer co-operation between the two registers and especially the inspectorates should in this alternative take the shape of promoting two differentiated 'registration products' under the same flag, appealing to a larger population of ship owners. However, the difference in quality is crucial in this respect, while both registers aim for a different market. The Netherlands Antilles have an open register aimed at attracting ships and related offshore activities. As indicated, the Dutch flag and registration are part of a strategy aimed at attracting onshore shipping activities.

In other words: as both registers aim at different markets, it is highly unlikely that both will be successful if the same safety standards are applicable and enforced. Therefore, a larger 'quality bandwidth' is a prerequisite for successful marketing of the Antillean register. However, such a large 'bandwidth' for quality standards does not tally with the Dutch policy regarding safety standards and their operational enforcement.

At present, the limits of this 'bandwidth' are somewhat reflected by the distinction between 'List 1' and 'List 2' of the Antillean register. List 1 vessels are inspected by the NLSI, while the vessels on List 2 are the responsibility of the SINA. This division has often been a subject of conflict. The choice to be on either List 1 or 2 is at the discretion of the shipping company. There is a clear difference in both the Dutch governments and the shipping community's perception, between the two lists with respect to the safety and quality standards maintained.

In conclusion, closer co-operation in the current uniform constellation under the flag of the Dutch Kingdom is unlikely to be successful.

In conclusion, closer co-operation in the current uniform constellation under the flag of the Dutch Kingdom is unlikely to be successful. On the basis of experience, it may be expected that a lot of energy would be wasted on arguments between the NLSI and the SINA. This energy had better be used productively with a view to improving and expanding the ship's register of the Netherlands Antilles.

V.3.4.2. Separate Antillean flag

The best alternative would be to pursue a quality strategy for a separate Netherlands Antilles flag within the Dutch realm.

The best alternative would be to pursue a quality strategy for a *separate Netherlands Antilles flag* within the Dutch realm, along the lines of the British model of the 'Red Ensign'. A recent study has concluded that from a legal point of view there are no real obstacles to the introduction of such a construction[15]. The SINA and the NLSI would be two completely independent organisations, without any operational links. Existing legislation with respect to safety and manning requirements at the level of the Kingdom would have to be replaced by national legislation.

A separate flag for the Netherlands Antilles would be preferable from a promotional point of view.

The principal marketing advantage of a separate flag is that more ship owners can be attracted because of the removal of the current link with the Dutch Shipping Inspectorate (NLSI). Moreover, the distinct product can be promoted under a separate flag. Thus, in prin-

[15] For more details, see The Netherlands Institute for the Law of the Sea (1998).

ciple, a separate flag for the Netherlands Antilles would be preferable, mainly from a promotional point of view.

V.3.4.3. One flag, two distinct products

Although not preferable, the alternative is to continue with two registers using the same flag.

In spite of its being the best option from the economic and marketing point of view, the transition to two separate flags could cause too much emotional turmoil in the relationship between the two countries. The less advisable alternative is to continue with the two registers using the same flag[16].

It would require a strict and clearly-communicated separation of the operation of the registers.

Because of the difference in quality, this second-best alternative would require a strict and *clearly-communicated* separation of the operation of the registers, *especially with respect to inspections*. This would concern both their organisation and their legal and political responsibilities. This would imply that:

- the NLSI would no longer perform inspections for so-called 'List 1 vessels' on behalf of the SINA. These inspections would have to be performed by the SINA and especially by class societies in the future. The separation would have to be complete in this respect, as the NLSI would continue to apply its own higher standards while the Antillean register would aim at a different market segment, using internationally acceptable standards. Inevitably, as has been shown in the past, this would lead to conflicts between the NLSI and the SINA.

  Of course, the two Shipping Inspectorates could perform inspections on each other's vessels in the scope of Port State Control. However, the NLSI should not specifically target Antillean ships in this respect, but treat the Antillean ships like those of any other open register or even take a more lenient stance. This is an important recommendation to the Dutch government and one which would require a substantial change in attitude;
- the Netherlands Antilles need to develop maritime legislation with respect to safety standards, manning requirements, *etc*. In the past, this legislation was drawn up and introduced at the level of the Kingdom (Schepenwet), to a large extent without taking due notice of the interests of the Netherlands Antilles. Moreover, the work generated as the introduction of this legislation has often led to a periodical overload of the Antillean administration. The Netherlands should consider continue into provide juridical and

16 The continued use of the flag of the Kingdom would enable the Antillean register to remain extra attractive for the market segment of offshore vessels (FPSOs *etc.*), as the 'quality image' of the Dutch flag is very important in this segment.

administrative support in this respect, although only at the request of the Antilles;

- the Antilles should be enabled to apply for independent (associated) membership of international organisations such as the International Maritime Organisation (IMO). Furthermore, the Netherlands Antilles would have to be allowed to participate in international agreements and treaties on a more independent basis. At present, these matters are still arranged at the level of the Dutch Kingdom. The introduction of the New Fiscal Framework (NFR, see *Chapter V.5*) will put the Netherlands Antilles in a better position to realise a more elaborate network of tax treaties. This will in turn increase the attractiveness of the register.

V.3.5. *ORGANISATION: PUBLIC VS PRIVATE, SERVICE LEVEL*

Within the high quality REGISTER PLUS approach, two alternatives are evaluated:
- *an integrated register run by a public service (SINA);*
- *an integrated register managed by a private and commercial operator.*

The 'registration market' is very competitive. Consequently, the maximum price of registration services (registration fees, tonnage taxation) is set by the market. For the sake of competitiveness, both the register's service levels and efficiency have to be improved through a 'one-window approach'. In addition, the costs of the register have to be reduced. To make the register more competitive, two alternatives can be considered (see *Annex D*):

- an integrated register run by a public service (more specifically SINA). Although not strictly necessary because of the generated indirect effects, this c service could aim to become self-financing;
- an integrated register managed by a private and commercial operator. Obviously, profitability would be a prerequisite in this instance.

In the course of the A-EIS project a clear that SINA, was not expected by the financial offshore sector to be able to make the (mental) shift towards the service-oriented approach a necessary commercially to operate the register successfully.

Moreover, at the final workshop on April 16, 1998, the management of SINA indicated it was not interested in becoming the operator of a one-window ship's register.

On the basis of the analysis in *Annex D* it may be concluded that it would be hard to find an interested private operator outside the Netherlands Antilles to run the register. Moreover, the effects in terms of value added and employment on Curaçao are expected to be slightly higher in the case of operation by the SINA. However, in the course of the A-EIS project became clear that the SINA, intended to perform inspections, could not be expected to be able to make the (mental) shift towards the *service-oriented* approach necessary commercially to operate the register successfully. This concern was also expressed by the maritime offshore sector benefits from the register, during the final workshop on the project on April 16, 1998. Moreover, at the same workshop the management of the SINA, , indicated it was not interested in becoming the operator of a one-window ship's register, but would rather stick to the 'core business' of this public service, i.e. performing inspections.

The opinion of private registration is only feasible if the maritime financial offshore sector of Curaçao decides to operate the register itself.

It would be possible to opt for a private registration office, but only if the maritime financial offshore sector of Curaçao decided to operate the register itself. *Annex D* shows that the financial offshore sector should consider running the one-window register itself by means of an operation integrated into an existing structure, for instance the Curaçao Ports Authority (also see *section V.3.5.2.*).

The responsibility for investment in a one-window register clearly lies with the private sector and possibly in so far that it should facilitate the procedure with the government.

It needs to be emphasised that it is the private sector, notably the trust companies and law and notary offices active in ship's registration and its related activities, which should take the initiative in establishing a private and commercially viable one-window register[17]. The responsibility with regard to investing in a one-window register clearly lies with the private sector and possibly in so far that it should facilitate the procedure (e.g. with respect to legislation) with the government.

In addition to financing the one-window approach and related promotional activities, the private sector should also develop practical solutions with respect to the organisation of the register.

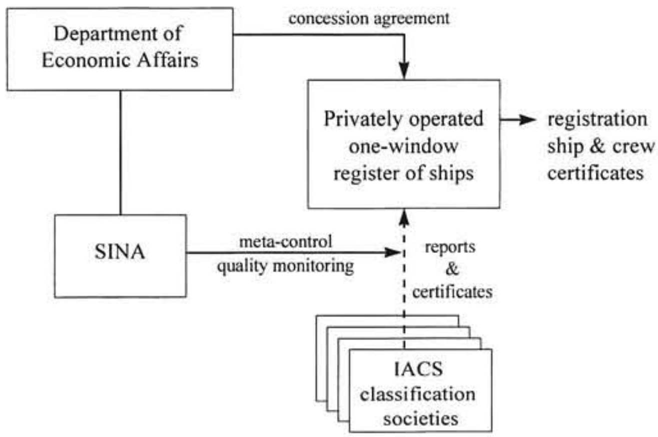
The organisational structure proposed is presented in Figure V.1. and discussed in the following sections.

In addition to financing the one-window approach and related promotional activities, the private sector should also develop practical solutions with respect to the organisation. In order further to develop a structure for the organisation of the register, its tasks and responsibilities should be clearly defined first. In order to improve its competitive position, the operation of the register should be restructured, with more emphasis on service-level and cost-efficiency.

The organisational structure proposed is presented in *Figure V.1.* and discussed in the following sections.

[17] Keeping in mind the process of Re-inventing Government and privatisation, the government of the Netherlands Antilles should take a passive stance in this respect, as the registration of ships is neither a 'public good' nor extremely of prime budgetary interest.

Figure V.1 : Organisation of the one-window register



Source : Policy Research Corporation N.V.

V.3.5.1. The role of the private one-window register

The approach and organisation necessary to provide integrated registration services are described on the following pages.

In principle, the private operator of the register is responsible for the service aspects, most administrative services and the commercial activities related to registration. The tasks and responsibilities of the register are described below:

- a 'one-window' approach (one-stop shopping) should be introduced, allowing ship owners to register their ships conveniently and efficiently. This means that:
  - i the operator of the one-window register should be able to issue temporary certificates (Zeebrief), awaiting the final approval of the classification society and/or the SINA. This is essential in order to be able provisionally to register vessels within a 24 hour period;
  - ii the operator should be able to issue provisional crew documents within 24 hours as well. No nationality requirements would be made with respect to the master of the ship (nor the other officers and crew): this way the current lengthy dispensation procedures could be avoided. Obviously, the requirements with respect to training certificates would remain very strict;
  - iii the private operator should also manage the ship's register, which is currently the responsibility of the Registrar office. In

order to be entitled to register a ship, the ship owner has to appoint a local representative. Although rather weak, this so-called 'genuine link' condition is upheld, not merely because of economic considerations, but a legal one as well: the link enables the Netherlands Antilles to exercise its judicial powers on the ship[18].

iv The procedure to obtain a declaration of nationality ('nationaliteitsverklaring'), at present necessary to register a ship, should either be cancelled or simplified.[19];

v in order to offer a complete package of registration services, the possibility of bareboat registration, both bareboat-in and out should be continued. Thus, the bareboat register, which is currently managed by the SINA, should be transferred to the operator of the one-window register. This part of registration should be promoted more actively;

vi contrary to the present situation (Bureau Telecommunication) , the issuing of radio licenses is also integrated in the one-window operation of the register;

- as indicated, the registration market is very competitive. Consequently, the Netherlands Antilles should offer services at competitive rates and fees:

  a) this implies that an increase of the tonnage tax rate may be expected to have an adverse impact on the register's competitive position. At present, the tonnage tax rate of the Netherlands Antilles is 0.40 NA*f*./GT, which is in the competitive range when compared to Liberia (0.70 NA*f*./NT) and Panama (0.18 NA*f*./NT). Moreover, the improvement of the service level is not considered a valid reason for an increase in the tonnage tax rate: the competing (and more successful) registers all offer service at a high level;

  b) a similar reasoning applies with respect to the sharp increase in the registration fee recently announced by the Registrar of the Netherlands Antilles. Although the current fees of 1 700 NA*f*. are very low when compared to Liberia (4 375 NA*f*.) and Panama (on average 5 250 NA*f*.), very steep increase would hurt the register's competitive position[20];

18 See Nederlands-Antilliaans Zeebrievenbesluit 1993, explanatory notes.

19 In order to register a ship in the Netherlands Antilles, the ship owner has to be either a natural person or legal entity with the nationality of the Netherlands Antilles, the Netherlands or one of the Member States of the European Union. For registration in truly 'open registers' even less strict conditions are imposed: 'Foreign Maritime Entities' are allowed to register ships in Liberia, while a local legal representative is sufficient for registration in Panama. For registration in Bermuda it is necessary to have a resident representative or corporate entity.

20 Source: the Official Guide to Ship Registries, 1995-1996, International Marketing Strategies, Inc.

- with respect to safety requirements and vessel manning, the Netherlands Antilles register should comply with important international legislation, mainly with IMO regulations with respect to safety standards. For instance, a Safe Manning Certificate should be required, implying that STCW and SOLAS standards wouldhave to be met;
- a travelling representative with significant marketing experience should be appointed to promote the register. Furthermore, promotion should consist of mailings, brochures, advertising, visits to international conventions and other similar events;
- in addition, local representatives should be appointed in major maritime centres (e.g. consuls, "special agents");
- the emphasis of the organisation should be on the provision of service. To provide clients with detailed and accurate information at all times, an interactive web-site should be set up;
- the current problems with the ITF should be sorted out. Ever since the ITF started its 'flag of convenience' campaign, the flag of the Dutch Kingdom in combination with Antillean registration, has been considered a FOC. This FOC status attributed to the fact that social security and labour legislation of the Netherlands Antilles does not apply to foreign seamen aboard Netherlands Antilles ships. Except for the Master, there are no nationality limitations with respect to the manning of ships under the Antilles flag. In practice this means that only non-nationals are employed. In order to solve the 'conflict' with the ITF, ships flying the Antillean flag (or the Netherlands Antilles variety of the Dutch flag) would be required to comply with ITF rate agreements[21]. These requirements have to be enforced by the operator of the register;
- special facilities should be created for the registration of yachts in the Netherlands Antilles.

  Currently, most large yachts are registered in the Bahamas and under 'Red Ensign' flags like Bermuda and Cayman Islands. These countries offer open registers, combined with zero taxation and liberal regulations with respect to the crew (number, nationality, certificates, lodging conditions).

  Furthermore, through the establishment of a local company anonymity of the owner(s) can be assured. This may be important for both fiscal and (personal) safety reasons. Like the Netherlands Antilles, the concerned countries can offer all services related to the establishment of such companies, including legal advice, notary services and trust companies.

21 The policy of requiring 'ITF blue certificates' is likely to solve problems with the ITF. In the mean time, the effect on the attractiveness of the register may be negative. However, such a policy fits in with a high-quality register philosophy.

Moreover, the Anglo-Saxon legal framework of these countries is convenient with respect to financing and the insurance of the vessels. Obviously, the Netherlands Antilles do not offer this advantage.

Within the EU Value Added Tax (VAT) is due on the value of newly built yachts. By registering their yachts outside the EU and using local companies, EU owners can avoid paying this VAT, which can amount to an advantage of about 20% of the vessel's value. In this respect the clear fiscal relation between the Netherlands Antilles and the Netherlands (EU) through the 'Belasting Regeling voor het Koninkrijk' (BRK) may be a disadvantage.

V.3.5.2. Practical organisation of the registration office

The following factors have to be considered when in physically organising the registration office:

- the above mentioned tasks and responsibilities of the operator of the one-window register;
- the potential for automation and computerisation;
- the current and expected registered tonnage;
- the provision of service on a 24 hours a day basis.

In view of the above mentioned factors, the staff of the registration office should be limited to two to four administrative employees and a travelling representative.

On the basis of these considerations, the staff of the organisation should be limited to between 2 and 4 administrative employees, plus the travelling representative. Specialist services, e.g. setting up and updating a web-site, should be contracted out as much as possible.

The maritime financial offshore sector should develop concepts for the physical organisation and the location of the registration office.

Apart from the financing of personnel and promotion, another point of discussion could be the location of this one-window registration office. It is obvious that a separate office would sharply increase costs. Moreover, in order to avoid conflicts of interest, integrating the register into one of the existing trust companies is not recommended. An alternative would be to rent office space provided by the Curaçao Ports Authority (CPA). The sector could even consider paying the CPA fully to operate the registration office. One additional (and mutual) advantage concerns the promotion of the register, which could be combined with CPA's efforts to promote other maritime activities on Curaçao. With respect to the promotion of the register, organisations such as Curaçao Inc. could also make considerable.

It is up to the offshore sector to take the initiative and present a practical solution which is acceptable to all parties involved. The role of the government should be limited to providing the sector with a suitable legal framework, e.g. a separate Antillean flag.

As indicated, it is now up to the offshore sector to take the initiative and present a practical solution which is acceptable to all parties involved. The role of the government should be limited to providing the sector with a legal framework enabling the one-window register to be operated in an efficient and commercially attractive manner. However, the government should only take action after the sector has clearly committed itself to developing the register.

In that case, the Antillean government could cancel the 'nationaliteitsverklaring' and the nationality requirements with respect to the Master. Moreover, should the sector request the introduction and use of a separate Antillean flag for promotional reasons. This should be made possible in co-operation with the Dutch government.

V.3.5.3. The role of the SINA

The role of the SINA should be limited to monitoring (meta-control) the work of the classification societies and occasionally visiting ships themselves to this end.

As indicated in *Figure V.3*, the SINA would remain responsible for safeguarding the safety standards of the ships in the register. In contrast with the present situation, the role of the SINA in this respect should be limited to monitoring (meta-control) the work of the classification societies and occasionally visiting ships themselves to this end.

The inspection of ships should be contracted out by the private operator to classification societies (classes) to the maximum extent possible. In order to be able to maintain current quality standards, only a limited number of classes would be eligible to perform these services, e.g. the full members of the International Association of Class Societies (IACS).

The private operator should contract out the inspection and certification of ships to classification societies (classes) to the maximum extent possible. In order to be able to maintain current quality standards, only a limited number of classes would be eligible to perform these services, e.g. the full members of the International Association of Class Societies (IACS). The SINA experts would only monitor the work of the classification societies and occasionally visit ships themselves to this end. Moreover, the SINA could play an important role in performing Port State Control inspections.

It is clear that, in view of its new role, the size and organisational structure of the SINA should be reconsidered by the Central Government of the Netherlands Antilles. It is to be expected that as a result of transferring a part of the SINA's tasks present tasks to the private operator of the one-window register, some rationalisation will be warranted.

V.4. SCENARIO 4: INTEGRATED MARITIME POLICY

The *INTEGRATED MARITIME POLICY* (IMP) scenario builds on the assumption that a new package of maritime policy measures is introduced and takes into account all aspects and sub-sectors of the maritime sector. The principal aim of the IMP is to develop (*maritime*) *activity* in the ports of the Netherlands Antilles, and for the Netherlands Antilles to become a *Maritime Centre* in the region.

Chapter V.4 portrays the INTEGRATED MARITIME POLICY scenario, which consists of three (inter-related) tracks:
- *the facilitation of economic development in general;*
- *the stimulation of activities in the maritime sector;*
- *the provision of beneficial boundary conditions.*

The *integrated maritime policy* is based on three (interrelated) tracks or viewpoints with respect to maritime policy:

1. *Facilitating policy*: policy measures aimed at enhancing the function of ports and shipping as facilitators of **economic development in general**. In this context the maritime sector is considered to be an essential part of a country's 'infrastructure'. This is especially true for island nations such as the Netherlands Antilles.

   - An *integrated maritime policy* must ensure that port authorities and operators actively pursue these macro-economic objectives, besides striving for the realisation of their own micro-economic goals (profit).

     One of the objectives of this study is to evaluate whether the current organisation and tariff structure of the ports and other maritime services is conducive to economic growth on the islands, and to formulate recommendations to improve this function of the maritime infrastructure of the Netherlands Antilles (see *Chapter V.4.1.1*);

   - apart from port infrastructure, inter-island shipping connections can also be considered as infrastructure ('maritime highways') for an island nation such as the Netherlands Antilles. In *Chapter V.4.1.2.* this aspect, including the possible role of the government, is discussed;

   - finally, port facilities can support externally generated economic growth. The provision of facilities to promote cruise tourism is the subject of *Chapter V.4.1.3.*

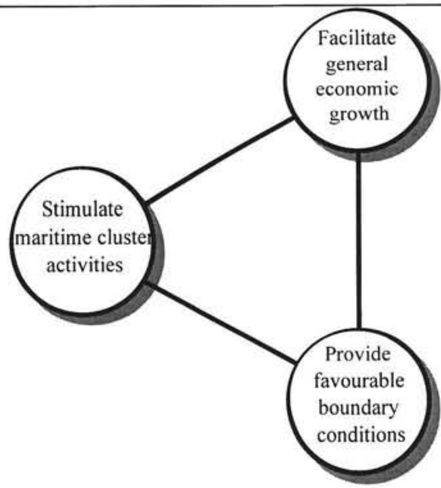
The track focusing on the facilitation of economic growth in general covers:
- *port organisation;*
- *inter-island shipping;*
- *cruise tourism.*

2. *Development policy*: measures aimed at stimulating the development of **activities in the maritime sector** itself. From this viewpoint the port is considered as a nucleus of economic growth;

3. *Flanking policy*: policy measures aimed at the **boundary conditions** for a successful maritime sector, such as education & training, promotion etc. These measures support both the facilitating and development tracks of maritime policy.

The three tracks of the *integrated maritime policy* are presented in *Figure V.2*. This classification is used as a starting point for the detailed description of the various aspects of this policy scenario.

Figure V.2 : Three tracks of an Integrated Maritime Policy (IMP).



Source : Policy Research Corporation N.V.

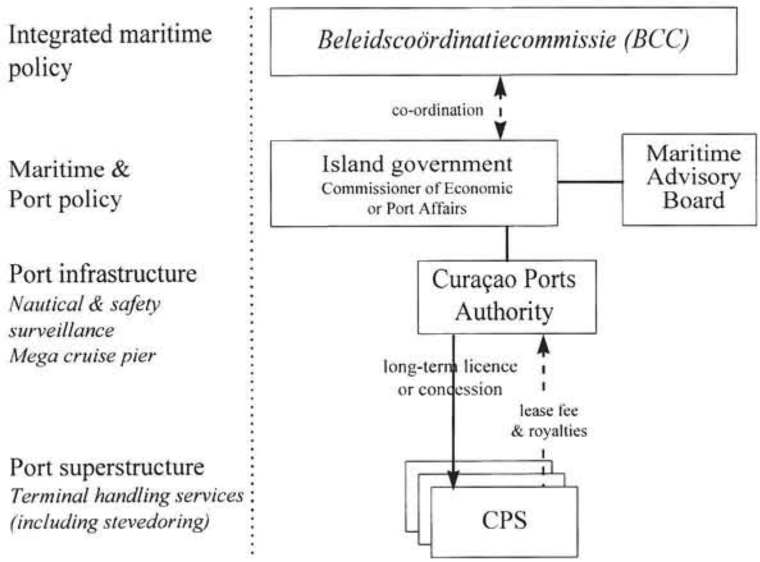
V.4.1. *FACILITATION OF ECONOMIC GROWTH IN GENERAL*

V.4.1.1. *Port organisation*

The organisation of the port, structured by means of the concession agreement between CPA and CPS, has to be altered to realign the micro and macro-economic goals of CPA, CPS and the island of Curaçao.

As indicated in *Chapter III*, the port of Willemstad can at present be characterised as a 'tool port'. The tool port approach, in combination with the absence of competition, has led to a situation in which the objectives of CPS do not always coincide with macro-economic efficiency. A number of changes in the concession agreement are proposed inthe *INTEGRATED MARITIME POLICY* scenario. The suggestions with respect to container handling are presented in *Chapter V.4.2.3*.

Figure V.3 : Proposed port organisation and government structure for Curaçao.



Source : Policy Research Corporation N.V.

Figure V.3 presents the proposed organisation for the port of Willemstad. As indicated in *Chapter IV*, the port should be operated on the basis of a 'landlord model'. This implies that the Curaçao Port Authority (CPA) would be responsible for the nautical operations and safety in the port. Moreover, in a landlord model, the public CPA would own and maintains the port's infrastructure, in particular the quays and related facilities such a buoys, boulders, *etc.*

Cargo handling equipment and the superstructure used for the loading and unloading of vessels, mobile and gantry cranes, chassis, container stacking equipment (front end loaders, straddle carriers), grain elevators, *etc.* would be owned and operated by private stevedoring companies in such a constellation.

It should be emphasised that the present division between the CPA, the provider of the port infrastructure, and the stevedoring company CPS should be maintained. Consequently, a CPA participation in the equity of CPS is not recommended. Detailed recommendations with respect to the maritime government structure are presented in *section V.4.3.5*.

The concession agreement between the CPA and the CPS needs to be amended in order to realise a 'landlord model'. Taking the existing agreement into consideration, in 2005 the concession should be granted to CPS for the first 15 years. After that period the concession should be tendered internationally.

As indicated, the concession agreement between the CPA and the CPS would have to be amended in order to realise the above described situation of the 'landlord model'. The 'evergreen' contract between the CPA and the CPS should be revised every 10 to 15 years. The concession agreement became effective on July 31, 1991. The first 'window of opportunity' to change or renegotiate the concession agreement will thus present itself on July 31, 2001. In order to finish the re-negotiation and (legal) preparation of a new concession agreement in time, action have to be taken as soon as possible. Taking the existing agreement into consideration, in 2005 the concession should be granted to CPS for the first 15 years. After that period the concession should be tendered internationally.

V.4.1.2. Inter-island shipping

Inter-island shipping services can be an important form of infrastructure for an island nation such as the Netherlands Antilles.

A number of measures to facilitate and support such a service are included in the INTEGRATED MARITIME POLICY scenario.

By providing efficient and well-priced transportation and logistic services, the maritime sector can positively influence the economic growth of the Netherlands Antilles' economy. However, it should be kept in mind that *facilitating* transport is not synonymous with *generating* economic growth. Demand for transportation infrastructure is a derived demand, and thus the result of economic growth, not its engine. Nevertheless, the provision of a frequent and regular inter-island shipping service between the Leeward and the Windward islands may contribute to the economic development of the Netherlands Antilles, especially of the smaller islands of Saba and Statia.

In principle, the inter-island shipping services should be carried out by a private operator. A tendering procedure is recommended so as to ascertain the (periodical) influence of market competition. The terms of reference, set by the central government, should contain strict conditions with respect to the service level, e.g. frequencies. Applicants should be allowed to tender for a concession for a period of five years at a time and via a procedure comparable to that followed forthe granting of concessions for regional public transport in some European countries. The concession should be granted to the company requesting the lowest operating subsidy, provided all conditions of the terms of reference are met.

Annex E presents the results of calculations with respect to the feasibility of a regular inter-island connection between the Leeward islands and the Windward islands. In order to support this inter-island service, a number of measures may be considered:

- the introduction of *zero harbour tariffs*. At present, harbour tariffs make up a considerable part of the total voyage costs between Curaçao and Sint Maarten. The abolition of harbour tariffs would only marginally lower the break-even point of an inter-island service (see *Annex E*). Such a measure would constitute an (opportunity) cost for the islands' ports authorities, and can therefore be considered a (small) contribution to the development of inter-island services and the island's economic development;
- if necessary, the (temporary) granting by central government an *operating subsidy* for an inter-island shipping service, on the grounds of its contribution to the 'Nation Building' program. However, the calculations of *Annex E* show that its operating subsidy would have to be very substantial. A total of over 11 million NA*f.* would be required in the first ten years of the operation. Such a public contribution cannot be justified, considering the fact that existing indirect services by international liner shipping companies already meet the demand for cargo transportation between Curaçao and the Windward islands. Moreover, a more direct and more efficient way of using this money would be to stimulate the economies of the smaller Windward islands;
- a *combination of passengers (tourism) and cargo* may also facilitate the profitable operation of an inter-island service. In the tendering procedure, applicants which combine tourism and freight shipping should be favoured;
- the development of an *information platform* facilitating the consolidation of cargo flows between the Leeward islands and the Windward islands. To this end an inventory of all current and possible flows between the islands of the Caribbean region should be made;
- attempts to achieve *international co-operation* with respect to inter-insular shipping, e.g. within the Association of Caribbean States.

On the basis of the calculations presented in *Annex E,* a regular and direct shipping service between the Leeward and the Windward islands is not considered economically feasible. Moreover, the effect on the economies of the smaller Windward islands is expected to be merely marginal. An inter-island shipping connection is therefore not included in the EIS® calculations for *the INTEGRATED MARITIME POLICY* scenario.

Further investigation into the potential of inter-island shipping connections between the Dutch and other Windward islands, especially with respect to the transportation of tourists.

However, further investigation into the potential of inter-island shipping connections between the Dutch and other Windward islands is recommended. Especially with respect to the transportation of tourists (and irregular cargo), a number of feasibility studies could be carried out. For example, Sint Maarten is visited by huge numbers of (cruise) tourists in the high season. It should be examined whether it would be possible to stimulate the overflow of tourists to neighbouring islands, such as Saba and Statia. Even small numbers of tourists would already have a considerable impact on the economy of these small islands.

V.4.1.3. Cruise tourism

Cruise tourism is in fact the most outstanding and significant external impulse to (be) support(ed by) the maritime sector.

In the INTEGRATED MARITIME POLICY scenario, the provision of improved passenger reception facilities (mega cruise pier) is evaluated on the basis of its macro-economic effects.

Maritime policy also aims to *support the economic development generated by other stimuli*. This inducement of economic growth can either be the result of:

1. general economic policy (see *Chapter V.5.*) or
2. external factors.

In the *INTEGRATED MARITIME POLICY* scenario it is assumed that the current general economic policy is continued, which implies the absence of a concerted government programme for the stimulation of the Antillean economy. Hence, the focus is on supporting (potential) *external* impulses for economic development.

The current and future competitive position of the Netherlands Antilles with respect to cruise tourism is the subject of a separate and elaborate external analysis (see *Volume II* of this *Final Report*). The most important conclusions of this analysis are summarised in *Chapter IV.* and *Table V.1.* This analysis has shown that *cruise tourism* is in fact the most striking and most significant external impulse to (be) support(ed by) the maritime sector.

The development of cruise tourism in the Caribbean region is independent of the economic development of the Netherlands Antilles themselves. The Caribbean cruise market is, however, very competitive. Attracting cruise tourism depends on other important factors, namely:

- an attractive product (see *Chapter V.5.*);
- high quality port facilities at a reasonable price.

Table V.1 : External analysis: conclusions with respect to cruise tourism on Curaçao

- The projected annual growth for the Caribbean cruise market between 1996 and 2005 is ±10% (passenger visits).
- The projected annual growth for the Deep Caribbean cruise market between 1996 and 2005 amounts to ±9% (passenger visits).
- In recent years, Curaçao has lost market share within the Deep Caribbean cruise market.
- The construction of a mega cruise pier at Otrobanda is expected to enable Curaçao to maintain its present Deep Caribbean market share.
- This would mean some 50 000 additional passenger visits generated by the pier.

Source : Policy Research Corporation N.V.

Within the *integrated maritime policy* support for the development of cruise tourism is limited to maritime aspects only:

- the provision of berthing facilities which meet the requirements of the cruise line operators. It is assumed that the existing infrastructure (quays and 'terminals') for cruise vessels is upgraded and will mainly be used by smaller and medium-sized cruise vessels. Furthermore, the *INTEGRATED MARITIME POLICY* scenario includes the construction of a new terminal facility (pier) for the reception of cruise ships at Otrobanda;
- in a joint effort with other cruise destinations in the region, the Leeward islands of the Netherlands Antilles are in the process of drawing up new cruise itineraries in co-operation with cruise lines. Recently, a '*Southern Caribbean Group*' was installed precisely to this purpose: in May 1998, new itineraries will have been presented to selected interested cruise lines. The *Southern Caribbean Group* comprises ports in Panama, Colombia, Venezuela, Trinidad & Tobago, Aruba and the Netherlands Antilles (Curaçao, Bonaire). Together, these ports can develop cruise programmes for the Deep Caribbean in order to attract more vessels to the region on a regular basis. These activities are included in the *INTEGRATED MARITIME POLICY* scenario;

- a port tariff structure attractive to cruise lines[22], based on the macro-economic viewpoint that the benefits of cruise tourism accrue mainly through the spending impact of tourists and crew, and not so much from the revenues of port authorities;
- the provision of convenient, efficient and competitively priced services, such as the bunkering of fuel oil and the provision of water. Recently, the CPA and CUROIL have come to an agreement concerning the provision of bunkers at the mega cruise pier.

To become a home port for segments of the cruise market, the provision of passenger facilities in the port has to be complemented by flanking measures outside the scope of maritime policy. These measures are included in the FRAMEWORK POLICY with MARITIME FOCUS scenario.

Not included in the *INTEGRATED MARITIME POLICY*, but part of scenario 5 *'FRAMEWORK POLICY with MARITIME FOCUS'* (see *Chapter V.5.*) are other, more general actions, such as:

- the further promotion and operation of Curaçao as a cruise destination in a continued concerted action between the maritime sector (Curaçao Ports Authority) and the tourism sector, represented by the Curaçao Tourism Development Bureau. This means the 'product Curaçao' has to be upgraded: more attractions, more emphasis on historical sites outside Punda, guided tours, *etc*. In 1997, the management of Caracas Bay was transferred to the CPA, which is looking for partners to implement its plans for the development of Caracas Bay for water and cruise tourism;
- the promotion of Curaçao not only as a cruise destination, but also as a stay-over destination by means of 'return visit promotion programmes': the cruise passengers visiting Curaçao must be encouraged to return for a longer stay;
- the introduction of a more 'open air' transport policy, allowing other airlines to compete on international connections, with lower air fares as a result;
- the restructuring of the hotel sector, both financially and with respect to the service offered;
- the implementation of a programme for the training of hotel and restaurant personnel, as well as other tourism-related employees and entrepreneurs, such as taxi-drivers and tour guides.

These actions are necessary if Curaçao is to become a successful home port for a segment of the cruise vessels ('boutique lines'). In this scenario the possibility of (limited) home porting is ruled out, for reasons presented in *Volume II* of this *Final Report* (see *Chapter IV* of this report for the main conclusions). Limited-home porting is a possibility considered in the *FRAMEWORK POLICY with MARITIME FOCUS* scenario.

22 Recently introduced by the Curaçao Ports Authority.

V.4.2. *STIMULATION OF ACTIVITIES IN THE MARITIME SECTOR*

The INTEGRATED MARITIME POLICY scenario considers activities which are largely independent of the general economic situation, namely:
- *the ships' register and related activities;*
- *the ship management activities;*
- *transhipment of cargo;*
- *ship repair;*
- *bunkering;*
- *ship chandling;*
- *free zone 'Koningsplein';*
- *yachting and marinas.*

As explained previously, the growth of the maritime sector is largely dependent on economic growth in general. In the *INTEGRATED MARITIME POLICY* scenario it is assumed that a general economic policy stimulating economic growth is virtually non-existent. Consequently, growth in the maritime sector as a result of a positive macro-economic development, and a subsequent increase in local traffic will be part of the *FRAMEWORK POLICY WITH MARITIME FOCUS* scenario, and is not considered in this scenario.

Hence, the *INTEGRATED MARITIME POLICY* scenario only considers the stimulation of activities which are largely independent of the general economic situation on the Netherlands Antilles themselves, namely:

- the ship's register and related activities;
- ship management activities;
- transhipment of cargo in the port of Curaçao;
- ship repair;
- bunkering services and facilities;
- ship chandling;
- the activities in the free zone 'Koningsplein';
- yachting and marinas.

V.4.2.1. *Ship's register*

With respect to the ship's register, the *INTEGRATED MARITIME POLICY* scenario builds on the *REGISTER PLUS* scenario. The assumptions and proposed measures of the *REGISTER PLUS* scenario apply here as well. This implies that the SINA will continue to operate the register. Moreover, the register should be a one-window operation supported by effective promotional activities aiming for the high end of the market and using a separate Antillean flag.

A register of high quality in an international context is one of the corner stones of a strategy aimed at becoming a *Maritime Centre*. In such a centre, shipping companies should have all relevant facilities and services at their disposal.

V.4.2.2. Ship management

Ship management is not identified as a subsector with large potential for future development. Therefore, no specific measures are introduced to support it.

The management of ships is a 'footloose' activity, not necessarily connected to the home country of the ship owner, or even the country of registration. Ship management is an activity that can be performed by both ship owners and specialised ship managers. The former manage their own ships, while the latter manage ships on behalf of third parties. Obviously, combinations are also possible.

The management of ships covers a number of areas:

- crew management;
- technical management;
- commercial management;
- fleet management;
- financial management;
- administration.

At present, hardly any operational ship management activities exist in the Netherlands Antilles. Some administrative and financial services are performed by trust companies. In the absence of a local supply of seafarers, the Netherlands Antilles are not particularly well placed to carry out crew management activities. In order to attract these, either by ship owners or specialised managers, the Netherlands Antilles must offer other substantial advantages over and above those offered in alternative places of business.

The same argument can be used with respect to the other types of management: In order to attract management activities Curaçao should offer clear advantages. These can be either of a maritime or a general economic nature:

- at present the Netherlands Antilles, and more specifically Curaçao, cannot be considered a *maritime centre* with a prospering maritime community and a large stock of *human capital* (skilled and experienced work force)[23];
- as indicated before, the current general economic situation and the business or investment climate are not particularly conducive to attracting foreign investments in any industry, including the maritime sector. For a footloose activity such as ship management the prevailing business climate is especially important.

23 One possible exception in this respect can be made for technical management, with the presence of the dry dock, surveyors and classification societies. The main problem is that Curaçao is not close enough to the major trade routes, and thus to ships.

For the Netherlands Antilles to become a maritime centre, both the general economic development and the investment climate have to be dramatically improved. The main problem is the region's remoteness (airway connections, time-zone) with respect to the world's major shipping markets (brokers in Europe and Asia). Apart from administrative and financial services related to the registration of ships, it is therefore not very likely that substantial management activities can be developed in the Netherlands Antilles.

Since the chance of success is very limited, no specific measures to attract ship management activities are introduced within the *INTEGRATED MARITIME POLICY* scenario.

V.4.2.3. Transhipment

Another form of port activity which is not directly and completely related to the economic situation on the island itself, is the transhipment of cargo. In this analysis, three types of cargo are considered: containers, dry bulk and liquid bulk.

a/ Container transhipment

The attainment of regional subhub status is a serious possibility for the port of Willemstad.

This may be concluded on the basis of an elaborate analysis of the competitive position of the ports of the Netherlands Antilles in the Caribbean region.

The attainment of regional subhub status is a real possibility for Curaçao. An in-depth analysis was carried out, focusing on the (competitive) position of the ports of the Netherlands Antilles in regional and global liner shipping networks. In this analysis a number of preconditions for success in container transhipment were identified. The conclusions of this analysis are summarised in *Chapter IV* and presented briefly in *Table V.2*.

Table V.2 : External analysis: conclusions with respect to transhipment on Curaçao

- The relationship between CPA and CPS should be one of landlord port and lessee. As a result of the current (tool port) relationship between the CPA and the CPS, encapsulated in the concession agreement between these parties, there is no incentive for the CPS to vigorously pursue a transhipment strategy.
- Failure to vigorously pursue transhipment cargoes is a threat to the overall position of the port of Willemstad in liner shipping networks.
- Without substantial transhipment activities, the port of Willemstad is expected to lose most of its direct calls and will only be served by feeder vessels. As vessel sizes increase, direct calls will stop and carriers will switch to a full hub-and-spoke operation, because of the limited volumes in the Caribbean in general and Willemstad in particular.
- This will have negative macro-economic effects, as Curaçao freight rates could increase (possibly with 250-350 US$ per box), whilst they are approximately 1 000 US$ higher on some deep-sea routes. These higher freigth rates are not a result of the CPS monopoly, but rather of the relatively small volumes of cargoes. Even if the overall freight rate levels (to the Caribbean) decrease as a result of the introduction of the multi-layered feedering system, the port of Willemstad will still be confronted with higher rates than for instance Manzanillo.
- In turn, this will result in a decrease in captive traffic, threatening the profitability of the container terminal in combination with the loss of most if not all transhipment traffic.
- By means of a pro-active transhipment strategy, however, Willemstad could develop into a sub-regional hub, serving the ABC islands and the Atlantic Seaboard of Colombia and Venezuela. Such a marketing strategy is recommended, in close co-operation with CPA and the shipping agents in the port. The existing Marketing Action Group can be a starting point towards a more pro-active approach of the transhipment market.
- In a first phase, no substantial investments are necessary to increase the capacity of the container terminal. A number of changes in the operational and cost structure will, however, have to be elaborated and implemented.

Source : Policy Research Corporation N.V.

The initiative to develop into such a subregional hub should come from the operator of the container terminal, Curaçao Port Services.

The initiative for the development of subregional transhipment should come from the private sector, *in casu* the Curaçao Port Services (CPS). The successful development of container transhipment is conditional upon the introduction of the following measures:

– the development of a general policy for the management of the Antillean ports. This means that the current situation of the port of Curaçao is evaluated. In principle, the CPA and (especially) the CPS at present operate on the basis of micro-economic considerations and the goals of the shareholders, while both companies have important macro-economic function and impact as well.

In the past, the CPS has introduced special handling rates for export products, inter-island cargoes and transhipment containers. Moreover, some (extra) handling rates do not apply for free zone export containers. Nevertheless, it is recommended that the concession agreement should be adapted to provide the CPS with additional and structural incentives to increase the scale of the container operation by attracting transhipment cargoes. This scale increase should lead to an overall reduction in handling rates, which would benefit the entire economy of Curaçao;

- the good organisation of the container terminal (reflected by the recent ISO 9002 certification), its high productivity when compared to other terminals in the region, and the favourable perception by the international shipping community[24] provide CPS with a good starting position to compete with other ports for the position of sub-regional hub. However, a modern and active marketing approach is essential in this respect. The existing Marketing Action Group is a good platform for such actions;

To provide the CPS with extra incentives actively to pursue a transhipment strategy, the current concession agreement between the CPA and the CPS has to be altered.

- A change in the concession agreement between the CPA and the CPS with respect to the provision of superstructure and equipment: the CPS should become the owner of the cranes on the container terminal and be responsible for their maintenance and timely replacement[25]. This would cause a shift in the CPS cost structure from a high variable to a high fixed cost component, providing an extra incentive to attract more (transhipment) traffic. The principles for the revision of the concession agreement are presented in *Figure IV.4*;
- if the port of Willemstad is successful in attracting transhipment, the CPS should have three to four ship-to-shore gantry or HD-mobile cranes available in order to provide an efficient transhipment function. This means that CPA's plans to sell the mobile crane should be cancelled. The procurement of a third gantry crane and additional equipment should only be considered if the marketing strategy to become a sub-regional hub is successful;
- other large additional investments in the container terminal are not necessary in the short term. In the short term, however, the purchase of some more reach stackers to improve handling and stacking operations is recommended;

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24 Willemstad was awarded the title of 'Most Dependable Port' in the Caribbean region for 1996 by the Port Award Committee of the Caribbean Shipping Association.

25 The gantry and mobile cranes should be transferred from the CPA to the CPS, but not in exchange for an equity share in the CPS. This could easily lead to conflicts of interest, while it would also make the recommended development towards a landlord port model more difficult.

- the increase of the stacking area's capacity by changing the stacking system and equipment. This may require the gradual replacement of front-end loaders, as well as future investments in a different type of container handling equipment (e.g. Rubber-Tyred Gantries) and in the training of personnel. This would entail a gradual shift from a stacking system characterised by a high consumption of land area to one with a low consumption of land area;

Besides a number of relatively small investments in the terminal itself, a crucial factor for success is an agreement between the CPS and the labour unions on a more flexible deployment of labour on the terminal.

- a new labour agreement notwithstanding the fact that the first steps in the right direction have already been taken, the CPS and the relevant labour unions should come to a (CAO) agreement with regard to a more flexible deployment of labour in order to break away from the currently rigid shift system with excessive shift supplements. Moreover, national labour market legislation should be changed to permit a more flexible use of labour. This would also benefit other sub-sectors, such as ship repair;
- CPS and CUROIL should jointly consider providing bunkering services at the container terminal, reducing the turnaround time of the vessels through the implementation of a 'one-stop shopping' concept.

b/ Liquid bulk

The INTEGRATED MARITIME POLICY scenario does not include specific measures aimed at stimulating the transhipment of liquid bulk (oil products).

The transhipment of liquid bulk on Curaçao currently only consists of the limited transhipment of oil products by the Venezuelan Petroleum Company (PdVSA) in the port of Bullenbaai [26]. In general, the market for transhipment of crude oil in the South Caribbean is going slump. The main cause seems to be the shifted pattern of crude oil sourcing by the United States. The US is increasingly importing Venezuelan and Mexican oil, at the expense of the market share of suppliers in the Middle-East (Saudi Arabia).

This shift has eroded the position of transhipment terminals in the region[27]. The *INTEGRATED MARITIME POLICY* scenario does not include specific measures aimed at stimulating the transhipment of liquid bulk.

26 Currently, Bullenbaai terminal is used by PdVSA mainly for the import of light and medium crude for the ISLA refinery. Furthermore, some bunker activities are performed for ships operated by the Venezuelan oil company.

27 The Statia Oil Terminal is in an exceptional position as a result of the long-term contract with Saudi Arabian giant Aramco, which also has a large client base in Europe. In addition to transhipment, SOT offers very cheap bunkers and white oil products.

c/ Dry bulk

Until the review of the EU-OCT arrangement ('LGO regeling') with the European Union, the dry bulk cargo in the port of Willemstad mainly consisted of rice and sugar[28]. Because of the light processing of rice and sugar, these activities cannot strictly speaking be considered as 'pure' transhipment[29]. Nevertheless, in this analysis they will be considered as bulk transhipment. Although the Netherlands Antilles continue to object to the review of the OCT arrangement, the prospects for this category of dry bulk transhipment are bad. Within the *INTEGRATED MARITIME POLICY* scenario no specific measures are introduced to counter current developments, although actions to revive the transhipment of EU-OCT cargoes would be welcomed.

It is not clear whether the port of Willemstad has potential to become a dry bulk transhipment port. Further (market) research is required. However, any potential development of dry bulk activities (storage, transhipment) does not seem to be stimulated by the current concession agreement between CPA and CPS.

In the (recent) past, feasibility studies were carried out with respect to the transhipment of other types of dry bulk on Curaçao. So far, these studies have not resulted in the actual start-up of dry bulk transhipment activities. In conclusion, it is not clear whether the port of Willemstad could become a dry bulk transhipment port. Further market research is required to establish this. However, the issue is outside the scope of this study.

Changing the concession agreement with respect to dry bulk operations would enable other operators, more interested in such activities than CPS, to step in.

Any potential development of dry bulk activities (storage, transhipment) does not, however, seem to stimulate the current concession agreement between the CPA and the CPS. The concession grants the CPS the sole right to perform stevedoring activities in the ports of Curaçao for all cargo categories, including dry bulk cargo. So far, the CPS has not been very active in developing the bulk transhipment market: in terms of marketing, the company's interest is mainly in the container terminal, and it has no significant incentive to enter other markets. Changing the concession agreement with respect to dry bulk operations would enable other operators more interested in such activities than the CPS, to step in.

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28 The OCT arrangement will expire in the year 2001. A decision on the extension of the arrangement still has to be made by the EU.

29 In this sense rice and sugar activities are comparable to free zone activities: the product is not destined for the local market and the processing of the activities is relatively limited. Still, the rice and sugar business generates considerable employment in the port and port-side factories. According to some sources, about 500 people are employed directly (±300) and indirectly (±200) in the rice and sugar business on Curaçao (NEI, 1997).

An alternative for the current concession agreement with respect to the *transhipment* of bulk cargoes, could be to grant limited concessions to new operators that bring *substantial* new cargo flows to the port[30]. Such a new operator would then be allowed to perform stevedoring activities for his own cargo, in consultation and agreement with the CPA and the CPS. Moreover, in the concession agreement the CPS could be granted 'first refusal' to perform the stevedoring at a price level negotiated by the new operator.

V.4.2.4. Ship repair

Considering the market position and the operation of the CDM, no specific maritime measures to support the dry dock company are necessary.

The situation of the Curaçao Dry Dock Company (CDM) was described in *Chapter III*. The conclusion was that the main problems of the wharf on Curaçao were:

- the fact that the CDM had no captive market;
- the recently introduced labour market legislation, which hampered a flexible use of labour and increases the wharf's costs.

Still, a change in labour legislation resulting in more flexibility to work with subcontractors, can further improve the com petitive position of the CDM. This kind of labour market liberalisation, however, is outside the scope of maritime policy and therefore part of the FRAMEWORK POLICY with MARITIME FOCUS scenario.

It is obvious that the 'captive market problem' cannot be solved easily. However, an increase in the activities of the port of Curaçao will most likely result in additional contracts for the CDM. An improvement of labour market legislation is outside the scope of maritime policy, and is therefore part of the *FRAMEWORK POLICY with MARITIME FOCUS* scenario.

In conclusion, notwithstanding its huge economic importance, no specific measures for the benefit of the ship repair subsector are introduced within the *INTEGRATED MARITIME POLICY* scenario.

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30 The aim is not to re-create a situation in which a large number of small stevedoring companies would operate in the port of Willemstad.

V.4.2.5. *Bunkering services and facilities*

Although at present no accurate data are available to Policy Research, there seems to be potential in the provision of upgraded bunkering services. Hence, a number of measures are incorporated into the INTEGRATED MARITIME POLICY scenario to this end.

Two arguments can be made in favour of stimulating efficient and well-priced bunkering services. In the first place, they are part of a complete package of port services, and therefore add to the attractiveness of the port. Secondly, any possibility to generate income in the port must be seized. Although no accurate data are available, *Policy Research* holds the opinion that there is potential in the provision of upgraded bunkering services. The 32% growth in bunker sales in 1997, as a result of a more active marketing approach and an attractive package of (port) tariffs, may be an indicator of this potential.

A number of concrete measures can therefore be considered:

- the current CUROIL monopoly for bunkering could be reconsidered. This would enable other suppliers to compete on this market, in both the Schottegat and Bullenbaai ports[31];
- currently, bunker points (pumps) are in place at the CPS container terminal. However, these facilities are not connected to the fuel tanks of CUROIL, the sole supplier of fuel bunkers in the port of Willemstad. Container vessels thus have to berth a second time to bunker fuel oil: this is both time-consuming and expensive (double harbour fees). A supply pipe is proposed to solve this problem. Although this is not expected to increase the number of ships in the port, the bunkering revenues per ship could increase;
- furthermore, the CPA has to offer a more attractive package of port charges (wharfage, towing, pilotage charges), if the bunker port function is to be enhanced;
- Willemstad is to offer a wide range of products, e.g. engine-room chemicals and lubricating oils to be an attractive bunker port;
- furthermore, the new mega cruise pier should be equipped with bunker facilities, so that ships can avoid the time and expenses involved in going into the St. Anna Bay and the Schottegat for bun-

31 The CUROIL concession with respect to the supply of petrol on Curaçao is clearly outside the scope of maritime policy. However, the supply of ship's bunkers *is* considered a part of maritime policy. Although no information on this concession was available to the researchers, the possibility to change its bunker component is not ruled out at this time. The monopoly position of CUROIL does not necessarily have to be discontinued: as is the case for the container terminal, most problems can be solved by means of an adequate concession agreement.

kers[32]. At present, Curaçao cannot offer such offshore bunker facilities[33].

Very recently, CPA and CUROIL have reached an agreement for the provision of bunkers at the mega cruise pier: CUROIL is to invest some 4 million NA*f.* in bunkering facilities at the pier. As cruise vessels require high quality bunkers, which apparently cannot be supplied by the ISLA refinery, CUROIL will have to purchase them elsewhere;

- a logical result of the bunker port strategy could be the opening of a tank cleaning station at the port of Bullenbaai[34].

V.4.2.6. Ship chandling

Ship chandling in the port of Willemstad has very limited potential, due to the high price level and the limited assortment. Consequently, no measures to support this sub-sector are included in the INTEGRATED MARITIME POLICY scenario.

Due to the high price level on the island and the relatively small scale of the market, Curaçao ship chandlers cannot offer services at truly competitive prices. Moreover, the assortment is bound to be smaller than in larger ports in the region. This is illustrated by the fact that the cruise vessels calling on Curaçao hardly ever rely on local providers for their supplies. Nevertheless, Curaçao boasts a limited number of relatively small ship chandling companies.

For a more competitive ship chandling subsector, a decrease in the (general) price level has to be achieved. The high price level results from the fact that almost all products have to be imported. The relatively small scale of the economy hinders purchasing and transportation at low prices.

Solutions for this problem are found largely outside the scope of maritime policy:

- transportation costs are more or less determined by shipping lines and airlines: the bargaining position of the Antilles is weak. *Chapter IV* has shown that there is (not much) room for a reduction in the port-related costs in Curaçao;
- as there is hardly any local production of fresh food, the removal of import duties would not have significant adverse effects. Any

32 A detailed analysis of the costs and revenues related to such a connection should be carried out. At present no cost structure information is available on CUROIL.

33 In the past CUROIL used the 'Sonny' to provide offshore bunker services to ships. The use of barges or a single-point mooring buoy is complicated by the heavy swell of the coast of Curaçao.

34 In June 1996, CPA requested KabNA to fund a feasibility study for this project.

existing duties on foodstuffs imported for ship chandling purposes should therefore be reduced;

- in general, supplies for cruise vessels concern more expensive fresh and luxury goods, for which air transport is economically viable. A reduction in air fares as a result of the liberalisation of air traffic, could benefit the ship chandlers' competitive position, especially with respect to catering to the needs of the cruise lines.

The latter measures are part of the *FRAMEWORK POLICY with MARITIME FOCUS* scenario. In conclusion, no measures are included in the *INTEGRATED MARITIME POLICY* scenario, as the potential further to develop ship chandling activities is considered to be limited.

V.4.2.7. Free zone 'Koningsplein'

If an active transhipment strategy is pursued by CPS, it will be possible to maintain or even improve the the competitive position of the free zone.

Furthermore, special free zone handling rates could be introduced by the CPS to support labour-intensive, and thus employment-generating activities in the free zone. To this end the CPA-CPS concession agreement may need to be changed.

With respect to the free zone areas on Curaçao the following aspects are dealt with in the *INTEGRATED MARITIME POLICY* scenario:

- in the IMP scenario the free zone 'Koningsplein' is continued in its present form after the expiration of the current legislation in the year 2000. The decision on the extension of the legislation was finally made in December 1997 and, in order to provide clarity, should now be communicated to all parties involved or potentially interested;
- the existing customs legislation of 1908 should be adjusted to facilitate the customs clearance of containers;
- the competitive position of the free zone is to a certain extent determined by the terminal handling rates of the CPS. If the CPS does not pursue a transhipment strategy, freight rates will go up and adversely influence the competitive position of the free zone;
- the performance and reliability of the Curaçao Container Terminal have no doubt contributed to the degree of activity in the free zone. However, in the present situation free zone trading activities do not benefit from the CPS's relatively low transhipment tariffs of CPS. In order further to stimulate the development of free zone activities on Curaçao, the CPS should offer a lower tariff for free zone cargoes. If necessary, the concession between the CPA and the CPS could be altered to include such a lower tariff for free zone containers. If the CPS successfully pursues a transhipment strategy the increased volume would result in economies of scale,

permitting lower tariffs. This tariff should be cost-effective for the CPS, but still offer a real advantage to free zone trading[35];

- if the *INTEGRATED MARITIME POLICY* is implemented successfully the CPA should reserve space in the port for the expansion of the free zone.

Furthermore, in order to boost the free zones 'Koningsplein' (port) and 'Hato' (airport) the development of Sea-Air traffic, in a joint effort by Curinde, Curinta, and HADCO, is striven for. However, this measure goes beyond a purely maritime policy, and therefore strongly depends on general economic policy (see *FRAMEWORK POLICY with MARITIME FOCUS* scenario).

V.4.2.8. Yachting and marinas

At present, the yachting and marina subsector of Curaçao is of limited significance. Further market research is necessary to assess this subsector's potential on Curaçao.

At present, yachting is not an activity of great significance on Curaçao. This is partly due to its position in the South Caribbean. Curaçao should be able to attract more marina activities because:

- the island is positioned outside the so-called 'Hurricane belt', making it a potential safe haven for yachts;
- the island is characterised by a number of large bays and natural mooring places, with great potential for water sports, tourist development and the establishment of marinas, for example in the Caracas Bay and 'Spaanse Water'. Plans also exist to develop a marina in 'Het Waaigat' in the historic centre of Willemstad;
- unlike many other Caribbean islands Curaçao, offers many attractions and worthwhile tourist sites;
- it is possible to register yachts on the island.

In order to support the development of water sports and marinas on the island, the following measures are proposed:

- the registration of yachts could be further facilitated and integrated into the one-window approach of the ship's register;
- feasibility studies should be performed to evaluate investment possibilities in marinas and other water sports facilities. The Island Government should consider investing in marina infrastructure, e.g. through the Curaçao Ports Authority (CPA);

35 The effectiveness of this measure will to a large extent depend on the value of the goods shipped through the free zone 'Koningsplein': the 'local' rates of the CPS pose the largest problem for low-value goods.

- the feasibility of establishing ship repair facilities for yachts on the island should be further investigated as well. The Island Government could contribute to developing these activities by means of tax holidays or other fiscal incentives (no guarantees) or by subsidising specific training courses;
- in the longer term, after market research and feasibility studies have proved the viability of the development of yachting activities, the island could be promoted as a 'yachting paradise', e.g. by organising a regatta (race around the island) or by initiating more traditional promotional activities;
- an important aspect in attracting more yachts could be to reconsider the 'penshionado' legislation, making it (fiscally) more attractive for retired people to live on the island. The Dutch government should take a lenient stance in this respect. The recent change in legislation, which has made it harder for Dutch retirees to come to Curaçao, should be revoked for the Dutch have lots of other island alternatives (outside the Kingdom) and will avoid Dutch taxation anyway.

Clearly, the (marine) environment has to be protected, so proper regulations would have to be introduced, e.g. with respect to sewage and waste disposal.

V.4.3. *PROVISION OF FAVOURABLE PERIPHERAL CONDITIONS*

The third track of the INTEGRATED MARITIME POLICY is the provision of beneficial peripheral conditions, covering:
- *fiscal measures;*
- *training & education;*
- *promotion;*
- *safety and environmental measures;*
- *the structure of maritime government services.*

The creation of a favourable overall business and investment climate by means of an improved general economic policy is the basis of scenario 5. However, a number of measures to improve the business and operational climate at the level of the maritime sector are part of the *INTEGRATED MARITIME POLICY* scenario. These measures concern the following aspects:

- fiscal measures;
- the training & education for maritime professions;
- the promotion of the Netherlands Antilles as a maritime centre;
- safety and environmental measures;
- the structure of maritime government services.

V.4.3.1. Fiscal measures

Apart from the existing profit tax and tonnage tax facilities for shipping companies, no fiscal measures are included in the INTEGRATED MARITIME POLICY scenario.

As a result of the incorporation of the measures related to the ship's register the system of tonnage taxation is continued. The same applies for the low corporate tax rate for shipping (and aircraft) companies[36].

An exemption from corporation tax for specialised ship managers could be considered. Normally, their activities, i.e.ship management for third parties, are considered 'onshore' activities, and the system of tonnage taxation is not applicable. The special onshore profit tax tariff for shipping companies would also apply to specialised ship managers.

However, to exempt ship managers from paying corporate tax would only lead to a relatively limited reduction in their tax burden. Under the current tax system on the Netherlands Antilles, the corporate tax rate for onshore shipping companies (including managers) is only 7.7% to 9.7%. It is clear that the expected incentive of reducing it to 0% is merely marginal.

In conclusion, it would not be feasible to develop ship management activities by means of this instrument on Curaçao (or the other islands) within the *INTEGRATED MARITIME POLICY* scenario. The adverse location factors mentioned in *Chapter V.4.2.2* would on the basis of fiscal measures outweigh the benefits of tax reduction.

V.4.3.2. Training & education for maritime professions

In the INTEGRATED MARITIME POLICY scenario a phased approach is chosen, geared to market demand for maritime education.

Within the *integrated maritime policy*, training and education are important aspects. In order to develop Curaçao into a *Maritime Centre*, a qualified and motivated work force is essential. The development of the maritime educational infrastructure is a process of years. In the *INTEGRATED MARITIME POLICY* scenario a phased ap-

36 7.7% to 9.7% (including 15% island surcharges), International Tax Summaries, 1997.

proach is chosen, geared to the gradual development into a maritime centre.

The current situation with respect to maritime training and education is presented in *Chapter III*. In brief, maritime training on Curaçao is at present limited to a one-year course for the training of 'able seamen' at the Zeevaartschool.

Central to the new philosophy of organising training and education is the principle of *demand-driven development*. The initiative thus lies mainly with the private sector. However, the government has an important role to play with respect to the financial aspects of the training schemes.

Two types of maritime education are distinguished:

- a basic *nautical education*:
  - i at MBO and HBO level (nautical college);
  - ii over a period of more than one year;
  - iii organised on a permanent basis;
  - iv for example a four-year training to become a 'maritime officer' (MAROF).
- 'short' *maritime courses*, professional training and retraining for both seafaring and land-based professions.
  - i at all levels (LBO, MBO, HBO, MBA);
  - ii up to one year in length;
  - iii courses organised on a demand basis;
  - iv examples could be: master mariner/engine driver restricted certificate[37] and courses for tank storage operators (basic), cargo broker, shipping agent, *etc*.

a/ Basic nautical training and education

Qualified teaching staff is currently not abundantly available on the islands. In general, the organising these long courses in the Netherlands Antilles using foreign (e.g. Dutch) teachers would be expensive. Moreover, in view of the small scale of the local market, the

[37] Such a course (Schipper/Machinist Beperkt Werkgebied) is currently and successfully organised on Bonaire, in co-operation with a Dutch institute.

conclusion must be that basic nautical education cannot be realised on a local basis in the Netherlands Antilles.

Hence, a *regional approach* should be considered for basic nautical education in the *INTEGRATED MARITIME POLICY* scenario. In practice, it will be hard to realise a regional function right away for several reasons. Therefore, a regional approach is not considered feasible in the short run.

b/ Short training courses

An alternative for basic nautical education on a permanent and regional basis, could be the organisation of short courses, for both seafarers and 'waterside' employees. These courses, which take from a few weeks up to a year, could be organised with greater flexibility, depending on local and /or regional demand.

Again, organising of courses in the Netherlands Antilles using foreign (e.g. Dutch) teachers would be rather expensive. This is also true for the alternative of teaching Antillean students abroad (in the Netherlands or U.S.). Grants and fiscal advantages for employers would thus probably be necessary in order to attract students.

These considerations lead to the following elements (which hold for all the islands) being included in the *INTEGRATED MARITIME POLICY* scenario[38]:

- the 'Zeevaartschool' in its present form should be discontinued;
- the starting point should be the organisation of short courses, for both seafaring professions (seamen, officers) and land-based maritime professions (shipping agents, stevedoring, *et cetera*);
- based on demand, these courses woulf be organised in a flexible way, using available infrastructure (class rooms, administration) and teaching staff (local, Dutch)[39];

38 Because of the small scale and relatively high costs of education and training, these activities should in principal be concentrated on Curaçao. Curaçao should learn from the success of the hands-on approach on Bonaire. If demand on the Windward islands is substantial enough, the organisation of courses on Sint Maarten could be considered as well. As was mentioned above, a training programme has already successfully been started on Bonaire.

39 Some (parts) of the courses could only be organised using available infrastructure in the Netherlands.

- in the first stages the courses would mainly be aimed at the maritime sector in the Netherlands Antilles (and Aruba). A regional function for the Caribbean cannot be realised overnight. First, a solid reputation should be established in the region;
- a regional function could only be performed if the courses were taught in English. Additional advantages would be the availability of books and other teaching materials on the one hand, and of English-speaking (Dutch) teachers on the other;
- in the longer run, the courses may attract participants from outside the Netherlands Antilles. Cheap housing facilities would have to be created to accommodate these students;
- moreover, the high costs of studying on Curaçao could not be borne by the (foreign) students. A system of grants (or loans) would be therefore a prerequisite for successful development of any kind of international (regional) education;
- in a later stage, and only if it was successful, could the programme become institutionalised, with its own infrastructure and staff. A 'train the trainers' programme would be necessary to decrease dependency on foreign teachers;
- finally, on the financial and infrastructural basis provided by the short courses programme, the development of nautical education for the regional market could be considered in the longer run.

V.4.3.3. Promotion of the Netherlands Antilles as a maritime centre

The promotion of the Netherlands Antilles as a maritime centre should become part of an overall promotional campaign, co-ordinated by a national promotional campaign.

In order to stimulate the development of the Netherlands Antilles as a *Maritime Centre*, the entire maritime sector, on all five islands, should promote the Netherlands Antilles in a co-ordinated way. Promotional organisations on Curaçao are working towards a merger. The first step in this direction has recently been taken by the incorporation of FIAC into Curinc. The resulting organisation could form the basis for a national arrangement.

Within this general and national promotional organisation, special attention should be devoted to 'maritime promotion'. To this aim a special maritime task force is to be installed. It should be emphasised that no separate organisation is to be created for the promotion of maritime interests.

Another way of promoting the maritime aspect of the Antilles is to become more actively involved in international forums of discussion, the organisation of symposia, the hosting of conventions of international organisations, *etc*.

V.4.3.4. Safety and environmental measures

a/ International standards and conventions

In order to attain the quality image of the REGISTER PLUS approach, the Netherlands Antilles should meet the requirements of relevant international agreements with respect to safety and environmental issues.

In order to attain the quality image of the *Register Plus* approach, the Netherlands Antilles should meet the requirements of relevant international agreements with respect to safety and environmental issues[40]. Particularly relevant are the conventions of the International Maritime Organisation (IMO), such as:

- International Convention for the Safety of Life at Sea (SOLAS), including the International Safety Management code (ISM code)[41];
- International Convention for the Prevention of Pollution from ships (MARPOL);
- International Convention on Standards for Training, Certification and Watch keeping for Seafarers (STCW);
- International Convention on Load Lines (CLL);
- Convention on the International Regulations for Preventing Collision at Sea (COLREG);
- ...

Another important convention is International Labour Organisation (ILO) convention 147 on Merchant Shipping Minimum Standards.

The Netherlands are a full member of the IMO[42]. As a result of the 'Rijksschepenwet' (Shipping Act) of the Dutch Kingdom, the SOLAS and COLREG conventions, and a small part of the STCW conventions apply to all countries in the Kingdom. The bulk of the STCW convention, however, is not applicable to Netherlands Antilles ships. In the near future, the ISM code will also become part of the 'Rijksschepenwet' and will thus be applicable to ships registered in the Netherlands Antilles. The MARPOL treaty applies to all coun-

[40] Clearly there is a link with the aspect of training and education.

[41] The ISM code is described in the new chapter 9 of the SOLAS convention.

[42] As such the Netherlands have signed all IMO conventions, with the exception of Annex IV of the MARPOL convention.

tries of the Dutch Kingdom as well[43]. However, the Netherlands Antilles and Aruba implement these standards by means of own legislation.

There are plans exist to replace the existing Shipping Act by a new legislative framework, which would leave the responsibility of legislating safety and manning requirements to the separate countries of the Kingdom.

Currently, there are plans to replace the existing legislation of the Kingdom with respect to safety standards and manning requirements, especially the Shipping Act, by completely a new legislative framework. This new framework would leave the responsibility of legislating these aspects to the separate countries of the Kingdom. Consequently, the Netherlands Antilles would have to develop such legislation, possibly with the juridical support of the Dutch government.

Separate (associate) membership of the IMO and other relevant organisations will become necessary for the Netherlands Antilles if the register and the SINA obtain an independent position. Moreover, the Netherlands Antilles should be able to enter into international agreements and treaties. This to enforce the independent position and the quality image of the *REGISTER PLUS* approach, and to protect both seafarers and the marine environment[44].

The Netherlands Antilles have recently become a voting member of the Caribbean Memorandum of Understanding concerning Port State Control. Furthermore, the Netherlands Antilles (SINA) host the Caribbean Maritime Information Centre, co-ordinating and distributing information between member states for Port State Control purposes. Within the *INTEGRATED MARITIME POLICY* scenario this path of action is to be continued.

b/ Pilotage service

In order to prevent (further) disruptions of the day-to-day activities in the port of Willemstad the current problems between the CPA and the CLV will have to be solved.

Efficient pilotage is an essential peripheral condition for the functioning of ports in general and of the nautical function in particular. The current disagreement between the CPA and the Curaçao Pilots Association (CLV) has to be solved in order to prevent (further) disruptions of the day-to-day activities in the port of Willemstad.

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43 As a result of MARPOL regulations, a 'Haven Ontvangst Installatie' will have to be built on Curaçao.

44 For separate membership the 'Koninkrijksstatuut' would have to be changed.

Pilotage could remain one of the Island Government's responsibilities. However, the current organisational structure should be changed, creating a public pilotage service (not a separate NV), independent of the CPA.

An alternative is to privatise the provision of pilotage services, in which case a number of conditions would have to be met:
- *a solid concession agreement for a limited period should safeguard the quality and continuity of service;*
- *the legal framework should regulate the use of pilots;*
- *the pilots' organisation should be financially autonomous: the government budget should be relieved.*

With respect to the provision of pilotage services two options exist:

1. Pilotage services could in principle remain a *public service*, under the island governments' responsibility. The underlying logic of this option is that the limited number of pilots (13) hardly justifies the incorporation of a separate entity (NV). With the limited scale of pilotage activities, their operation and administration cannot be made cost-effective. Hence, pilotage should continue as a public service, and the pilots should continue to be employed by the island government.

   In this option is retained, the organisational situation on Curaçao will have to be changed. Currently, the pilots are assigned to the Curaçao Ports Authority (CPA). In order to prevent any (apparent) conflict of interest, they should be organised as a separate operational or executive service of the Island Territory of Curaçao. This executive 'unit' should then be monitored and supervised by the Island government, *e.g.* by the *Service for Economic Affairs*.

2. A second option is the *privatisation* of the pilotage activities. In the case of privatisation, a number of conditions will have to be met:
   - the private pilots should work within the framework of a *concession agreement*. The concession could be granted for a period of, say 10 years. Moreover, the concession should contain a formula for setting of tariffs, and contain strict criteria with respect to the required competence level of the pilots and the continuity and quality of the service to be provided. If these criteria are not consistently met by the pilots, the government should be able to cancel the concession at any time;
   - the government should create (or continue to provide) an appropriate legal framework with respect to the use of pilots in the ports of Curaçao (the conditions for their compulsory use);
   - stating, for instance, there should not be any government involvement beyond the creation of a legal framework and the above described concession. Moreover, privatisation should result in a reduction in the costs incurred by the government and improved service for ships calling at Curaçao's ports. This implies that the pilots would have to be financially autonomous and generate sufficient revenues to pay for their operation, including wages, the purchase and maintenance of pilotage vessels, offices, *etc*. Obviously, the pilots would be allowed to levy and collect pilotage fees.

The public option is recommended in the *INTEGRATED MARITIME POLICY*. However, regardless of the chosen structure, the privatisation of pilotage services is a realistic possibility on condition that the minimum criteria set out above are met, and that these are formalised in a solid concession agreement.

V.4.3.5. Government structure

The structure and scale of government on the Netherlands Antilles in general are discussed in the *FRAMEWORK POLICY with MARITIME FOCUS* scenario (see *Chapter V.5.*). With respect to maritime policy making, the same train of thought should be applied.

Clearly, the (size of the) organisation is closely related to the selected policy scenario: the execution of an *integrated maritime policy* requires more government intervention than a *laissez faire policy*. In order to create synergy and scale economies, we propose to formalise the '*Beleidscoördinatiecommissie*' (BCC), better known as the *IDB Task Force*. The BCC should be responsible for the co-ordination of economic policy in the Netherlands Antilles. This implies that the BCC would not just be responsible for the maritime sector, but would also monitor and stimulate the development of other sectors of the economy.

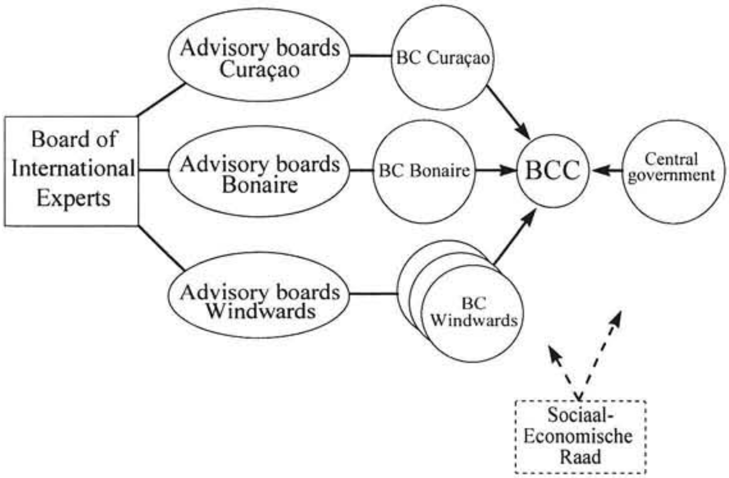
The principle of subsidiarity should be applied to all government tasks, including its maritime responsibilities. This implies that tasks which can be performed by the island governments, should not be performed by the central government.

However, the government's decision power should be delegated to the level of the islands to the maximum extent possible: tasks which can be performed by the Island Governments should not be performed by central government. This means that the Islands Governments should have a large degree of autonomy with regard to maritime policy, which would enhance commitment enable them to react to problems fast and efficiently. Given the scale of the maritime sector on the Netherlands Antilles, however, two remarks have to be made:

- this delegation of tasks should not lead to a duplication of work or other inefficiencies. Some tasks, such as ship's registration and related activities should the central government's responsibility;
- the scale of the maritime sector and the related government tasks should justify the establishment of separate organisations on each of the islands. For instance, in view of the very limited significance of the maritime sector on Statia and Saba, separate departments cannot be an option.

Figure V.4 presents the proposed general government structure.

Figure V.4 : Government structure



Source : Policy Research Corporation N.V.

The already existing BCC should remain a part of the Ministry of Economic Affairs, but co-ordinate the policy of all other Ministries and other governmental organisations such as the National Bank. The BCC's principal task is to reduce and bypass 'red tape' hampering the implementation of policy proposals. Moreover, the BCC is the link between the Central and Island governments with respect to economic policy, and is, in fact, an interdepartmental group of civil servants, mainly representatives of the *Services for Economic Affairs* of all five islands[45].

The Island Governments should also be supported by sector-related *Advisory Boards* made up by Antillean and international experts. The constitution of these *Advisory Boards* should be tripartite, with repre-

45 The basis for the extension of this group could be formed by the 'Werkgroep Methodologie', which was set up to provide *Policy Research* with practical support in the course of this study The 'Werkgroep Methodologie' comprises representatives of the federal Department of Economic Affairs, the National Bank of the Netherlands Antilles, and the Services of Economic Affairs and Finance of the island of Curaçao.

sentatives of government, the private sector and the labour unions. Obviously, tripartite co-operation is also important at macro-economic level: therefore, the Sociaal Economische Raad (SER) or comparable organisations should be consulted by all levels of government.

These specialised *Advisory Boards* can provide the Island Governments with indispensable sector-specific expertise. In addition to these 'local' Advisory Boards, *Boards of International Experts* could provide the credibility and countervailing power which is sometimes necessary to withstand pressures from powerful private parties.

Principles for the government structure are formulated. A clear and sharp separation between legislative tasks and administrative or executive tasks is recommended.

The proposed government structure specifically with respect to Maritime Affairs is presented in *Figure V.5*.

1. At the level of central government the BCC should be formalised, linked to the Department of Economic Affairs. Regarding maritime affairs, the Minister of Traffic & Transport, supported by the BCC, is responsible for:
   - the co-ordination between the island governments and the national government;
   - the provision of a policy framework for ship's registration;
   - maritime (and related fiscal) legislation;
   - the negotiation, ratification and legal implementation of international treaties;
   - setting standards for maritime training and education programmes by private institutions;
   - defence and coast guard issues.
2. At the level of the islands appropriate organisational structures should be installed. These 'organisations' should be represented in the *Advisory Boards for Maritime Affairs* supporting the Island Governments.

   A Maritime Advisory Board should advise the Island Government with respect to maritime interests on Curaçao[46].

   The *Harbour and Pilotage Service* of Bonaire should be strengthened by a general manager, who would be the chairman of the Maritime Advisory Board on Bonaire.

46 As indicated, this Advisory Board should consist of representatives of the government (e.g. the CPA), the maritime sector and the labour unions.

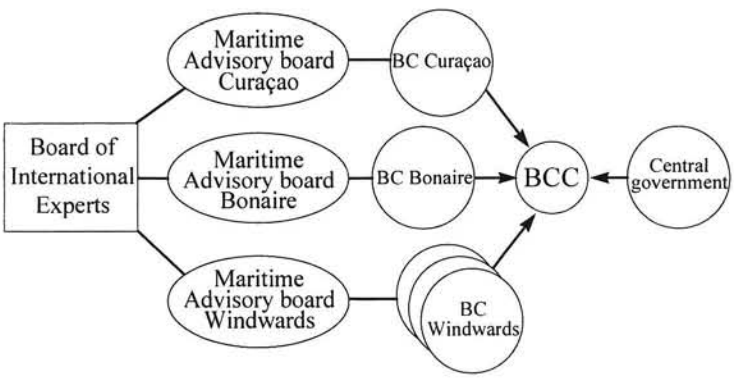
Because of the small scale of the maritime sector on Statia and Saba, separate organisations cannot be justified: the maritime interest of these islands should be promoted by a Maritime Co-ordinator within the Sint Maarten administration. This Co-ordinator would report to the Island Governments of all three Windward islands, and chair the Maritime Advisory Board for the Windward Islands.

The tasks of the Island Governments would include:

- the development of maritime and port policy, with the macro-economic development of the island as a central goal;
- the supervision of port management, both with respect to the level of both services and tariffs;
- the evaluation and co-ordination of investment projects initiated by the executive organisations.

3. The execution of maritime policy would be the responsibility of operational organisations, both at national and island level.

Figure V.5 : Government structure with respect to maritime affairs.



Source : Policy Research Corporation N.V.

a/ National level

As indicated in *Chapter V.3*, a concession to perform the operational, promotional and administrative activities related to the register should be granted to a private operator: provision of ship and crew certificates, registration, *etc*. Under the supervision of the *Department of Traffic & Transport*, the Shipping Inspectorate of the Netherlands Antilles (SINA) remains responsible for the inspection of ships, the investigation of accidents and Port State Control activities. As also indicated in the *REGISTER PLUS* scenario, the operational tasks should be commissioned to classification societies as much as possible: the SINA would only supervise these activities.

The Coast Guard has a number of tasks:

- guarding the maritime borderlines of the Kingdom;
- tasks related to customs;
- certain police tasks: patrolling the territorial waters and coast line in search of illegal actions (waste dumping, pollution, illegal fishing, drug trafficking, *etc.*);
- tasks related to environmental control;
- offering assistance to ships in distress.

The BCC should coordinate these activities with those of other government organisations.

b/ Island level

Under the supervision of the Island Government, the executive apparatus at the level of the islands consists of two public services:

- the management and operation of the port infrastructure by the Ports Authority;
- the provision of pilotage services.

As indicated before, on Curaçao these activities should be performed by two separate organisations controlled by the island government. On the other islands these services should be provided without significant problems by one integrated organisation. No changes are therefore proposed.

V.5. SCENARIO 5: FRAMEWORK POLICY WITH MARITIME FOCUS

The development of the maritime sector is largely dependent on the general economic situation of the Netherlands Antilles. In order for the integrated maritime policy *to be truly effective, it should be supported by a solid general economic framework policy.*

In this fifth scenario, FRAMEWORK POLICY with MARITIME FOCUS, an overview is presented of the different aspects that should be covered by such a framework.

Scenario 5 combines the *INTEGRATED MARITIME POLICY* scenario with an improved *general economic policy* (GEP). In the previous scenario concrete maritime policy measures were presented. Furthermore, it has become clear that the development of the maritime sector is closely linked to the general economic situation.

A detailed description of the current macro-economic performance of the Netherlands Antilles is provided in *Chapter I* of this report. For the first time now, there seems to be a consensus on the seriousness of the macro-economic situation in the Antilles.

All concerned parties (government, employers, labour unions, IMF, the Netherlands) are now convinced that structural changes are necessary to improve the country's economy. The execution of the Structural Adjustment Program (SAP) and the related process of reinventing government (RIG) are expected to facilitate and foster economic growth in the longer term, if implemented successfully.

In previous studies a number of potential sources of growth were identified, among which the transport and distribution sector.

The Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles provides concrete policy measures to stimulate the maritime sector.

A similar research and implementation approach is recommended for other sectors, such as tourism, air transport and telecommunications.

Along the lines presented in *Chapter I*, previous studies have, without exception, indicated the general direction of economic reforms. In the recent IDB[47] study, a number of potential sources of growth were identified. Furthermore, a general strategy for recovery and development was presented. This widely-accepted general strategy now has to be translated into concrete policy recommendations[48].

The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* provides such concrete policy measures for the maritime sector. However, the development of the maritime sector is largely dependent on the economic situation of the Netherlands Antilles in general. In order for the *integrated maritime policy* to be truly effective, it should be supported by a general economic framework policy.

47 See Inter-American Development Bank (1997).

48 Subsequently, the IDB was asked to develop an action plan, containing concrete measures and a detailed time scale.

This fifth scenario, *FRAMEWORK POLICY with MARITIME FOCUS*, presents an inventory of the different aspects that should be covered by such a framework. These measures concern both general economic policy and measures aimed specifically at other sectors of the economy, e.g. tourism. It is outside the scope of this study to investigate and describe these measures in detail, although an approach similar to that used in this study is recommended for other sectors, such as tourism, air transport and telecommunications.

This scenario clearly builds further on *the INTEGRATED MARITIME POLICY* scenario. The additional effects of the proposed flanking policy measures are calculated in *Chapter X.*

In support of the integrated maritime policy the FRAMEWORK POLICY with MARITIME FOCUS includes measures aimed at:
- *restructuring government;*
- *spurring economic growth in general;*
- *providing beneficial boundary conditions;*
- *attracting foreign investment;*
- *specific sectors;*
- *stimulating inter-island trade.*

In support of the *integrated maritime policy* the *FRAMEWORK POLICY with MARITIME FOCUS* includes measures aimed at:
- restructuring government;
- spurring economic growth in general;
- providing beneficial peripheral conditions;
- attracting foreign investment;
- specific sectors: financial offshore activities, (cruise) tourism, manufacturing industries, fishery, and telecommunications;
- stimulating inter-island trade;
- promoting the Netherlands Antilles.

V.5.1. *MEASURES AIMED AT RESTRUCTURING GOVERNMENT*

- The government of the Netherlands Antilles is to be restructured along the lines of the Re-Inventing Government (RIG) plan. This means that government will be down-scaled and focuses on its core responsibilities, i.e. providing public services. One of the principal measures to down-scale government is to privatise government companies to the maximum extent possible. The reduction of the public sector's size will provide more room for private initiative;
- it needs to be stressed that the privatisation of government activities does not release the government from the task of developing a policy. On the contrary, the government should provide the private sector with a framework in which to operate;

- besides being reduced in scale, government power is delegated to the level of the islands along the lines of the principle of subsidiarity: the tasks which can be performed by the island governments should not be performed by central government;
- decision making at all levels of government is to be sped up by reducing bureaucratic procedures ('red tape', see *Chapter I*) and by decentralisation: fast decision-making should become one of the Netherlands Antilles strenghts.

V.5.2. MEASURES AIMED AT SPURRING ECONOMIC GROWTH IN GENERAL

- In the *FRAMEWORK POLICY with MARITIME FOCUS* scenario the government should focus its efforts on the stimulation of service industries, e.g. tourism, financial offshore, transport & distribution, and telecommunications. Due to the lack of raw materials, production industries suffer a 'natural' disadvantage;
- a new taxation system, the New Fiscal Framework (Nieuw Fiscaal Raamwerk, NFR) should be introduced. The NFR will result in a lower profit taxation tariff, while the difference between onshore and offshore companies will be abolished. The economy will be stimulated by the lower tax level, which can of course only be realised if the government is severely down-sized. In turn, the financial offshore sector will be able to open new markets by entering into new bilateral tax agreements, which are possible as a result of the respectable nature of the NFR[49];
- the capital market should be liberalised, allowing foreign banks to enter the local market. This will result in lower interest rates and a more formalised way of investment financing;
- current investment credit ceilings are to be removed, or at least separated from ceilings for consumptive credit;
- the labour market should be restructured by introducing modern legislation which permits the more flexible use of labour without excessively compromising the rights of the employee. This was also one of the principal recommendations of the IDB study. In the short term, introducing more flexibility may seem a threat to labour unions. However, in the longer run this flexibility will stimulate economic growth and create additional employment on the islands.

49 The financial offshore sector is 'protected' from paying high taxes by means of a clear-cut advance ruling system.

V.5.3. *MEASURES AIMED AT PROVIDING BENEFICIAL PERIPHERAL CONDITIONS*

- The privatisation of government companies and the liberalisation of the markets will lead to better services and lower tariffs for telecommunications and utilities (water, electricity). However, the government cannot stop at liberalisation and privatisation. The limited size of the Antillean markets can easily lead to a monopoly, and this time a private one. In order to guarantee a certain degree of competition, the government should therefore tender the right to provide the services in question on the islands, on the basis of strict terms of reference with respect to service levels and (maximum) tariffs;
- training and education will be restored as crucial elements for economic development and subsidised to attract foreign investment;
- closely related to the aspect of training and education is a policy aimed at reversing the continuous 'brain drain'. Highly-educated Antilleans living in the Netherlands and the United States will be urged to come back to the Netherlands Antilles to contribute to the economic development of their home country[50]. A very important aspect in this respect, is the provision of good and affordable (temporary) housing for repatriates;
- in order to achieve more economic, social and political stability, a move should be made towards more co-operation and consultation between government and the social partners. The first step in this direction was recently taken with the signing of the 'Akuerdo di Amandelweg' by representatives of the labour unions and employers' and producers' organisations. This 'consultation economy' is modelled the Netherlands ('Poldermodel'), taking into account the characteristics of the Antillean history and economy;
- the legal framework of the Netherlands Antilles is modernised, while obsolete legislation is discontinued. In order to achieve this goal, the capacity of the Central Bureau for Legal and General Affairs (CBJAZ) is (temporarily) increased and 'red tape' is reduced[51]. In order to obtain transparent legislation, it is essential to have policy makers determine the objectives to be achieved before the actual law texts are drawn up by jurists;
- an objective and uniform instrument for the evaluation of both direct government investment and investment projects supported by the Antillean or Dutch (KabNA) government will be developed.

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50 The 'Arbeids Advies Dienst' and the 'Centrum Voorlichting Antillianen' can provide support to this end.

51 Using technical support by Dutch public servants.

V.5.4. Measures aimed at attracting foreign investment

The following measures are to be introduced:

- fast decision-making and the removal of bureaucratic obstructions. For instance, the procedures for granting work and residence permits to foreign employees (expatriates) are to be simplified and sped-up;
- a more favourable fiscal treatment of foreign investment is to be introduced. These fiscal advantages may take the form of tax holidays. However, the current system will have to be simplified: a uniform system of granting these tax holidays 'across the board' is to be introduced, while clear and unambiguous criteria are to be developed so as to avoid uncertainty and abuse.
- the historical policy of granting government guarantees should be abandoned for obvious reasons: (foreign) investors should bear their own investment risk. Entrepreneurs should not have any problems in financing solid projects 'in the market'. In the past, nearly all guarantees provided by the government of the Netherlands Antilles were cashed in;
- the free zone areas should be continued in their current format, while the Economic Zone (E-zone) at Hato airport should be further developed (partly as experimental garden for possible future deregulation);
- Sea-Air transport and the development of a regional distribution function are to be stimulated by means of fiscal incentives and promotional port handling tariffs;
- the intrinsic fear of foreign investors and employees should be tackled by means of promotion and training. This campaign should be aimed at both the general public and pressure groups such as labour unions. A 'mental shift' or change in the attitude towards foreigners is the final goal: the professional experience and knowledge of foreigners should be used to the advantage of the Antilles. Moreover, providing service should be considered an 'art' instead of the proof of subordination;
- support by contributing to (organising, financing) the training and education of (potential) local employees.

V.5.5. Sector-specific measures

In order to formulate policy alternatives for other sectors, an approach similar to the one used for the maritime sector is recommended for the financial offshore sector, tourism, telecommunications, manufacturing, and fishery. Some general and preliminary recommendations are presented below.

V.5.5.1. The financial offshore sector

- the telecommunications market are to be liberalised;
- the financial offshore sector is to be supported by means of the introduction of a New Fiscal Framework (Nieuw Fiscaal Raamwerk, NFR).

  The NFR will turn the Netherlands Antilles into a '*high-tax haven*': relatively high tariffs (28%), combined with a system of deductions and rulings will result in very low effective taxation for offshore companies.

  The respectability of the NFR will enable the sector to broaden its income base by entering into new bilateral tax treaties. Furthermore, the link with the Netherlands - the home market of the Antillean offshore - can remain intact. An alternative tax scenario aimed at attract more offshore activity would be to become a 'no-tax haven'. Such an imprudent approach would inevitably result in the striking of the tax arrangement of the Dutch Kingdom ('Belasting Regeling voor het Koninkrijk', BRK). As a result, the financial offshore would lose an important part of its 'home market', namely the Netherlands.

V.5.5.2. Tourism

a/ Stay-over tourism

- the generally negative attitude towards providing services (to tourists) has to be changed, especially on Curaçao;
- to support (cruise) tourism, local (small-scale) initiatives have to be stimulated. Investments in hotels and tourist attractions will be supported by means of investment grants and/or fiscal advantages (e.g. tax holidays). However, the current policy of providing government guarantees will be discontinued;
- because of the intrinsically high price level on the islands, the Netherlands Antilles should aim for the high end of the tourist market;
- to this end, the quality of service in hotels and restaurants will have to improve, and new attractions will have to be built, such as a golf course and other sports facilities;
- the potential of new forms of 'combined tourism' should be considered, e.g. an island-hopping programme including some or all of the Netherlands Antilles, emphasising the differences between the islands.

- furthermore, the combination of inter-island passenger and cargo shipping could be economically feasible and contribute to the concept of Nation Building. The combination of tourism and fishery could also appeal to certain markets, *etc*.
- the hotel sector is to be restructured, both financially and with respect to the service rendered.

b/ Cruise tourism

- Curaçao is to be promoted and operated as a cruise destination in a concerted action of the maritime sector (Curaçao Ports Authority), the tourism sector, represented by the Curaçao Tourism Development Bureau, and the (Punda) retail sector;
- a limited home porting strategy may be pursued, aimed at short cruises (up to one week) in the region, provided by 'boutique lines' and small cruise vessels (e.g. windjammers);
- in a joint effort with other cruise destinations in the region, the Leeward islands of the Netherlands Antilles should initiate the proposals for new cruise itineraries in co-operation with cruise lines. Recently, a '*Southern Caribbean Group*' was installed precisely for this purpose. The group comprises ports in Panama, Colombia, Venezuela, Trinidad & Tobago, Aruba and the Netherlands Antilles (Curaçao, Bonaire); the initiative was taken by the tourist offices in the countries concerned;
- the new package(s) should be promoted as well, e.g. as the 'Deep Caribbean Cruise Experience';
- a more 'open air' transport policy is introduced, allowing other airlines to compete with KLM and ALM on international connections, with lower air fares as a result. This aspect is of great importance if Curaçao is to become a (limited) home port for small cruise vessels.

V.5.5.3. Manufacturing and light industry

- Investors in manufacturing and light industry should obtain a number of advantages, comparable to those aimed at attracting foreign investment, provided the following conditions are met: the activity should be sustainable, create employment, and be non-polluting. Furthermore, no protection from international competition will be provided;

- with respect to manufacturing related to the EU-OCT arrangement (rice, sugar) no concrete recommendations can be made at present pending decision-making at the level of the Kingdom and the EU. However, from a realistic point of view, both the near and more distant future prospects for this kind of activity are far from promising[52]. Hence, no positive long-term effects should be expected.

V.5.5.4. Fishery

The Curaçao fishery sector was briefly described in Chapter III. With respect to fishery, two projects are at present being carried out on Curaçao:

- the development of port facilities for small fishing boats;
- the use of deep water buoys (Fish Attraction Devices) to improve efficiency.

The port project aims to maintain current fishery activities on the island, by providing the fishermen with specific fishery port facilities, such as ice-machines. The aim is not to stimulate the sector. The buoy project is aimed at increasing the catch of the current fishermen. Again, the aim is not to increase the number of fishing boats. Nevertheless, credit funds for investment in the sector are available through the Development Bank for the Netherlands Antilles (OBNA). At present, further growth in the number of boats is expected to result in a decrease of the catch per boat, as the potential of the coastal waters of Curaçao is limited.

Additional potential is in fishery outside the coastal waters. At present, fishing for migrating fish (e.g.like tuna) in the Atlantic Ocean is not an activity in which fishermen from the Netherlands Antilles are engaged[53]. However, there seems to be potential for additional revenues from tuna fishing for the Leeward islands. In order to become involved in this market, the Netherlands Antilles have to become a

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[52] For one, the benefits related to the OCT arrangement will decrease with the world wide downward trend of tariffs and duties caused by the WTO. Furthermore, it is very likely that the EU-OCT arrangement will not be continued when it expires in the year 2001.

[53] The ship's register has attracted a fleet of Spanish tuna fishery vessels using the Netherlands Antilles as their home base.

member of ICATT, which regulates the fishing of migrating fish in the Atlantic Ocean by setting quotas.

Finally, no links with tourism have been established yet. There would be some potential for fishing trips for tourists, and for providing more fresh fish to hotels and restaurants. However, ,as a result of the currently low fish stock in the Caribbean region the danger of over-fishing is real. The Food and Agriculture Organisation of the United Nations (FAO) expects a shortage resulting in an increase in prices.

With relatively minor investments the fishery sector, which is important in the sense of employment, can be actively supported. Without going into much detail, the *FRAMEWORK POLICY with MARITIME FOCUS* scenario assumes this support will be realised in order to sustain the current scale of the sector and its contribution to the island's economy.

V.5.5.5. Telecommunications

After the privatisation of Antelecom and its merger with the (public) telecommunication companies of the islands, the liberalisation of the telecommunication smarket of the Netherlands Antilles is completed.

Like for the operation of the ports, the Antillean government cannot stop at the point of liberalisation. The limited size of the Antillean telecommunication market can easily give occasion for a monopoly, and this time a private one. In order to guarantee a certain degree of competition, the government should therefore tender the right to provide telecommunications services on the islands, on the basis of strict terms of reference with respect to service levels and (maximum) tariffs.

With competitive telecommunications, the islands will be able to promote all sorts of telecommunication-related activities, such as call centres (marketing), help desks, security services, dispatch services, *et cetera*. The time difference with Europe, the multilingual population, and the relatively cheap labour are additional strengths in this respect.

V.5.6. Measures aimed at stimulating inter-island trade

In order to stimulate trade and transport, the islands should start producing products. The following measures and options may be considered in this respect:

- the stimulation of agricultural and cattle breeding activities on the five islands, enabling the Netherlands Antilles to substitute some of the current imports of agricultural products;
- the facilitation of inter-island contacts by means of lower telecommunication tariffs and low air fares. Personal contacts are essential to establish good trade relations;
- *Annex D* showed that the central government should not consider granting an operating subsidy for an inter-island shipping service, on the grounds of its contribution to the 'Nation Building' programme. Moreover, supporting inter-island transport, especially inter-insular shipping, by means of fiscal advantages and preferential harbour tariffs is not expected to generate results either;
- a combination of passengers (tourists) and cargo may facilitate the profitable operation of an inter-island service;
- stimulating the development of an information platform facilitating the consolidation of cargo flows between the Leeward islands and the Windward islands. To this end, an inventory of all current and possible flows between the islands of the Caribbean region should be made;
- attempting to achieve international co-operation with respect to inter-insular shipping, e.g. within the Association of Caribbean States[54].

V.5.7. Measures aimed at promoting the Netherlands Antilles

- the promotion of the Netherlands Antilles as a place of business and investment should be reorganised. Organisations such as Curinde, FIAC, Curaçao Inc., HADCO should work towards a merger so that Curaçao will have a clear and efficient promotional organisation. A first step in this direction is the merging of FIAC into Curaçao Inc. Close co-operation with the CTDB is also recommended. Within this umbrella organisation, task forces may be set up to look after specific (sector) interests;

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54 It should be borne in mind that these activities should be in line with the networks of the major international shipping lines to be successful.

- the merged Curaçao promotional organisation could serve as a platform for the establishment of a promotional structure for the Antilles as a whole. This way economies of scale could be realised. Furthermore, the operation of the current programme 'Netherlands Antilles - Dutch Caribbean', promoting the Netherlands Antilles as a diverse set of islands would be facilitated;
- the '*mundane character*' of the Netherlands Antilles is to be promoted in high class tourism if the aim is to attract. The arts and fashion design should be stimulated by providing facilities for artists, and by organising fashion shows, festivals, exhibitions *etc.*

VI. POLICY SCENARIOS FOR BONAIRE

In this chapter the policy scenarios are adapted to the particular situation on Bonaire.

As has already been indicated, the previous chapter provided a detailed description of the policy scenarios for Curaçao. Because of the central position of Curaçao in the Netherlands Antilles, federal aspects of maritime policy, which also apply to the other islands, were described as well. In this and the subsequent chapters the policy scenarios are adapted to the situation on Bonaire and the Windward islands.

VI.1. SCENARIO 1: CONTINUATION

Chapter VI.1 describes the CONTINUATION scenario for Bonaire.

Chapter III presented an overview of the current situation in the maritime sector of the Netherlands Antilles, including Bonaire. In the *CONTINUATION* scenario current policies, as described in *Chapter III*, will be continued in the future.

The situation on *July 1, 1997* is used as a reference point for the current situation, and thus as the basis of the *CONTINUATION* scenario. For maritime policy on Bonaire this means:

- all current federal measures will continue to apply, including the registration of ships and the (special profit and tonnage) taxation system. The lack of an overall policy framework, and of efforts to promote the Netherlands Antilles as a maritime centre will not be remedied;
- the Island Government will remain responsible for the management, operation and development of the port. The operational and administrative tasks related to the port will be delegated to the *Harbour and Pilotage Service*. Private companies (shipping agents) will perform agency and stevedoring activities in the port of Kralendijk;

- no specific policy will be developed for the management and operation of the ports of the Antilles, including investments in port infrastructure. As a result the *Harbour and Pilotage Service* will (continue to) have to do without a framework for its planning and actions;
- no investments will be made in port infrastructure to upgrade either the cargo handling or (cruise) passenger reception facilities;
- no measures (e.g. promotion) will be introduced to attract more cruise ships to Bonaire;
- the activities of Bonaire Petroleum Company (BOPEC) at the oil storage and transhipment terminal will be continued;
- the *CONTINUATION* scenario will take into account the decline of the rice imports and exports in the port of Kralendijk as a result of the review of the EU-OCT arrangement;
- no free zone will be established in the *CONTINUATION* scenario;
- maritime education and training will be continued in its present form, at its present level: the course leading to the 'Master/Engine driver restricted certificate' will be continued.

No changes in the general economic policy of the federal and island governments are assumed to occur within the CONTINUATION scenario.

With respect to general economic policy (business climate), this scenario assumes that current conditions will not change (radically): utility prices will remain virtually unchanged, current legislation with respect to residence and work permits will not be relaxed, telecommunications tariffs will remain high, *etc*. As for Curaçao (and the Windward islands), changes in the general economic situation are assumed to be part of the *FRAMEWORK POLICY with MARITIME FOCUS*.

VI.2. SCENARIO 2: LAISSEZ FAIRE

A LAISSEZ FAIRE attitude implies that existing measures aimed at or related to the maritime sector will be discontinued and that no new measures will be introduced.

The implications of such an attitude are presented in Chapter VI.2.

As for Curaçao the *LAISSEZ FAIRE* scenario implies that:

- no Department of Economic and Maritime Affairs will be established, which means that no maritime policy will be developed at central government level.
- moreover, no *Service for Shipping and Maritime Affairs* (SSMA-B) will be set up for the Island Territory of Bonaire either;
- the ship's register will be abolished, the Shipping Inspectorate (SINA) will (largely) become redundant, and the current tonnage tax facility will become superfluous;
- no free zone area will be established on Bonaire;

- the training and education of seafarers with government support will be discontinued. Activities in this area will only sprout from private initiatives. This means the current training programme leading to the 'Master/Engine driver restricted certificate' will not be continued;
- the Netherlands Antilles will not be promoted as a maritime centre.

A true laissez faire approach would entail the privatisation of the port. However, considering the macro-economic importance of the port to the island's economy this option is considered unsuitable.

The complete privatisation of the management and operation of the port of Philipsburg is not considered in the *LAISSEZ FAIRE* scenario, for the same reasons that applied for Curaçao. Because of the macro-economic importance of port infrastructure for the island economy, it is not desirable to create any kind of (unregulated) private monopoly in the port[1].

With respect to general economic policy the same assumptions are made as in the *CONTINUATION* scenario.

VI.3. Scenario 3: Register Plus

The REGISTER PLUS scenario covers a set of measures aimed at stimulating activities related to the registration of ships.

However, considering the absence of such activities on Bonaire, the effects of the REGISTER PLUS scenario are reasonably assumed to be limited to Curaçao.

The *REGISTER PLUS* scenario is not expected to have a significant impact on the maritime sector of Bonaire. Although the ship's register enables ship owners to register ships on Bonaire, this has not caused any related activity (notary, trust companies) on the island. For the future no change in this pattern can logically be expected. The same is true for the Windward islands. The effects of the *REGISTER PLUS* scenario are therefore limited to Curaçao.

If the registration of yachts in the Netherlands Antilles is facilitated and promoted, this may have a positive impact on yachting, marinas, boat yards etc. The fact that Curaçao and Bonaire are situated outside the hurricane belt is an additional advantage. The islands can be promoted as 'safe havens' during the hurricane season. The positive effect on yachting and marinas can only be realised within an overall policy aimed at developing tourism on Bonaire. This is therefore part of the *FRAMEWORK POLICY with MARITIME FOCUS*.

1 Considering the small scale of the port, a monopoly is the most likely outcome of a privatisation process.

VI.4. SCENARIO 4: INTEGRATED MARITIME POLICY

As for Curaçao, the *integrated maritime policy* is based on three tracks:

1. facilitating (externally generated) economic growth in general;
2. stimulating activities in the maritime sector;
3. providing favourable peripheral conditions.

VI.4.1. THE FACILITATION OF ECONOMIC GROWTH IN GENERAL

Chapter VI.4 portrays the INTEGRATED MARITIME POLICY scenario, which consists of three (inter-related) tracks:
- *the facilitation of economic development in general;*
- *the stimulation of activities in the maritime sector;*
- *the provision of beneficial peripheral conditions.*

As indicated, the maritime sector can merely *facilitate* economic growth. At present, the Bonaire economy is not likely to produce internal growth, largely because of the near-full employment situation and the limited potential for economic development and diversification. Apart from salt, the island's natural resources are limited, while qualified labour is scarce and utilities are relatively expensive.

Three aspects can be considered in the light of the facilitation of economic growth in general:
- *port organisation;*
- *inter-island shipping;*
- *cruise tourism.*

Three aspects can be considered in the light of the facilitation of economic growth in general:

- port organisation;
- inter-island shipping;
- cruise tourism.

VI.4.1.1. Port organisation

Because of the macro-economic importance of port infrastructure for the island's economy, it is not desirable to create any kind of (unregulated) private monopoly in the port of Kralendijk.

Hence, a slight modification of the existing situation: the terminal should be operated as a common user facility by all licenced stevedoring companies in the port.

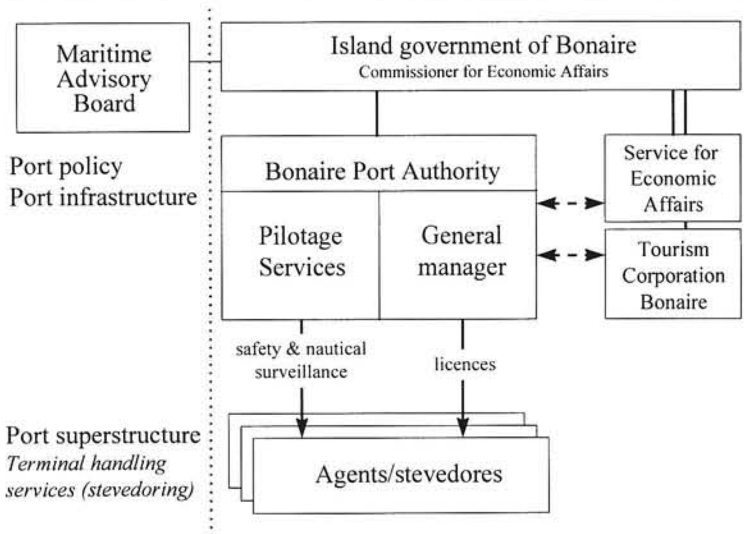
Because of the macro-economic importance of port infrastructure for the island economy, it is not desirable to create any kind of (unregulated) private monopoly in the port.

A number of years the island government of Bonaire ago, pressured by the Dutch government (KabNA), considered re-organising the port of Kralendijk along the lines of the current organisation of the port of Willemstad. The re-organisation was put forward as a precondition for further investment support by KabNA. Such a move would effectively have granted a stevedoring monopoly to a group of small stevedoring companies. A lawsuit, instituted by stevedores excluded from the agreement, prevented the plans from being implemented.

Because of insufficient staffing, an adjusted structure for the organisation of the port of Kralendijk is recommended see Figure VI.1.

As indicated in *Chapter III*, at present the *Harbour and Pilotage Service* does not have the time nor the resources to manage the port properly and effectively. An adjusted structure for the organisation of the port of Kralendijk is therefore recommended. The recommended adjustments are presented in *Figure VI.1*. In an ideal situation, the statutory and legislative tasks should be performed by the Service for Economic Affairs (Dienst Economische Zaken) of the island, while the operational and administrative tasks related to the port would be delegated to the *Harbour and Pilotage Service*. However, in view of the scale of the port and the characteristics of the current organisation, a different structure is recommended.

Figure VI.1 : Proposed organisation for the port of Kralendijk.



Source : Policy Research Corporation N.V.

Within the *INTEGRATED MARITIME POLICY* scenario, the Island Government remains responsible for the management, operation and development of the port. The port should be operated as a 'landlord port', with the Island Government as the owner of the port infrastructure. Private agents/stevedores should be responsible for the procurement and maintenance of the port's superstructure (cranes, chassis and other cargo handling equipment).

Because of the diverse background and interests of the port's existing shipping companies/agents/stevedores, a merger into one single stevedoring company is not expected to be feasible. The port infrastructure (piers and quays) should therefore be operated as a common user facility, accessible to all licenced stevedoring companies and their accredited personnel. With respect to the personnel a system of port access passes should be introduced in order to prevent the public's access to the port area.

Within the new structure, a stronger BPA would take up new responsibilities:
- *the development of a maritime and port policy at island level;*
- *co-ordination with the integrated maritime policy at national level;*
- *having a part in drawing up a Master Plan for the development of cruise tourism;*
- *the continuation of existing initiatives for regional co-operation with respect to cruise tourism;*
- *issuing licences;*
- *setting (new) harbour tariffs and pilotage charges;*
- *drawing up rules and regulations;*
- *the conception of a strategy for the promotion and development of yachting and marinas.*

The *Harbour and Pilotage Service* should be turned into a Bonaire Port Authority (BPA) by adding a general or strategic manager to the present staff. The BPA should operate in close co-operation with the Service for Economic Affairs and should report directly to the Commissioner of Economic Affairs. In addition to pilotage services, the BPA would be responsible for:

- the development of a port policy. This would mainly concerns strategic planning with respect to investments in the port, and finding the funds to realise these investments. At present, the Netherlands (KabNA, DEPOS, Sociaal Vangnet) and the EU are the most important sources of funds for port investments. The general manager would be responsible for this aspect;
- the island's port policy should be co-ordinated with the integrated maritime policy at national level, guarded by the '*Beleidscoördinatiecommissie*' (BCC). In the development of proposals for the island's maritime and port policy, the general manager of BPA would be supported by the *Maritime Advisory Board*, of which he would be the chairman;
- in co-operation with the Tourism Corporation Bonaire, BPA should also be involved in completing a master plan for the development of cruise tourism and making it operational;
- moreover, existing initiatives for regional co-operation (*Southern Caribbean Group*) with respect to cruise tourism should be continued;
- the issuing of licences to agents/stevedoring companies;
- setting (new) harbour tariffs and pilotage charges;
- drawing up a set of nautical rules for the use of the port and the allocation of berths;
- drawing up regulations with respect to the use of labour in the port, dealing with education and safety at work. The BPA could

also take the initiative for setting up training courses in this respect;

- drawing up a set of port regulations with respect to nautical safety and environmental issues. These regulations should be based on international standards. However, giving the (economic) importance of the preservation of the marine environment, additional legislation may be necessary. The additional environmental legislation should be developed in consultation with the Bonaire Marine Park (STINAPA) and the Coast Guard;
- the conception of a strategy for the promotion and development of yachting and marinas on Bonaire.

In order to be able to perform these additional tasks, the BPA should acquire a general manager who would be entrusted with these strategic issues. The *Harbour Master* should remain responsible for the surveillance and enforcement of nautical safety and environmental regulations, as well as for providing of pilotage services. Moreover, the *Harbour Master* should be involved in developing the abovementioned legislation, and be a Member of the *Maritime Advisory Board*.

VI.4.1.2. Inter-island shipping

Shipping connections between Bonaire on the one hand, and Curaçao and Aruba on the other, are regular, sufficient and acceptable. No additional measures to stimulate inter-island shipping to and from Bonaire are introduced.

VI.4.1.3. Cruise tourism

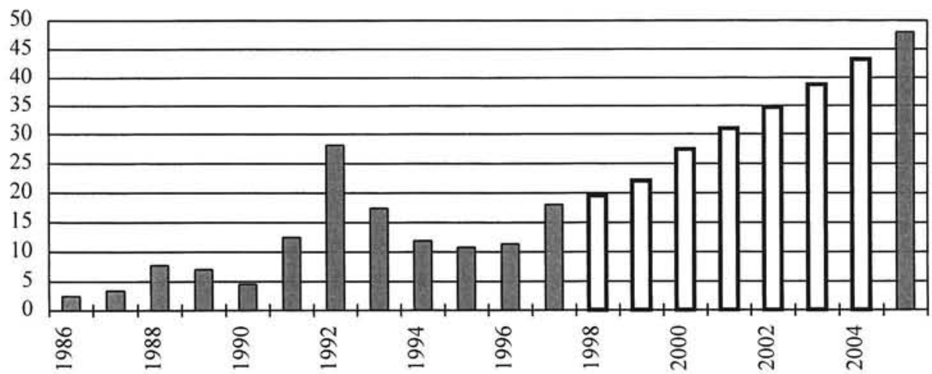
Although tourism is very important to the Bonaire economy, the Island Government has consciously chosen a path of gradual and limited growth.

Analogous to the situation on Curaçao, the principal *external* source of economic growth to be supported by the maritime sector is (*cruise*) *tourism*. Although tourism is very important to the Bonaire economy, the Island Government has chosen a path of gradual and limited growth. So as to protect the island's (marine) environment. With respect to cruise tourism, the Island Government aims to attract medium-sized cruise vessels, with an average of about 700 passengers, which is the maximum the island can sustain. Two visits a week by ships of this size would be considered ideal by the Island Government.

Considering the growth prospects for the Deep Caribbean as a whole and the competitive position of Bonaire, 48 000 is considered the maximum attainable number of passenger visits per year by 2005.

The historical development of the number of cruise passenger visits to Bonaire is presented in *Figure VI.2*. Moreover, the figure presents a forecast for the future development of cruise tourism on the island. A total number of 48 000 passenger visits is forecast for 2005. This is far less than two vessels carrying 700 passengers a week, such a schedule which would result in approximately 70 000 passenger visits a year. Considering the growth prospects of the Deep Caribbean as a whole and the competitive position of Bonaire, 48 000 is considered the maximum attainable number. This level will probably not be attained as gradually as *Figure VI.2* suggestss but rather by fits and starts.

Figure VI.2 : Bonaire, number of cruise passenger visits (x 1 000), 1986-2005.



Source : Policy Research Corporation N.V.

To actually attain this level, the Island Government, BPA and TCB should:
- *improve their product;*
- *improve the organisation and facilities of the port;*
- *co-operate internationally to promote their port.*

In order to stimulate cruise tourism on Bonaire and actually attain the level of 48 000 passenger visits in 2005, the Island Government, BPA and TCB have a number of instruments at their disposal:

- the improvement of the product Bonaire (island-related factors);
- the improvement of the organisation and facilities of the port of Kralendijk (port-related factors);
- international co-operation with respect to promoting ports in the Deep Caribbean as cruise destinations.

As a cruise tourism product, Bonaire can still improve in some respects:
- *upgrading the area adjacent to the port;*
- *shopping and restaurant facilities in Kralendijk;*
- *training of employees in service professions;*
- *better use of attractions;*
- *more funds for island promotion.*

a/ The product Bonaire

Some of the strengths and weaknesses of Bonaire as a cruise destination have already been discussed in *Chapter III*. For instance, the clean and diverse environment makes the island very suitable for one-day tours. In some respects, however, the product Bonaire still needs to be improved.

Which could also be considered as part of the port itself. The area directly adjacent to the port should be upgraded too: by means of more attractive street furniture, a promenade[2], trees, sanitary facilities, sun sheds, *etc*.

Among the other aspects which need improvement are the shopping facilities in Kralendijk. In this respect, the island should not aim at conventional articles such as T-shirts and souvenirs. Bonaire should focus on becoming an 'island of art', selling all kinds of (art-related) products to tourists and organising conventions and exhibitions.

In addition, a wider variety of restaurants is apparently necessary. The education and especially the training of personnel is an important factor as well. The people of Bonaire have a favourable attitude towards cruise tourism, and are generally considered very nice and helpful by cruise passengers. Nevertheless, employees in service professions can be trained to provide more information and a higher level of service. An important occupational group in this respect consists of the (temporary) taxi-drivers. In co-operation with cruise lines, the island should train its taxi-drivers to be tour-guides as well.

In addition, the island should make better use of the available attractions to, for instance, diving and snorkelling sites, the flamingo sanctuaries, slave huts and the light house, salt pans, National Park Washington Slagbaai, *etc*. Wherever possible, Bonaire should develop new attractions and activities, e.g. new water sport activities, (historical) exhibitions and other cultural events.

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2 The Island Government has recently decided to start upgrading the existing promenade.

Finally, more funds have to be made available for the promotion of the island and its cruise potential. The existing Bonaire Cruise Association should take the initiative in this respect. Although there is very little crime on Bonaire, the island should battle clamp down on it: even petty crime damages a destination's reputation with cruise lines and their passengers.

b/ Port organisation and facilities

Substantial investments in port infrastructure and passenger reception facilities on behalf of cruise tourism cannot be justified, due to the rather limited volume of this type of tourism.

Moreover, with relatively small investments and a more efficient utilisation of the available piers, the port's cruise facilities can be upgraded considerably.

Some clear recommendations can be formulated on how to make better use of the existing infrastructure for the benefit of cruise tourism, with only limited investments:

- the North pier should be adapted to suit the reception of larger cruise ships: additional boulders and dolphins will have to be constructed to this end. At the North pier, cruise passengers directly arrive in Kralendijk's tourist centre and can avoid walking through the less attractive southern part of the port. If more cruise ships call at the port simultaneously, the use of the South pier may be considered[3];
- the North pier and the surrounding area should be upgraded to offer better service and higher quality to cruise tourists: upgraded boulevard ('Zeepromenade'), more restaurants, shops, sanitary facilities, *etc.*;
- by relieving the South pier, more capacity will come available for cargo handling, mainly ro/ro cargo;
- in addition, the middle pier should be adjusted to accommodate the ro/ro vessels of the inter-island operators, as well as ferries. This way, reliance on the single ro/ro ramp of the South pier will be reduced. At present, the entire island economy depends on the ro/ro facility of the South pier for its supplies, which is an undesirable situation;
- more efficient and structured use of the storage areas and road access will help solve current problems concerning capacity, safety, *etc*.

The port can be made more efficient so that it will be able to accommodate all cargo and passenger traffic expected over the coming years. This upgrading will only require limited investments. Considering the fairly limited potential for cruise tourism, large investments in cruise reception facilities are not warranted anyway.

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3 An alternative would be to offer tendering services from the roadstead to the shore. Considering the relatively calm water in the port, this seems a feasible alternative which deserves further investigation.

The Leeward islands of the Netherlands Antilles are in the process of drawing up new cruise itineraries in co-operation with cruise lines. Recently, a 'Southern Caribbean Group' *was installed precisely to this end.*

c/ International co-operation: Southern Caribbean Group

In a joint effort with other cruise destinations in the region, the Leeward islands of the Netherlands Antilles are in the process of drawing up new cruise itineraries in co-operation with cruise lines. Recently, a '*Southern Caribbean Group*' was installed precisely for this purpose: in May 1998, new itineraries were presented to selected interested cruise lines. The *Southern Caribbean Group* comprises ports in Panama, Colombia, Venezuela, Trinidad & Tobago, Aruba and the Netherlands Antilles (Curaçao, Bonaire). Together, these ports can develop cruise programs for the Deep Caribbean, with a view to attract more sizeable vessels to the region on a regular basis. These activities are included in the *INTEGRATED MARITIME POLICY* scenario.

By working together with other ports in the Deep Caribbean, Bonaire may be able to attract medium-sized cruise ships throughout the year.

At present, cruise tourism is a highly seasonal industry on Bonaire. By working together with other ports in the Deep Caribbean, Bonaire may be able to attract cruise ships throughout the year. The port's infrastructure is capable of receiving very large vessels, carrying some 1 500 passengers. However, as indicated, considering the availability of tourist facilities and attractions, the island prefers vessels carrying a maximum of about 700 passengers.

VI.4.2. *STIMULATION OF ACTIVITIES IN THE MARITIME SECTOR*

The stimulation of maritime activities in the INTEGRATED MARITIME POLICY scenario is considered for the following types of activities:
- *the transhipment of oil products;*
- *bunkering services and facilities;*
- *ship chandling;*
- *free zone trading activities;*
- *yachting and marinas.*

As for Curaçao, the *INTEGRATED MARITIME POLICY* scenario only considers the stimulation of maritime activities which are largely independent of the general economic situation in the Netherlands Antilles. For Bonaire these activities include:

- the transhipment of oil products;
- bunkering services and facilities;
- ship chandling;
- free zone trading activities;
- yachting and marinas.

VI.4.2.1. Transhipment of oil products

The activities of the BOPEC oil terminal are affected by developments on the international market, and largely independent of the economic (and therefore maritime) policy of the Netherlands Antilles.

Hence, no specific measures are included in the INTEGRATED MARITIME POLICY scenario.

As indicated in *Chapter III*, the Bonaire Petroleum Company (BOPEC) is privately owned and operated. BOPEC's operations are largely dependent on developments in the international market. No government intervention is suggested to support or discourage these activities.

The main concern for the Island Government is to ensure the observance of the contract and the safety and environmental regulations. The environmental aspect (danger of oil spills) is crucial because of the importance of the underwater environment for the island's economy (diving)[4].

In conclusion, no specific measures are introduced in the *INTEGRATED MARITIME POLICY* scenario.

VI.4.2.2. Bunkering services and facilities

BOPEC offers bunkering services to ships calling at the oil terminal, mainly oil tankers loading and unloading. At present no bunkering facilities are available in the port of Kralendijk. Plans exist to provide such services from Curaçao (CPA, CUROIL) by means of a bunker barge. Moreover, although BOPEC would be interested in providing bunker services in the port of Kralendijk, this is apparently not possible due to a CUROIL monopoly. The BOPEC and CUROIL should be encouraged by the government to find of a solution to this problem.

As the potential for bunkering is rather limited due to the small number of ships calling at the port of Kralendijk, no measures to stimulate this activity are introduced.

The provision of bunkering services is not a task for the Island Government or the Harbour and Pilotage Service of Bonaire. Initiatives from the private sector (oil companies) are welcomed, but not expected, due to the limited scale of the local market. Furthermore, Bonaire is not on one of the major shipping routes in the Caribbean (like Statia), which hampers its development into an international bunker station.

4 In fact BOPEC has an excellent track record with respect to safety and environmental protection.

Given the above-mentioned factors, no measures to support the development of bunkering services are proposed in the *INTEGRATED MARITIME POLICY* scenario. However, as indicated, BOPEC and CUROIL should come to an agreement concerning the provision of bunkers in the port of Kralendijk.

VI.4.2.3. Ship chandling

Ship chandling in the port of Kralendijk has very limited potential, due to the high price level and the limited range of goods. Consequently, no measures to support this subsector are included in the INTEGRATED MARITIME POLICY scenario.

Generally speaking, price levels are relatively high on Bonaire, as the local market volume is small and there is hardly any local production of consumer goods, including food and beverages. Provisions for ships need to be imported (through Curaçao). Moreover, demand for ship chandling is limited, which has clear repercussions on the scale of chandling activities and, consequently, the price level. Since ship chandling can thus not be performed on a competitive basis on Bonaire, no measures are introduced in this respect.

VI.4.2.4. Free zone trading activities

In the past, several plans were drain up for the establishment of free zone trading areas on Bonaire. Recently, the Island Government has resurrected plans to realise two free zone areas. The main free zone is to be situated south of the port and airport, near Punt Vierkant, next to the Trans World Radio antenna park. The distance to the port is considered a clear disadvantage.

The development of a free zone area on Bonaire is not expected to be a success and is therefore not recommended.

Moreover, it is unlikely that of the establishment of a free zone on Bonaire will be a great success. The island is offside the main trade and shipping routes. All international sea transport will have to be transhipped, for instance in the port of Curaçao. Furthermore, Bonaire has only a limited number of international airline connections.

Because of these factors, the transportation costs related to free zone trade on Bonaire are expected to be relatively high, which would severely affect the competitiveness position of the zone. Other limitations are the relatively high costs of labour in the Antilles, as well as

Bonaire's tight labour market[5]. In addition, the competition of existing free zone areas on Curaçao, Aruba and especially Panama, is expected to be fierce.

On the basis of these considerations, the establishment of a free zone area on Bonaire is not expected to be feasible. It is therefore recommended not to make any investments in a free zone area before a number of contracts with trading companies is signed.

VI.4.2.5. Yachting and marinas

Tourism, especially that generated by diving, is crucial for the Bonaire economy.

Clearly, tourism is one of the main sources of employment and revenue on Bonaire. Almost half the tourists come to Bonaire for diving and snorkelling. The economic impact of tourism is very considerable, as was shown by a recent study on behalf of the Tourism Corporation of Bonaire (TCB)[6]. Because of its economic significance, tourism should be central in the Island Government's economic decision making. Despite calls for diversification, tourism is bound to remain an important source of revenue and employment on Bonaire.

At present there is only one full-service marina on the island. Further research is necessary to establish whether or not additional marina capacity is necessary. So far, no research on this subject has been carried out and there are no plans to do so in the near future. Additional market research would be necessary to evaluate the potential for marinas and yachting on the Leeward islands, including Bonaire.

Recently, an initiative was launched to start up a small boating yard for the building and repairing of yachts on Bonaire. These kinds of facilities are very important if the island is to successfully develop a marina industry. The Island Government should also consider providing assistance in training technical personnel for the yard.

5 The changes in the EU-OCT agreement with respect to rice and sugar have resulted in the loss of some 50 jobs on Bonaire. As a result, the labour market situation has changed as well.

6 International Centre for Tourism and Hospitality Research, 1997.

At present, the yachting and marina subsector on Bonaire is of very limited economic significance.

As for Curaçao, further market research is necessary to assess whether this subsector's potential is sufficient enough to justify investments and/or other (promotional) efforts.

If so, the Island Government should consider investing in marina infrastructure.

In principle, the private sector should take the initiative, while the TCB could play a central and co-ordinating role in attracting yachts and developing marinas on the island[7]. The government could also, directly contribute to the development of marina infrastructure. Up to now, the TCB has not taken any action in this respect. This should be part of an overall tourism promotion campaign, which falls outside the scope of maritime policy.

Efforts should be made not only to promote Bonaire as a holiday destination, but also to facilitate the registration of yachts on the Netherlands Antilles as this may stimulate yachting on Bonaire. The organisation of an international sailing regatta would help Bonaire to realise its the yachting ambitions.

VI.4.3. PROVISION OF FAVOURABLE PERIPHERAL CONDITIONS

VI.4.3.1. Fiscal measures

Within the *INTEGRATED MARITIME POLICY* scenario no fiscal measures are introduced to stimulate the maritime sector on Bonaire.

VI.4.3.2. Training and education for maritime professions

In the INTEGRATED MARITIME POLICY scenario a phased approach is chosen, geared to market demand for maritime education.

In principle, the training facilities are concentrated on Curaçao.

In principle, maritime education and training in the Netherlands Antilles are concentrated on Curaçao, so as to generate economies of scale. Consequently, no investments are made on Bonaire with regard to training teachers or providing physical infrastructure. As was suggested for other programmes, such as the training of personnel in the tourist sector, existing staff and premises should be used as much as possible. Whenever possible, state of the art methods of 'distant learning' should be employed.

The main tasks for the Island Governments of the other islands are:

- promoting the maritime professions (both seafaring and ashore) and providing information on existing programmes;

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7 It should be emphasised that the island government should not provide guarantees to private (foreign) investors.

- making an inventory of and co-ordinating local demand for maritime education;
- providing (or channelling federal) financial support to students, e.g. in the form contributions towards the cost of living and studying on Curaçao;
- organising short training programmes, such as the existing an d successful programmes leading to a Master/Engine driver restricted certificate' at island level, if local demand is sufficient.

In order for yachting, marinas and related activities to develop successfully, qualified personnel is essential. In the short term skilled staff will probably have to be 'imported'. In the longer run, training programs could be organised, e.g. short technical courses aimed specifically at yacht repairs (after basic polytechnic training), but also courses to train officers for local tourist charter vessels, *etc*.

VI.4.3.3. The promotion of the Netherlands Antilles as a maritime centre

The promotion of the Netherlands Antilles as a maritime centre should become part of an overall promotional campaign, co-ordinated through a national promotional campaign.

As has already been indicated with regard to Curaçao, the promotion of the Netherlands Antilles as a maritime centre should be incorporated into other campaigns, e.g. general investment promotion, or tourism campaigns (Dutch Caribbean). Each island should contribute to the campaign(s), which should emphasise the particular strengths of the individual islands. For Bonaire these strengths currently are the storage and transhipment of crude oil and (cruise and dive) tourism.

VI.4.3.4. Safety and environmental measures

As indicated, ensuring safety in the ports and coastal waters and protecting the (marine) environment are essential for an island such as Bonaire. Its dependence on (dive) tourism is strong and there is little potential for economic diversification.

Special attention should be devoted to the BOPEC terminal in this respect. Moreover, the (further) development of diving and yachting can only be realised within a strict regulatory framework with respect to pollution effects. The formulation and enforcement of this legislation is the principal task of the Island Government, with the assistance of the Coast Guard and the Bonaire Marine Park (STINAPA).

VI.4.3.5. Structure of maritime government services

Because of the limited scale of Bonaire's maritime sector, a separate service for shipping and maritime affairs cannot be justified. A general manager responsible for port policy and strategic planning should be added to the Harbour and Pilotage Service.

As was suggested for the other islands, a small maritime service should be established within the Island Government of Bonaire. Because of the small scale of the maritime sector on the island, this service should consist of only one person. As indicated, a general manager should be added to the Harbour & Pilotage Service (see *Figure VI.1*) to form a new Bonaire Port Authority (BPA). Because of the emphasis on cruise tourism, the BPA should work closely with the Tourist Corporation Bonaire (TCB) and the Service for Economic Affairs. The BPA and TCB should continue to contribute to the Southern Caribbean Group, which coordinates existing international initiatives, the existing international co-operation in the field of cruise tourism.

At island level, the general manager of the BPA should be the chairman of the *Maritime Advisory Board*, comprising representatives of the government, the maritime sector and the labour unions. The structures (PREPCOM) set up for the A-EIS project should therefore be formalised.

VI.5. SCENARIO 5: FRAMEWORK POLICY WITH MARITIME FOCUS

The FRAMEWORK POLICY with MARITIME FOCUS includes measures aimed at:
- *restructuring government;*
- *spurring economic growth;*
- *providing beneficial peripheral conditions;*
- *attracting foreign investment;*
- *supporting specific sectors;*
- *stimulating inter-island trade and traffic*
- *promotion.*

Scenario 5 combines the *INTEGRATED MARITIME POLICY* scenario with an improved *general economic policy* (GEP). In the previous scenario, concrete maritime policy measures were presented. Furthermore, it demonstrated that the development of the maritime sector is closely linked to the general economic situation.

The *FRAMEWORK POLICY with MARITIME FOCUS* scenario, as described in *Chapter V.5.*, mainly includes measures outside the scope of maritime policy. All general measures which apply to Curaçao and the central government are also relevant for Bonaire. For a detailed description, see *Chapter V.5.*

VI.5.1. Measures aimed at restructuring government

Government power is delegated to the level of the islands along the lines of the principle of subsidiarity, and decision making at all levels of government is sped up by reducing bureaucratic procedures. The Island Government of Bonaire is reorganised and, if necessary downscaled.

VI.5.2. Measures aimed at spurring economic growth in general

The government focuses its efforts on the stimulation of service industries. For Bonaire this means a focus on tourism, in particular cruise and dive tourism, and possibly yachting. As a result of the lack of raw materials, the island is not suitable for production activities.

Furthermore the New Fiscal Framework (Nieuw Fiscaal Raamwerk, NFR) also applies to Bonaire. The NFR will result in a lower profit taxation tariff. Moreover, the capital market is liberalised, current investment credit ceilings are removed, and the labour market is restructured.

VI.5.3. Measures aimed at providing beneficial peripheral conditions

As for Curaçao, these measures include: the privatisation of government companies and the liberalisation of telecommunication and utilities, more emphasis on training and education, the reversal of the 'brain drain', and more co-operation and consultation between government and the social partners. Furthermore, the legal framework is modernised, and an objective and uniform instrument for the evaluation of investment projects is developed.

VI.5.4. Measures aimed at attracting foreign investment

National procedures of granting work and residence permits to foreign employees (expatriates) are simplified and sped-up. This also applies to Bonaire. A more favourable fiscal treatment is introduced for foreign investment.

The emphasis and focus of economic and investment policy should be on sectors with the best potential, *in casu* tourism. A campaign to combat the local population's fear of foreigners and promote a better service attitude is not strictly necessary on Bonaire, where the level of service is generally higher.

VI.5.5. SECTOR-SPECIFIC MEASURES

Within the context of formulating policy alternatives for other sectors, a similar approach as that proposed for the maritime sector is recommended for tourism. Some general recommendations are presented below.

VI.5.5.1. Tourism

In addition to being a 'Diver's Paradise' the island should try to generate more revenue from cruise tourism by providing better and more elaborate services and facilities.

Tourism is extremely important for Bonaire's economy. Despite calls for diversification, the island's main source of income is bound to remain tourism. In order to boost (cruise) tourism, local (small-scale) initiatives need to be stimulated and investments in hotels and tourist attractions need to receive support. Bonaire should be promoted and operated as a cruise destination in a concerted action by the maritime sector (BPA) and the tourism sector, represented by the Tourism Corporation Bonaire.

Furthermore, Bonaire should continue to promote itself as a "Diver's Paradise", although environmental concerns have to be taken into account. In addition to the Bonaire Marine Park (STINAPA) with its beautiful underwater attractions, the island has other strengths, such as the National Park 'Washington Slagbaai' and the Flamingo Sanctuaries.

As a result of obvious overcapacity, it will not be necessary to expand the hotel sector on Bonaire.

The Government, both at central and island levels, should not financially support (e.g. by providing guarantees) private investments in the tourist industry, for instance new hotel accommodation. Support for (foreign) investors could take the form of reduction in 'red tape' and the financing and organising of specific training and education programmes for (potential) local employees.

At present, however, there is no need for additional beds on Bonaire: in 1996 the occupancy rate was well below 60%. Moreover, tourism dropped in 1997, due to the expensive US dollar, the high level of indirect taxation and fierce competition by cheaper destinations in the Caribbean and Far East. Nearly 20 approved plans for the expansion of hotel capacity on the island are at present not being carried out.

VI.5.6. MEASURES AIMED AT PROMOTING THE NETHERLANDS ANTILLES

The measures proposed in *Chapter V.5* apply to the Netherlands Antilles in general and therefore for all the (separate) islands.

VII. POLICY SCENARIOS FOR SINT MAARTEN

The current situation in the maritime sector of Sint Maarten is described in *Chapter III.4*. Furthermore, *Volume II* of this *Final Report* (summarised in *Chapter IV* of this volume) provides the results of the external analysis with respect to the competitive position of the port of Sint Maarten.

VII.1. SCENARIO 1: CONTINUATION

Chapter VII.1 presents the assumptions underlying the CONTINUATION scenario for Sint Maarten.

The *CONTINUATION* scenario implies that the situation as of July 1, 1997 will be continued:

- all federal measures will apply to Sint Maarten as well, including the registration of ships, the (special profit and tonnage) taxation system, the lack of an overall policy framework and of efforts to promote to the Netherlands Antilles as a maritime centre;
- the Sint Maarten Ports Authority (SMPA) will remain responsible for the management, operation and development of the port. Neither at the level of Central Government, nor at the level of the Island Government will a maritime policy department or service be installed;
- the Island Government's policy will not so much be structural as project-related, and focused on the expansion of the port[1];
- furthermore, the Island Government will be involved in negotiations with the cruise line industry, represented by the Florida Caribbean Cruise Association (FCCA);
- the physical organisation of the port of Philipsburg will not be changed in the *CONTINUATION* scenario: it is assumed that the

[1] Over the last years, the Island Council has played an active role in supporting the development plans for the port.

port development plan will not be carried out. Thus, no new cruise pier and container terminal will be built[2];

- the damage to the port infrastructure, caused by hurricane "Luis" in 1995, has not been fully repaired yet. As a result, the cargo handling capacity of the port is limited. This situation is assumed to change in the *CONTINUATION* scenario. As the overall plans will not be carried out, for the damages of the existing port infrastructure will only be repaired;
- a 5 US$ head tax for cruise passengers, introduced by the SMPA as for January 1, 1997 in order to finance a part of the port's expansion plans, will remain, effective. However, as the port expansion plans are not included in the *CONTINUATION* scenario, the funds will be used to repair the damages caused by hurricane Luis and finance the construction of the new Capt. Hodge tender pier[3];
- moreover, the 200 Na*f*. 'road tax', levied on incoming containers, will remain valid. Normally, this tax would benefit the Island Government. However, the money is currently being channelled to the SMPA to finance the port expansion project. Instead, like the head tax, these funds are now used to repair the damage caused by the hurricane;
- the SMPA will remain responsible for the provision of pilotage services;
- the island will remain a 'free zone' as no import duties are levied on Sint Maarten and the other Windward islands[4];
- currently, there are no programmes for maritime training and education on Sint Maarten. This situation is assumed to continue in the *CONTINUATION* scenario.

No changes are assumed to occur in the general economic policy of the federal and island governments within the CONTINUATION scenario.

With respect to general economic policy (and the business climate), this scenario assumes that the current conditions will not change (radically): utility prices will remain virtually unchanged, current legislation with respect to residence and working permits will not be relaxed, telecommunications tariffs will remain high, *etc*.

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2 The implementation of the current plans was severely delayed by the slow reaction of the Central Government with respect to the water rights problem.

3 The costs of the construction of the Capt. Hodge pier will amount to 4.7 million US$.

4 Except for natural gas. See International Bureau of Fiscal Documentation (1997), p.85.

VII.2. Scenario 2: Laissez faire

A LAISSEZ FAIRE attitude implies that existing measures aimed at or related to the maritime sector will be discontinued and that no new measures are introduced.

The *LAISSEZ FAIRE* scenario implies that:

- no policy-making department will be established, which means that no maritime policy will be developed, neither at Central Government nor at Island Government level;
- the ships' register will be abolished, the Shipping Inspectorate (SINA) (largely) will become redundant, and the current tonnage tax facility will become superfluous. This will have no direct influence on the maritime sector of Sint Maarten;
- the Island Government will stop its activities and support for the expansion and development of the plans;
- no maritime training and education program will be introduced;
- the Netherlands Antilles will not be promoted as a maritime centre.

A true laissez faire approach calls for the privatisation of the port. However, considering the macro-economic importance of the port to the economy of Sint Maarten, this option is considered unwarranted.

Complete privatisation of the management and operation of the port of Philipsburg is not considered in the *LAISSEZ FAIRE* scenario, on the same grounds as those which apply to Curaçao and the other islands. Because of the macro-economic importance of port infrastructure for the island economy, the creation of any kind of (unregulated) private monopoly in the port is not recommended[5].

With respect to general economic policy the same assumptions are made as in the *CONTINUATION* scenario.

VII.3. Scenario 3: Register Plus

The REGISTER PLUS scenario covers a set of measures aimed at stimulating activities related to the registration of ships.

However, considering the absence of such activities on Sint Maarten, the effects of the REGISTER PLUS scenario may reasonably be assumed to be limited to Curaçao.

The *REGISTER PLUS* scenario is not expected to have a significant impact on the maritime sector of Sint Maarten. Although the ship's register enables ship owners to register ships on Sint Maarten, this has not led to significant related activity (notary, trust companies) on the island so far. The same applies to the other Windward islands. The effects of the *REGISTER PLUS* scenario are therefore expected to be limited to Curaçao with respect to merchant shipping.

[5] Considering the small scale of the port, a monopoly is the most likely outcome of a privatisation process.

However, in the *REGISTER PLUS* scenario, the registration of yachts in the Netherlands Antilles is facilitated and promoted. This could have a positive impact on yachting, marinas, boat yards, *etc*. Sint Maarten already has significant activities in this area, which they suffered from the hurricanes in 1995 and 1996. Improved registration facilities alone are not expected to boost yachting and marinas on Sint Maarten either. In order to restore the pre-hurricane situation, a more integrated approach towards (yachting and) tourism is necessary. At present, no such policy exists with respect to the marine industry on Sint Maarten.

VII.4. SCENARIO 4: INTEGRATED MARITIME POLICY

Central to the INTEGRATED MARITIME POLICY scenario for Sint Maarten are the plans for the expansion and improvement of the port of Philipsburg.

The *INTEGRATED MARITIME POLICY* scenario aims to develop 'onshore' maritime activity on Sint Maarten. Central to the discussion concerning the development of maritime activities on Sint Maarten, are existing plans to reorganise and expand the harbour facilities in Great Bay[6]. These plans focus on two activities: cruise tourism and container transhipment.

Whether or not development in these areas is successful, will largely be determined by factors outside the (sphere of influence of the) island, namely developments in international liner shipping and cruise tourism. Opportunities for the development of other maritime activities on Sint Maarten will depend on these two central activities in the port.

These plans focus on:

- *cruise tourism;*
- *container transhipment.*

For both paths, the chances of success and the potential economic impact were determined in the external analysis. The conclusions of this analysis are presented in Chapter IV.

In *Volume II* of this *Progress Report* a detailed analysis of the competitive position of Sint Maarten is presented. Its conclusions are summarised in *Chapter IV*. In the *INTEGRATED MARITIME POLICY* scenario, plans for the expansion of the port are evaluated[7]. For both paths, container transhipment and cruise tourism, the chances of success and the potential economic impact are determined.

6 The project is jointly financed by the SMPA, local and Dutch banks, and KabNA.

7 The port expansion plans approved by the Island Government of Sint Maarten. However, funding for the project has not yet been finalised completely. The water rights problem seems to have been solved. The construction work was due to start mid-November 1997.

VII.4.1. *THE FACILITATION OF ECONOMIC GROWTH IN GENERAL*

Three aspects are considered in the context of the facilitation of economic growth in general:
- *port organisation;*
- *inter-island shipping;*
- *cruise tourism.*

Like many island economies, Sint Maarten is characterised by a predominance of service industries, as the possibilities for production industries are limited. One of the principal tasks of the maritime sector (and other transportation sectors) is to *support* the economy with efficient infrastructure and transportation services. However, the maritime sector cannot be expected to *induce* internal economic growth (outside the maritime sector) on Sint Maarten.

VII.4.1.1. *Port organisation*

It is recommended that the existing 'landlord port' structure should be continued into the future.

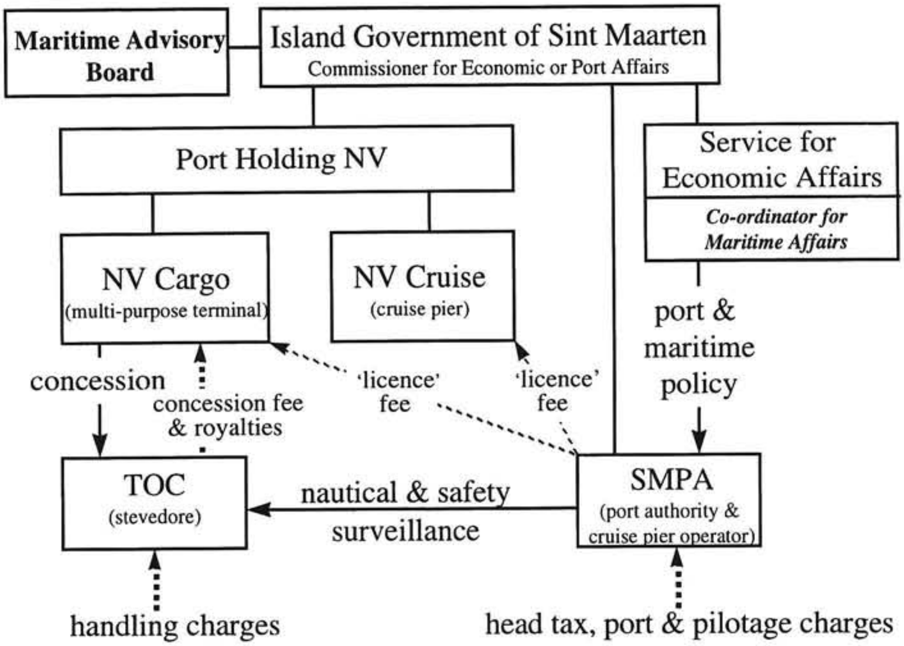
In the *INTEGRATED MARITIME POLICY* scenario, large investments in Sint Maarten's port infrastructure are considered. As well as the construction of new infrastructure, a new port organisation concept should be considered.

At present, as indicated in *Chapter III*, the port of Philipsburg can be characterised as a 'landlord port':

- the Sint Maarten Ports Authority (SMPA) is the owner of the terminal infrastructure (quays and storage area), while the only crane is owned by one of two principal agent/stevedoring companies. The crane is also used by the other stevedore, while the container terminal is a common user facility;
- with respect to the cruise segment, the pier that was used to berth cruise vessels was destroyed by hurricane Luis. As a result, the cruise lines and their passengers have to rely on tender services, offered by a private operator to reach the shore. The SMPA has built a small pier for tenders and some basic reception facilities in the centre of Philipsburg.

It is recommended that, after the completion of the port investment plans, the port of Philipsburg remains a landlord type port, albeit operated in a different organisational constellation (see *Chapter IV* and *Figure VII.1.*).

Figure VII.1 : Proposed government structure and port organisation Sint Maarten.



Source : Policy Research Corporation N.V.

In the future, the newly-constructed multi-purpose cargo terminal and cruise pier would be owned by two special-purpose companies (SPCs), the 'NV Cargo' and the 'NV Cruise'. In turn, these SPCs would be controlled by a holding company owned by the Island Government. This construction was apparently set up for reasons to do with financing the investment project.

The Sint Maarten Port's Authority (SMPA) should remain responsible for the technical and nautical management, as well as the safety in the port. This implies that the SMPA will provide pilotage services. Moreover, the SMPA should operate the new cruise pier, collecting the head tax and other port charges. As discussed in more detail in *Chapter IV.2.2*, the multi-purpose terminal should be operated as a common-user facility. The NV Cargo should therefore lease out the terminal to a Terminal Operating Company (TOC) for a ten to fifteen year term, on the basis of a revenue-sharing formula. Although this TOC would have the exclusive right to operate the terminal, it is obliged to serve all shippers, shipping companies and their agents on the basis of the terms set out in the lease agreement.

A Co-ordinator for Maritime Affairs in the *Service for Economic Affairs* will be responsible for the development of a port and maritime policy which will provide the players in the port with guidance and objectives. This co-ordinator should also be responsible for the development of port policy on the other Windward Islands, and would thus report to all three Windward Island Councils. The Maritime Co-ordinator should have regular contacts with the Harbour Masters of both Statia and Saba, in order to benefit from their knowledge of local circumstances. Moreover, the Co-ordinator for Maritime Affairs should be the chairman of the *Advisory Board for Maritime Affairs* of the Windward islands.

VII.4.1.2. Inter-island shipping

Inter-island shipping services can be an important form of infrastructure for an island nation like the Netherlands Antilles.

A number of measures to facilitate and support such a service are included in the INTEGRATED MARITIME POLICY scenario.

At present, there is no scheduled direct service between Sint Maarten and the Leeward islands. Most cargo between the Leeward and Windward islands is transhipped by international lines based in Trinidad, Puerto Rico or Jamaica. Every now and then a small vessel makes the trip on a charter basis. This charter service is only slightly cheaper than the (indirect) services of the international shipping lines. The principal problem with regard to establishing a direct scheduled service is the lack of return freight from the Windward islands: there is hardly any production on the islands and no consolidation activities are performed by stevedores on Sint Maarten.

As was concluded in *Chapter V* and *Annex E*, even on the basis of optimistic traffic projections, a regular weekly inter-island shipping service between the Leeward islands and the Windward islands would not be feasible unless it was hugely subsidised. An inter-island shipping connection is therefore not included in the EIS® calculations for the *INTEGRATED MARITIME POLICY* scenario for Sint Maarten.

The connections between Sint Maarten and the other Leeward islands, more specifically Statia and Saba, are mostly unscheduled or tourism-related (small ferries). The ferries from Sint Maarten to Saba carry about 50 day-trippers and divers each way per day. Only irregular dedicated cargo services exist between the Dutch and other Windward islands.

The potential for inter-island shipping connections between the Dutch and other Windward islands should be investigated further. Especially with respect to the transportation of tourists (and irregular cargo), a number of feasibility studies could be performed, while the start-up of a pilot project could be considered. The possibilities of having an overflow of (cruise) tourists from Sint Maarten to neighbouring islands, such as Saba and Statia, should be investigated. Even limited numbers of tourists would already have a considerable impact on the economy of these small islands.

VII.4.1.3. Cruise tourism

For the maritime sector of Sint Maarten cruise tourism is in fact the most significant external impulse.

In the INTEGRATED MARITIME POLICY scenario, the provision of improved passenger reception facilities, a new pier, is evaluated on the basis of its macro-economic effects.

The maritime sector can stimulate *external* impulses for economic growth, among which cruise tourism is the most important. Geographically, Sint Maarten is ideally located in the Caribbean cruise market, and cruise tourism is an important factor in the island's economy. It is in this area that the provision of an attravtive (maritime and island) product can attract more ships and passengers (see *Chapter IV*).

To this end the Sint Maarten Ports Authority (SMPA) plans to construct new cruise facilities, more precisely a pier with berthing places for up to five mega cruise ships. The aim of the SMPA is to combine a cruise strategy and a subregional hub strategy with respect to the transhipment of containers. The total investment costs are estimated at 60 million US$. The effects and considerations with respect to the multi-purpose cargo terminal are further discussed in *Chapter VII.4.2*.

However, in order to maintain the existing basis for cruise tourism, absolute priority should be given to the introduction of a number of flanking measures than to the construction of a new pier.

If no measures are introduced to improve the 'product Sint Maarten', lower growth rates are expected to be realised.

In conclusion: the top priority for the island of Sint Maarten is to upgrade the island product, in order to keep attracting large numbers of cruise tourists in the future, and make the development of cruise tourism sustainable.

On the basis of these conclusions, the proposed cruise pier is included in the *INTEGRATED MARITIME POLICY* scenario, and its economic impact is calculated in the EIS®. The construction of the new cruise pier is not considered a top priority (by the cruise lines). Instead, the possible restoration of the old pier should be investigated, while alternative plans for the development of the port should be considered.

Top priority should be given to the introduction of a number of flanking measures, in order to maintain the existing basis for cruise tourism. In brief, cruise tourism is about to reach its maximum potential on the island. If no measures are introduced to improve the 'product Sint Maarten', lower growth rates are likely.

Figure VII.2 : External analysis: conclusions with respect to cruise tourism on Sint Maarten

- The projected annual growth for the Caribbean cruise market between 1996 and 2005 is ±10% (passenger visits).
- The projected annual growth for the Eastern Caribbean cruise market between 1996 and 2005 amounts to ±9% (passenger visits).
- As a result of the damages caused by hurricane 'Luis', Sint Maarten has lost market share within the Eastern Caribbean cruise market.
- The construction of cruise facilities at Great Bay is expected to enable Sint Maarten to maintain its present market share, and possibly even improve towards the 'before-Luis' level of passenger visits.
- This means that some 100 000 additional passenger visits can reasonably be expected to be generated by the new cruise facilities.
- Notwithstanding its expected positive effects, the construction of the new cruise pier is not considered a top priority by the cruise lines for the further development of cruise tourism on Sint Maarten. An alternative could be to restore the old pier.
- In consultation with the cruise lines, the island of Sint Maarten should address other problems first. The basis for the continued success as a cruise destination has to be secured by adressing these other problems. Failure to address these problems is expected to result in a considerably lower growth of cruise tourism on Sint Maarten.
- For instance, priority should be given to solving the congestion in the town Philipsburg by means of a new traffic plan, providing a wider range of attractions, and improving the quality of taxi service and guided tours.

Source : Policy Research Corporation N.V.

Most of these flanking measures, aim to develop Sint Maarten as a tourist 'product'.

For instance, a new traffic plan should be drawn up for the town of Philipsburg in order to solve the existing problems of congestion. Moreover, the quality of the roads in general leaves much to be desired on the island. One measure could be to turn Front Street into a pedestrian zone. According to a recent survey among cruise tourists more public phones, automatic teller machines (ATM), sanitary facilities and rubbish disposal points should be installed in the tourist part of Philipsburg[8].

The education and training of personnel in the tourist sector is of crucial importance as well.

The education and especially the training of personnel is an important factor as well. The people of Sint Maarten have a favourable attitude towards cruise tourism, and are generally considered very nice and helpful by cruise passengers. Nevertheless, employees in service professions can be trained to provide more information and a higher level of service. Moreover, the above mentioned survey also pointed out that cruise tourists often feel harassed by street vendors and distributors of flyers. An important occupational group in this respect are the island's taxi-drivers. In co-operation with cruise lines, the island should train its taxi-drivers to act as tour-guides as well.

Considering the impact of cruise tourism development on the island economy, special attention is to be given to the labour market.

Finally, the expected development of cruise tourism on Sint Maarten will have a substantial impact on the island's overall economy (see *Chapter X*). The effects on the labour market call for special attention of the Island Government: an active labour market policy is necessary. This includes the close monitoring of the development of supply and demand, both quantitatively and qualitatively (education level). In order to be able to meet the future demand for qualified personnel, the development of a balanced training programme is essential.

8 See CBS (1997)

VII.4.2. STIMULATION OF ACTIVITIES IN THE MARITIME SECTOR

The INTEGRATED MARITIME POLICY scenario for Sint Maarten considers the following activities:
- *the transhipment of containers;*
- *ship management activities;*
- *bunkering;*
- *ship chandling;*
- *yachting and marinas;*
- *ship repair.*

Once again, the stimulation of activities in the maritime sector can only concern activities which do not depend on the development of the local economy, namely:

- the transhipment of containers;
- ship management activities;
- bunkering services and facilities;
- ship chandling;
- yachting and marinas;
- ship repair.

VII.4.2.1. Transhipment of containers

In the INTEGRATED MARITIME POLICY scenario for Sint Maarten the recommendations with respect to the multi-purpose terminal facilities, summarised in Figure VII.3., are assumed to be realised: new multi-purpose cargo terminal facilities are built in combination with the cruise reception facilities.

At present, Philipsburg is a relatively minor player amongst Caribbean cargo ports. With 26 700 container moves in 1996 with regard to containerised cargoes Philipsburg belongs to the group of small to medium-sized container ports in the Caribbean that show more ambition than traffic potential. The conclusions of the external analysis performed by *Policy Research* with respect to Sint Maarten's competitive position as a subregional transhipment hub are summarised in *Figure VII.3.* A more elaborate presentation of the results, conclusions and recommendations is provided in *Chapter IV.*

However, a phased expansion of the cargo terminal is recommended.

In the *INTEGRATED MARITIME POLICY* scenario for Sint Maarten the recommendations with respect to the multi-purpose cargo terminal facilities (see *Figure VII.3.*) are assumed to be implemented. It should be clear that the investments in the multi-purpose cargo terminal recommended by *Policy Research* are less considerable than those proposed in the original SMPA plan. A phased expansion of cargo handling facilities is recommended (see *Chapter IV* and *Volume II*).

Figure VII.3 : External analysis: conclusions with respect to transhipment on Sint Maarten

- A revised first phase of a new multi-purpose terminal is to be implemented, with an equivalent capacity of approximately 100 000 container moves.

- The first phase of the multi-purpose terminal is to provide 225 meters of berth length with a draft of 10 metres alongside and 40 000 m² terminal area. The required investment in infrastructure and superstructure is estimated at 12-14 million US$.
- The multi-purpose terminal is to be equipped with a second HD-mobile harbour crane and additional reach-stackers or front-end loaders to be provided by the Terminal Operating Company.
- The multi-purpose terminal is to be operated as a common user facility by a single Terminal Operating Company which is obliged to serve all parties on the basis of the terms and tariffs set in the lease agreement.
- SMPA as landlord tenders the multi-purpose terminal either locally or on an internationally competitive basis for a 10-15 year period.
- The lease rent for the multi-purpose terminal is to be agreed on the basis of a revenue-sharing formula.
- The Terminal Operating Company is eventually to set its own tariffs without interference from SMPA or other authorities. Only tariffs for local cargoes would require SMPA approval.
- Other SMPA tariff schedules are to be revised, restructured and simplified.
- SMPA is to develop without delay a realistic marketing strategy to be jointly implemented and occasionnaly revised by SMPA and the nominated Terminal Operating Company.

Source : Policy Research Corporation N.V.

The economic impact on the island's economy is estimated in the *Economic Impact Study* (EIS®). The aim is to evaluate whether the proposed investments can be justified by the generated economic impact in terms of value added, employment and backflow to the government.

VII.4.2.2. Ship management activities

Ship management is not identified as a subsector with large potential on Sint Maarten. Therefore, no specific measures are introduced to support it.

At present, no ship management activities are carried out on Sint Maarten. Neither Sint Maarten nor Curaçao, can offer decisive advantages to attract shipping companies or specialised ship managers: Sint Maarten is not a *maritime centre*, and is not very likely to become one. Therefore, no measures to support or attract those kinds of activities are introduced in the *MARITIME FRAMEWORK POLICY* scenario.

VII.4.2.3. *Bunkering services and facilities*

Because of the limited potential, the provision of bunkering services is not considered a (government) priority in the INTEGRATED MARITIME POLICY scenario for Sint Maarten.

Currently, no bunkering services for sea-going vessels are provided in the port of Philipsburg. Even in the port expansion plans bunkering facilities are not included. Apparently, plans exist to provide bunkering services with barges.

Ships, especially cruise ships, are expected to bunker in the cheapest port. Sint Maarten is not likely to be the cheapest supplier, considering that crude oil has to be imported in relatively small volumes. Moreover, the nearby Statia Oil Terminal on Statia provides convenient bunkering facilities at very competitive prices. The possibilities for co-operation in this respect should be investigated.

In brief, the provision of bunkering services is not considered in the *INTEGRATED MARITIME POLICY* scenario. Nevertheless, private initiatives in this respect should be supported.

VII.4.2.4. *Ship chandling*

There is only limited potential for ship chandling in the port of Philipsburg. Consequently, no measures to support this sub-sector are included in the INTEGRATED MARITIME POLICY scenario.

The market potential for ship chandling is limited. As the entire island is duty free, most yachts buy their own provisions in local supermarkets. Ships operating internationally generally buy in cheaper ports and only occasionally use chandlers for 'emergency purchases'. Cruise ships calling at Sint Maarten are generally on one-week trips and buy all their provisions in their (cheaper) home ports (Miami, San Juan).

VII.4.2.5. *Yachting and marinas*

Notwithstanding the economic importance of the yachting and marina industry, no relevant government policy currently exists.

At present, the yachting and marina business, the 'marine industry', is an important factor in Sint Maarten's economy. Nevertheless, no government policy has been developed in this area. The rapid growth of this sector levelled off after the hurricanes of 1995 (Luis) and 1996. As yet some of the damage has not been repaired.

It is recommended that the government should take a more active approach, even to the extent of considering investing in marina infrastructure itself.

The government itself can consider investing in this sector, but can also provide incentives, e.g. in the form of tax holidays, for private investment in the restoration and expansion of the marine business.

Furthermore, in a joint effort by the Island Government and the private sector (Marine Trades Association), Sint Maarten should be promoted as an affordable and pleasant yachting destination. However, promotion falls within the scope of tourism, rather than the maritime sector and is thus not the responsibility of a maritime administration. (Private) initiatives such as the annual Heineken Regatta are an excellent way to promote yachting on Sint Maarten.

Clearly, the (marine) environment has to be protected so regulations will have to be imposed and enforced, e.g. with respect to sewage and waste disposal.

VII.4.2.6. Ship repair

Currently, ship repair facilities mainly cater for the yachting sector. No specific measures are introduced further to stimulate this activity. An exception could be made for technical training and education, so as to provide the sector with local skilled labour.

At present, ship repair facilities mainly cater for the yachting sector. This subsector consists of the Caribbean Dry Dock NV and a number of marina wharves. The future growth of this subsector is closely linked to the development of yachting on the island. Measures aimed at stimulating the marine industry will therefore also benefit the repair sector. Considering the competition of other wharves in the region, e.g. on Curaçao and Cuba, investments in ship repair facilities for sea-going vessels are not recommended.

One important form of support is the financing and/or provision of technical training and education in order to provide the sector with local skilled labour.

VII.4.3. PROVISION OF FAVOURABLE PERIPHERAL CONDITIONS

VII.4.3.1. Fiscal measures

No additional fiscal measures to support the maritime sector are introduced in *the INTEGRATED MARITIME POLICY* scenario.

VII.4.3.2. Training & education for maritime professions

In the INTEGRATED MARITIME POLICY scenario a phased approach is chosen, geared to market demand for maritime education.

In principle, the training facilities are concentrated on Curaçao. However, if local demand on the Windward Islands is substantial enough, short training programmes could be organised at island level.

In principle, maritime education and training in the Netherlands Antilles is concentrated on Curaçao so as to generate economies of scale. Therefore, no investments are made in the training of teachers or in physical infrastructure. The main tasks for the Island Governments of the other islands in this respect are:

- promoting the maritime professions (both seafaring and ashore) and providing information on existing programmes;
- making an inventory of and co-ordinating local demand for maritime education;
- providing (or channelling federal) financial support to students, e.g. contributions towards the cost of living and studying on Curaçao.

If local demand on the Windward Islands is substantial enough, short training programmes could be organised at island level. As indicated, the post-graduate training of technical personnel for the yacht repair industry could be considered.

VII.4.3.3. Promotion of the Netherlands Antilles as a maritime centre

The promotion of the Netherlands Antilles as a maritime centre should become part of an overall promotional campaign, co-ordinated through a national promotional campaign.

The promotion of the Netherlands Antilles as a maritime centre should be co-ordinated closely between the islands. Each island should contribute to the joint campaign, emphasising the particular strengths of the individual islands. For Sint Maarten these strengths currently are (cruise) tourism and yachting.

VII.4.3.4. Safety and environmental measures

the protection of its coastal waters and marine environment is essential for a tourism-dependent island like Sint Maarten.

As indicated, guaranteeing safety in the ports and coastal waters and protecting the (marine) environment are essential for an island like Sint Maarten. Its dependence on tourism is strong, and there is little potential for economic diversification.
Special attention in this respect should be devoted to the yachting and marina industry: the (further) development of diving and yachting can only be realised within a strict regulatory framework with respect to pollution effects. The formulation and enforcement of this legislation is a principal task of the Island Government.

VII.4.3.5. Structure of maritime government services

Taking into consideration the very small scale of maritime activities on Statia and Saba, a joint Co-ordinator for Maritime Affairs, based on Sint Maarten should be responsible for all Windward Islands.

Moreover, the Co-ordinator for Maritime Affairs should be the chairman of the Advisory Board for Maritime Affairs of the Windward islands.

A *Co-ordinator for Maritime Affairs* should be appointed within the Island Government of Sint Maarten. This co-ordinator should also be responsible for the other Windward Islands, and should thus report to all three Windward Island Councils. Because of the relatively small scale of the maritime sector on the islands, this co-ordinator should work alone, possibly with an assistant. The co-ordinator is part of the island's *Service for Economic Affairs*. Moreover, the Co-ordinator for Maritime Affairs should be the chairman of the *Advisory Board for Maritime Affairs* of the Windward islands.

The basis for this Maritime Advisory Board should be the existing Sint Maarten Committee for Maritime Affairs, which should be extended to include representatives from the maritime sectors of Statia and Saba.

The basis for this *Maritime Advisory Board* should be the already existing *Sint Maarten Committee for Maritime Affairs*[9]., which comprises government representatives and maritime entrepreneurs and should provide the co-ordinator with support and advice. The Sint Maarten Maritime Committee has to be extended to include representatives from the maritime sectors of Statia and Saba. Moreover, the co-ordinator should also have regular contact with the *Harbour Masters* of both Statia and Saba in order to profit from their knowledge of local circumstances. To this end, the Harbour Masters should represent their respective islands on the *Maritime Advisory Board*.

9 This Sint Maarten Maritime Committee stems from the Preparatory Committee which was set up to provide input for the A-EIS project.

This task force should be an integral part of the Service for Economic Affairs, while close co-operation with the Tourist Office and the Marine Trades organisation is recommended.

Because of the emphasis on cruise tourism and yachting, the co-ordinator should work closely with the Tourist Office and the Marine Trades Association. Administrative and operational assistance are be provided by Economic Affairs and the Sint Maarten Ports Authority (SMPA), which will remain also a government service as well.

The SMPA should remain responsible for the operation and day-to-day management of the new port and report to the *Service for Economic Affairs*, which represents the Island Council and is responsible for the island's port policy(see *Figure VII.1*). The Harbour Master should represent the SMPA in the *Maritime Advisory Board*, which advises the Maritime Co-ordinator and the Island Government.

VII.5. SCENARIO 5: FRAMEWORK POLICY WITH MARITIME FOCUS

The FRAMEWORK POLICY with MARITIME FOCUS includes measures aimed at:
- *restructuring government;*
- *spurring economic growth;*
- *providing beneficial peripheral conditions;*
- *attracting foreign investment;*
- *supporting specific sectors;*
- *stimulating inter-island trade and traffic;*
- *promotion.*

The *INTEGRATED MARITIME POLICY* scenario covers the expansion and upgrading of the port of Philipsburg. One of the principal aims of these investments is to attract more cruise tourism. However, in order to be successful, the provision of good port infrastructure has to be flanked by other measures. These flanking measures are mostly outside the scope of maritime policy.

The *FRAMEWORK POLICY with MARITIME FOCUS* scenario, as described in *Chapter V.5.*, mainly includes measures outside the scope of maritime policy. All general measures which apply to Curaçao and the central government, are also relevant for Sint Maarten. For a detailed description, see *Chapter V.5.*

VII.5.1. MEASURES AIMED AT RESTRUCTURING GOVERNMENT

Government power should be delegated to the level of the islands along the lines of the principle of subsidiarity, and decision-making at all levels of government needs to be sped up by reducing bureaucratic procedures. The Island Government of Sint Maarten is to be reorganised and, if necessary downsized.

VII.5.2. Measures aimed at spurring economic growth in general

The government should concentrate its efforts on the stimulation of service industries. For Sint Maarten this means a focus on tourism, both stay-over and cruise tourism, and possibly yachting. As a result of the lack of raw materials, production industries should not be promoted, especially if they compete with tourism.

Furthermore the New Fiscal Framework (NFR) will also apply to Sint Maarten. The NFR will result in a lower profit taxation tariff. Moreover, the capital market is liberalised, current investment credit ceilings will to be removed, and the labour market is restructured.

VII.5.3. Measures aimed at providing beneficial peripheral conditions

As for Curaçao, these measures should include: the privatisation of government companies and the liberalisation of telecommunications and utilities, more emphasis on training and education, the reversal of the 'brain drain', and more co-operation and consultation between government and the social partners. Furthermore, the legal framework should be modernised, and an objective and uniform instrument for the evaluation of investment projects is to be developed.

VII.5.4. Measures aimed at attracting foreign investment

In brief, support for foreign investment can take the form of:

- a clear foreign investment fiscal policy, based on the granting of tax holidays;
- fast decision-making and the removal of bureaucratic obstructions, with respect to the granting of tax holidays and of work and residence permits to foreign employees (ex-patriates) *etc.*;
- the Island Government should not provide (foreign) investors with guarantees: entrepreneurs should bear their own investment risk;
- support with respect to the training and education of local employees.

The emphasis and focus of economic and investment policy should be on the sectors with the best potential, *in casu* tourism. Unlike on Curaçao, a campaign to combat the local population's fear of foreigners and promote a better service attitude is not strictly necessary on Sint Maarten, where the attitude towards tourists is more friendly, and the level of service generally higher.

VII.5.5. *SECTOR-SPECIFIC MEASURES*

In order to formulate policy alternatives for other sectors, a similar research approach similar to that currently applied to the maritime sector is recommended for the tourism sector. In the text below some general recommendations are presented.

VII.5.5.1. Tourism

The 'product Sint Maarten' has to be upgraded in order for the island to continue to attract tourists. This holds for both stay-over and cruise tourism.

Congestion problems have to be addressed while additional attractions should be offered. This will also increase the revenue-generating potential of the island with regard to tourism.

Tourism is of great importance for Sint Maarten's economy, as the island has little opportunity for diversification. For the island to continue to attract (even larger numbers of) cruise passengers, the 'product Sint Maarten' needs to be upgraded. The island should be able to offer a larger variety of attractions and activities. To achieve this, local (small-scale) initiatives need to be stimulated and investments in hotels and tourist attractions should be supported by the government. This will also increase the revenue related to cruise tourism, which at present is relatively limited in comparison to that generated by stay-over tourism.

The Government, both at central and island levels, will not *financially* support (e.g. through direct subsidies or guarantees) private investments in the tourist industry, for instance new hotel accommodation. Support to (foreign) investors could, however, take the form of tax holidays, a reduction in 'red tape' and financing and organising specific training and education programmes for local employees.

The sustained promotion of the island as a cruise destination is warranted the upgrading of the island. As such a promotion conform joint efforts of all relevant sectors of the economy: maritime sector, hotel and restaurant sector, marine industry, the entertainment sector. An integrated promotional effort is called for. The establishment of a Sint Maarten Cruise or Tourism Association is strongly recommended. In the *INTEGRATED FRAMEWORK with MARITIME FOCUS* scenario, this joint promotion campaign is assumed to be realised.

VII.5.6. MEASURES AIMED AT PROMOTING THE NETHERLANDS ANTILLES

The measures proposed apply to the Netherlands Antilles in general and therefore to all the (separate) islands.

VIII. POLICY SCENARIOS FOR STATIA

VIII.1. SCENARIO 1: CONTINUATION

In this chapter the policy scenarios are adapted to the particular situation on Statia.

Chapter VIII.1 describes the CONTINUATION scenario for Statia.

The *CONTINUATION* scenario implies that the situation as of July 1, 1997 will be continued:

- all federal measures will apply to Statia as well, including the registration of ships, the (special profit and tonnage) taxation system, the lack of an overall policy framework and of efforts to promote the Netherlands Antilles as a maritime centre;
- the Island Government will remain responsible for the management, operation and development of the port. The administrative and other executive tasks which mainly concern the collection of harbour fees and administration of cargo movements in the port will be performed by the *Harbour Service*;
- the physical organisation of the port of Statia will not be changed in the *CONTINUATION* scenario. So far, plans for further investments in the port have not advanced beyond the planning stage;
- in its budget, the Island Government of Statia at present does not reserve funds for port maintenance, investments, or even depreciation. The necessary investments have historically been financed thanks to development aid (mainly provided by KabNA, e.g. the purchase of a new harbour boat). This practice is carried through in the *CONTINUATION* scenario;
- the recently introduced mooring fee for yachts, will continue to be levied in order to generate income for the port, even though it offers no facilities;
- the island will remain a 'free zone' *de facto*, as no import duties are levied on Statia;[1]

[1] Except for natural gas. See International Bureau of Fiscal Documentation (1997), p.85.

- the current activities of the privately-owned Statia Oil Terminal (SOT) will be continued. The SOT is an oil storage and transhipment terminal, with a crude oil storage capacity of 16 million barrels (see *Chapter III*). In addition, SOT offers cheap bunkers and white oil products (produced in a new small refinery);
- the SOT at present provides pilotage and towing services to ships calling at the oil terminal (barges, jetty). The Harbour master acts as pilot for ships in the port, although this is only occasionally necessary. This practice will be continued in the future;
- currently, there are no programmes for maritime training and education on Statia. This situation is assumed to continue into the future.

No changes are assumed to occur in the overall economic policy of the federal and island governments within the CONTINUATION scenario.

With respect to the overall economic situation, this scenario assumes that current conditions will not change (radically): production and investment will remain low, utility prices remain virtually unchanged, current legislation with respect to residence and work permits will not be relaxed, telecommunications tariffs will remain high, *etc*.

VIII.2. SCENARIO 2: LAISSEZ FAIRE

A true laissez faire approach would imply the privatisation of the port. However, considering the macro-economic importance of the port to the island's economy this option is considered unsuitable for Statia.

A complete *LAISSEZ FAIRE* scenario for Statia would simply imply that the operation and management of the port were privatised. However, complete privatisation of the management and operation of the port of Oranjestad is not considered in the *LAISSEZ FAIRE* scenario, on the same grounds as those which apply to Willemstad and the other ports. Because of the macro-economic importance of port infrastructure for the island economy, the creation of any kind of (unregulated) private monopoly in the port[2] is not advisable.

Moreover, because of the small scale of the port, it is considered highly unlikely although not impossible that a private operator would be found[3]. A pure *LAISSEZ FAIRE* scenario is therefore not considered for Statia.

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2 Considering the small scale of the port, a monopoly is the most likely outcome of any privatisation process.

3 There is some room for increasing revenue by raising tariffs, as well as for cutting cost by reducing the number of the staff.

VIII.3. Scenario 3: Register Plus

The REGISTER PLUS scenario covers a set of measures aimed at stimulating activities related to the registration of ships.

However, considering the absence of such activities on Statia, the effects of the REGISTER PLUS scenario are reasonably assumed to be limited to Curaçao.

The *REGISTER PLUS* scenario is not expected to have any impact on Statia's maritime sector. Although the ship's register enables ship owners to register ships on the island, so far this has not led to significant related activity (notary, trust companies). The effects of the *REGISTER PLUS* scenario are therefore expected to be limited to Curaçao.

VIII.4. Scenario 4: Integrated Maritime Policy

The INTEGRATED MARITIME POLICY scenario consists of three tracks:
- *the facilitation of economic development in general;*
- *the stimulation of activities in the maritime sector;*
- *the provision of beneficial peripheral conditions.*

As for the other islands, the *integrated maritime policy* is based on three tracks:

1. facilitating (externally generated) economic growth in general;
2. stimulating activities in the maritime sector;
3. providing favourable peripheral conditions.

VIII.4.1. Facilitating economic growth in general

VIII.4.1.1. Traffic volumes and port capacity

Four aspects need to be considered with regard to the facilitation of economic growth in general:
- *transportation needs and port capacity;*
- *port organisation;*
- *inter-island shipping;*
- *cruise tourism.*

The possibilities with regard to generating internal economic growth on Statia are limited, even more so than for Bonaire and Sint Maarten. As indicated in *Chapter III*, the port, airport, and oil terminal are considered to be the corner stones of Statia's economy. Considering the limited growth potential for the island's economy, the quality and capacity of the port are expected to meet the island's transportation needs now and in the foreseeable future[4]. At present, the island population numbers 2 500, as opposed to over 12 000 in the past. Thus, the autonomous development of Statia's economy will not require large investments in port infrastructure, considering the current idle capacity of the port.

4 Investments made in the past have not led to an ideal layout of the port with respect to the prevailing wind and wave conditions. Notwithstanding its less than optimal situation the port is not considered a bottleneck in the development of the island.

The major investments needed to enable larger vessels to call at the Port of Oranjestad, cannot be justified in view of the small volume of traffic to and from the island.

The existing infrastructure suffices to meet the island's transportation needs now and in the foreseeable future.

Currently, only relatively small conventional and ro/ro cargo vessels can be handled in the port. As a result, Statia depends on transhipment on Sint Maarten for the provision of supplies, which results in higher transportation costs and a higher price level on the island. However, very substantial investments in the port would be required to enable larger vessels to berth, while the effects on the island's price level are expected to be merely marginal. Such investments cannot be justified, and are therefore not included in this scenario.

VIII.4.1.2. Port organisation

The Harbour Service, headed by the Harbour Master, would remain responsible for the day-to-day management of the port.

In close consultation with the Harbour Masters of Statia and Saba, the Co-ordinator for Maritime Affairs would be responsible for the development of a maritime policy for the Windward islands.

The *Harbour Service*, headed by the Harbour Master, should remain responsible for the day-to-day management, the collection of harbour fees, and safety in the port. The *Harbour Service* is to remain part of the Island Government, while the size of its staff should be reduced as much as possible. Finally, the Harbour Master should be a member of the *Maritime Advisory Board* for the Windward Islands.

As indicated in *Chapter VII*, a *Co-ordinator for Maritime Affairs* should be appointed within the Island Government of Sint Maarten. This co-ordinator should also be responsible for the development of port policy for the other Windward Islands, and would report to all three Windward Island Councils. The *Maritime Co-ordinator* should have regular contacts with the Harbour Masters of both Statia and Saba, to benefit from their knowledge of local circumstances.

Given its importance for the island economy, Statia Oil Terminal would continue its operations.

The Statia Oil Terminal (SOT) is expected to continue its operations, including the provision of agency, pilotage and towing services to ships visiting its facilities. Although the Island Government of Statia may hold the opinion that the direct revenue generated by the presence and maritime operations of the SOT is limited, the importance of the terminal for the island's economy is evident from the figures presented in *Chapter III*. Over 300 jobs are directly and indirectly related to the SOT, its impact on the island's economy is considerable.

Nevertheless, the Island Government's options with regard to the re-negotiation of the SOT contract seem limited.

Considering the economic importance of the SOT and the validity of the existing agreement, the Island Government's options with regard to the re-negotiation of the contract seem limited.

VIII.4.1.3. Inter-island shipping

Inter-island shipping services can be an important form of infrastructure for an island nation such as the Netherlands Antilles. However, calculations have shown that a service between the Leeward islands and the Windward islands would not be profitable.

The stimulation of inter-island shipping is only warranted if the islands can produce products to be shipped between them. Considering the (potential) scale of production on Statia, significant inter-island traffic cannot reasonably be expected. Perhaps the stimulation of agricultural activities could provide some export products. However, the scale of these agricultural activities on Statia cannot justify the investments necessary to set up such a service, as over 200 TEUs leave the island empty every year.

The intrinsic capacity to generate cargo on islands like Statia is too small to justify additional shipping services.

Moreover, an increase in activities on Statia (and Saba) alone could never generate sufficient cargo to run profitable inter-island shipping in the region. In the past, similar initiatives were heavily subsidised. Finally, the restructuring of shipping networks is a process taking place on a world wide basis: the feeder-services of international liner shipping companies are increasingly penetrating the local markets.

As concluded in *Chapter V* and *Annex V.2*, even on the basis of optimistic traffic projections, a regular weekly inter-island shipping service between the Leeward islands and the Windward islands would not be profitable unless it was heavily subsidised. An inter-island shipping connection is therefore not included in the EIS® calculations for the *INTEGRATED MARITIME POLICY* scenario for Statia.

However, existing (un)scheduled connections are mostly passenger-oriented. The potential for new connections may precisely be in this segment: cruise tourists and other day-trippers interested in visiting these smaller islands.

The connections between Sint Maarten and the other Leeward islands, more specifically Statia and Saba, are mostly unscheduled or tourism-related (small ferries). There are only 'irregular' dedicated cargo services between the Dutch and other Windward islands. The potential for inter-island shipping connections between the Dutch and other Windward islands should however be investigated further. Especially with respect to the transportation of tourists (and irregular cargo), a number of feasibility studies should be performed. On the basis of which the implementation of a *pilot project* should be considered.

A number of feasibility studies should be performed with respect to the transportation of tourists (and irregular cargo). On the basis of these studies it should be decided whether it is attainable to organise a pilot project..

For example, Sint Maarten boasts a large number of tourists in the high season of cruise tourism. Small ferries from Sint Maarten to Saba already carry about 50 day-trippers and divers each way per day. The possibility of organising similar day trips between Sint Maarten and Statia is at present hindered by the greater distance between the two islands[5] and rough sea conditions. The use of new (types of) vessels may solve these problems. This should be investigated.

Moreover, bearing in mind the large numbers of American cruise passengers the market potential should be investigated for such a connection between Sint Maarten and Statia, the '*Historical Gem*' where the American flag was first saluted. This important historical link could be made the corner stone of a day trip to Statia. Obviously, the success of realising this 'overflow' of cruise passengers will not merely depend on the connection: the product Statia should be improved too. In addition, the market for these trips may be created by means of promotional activities. For instance, these day trips may already be sold on board the cruise vessels. This would obviously require the co-operation of the cruise lines.

As modest numbers of tourists would already have a considerable impact on the economy of these small islands, these feasibility studies should become a high or even a top priority.

Clearly, the possibilities of realising an overflow of tourists from Sint Maarten (and other 'larger' island in the region) to neighbouring islands, such as Saba and Statia, should be investigated in-depth. As modest numbers of tourists would already have a considerable impact on the economy of these small islands, these feasibility studies should get a high or even top priority.

VIII.4.1.4. Cruise tourism and day-trippers

The potential for cruise tourism is limited, with the exception of windjammer cruises.

No extensive port infrastructure investments can be justified in this respect.

Moreover, the 'product Statia' should be improved to attract more cruise tourists and day trippers.

As for the other islands in the region, tourism is the foremost (potential) source of income and activity for Statia. The entire economy, including the maritime sector, should therefore be geared to attracting tourism.

With respect to cruise tourism it should be borne in mind that in the current situation only very small cruise ships can call at the port of

5 Sint Maarten -Saba is 28 miles (45km), Sint Maarten - Statia is 38 miles (61km).

Oranjestad. The completion of even the most daring existing plans for the development of the port infrastructure will not change this. However, the facilities for the reception of windjammer cruise vessels, and consequently Statia's competitive position, may be improved by investing in marina infrastructure[6].

In order to attract cruise tourist to visit Statia, the island product should be improved and promoted better.

As indicated, an alternative may be to ship in cruise tourists (day trippers) from Sint Maarten. At present the trip is both long and uncomfortable, even on high-speed ferries, considerable distance between Sint Maarten and Statia and the frequency of rough sea conditions. Thanks to larger and more modern vessels these problems may be solved in the future. Moreover, although the island boasts a historical fort, it can currently not offer much more to make the trip worthwhile. Investments in the 'product Statia' are therefore essential. The Hotel & Tourism Association should take the lead in developing the product Statia in co-operation with the Island Government. The promotion should take place within the existing 'Dutch Caribbean' campaign.

VIII.4.2. STIMULATING ACTIVITIES IN THE MARITIME SECTOR

VIII.4.2.1. Shipping and related services

As indicated, the volume of trade and the demand for maritime services on the island do not necessitate the further development of its maritime sector. All services are already performed either by the island's maritime sector itself, or by foreign companies.

The volume of trade and the demand for maritime services on the island do not necessitate the further development of its maritime sector.

In 1996 the total number of incoming (ro/ro) containers on Statia mounted to 223 TEU, or about a hundred 40ft ro/ro containers. The current storage area (almost 6000 m^2) of the port can accommodate nearly 200 of these containers. Furthermore, there is no congestion at the pier. Considering the small volumes of cargo and passengers, it is

6 Port infrastructure consists of the (concrete) quays and breakwaters necessary for the handling of 'normal' cargo and passenger vessels. Marina infrastructure concerns buoys and (wooden) landing stages for the mooring of yachts and other pleasure boats.

not necessary to invest in port infrastructure which would allow larger vessels to call at Oranjestad.

VIII.4.2.2. Marine tourism: yachting and small cruise vessels

Although the current port infrastructure is sufficient to meet the island's autonomous (cargo) transportation demands, investments should be considered with high priority in two specific market segments: yachting and small cruise vessels (windjammers). At present, the port of Oranjestad lacks even the most basic facilities to accommodate yachts and/or small cruise vessels: there are no berthing places, no sanitary facilities, no shops (for provisions), no harbour-front restaurants, *et cetera*. In the recent past, some tentative plans were put forward to upgrade the port, including the construction of a marina.

Considering the success of Sint Maarten in this respect, there seems to be some potential for the development of yachting and diving on Statia.

However, so far (pre)feasibility studies have not demonstrated that substantial investments in marina infrastructure would be justified.

In order to protect a marina from the heavy swell in the bay, considerable investments in the construction of breakwaters would be necessary. However, the costs and benefits of these breakwaters were never properly evaluated, although pre-feasibility studies carried out in the past apparently showed that the investments could not be justified on economic grounds. Furthermore, the development of the harbour front would require substantial investments as well.

In January 1998 two engineering firms were asked by the Statia Harbour Master to draw up plans for the construction of marina facilities in the port of Oranjestad. The costs of these tentative plans were estimated at some 3 million NAf.

In the first months of 1998, two plans for the development of marina infrastructure in the port of Oranjestad were drawn up by two engineering firms at the request of the Harbour Master. Both plans are tentative in nature and use the extension of the existing pier and the construction of a new breakwater as starting-points. These facilities would create a better sheltered port basin, suitable for the mooring of yachts and fishing boats. In addition to 'artist impression' drawings of the new port, both plans provide a cost estimate on the basis of preliminary inspections of the site. Both plans independently estimate the costs at some 3 million NA*f*. In both cases this figure includes the construction of the pier and the breakwater and the provision of sanitary facilities, facilities for the bunkering of fuel and water, a small port office building, *et cetera*.

Unfortunately neither plan did include a thorough economic evaluation of the feasibility of the project.

Unfortunately neither plan did include an economic evaluation of the feasibility of the project, although some qualitative arguments in favour of the project were put forward. A detailed and in-depth investment evaluation is outside the scope of this project. Moreover, due to the late availability of the information (April 1998), the development of a marina on Statia could not be included in the quantitative part of the EIS®.

Although at present the construction of a marina cannot yet be justified. Further studies into the development of a marina on Statia are strongly recommended and should be given top priority.

These studies should include:
- *a marketing study to establish the potential;*
- *a technical feasibility study, accurately to estimate the costs of the project;*
- *an economic evaluation, both at micro-economic level and with respect to the macro-economic impact;*
- *an integrated analysis, which should point out whether additional investments in the port and the 'island product' are necessary.*

The Island Government should take the initiative, as marina infrastructure can be considered a government task just like 'normal' port infrastructure.

Consequently, the construction of a marina cannot at present be justified on the basis of detailed calculations of its economic effects. Further studies with regard to the development of a marina on Statia are however strongly recommended. These studies should be the island government's *top priority*, and should include:

- a marketing study, which would establish the potential and demand for yachting facilities on Statia;
- a technical feasibility study with a detailed estimation of the costs of the various aspects or modules of the project;
- an economic evaluation of the development plans for the port, both at a micro-economic level (investment evaluation) and with respect to the macro-economic impact on the island's economy;
- moreover, an integrated analysis should reveal whether additional investments in the port and the 'island product' would be necessary to increase the chances of successful port development.

In principle, the Island Government should take the initiative to investigate and possibly develop and co-ordinate such an investment project[7]. In this respect, marina infrastructure can be considered a government task just like 'normal' port infrastructure, especially considering the scale of the island and the possible impact of such a project on the economy. However, to make these investments, or provide support to private investors, the Island Government would probably have to rely on external funds (e.g. KabNA, EU) too. An alternative would be to grant tax holidays to foreign investors.

In general, support for private/foreign investors should come in the form of a reduction in 'red tape' and the financing/organising of specific training and education programmes for (potential) local em-

7 The possibilities to develop these plans in co-operation with partners on Sint Maarten should be considered. For instance, regional co-operation could lead to drawing up a yachting itinerary or tour between the Windward islands.

ployees. If the macro-economic effects are significant, even (limited) subsidising of private entrepreneurs' start-up losses could be considered. As was for projects in other sectors, the Island Government should not start to provide guarantees to (foreign) investors.

To protect the marine environment and stimulate diving on Statia, the creation of a Marine Park is supported.

Apparently, plans were developed to establish a Marine Park in co-operation with the STINAPA. To the knowledge of the research team these plans have not resulted in concrete actions. *Policy Research* recommends going ahead with the creation of a Marine Park, as this would provide better protection for the marine environment better, and would stimulate diving on Statia.

VIII.4.3. *PROVIDING FAVOURABLE PERIPHERAL CONDITIONS*

VIII.4.3.1. *Structure of maritime government services*

Taking into consideration the very small scale of maritime activities on Statia and Saba, the maritime interests of all Windward islands should be furthered by a Co-ordinator for Maritime Affairs, based on Sint Maarten.

As indicated in *Chapter VII*, a *Co-ordinator for Maritime Affairs* should be appointed within the Island Government of Sint Maarten. This co-ordinator should also be responsible for the development of port policy for the other Windward Islands, and would thus report to all three Windward Island Councils.

The Maritime Co-ordinator should chair the meeting of the already existing *Sint Maarten Committee for Maritime Affairs*, which has to be extended to include representatives from the maritime sectors of Statia and Saba, to become the *Maritime Advisory Board* for the Windward islands. Moreover, the co-ordinator should also have regular contacts with the Harbour Masters of both Statia and Saba, in order to benefit from their knowledge of local circumstances. To this end, the Harbour Masters should represent their respective islands on *the Maritime Advisory Board.*

Because of the relatively small scale of the maritime sector on the islands, this co-ordinator should work alone, possibly with an assistant. The maritime co-ordinator would be part of the Sint Maarten *Service for Economic Affairs*.

The *harbour service* (Harbour Master) would remain responsible for the day-to-day management of the port, the collection of harbour fees, as well as forsafety in the port. The harbour service would remain part of the Island Government, while the size of the staff should be reduced as much as possible. Moreover, the Statia Oil Terminal would continue its operations, including the provision of pilotage and towing services to ships using its facilities.

VIII.4.3.2. Safety and environmental measures

With respect to the Statia Oil Terminal, the Island Government should ensure it that the environment is effectively protected. This is essential, not only for the marine environment in the immediate vicinity of Statia, but also for the fishing grounds on the Saba Bank. The fact that SOT is now subject to a 'Hinderwetvergunning' is a step in the right direction.

The protection of the marine environment is essential for Statia, both with respect to the Saba Bank (potential for fishery) and the coastal waters of Statia (potential for diving).

The Saba Bank could be an important asset to the economies of both Saba and Statia (see *Chapter IX.5*). In order to make possible the future exploration of the fishing grounds of the Saba Bank, illegal fishing by foreigners should be stopped. Both the Island and Central Governments should make this a priority. The Coast Guard plays a crucial role by preventing illegal fishing.

VIII.4.3.3. Promotion of the Netherlands Antilles as a maritime centre

The promotion of the Netherlands Antilles as a maritime centre should become part of an overall promotional campaign and should be co-ordinated through a national promotional campaign.

The promotion of the Netherlands Antilles as a maritime centre should be closely co-ordinated by the islands and incorporated into existing promotional campaigns. Each island should contribute to the joint campaign, emphasising its particular strengths. For Statia these comprise (selective) tourism and fishery.

VIII.5. Scenario 5: Framework Policy with maritime Focus

The FRAMEWORK POLICY with MARITIME FOCUS includes measures aimed at:
- *restructuring government;*
- *spurring economic growth;*
- *providing beneficial peripheral conditions;*
- *attracting foreign investment;*
- *supporting specific sectors;*
- *stimulating inter-island trade and traffic;*
- *promotion.*

Scenario 5 combines the *INTEGRATED MARITIME POLICY* scenario with an improved *general economic policy* (GEP). In the previous scenario concrete maritime policy measures were presented. Furthermore, it became clear that the development of the maritime sector is closely linked to the overall economic situation.

The *FRAMEWORK POLICY with MARITIME FOCUS* scenario, as described in *Chapter V.5.*, mainly covers measures outside the scope of maritime policy. All general measures which apply to Curaçao and the central government, are also relevant for Statia. For a more detailed description, see *Chapter V.*

VIII.5.1. Measures aimed at restructuring government

Government power is to be delegated to the level of the islands along the lines of the principle of subsidiarity, and decision-making at all levels of government is to be sped up by reducing bureaucratic procedures.

VIII.5.2. Measures aimed at spurring economic growth in general

The government should concentrate its efforts on the stimulation of service industries. For Statia this means focusing on selective tourism, in particular sustainable forms of tourism, such as diving and possibly hiking. As a result of the lack of raw materials, production industries suffer a 'natural' disadvantage.

Furthermore, the New Fiscal Framework ('Nieuw Fiscaal Raamwerk', NFR) should also apply to Statia, which will result in a lower profit taxation tariff.

VIII.5.3. Measures aimed at providing beneficial peripheral conditions

As for Curaçao, these measures include: the privatisation of government companies and the liberalisation of telecommunications and utilities, more emphasis on training and education, the reversal of the 'brain drain', and more co-operation and consultation between government and the social partners. Furthermore, the legal framework should be modernised, and an objective and uniform instrument for the evaluation of investment projects is to be developed.

VIII.5.4. MEASURES AIMED AT ATTRACTING FOREIGN INVESTMENT

The national procedures for the granting of work and residence permits to foreign employees (expatriates) should be simplified and sped up. This also applies to Statia. A more favourable fiscal policy should be implemented towards foreign investment.

As indicated, support for foreign investors could take the form of a reduction in 'red tape' and of financing and organising specific training and education programmes for (potential) local employees.

VIII.5.5. SECTOR-SPECIFIC MEASURES

After a change in Dutch legislation per January 1, 1993, Statia and Saba lost the so-called 'driver's licence tourism', an important source of revenue. In order to formulate policy alternatives, an approach similar to that applied to the maritime sector is recommended for other sectors. Below some general recommendations for tourism and fishery are presented.

VIII.5.5.1. (Cruise) tourism

Tourism could become more important for the economy of Statia. To be successful in attracting more tourists, the island should upgrade its tourist product: 'Statia - Historical Gem'

Tourism could become more important for Statia's economy. Despite calls for diversification, the island's main source of income is bound to remain tourism. To stimulate (cruise) tourism, local (small scale) initiatives should be encouraged and investments in hotels and tourist attractions should be supported (although no government guarantees will be given), with the ecological limitations of the island may, however, hinder its development.

For 'Statia - The Historical Gem' to be successful in attracting tourism to, it should upgrade the *tourist product* it has to offer: better infrastructure (roads, water supply), more and better hotels and restaurants, guided tours to historical sites (e.g. Fort Orange), improved hiking trails on the Quill, *et cetera*.

Moreover, support for investors could take the form of tax holidays, a reduction in 'red tape' and financing and organising specific training and education programmes for (potential) local employees.

VIII.5.5.2. Fishery

The potential of the Saba Bank is very considerable. If the recently introduced Economic Fishery Zone can effectively be protected from illegal fishing, in due time the Saba Bank will be able to generate over a hundred jobs on Saba and Statia.

Currently, only a handful of fishing boats from Saba and Statia operate on the Saba Bank. As indicated in *Chapter III*, the Dutch government introduced an 'Economic Fishery Zone of the Netherlands Antilles and Aruba' in 1993 to protect the economically and ecologically important Saba Bank, whose economic potential is considerable. If the stock is brought up to and maintained at a healthy and sustainable level, the Saba Bank could generate 1000 to 1500 tons of fish each year. In an ideal situation, the Saba Bank could provide jobs for over a hundred people on Saba and Statia.

It is outside the scope of this study to formulate detailed recommendations for the development of the fishing sector and for the processing of its proceeds. However, the sector certainly seems to have potential and only relatively limited funds would be required to develop it. Support for the fishing sector would include minor investments in the facilities of the port(s) of Saba and/or Statia.

VIII.5.6. MEASURES AIMED AT PROMOTING THE NETHERLANDS ANTILLES

The measures proposed in *Chapter V.5.7.* apply to the Netherlands Antilles in general and therefore to all the (separate) islands.

IX. POLICY SCENARIOS FOR SABA

In this chapter the policy scenarios are adapted to the particular situation on Saba.

As was discussed in *Chapter III*, the maritime sector is negligibly small, if not non-existent on the island [1], whereas tourism is the most important economic activity.

IX.1. SCENARIO 1: CONTINUATION

Chapter IX.1 describes the CONTINUATION scenario for Saba.

At present, there are no maritime policy on Saba. All federal measures apply to Saba as well, including the registration of ships, the (special) taxation system, the lack of an overall policy framework, and of maritime promotion for the Netherlands Antilles.

The Island Government, represented by the Harbour Master and his assistant, is responsible for the operation and management of the port at Fort Bay. With a view to stimulating the development of tourism on the island, the reorganisation and restructuring of the port infrastructure have been considered[2]. Yet, no concrete measures have been introduced so far.

1 The owner of a local supermarket acts as a shipping agent in order to obtain the supplies for his store.

2 With respect to the redevelopment of the harbour, the European Commission has prepared a Terms of Reference for the formulation of a Long Term Development Plan for the Maritime Facilities on Saba. It is not clear whether any progress has been made in drawing up such a plan.

IX.2. SCENARIO 2: LAISSEZ FAIRE

A true laissez faire approach would imply the privatisation of the port. However, considering the macro-economic importance of the port for the island's economy this option is considered unsuitable for Statia.

Considering the enormous imbalance in the revenue and costs related to the port, privatisation is not a feasible option anyway.

The introduction of a pure *laissez faire policy* would imply that privatisation of the operation and management of the port at Fort Bay is privatised. Considering the enormous imbalance in the revenue and costs related to the port, privatisation is not a feasible option. In 1995, the total income (port charges) amounted to 19 249 Na*f*., while the operational costs of the port totalled almost 150 000 Na*f*.[3].

Moreover, the complete privatisation of the management and operation of the port of Philipsburg is not considered in the *LAISSEZ FAIRE* scenario, for the same reasons as those which apply to Curaçao. Because of the macro-economic importance of port infrastructure for the island economy, the creation of any kind of (unregulated) private monopoly in the port is not recommended[4]. The *LAISSEZ FAIRE* scenario is therefore not applicable to Saba.

IX.3. SCENARIO 3: REGISTER PLUS

Considering the absence of registration and offshore activities on Saba, the effects of the REGISTER PLUS scenario may reasonably be assumed to be limited to Curaçao.

The *REGISTER PLUS* scenario is not expected to have a significant impact on Saba. At present, one financial offshore company is active on the island. However, this company is not involved in maritime affairs.

IX.4. SCENARIO 4: INTEGRATED MARITIME POLICY

The INTEGRATED MARITIME POLICY scenario consists of three tracks:
- *the facilitation of economic development in general;*
- *the stimulation of activities in the maritime sector;*
- *the provision of beneficial peripheral conditions.*

The principal aim of the *integrated maritime policy* is to develop (*maritime*) *activity* in the ports of the Netherlands Antilles. The IMP is based on three tracks:

1. facilitating (externally generated) economic growth in general;
2. stimulating activities in the maritime sector;
3. providing favourable peripheral conditions.

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3 Annual Accounts of the Island Territory of Saba, 1995.

4 Considering the small scale of the port, a monopoly would be the most likely outcome of any privatisation process.

IX.4.1. Facilitation of economic growth in general

IX.4.1.1. Supporting function

Four aspects can be considered in the context of the facilitation of economic growth in general:
- *supporting function;*
- *port organisation;*
- *inter-island shipping;*
- *cruise tourism and ferries.*

The possibilities for generating internal economic growth on Saba are limited, even more so than on Sint Maarten. At present, the island population numbers about 1 500, with a virtual full employment situation.

Currently, only small cargo vessels can call at the Fort Bay port. As a result, Saba mainly depends on transhipment in Sint Maarten and Puerto Rico for the provision of supplies, which leads to higher transportation costs and a higher price level on the island. However, very large investments in the port would be required to enable larger vessels to berth. Moreover, the effects on the island's price level are expected to be merely marginal, because of the small scale of imports.

The number of vessels calling at the port is highly seasonal, and the traffic mainly concerns passengers. Due to the short service time per vessel, there is hardly any congestion in the port, not even in peak months.

In brief, the *autonomous* development of Saba's economy will not require large investments in the port infrastructure, considering the current idle capacity of the port. The development of tourism is also capped by the Island Government's decision to limit the number of tourists in order to protect the environment and the atmosphere of the island. As indicated, the traffic in the port of Fort Bay mainly concerns passengers (tourists). The existing infrastructure is expected to be able to handle the maximum allowed numbers of tourists in the future. A (large) investment in port infrastructure on behalf of cargo and passenger shipping can therefore not be justified[5].

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5 These findings are confirmed by a study performed by TecnEcon, 1997.

IX.4.1.2. Port organisation

The Harbour Service, headed by the Harbour Master, would remain responsible for the day-to-day management of the port of Fort Bay.

,The Co-ordinator for Maritime Affairs would be responsible for the development of a maritime policy for the Windward islands in close consultation with the Harbour Masters of Statia and Saba.

The management and operation of the port of Fort Bay would remain the responsibility of the Island Government, more specifically the Harbour Master. The loading and unloading of cargo, mainly ro/ro containers, would be performed by the ship's crew and (representatives of) the local interested party, supervised by the Harbour Master. Considering the small scale of the activities and the resulting over-capacity of the port, it would not be necessary to set up a new and possibly more efficient structure.

As indicated in *Chapter VII*, a *Co-ordinator for Maritime Affairs* should be appointed within the Island Government of Sint Maarten. This co-ordinator should also be responsible for the development of port policy for the other Windward Islands, and would report to all three Windward Island Governments. The Maritime Co-ordinator should have regular contacts with the Harbour Masters of both Statia and Saba, in order to benefit from their knowledge of local circumstances.

IX.4.1.3. Inter-island shipping

Inter-island shipping services can be an important form of infrastructure for an island nation like the Netherlands Antilles.

A number of measures to facilitate and support such a service are included in the INTEGRATED MARITIME POLICY scenario at a national level (see Chapter V.4).

The stimulation of inter-island shipping is only worthwhile if the islands can produce products to be shipped between them. Considering the (potential) scale of production on Saba, significant inter-island traffic cannot reasonably be expected. If the development of fishing and the processing of fish products is successful, this could generate some cargo, although no additional shipping services to and from the island would be required.

Moreover, an increase in activities on Saba (and Statia) alone could never generate sufficient cargo to run profitable inter-island shipping services in the region. In the past, similar initiatives were heavily subsidised. Finally, the restructuring of shipping networks is a process taking place on a world wide basis: the feeder-services of international liner shipping companies are increasingly penetrating the local markets.

As concluded in *Chapter V* and *Annex V.2*, even on the basis of optimistic traffic projections, a regular weekly inter-island shipping service between the Leeward islands and the Windward islands would not be profitable unless it was heavenly subsidised. An inter-island shipping connection is therefore not included in the EIS® calculations for the *INTEGRATED MARITIME POLICY* scenario for Statia.

The potential for inter-island shipping connections between the Dutch and other Windward islands, especially with respect to the transportation of tourists, should be investigated further.

The connections between Sint Maarten and the other Leeward islands, more specifically Statia and Saba, are mostly unscheduled or tourism-related (small ferries). There are only irregular dedicated cargo services exist between the Dutch and other Windward islands. The potential for inter-island shipping connections between the Dutch and other Windward islands should however be investigated further. Especially with respect to the transportation of tourists (and irregular cargo), a number of feasibility studies should be performed.

As indicated, Sint Maarten is faced with considerable 'congestion' problems in the high season of cruise tourism. Small ferries from Sint Maarten to Saba already carry about 50 day-trippers and divers each way per day.

Clearly, the possibilities of increasing the overflow of tourists to Saba should be investigated, particularly as modest numbers of tourists would already have a considerable impact on the economy of these small islands.

However, in the case of Saba this would also imply protecting the environment of the island, which is its most important asset with respect to tourism.

However, in the case of Saba this would also imply an impact on the island's environment, which is its most important asset with respect to tourism. In order to protect the environment, the Island Government has wisely chosen a path of selective tourism development, laid down in the 'Integrated Tourism Development Master Plan'. The number of tourists is consciously limited, while only sustainable activities are promoted (e.g. diving, hiking, eco-tourism).

IX.4.1.4. Cruise tourism and ferries

Feasibility studies are required to assess to what extent investments in the port of Fort Bay are warranted by the potential of tourism.

Two thirds of the day-trippers visiting the island come by sea, mainly on two ferries. The current port infrastructure apparently hampers the development of (maritime) tourism on Saba. In order to assess to which extent investment in the port can be justified, feasibility studies of the various investment alternatives have to be performed[6]. However, this kind of analysis is outside the scope of this project. No specific recommendations with respect to the overall restructuring of the port can therefore be formulated at this time.

In general, private investment initiatives should be endorsed, as long as they are not incompatible with the the island's ecological constraints.

In general, private investment initiatives should be endorsed, as long as they are not incompatible with the island's ecological constraints. This support should not consist of investment grants or guarantees. The Island Government could encourage private investors by means of tax holiday. An indirect incentive could involve cutting investment-related red tape, amongst other things with regard to application for work permits for foreign employees. Another possibility would be to organise and pay for the training and education of (potential) local employees.

Although the number of calls by cruise ships has been declining for some years, largely as a result of increased competition by alternative destinations, there seems to be potential at the top end of the cruise market, using small windjammer cruise vessels.

The number of calls by cruise ships has been declining for some years, largely as a result of increased competition by alternative destinations. Nevertheless, there seems to be potential at the top end of the cruise market, using small windjammer cruise vessels. A recent study has rightly indicated that in order to serve this market, it is not necessary to have a docking pier[7]. It needs to be pointed out in this respect that as in order to facilitate visits to Saba by these ferries and cruise vessels (windjammers), a single-point mooring buoy has recently been installed, as passengers can be taken ashore by tenders or dinghies. It is more important to upgrade the port area to provide these tourists with (sanitary) facilities, shopping opportunities and transportation across the island.

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6 On the one hand the 'cap' on the number of tourists ensures sustainable development. On the other hand, however, it limits the potential revenue and consequently the profitability of investment projects.

7 See TecnEcon (1997).

Only a very limited number of stay-over tourist arrive by sea and actually stays ashore. Most of them live aboard the dive boats, which are provisioned in Sint Maarten. At present, their impact on the island's economy is very limited and can therefore not justify large investments on their behalf.

IX.4.2. *STIMULATION OF ACTIVITIES IN THE MARITIME SECTOR*

IX.4.2.1. *Shipping and related services*

There is only a very limited need for maritime services on Saba, which produces hardly any agricultural or manufacturing goods. For its supplies and provisions, the island successfully relies on external providers of maritime transport.

IX.4.2.2. *Yachting and marinas*

In recent years, the number of yacht calls has increased. However, the spending impact of the visitors has been relatively limited.

There has been a strong increase in the number of yacht calls since 1990, to about 600 in 1995, even despite hurricane Luis[8]. These yachts mostly come from the French side of Sint Maarten, where a well-developed charter market exists (over 350 boats in 1995). However, because of the lack of facilities and entertainment in the port, the economic impact of these yachts is very limited[9]. This situation has even led to the recommendation of a cap on yacht calls. An alternative would be to provide yacht passengers with better facilities and more possibilities to spend money in the port area.

The provision of marina infrastructure would require large investments in breakwaters.

Such investments can only be warranted in combination with an overall program to increase the revenue generating potential of the island.

Plans exist to develop a marina on the island. However, because of the heavy swell it is very difficult to find a suitable location. The European Union has already granted a subsidy of 5 million Na*f*. to upgrade the existing breakwaters so as to better protect small vessels in the port. A relatively expensive enlargement of the main breakwater would be required to protect a marina within the current port and make it accessible the whole year round. The EU subsidy, however, does not suffice to cover the costs. The project has therefore been put on hold for an indefinite period.

8 Saba, Integrated Tourism Development Master Plan, 1996.
9 Economic Analysis of the Saba Marine Park report (R. Framheim, 1995).

The project to construct a new small boats port at the West breakwater of the port at Fort Bay can apparently cannot be justified on the basis of a micro-economic and financial evaluation.

As the information concerning the project was made available to Policy Research too late, the macro-economic impact of the investment plan could not be established.

Another option is to extend the West side breakwater to create a second port area for small boats (yachts, fishing boats). This option was evaluated in the summer of 1997 and cost estimates were provided[10]. These estimates were based on very conservative assumptions and excluded important aspects, such as navigational aids, mooring facilities and the stabilisation of the hillside next to the marina. Still, the costs of this project were already estimated at nearly 6 million NA*f*. Moreover, the project could apparently not be justified in micro-economic terms. Overall, the arguments presented in the report in favour of building the additional small boats port are qualitative or weak, especially from a financial point of view and in view of the assumptions made.

Whether the macro-economic effects, canned by the additional traffic generated in the port, would be able to justify the expansion plans could not be established. The necessary information was only made available to *Policy Research* in April 1998, when it was too late for an in-depth analysis and inclusion in the Economic Impact Study (EIS®).

IX.4.3. PROVISION OF FAVOURABLE PERIPHERAL CONDITIONS

IX.4.3.1. Structure of maritime government services

Taking into consideration the very small scale of maritime activities on Statia and Saba, the maritime interests of all Windward islands should be furthered by a Co-ordinator for Maritime Affairs, based on Sint Maarten.

As indicated in *Chapter VII*, a *Co-ordinator for Maritime Affairs* should be appointed within the Island Government of Sint Maarten. This co-ordinator should also be responsible for the development of port policy for the other Windward Islands, and would report to all three Windward Island Councils.

The Maritime Co-ordinator should chair the meeting of the already existing *Sint Maarten Committee for Maritime Affairs*, which has to be extended to include representatives from the maritime sectors of Statia and Saba, to become the *Maritime Advisory Board* for the

10 TecnEcon (1997).

Windward islands. Moreover, the co-ordinator should also have regular contacts with the Harbour Masters of both Statia and Saba, in order to benefit from their knowledge of local circumstances. To this end, the Harbour Masters should represent their respective islands on *the Maritime Advisory Board.*

The operation of the port at Fort Bay would remain the responsibility of the Island Government. The *harbour service* (Harbour Master) would be responsible for the day-to-day management, the collection of harbour fees, for the safety in the port. The harbour service should remain part of the Island Government.

IX.4.3.2. Safety and environmental measures

Considering the economic and ecological importance of the Saba Marine Park, environmental protection is an essential task of the Island and central government. In this respect, the Island Government should work closely with the STINAPA and the Coast Guard.

As was the case for Statia and Bonaire, the protection of the marine environment is essential for Saba. This concerns both the Saba Bank (potential for fishery) and the Marine Park diving grounds.

In relation to the protection of the underwater environment (Marine Park), the activities of the BBW cement plant in the port require special attention. The new stone-crushing equipment used to produce building materials (cement) apparently causes damage to the coral. Furthermore, the produced dust negatively influences the port environment, which is detrimental to the tourists' perception. The extent of the damage has to be established and proper measures need to be taken.

Furthermore, the Saba Bank could become an important asset to Saba's economy. In order to ensure the future exploitation of the fishing grounds of the Saba Bank, illegal fishing by foreigners should be stopped. Both the Island and Central Governments should make this a priority. The necessary legislation seems to be in place and the Coast Guard plays a crucial role by actively preventing illegal fishing.

IX.4.3.3. Promotion of the Netherlands Antilles as a maritime centre

The promotion of the Netherlands Antilles as a maritime centre should become part of an overall promotional campaign and should be co-ordinated through a national promotional campaign.

The promotion of the Netherlands Antilles as a maritime centre should be closely co-ordinated by the islands. Each island should contribute to the joint campaign, emphasising its particular strengths. For Saba these at present comprise eco-tourism and diving (Marine Park).

However, for the Saba to promote its maritime activities would not be advisable, as its strengths are mainly in tourism-related marine activities. These aspects, as well as the 'Saba - Unspoiled Queen' image, are already promoted under the collective marketing umbrella of the Netherlands Antilles and Aruba, the 'Dutch Caribbean', a public-private initiative which was launched in 1997.

IX.5. SCENARIO 5: FRAMEWORK POLICY WITH MARITIME FOCUS

The FRAMEWORK POLICY with MARITIME FOCUS includes measures aimed at:
- *restructuring government;*
- *spurring economic growth;*
- *providing beneficial peripheral conditions;*
- *attracting foreign investment;*
- *supporting specific sectors;*
- *stimulating inter-island trade and traffic;*
- *promotion.*

Scenario 5 combines the *INTEGRATED MARITIME POLICY* scenario with an improved *general economic policy* (GEP). In the previous scenario concrete maritime policy measures were presented. Furthermore, it became clear that the development of the maritime sector is closely linked to the overall economic situation.

The *FRAMEWORK POLICY with MARITIME FOCUS* scenario, as described in *Chapter V.5.*, mainly includes measures outside the scope of maritime policy. All general measures which apply to Curaçao and the central government, are also relevant for Saba. For a detailed description, see *Chapter V.5.*

IX.5.1. MEASURES AIMED AT RESTRUCTURING GOVERNMENT

Government power is to be delegated to the level of the islands along the lines of the principle of subsidiarity, and decision-making at all levels of government is to be sped up by reducing bureaucratic procedures. The Island Government of Saba is to be evaluated and, if necessary reorganised and down-sized. Currently, about 75% of the island's workforce is employed by the Island Government[11].

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[11] Source: Saba Integrated Tourism Development Master Plan.

IX.5.2. Measures aimed at spurring economic growth in general

The government should concentrate its efforts on the stimulation of service industries. For Saba this means focusing on tourism, in particular selective and sustainable forms of tourism, such as diving and possibly hiking. As a result of the lack of raw materials, production industries suffer a 'natural' disadvantage.

Furthermore, the New Fiscal Framework (Nieuw Fiscaal Raamwerk, NFR) should also apply to Saba, which will result in a lower profit taxation tariff.

IX.5.3. Measures aimed at providing beneficial peripheral conditions

As for Curaçao, these measures include: the privatisation of government companies and the liberalisation of telecommunications and utilities, more emphasis on training and education, the reversal of the 'brain drain', and more co-operation and consultation between government and the social partners. Furthermore, the legal framework is modernised, and an objective and uniform instrument for the evaluation of investment projects is to be developed.

IX.5.4. Measures aimed at attracting foreign investment

National procedures for the granting of work and residence permits to foreign employees (expatriates) should be simplified and sped up. This also applies to Saba. A more favourable foreign investment fiscal policy should be introduced. As indicated, support for foreign investors could also take the form of financing and organising specific training and education programmes for (potential) local employees.

IX.5.5. *SECTOR-SPECIFIC MEASURES*

Like Statia, Saba lost its 'driver's license tourism', an important source of revenue, after a change in Dutch legislation per January 1, 1993. In order to formulate policy alternatives, an approach similar to that proposed for the maritime sector is recommended for other sectors. Some general recommendations for tourism and fishery are presented below.

IX.5.5.1. *Tourism*

Tourism is important for Saba's economy. Despite calls for diversification, tourism is the only realistic option for the island. In terms of economic impact, stay-over tourists arriving by air are the most important, albeit not the largest group of visitors. Stay-over tourists coming in by sea generally live aboard their boats and have a more limited impact. Day-trippers coming in by sea (ferries, cruise vessels) also have a limited spending impact, unless they are divers.

To stimulate tourism, local (small-scale) initiatives should be encouraged and investments in hotels and tourist attractions supported, bearing in mind the ecological limitations of the island. As indicated before, the instruments to be used to attract investors are tax holidays and subsidies for the training of local personnel. Moreover, the product of Saba, the 'Unspoiled Queen', should be further developed and marketed within the existing 'Dutch Caribbean' promotion programme. The Saba Tourist Bureau should play a co-ordinating role.

IX.5.5.2. *Fishery*

The potential of the Saba Bank is very substantial. If the introduced Economic Fishery Zone can effectively be protected from illegal fishing, in due time the Saba Bank will generate over a hundred jobs on Saba and Statia.

Currently, only a handful of fishing boats from Saba and Statia operate on the Saba Bank. As indicated in *Chapter III*, the Dutch government introduced an 'Economic Fishery Zone of the Netherlands Antilles and Aruba' in 1993 to protect the economically and ecologically important Saba Bank, whose economic potential of the Saba Bank is significant. If the stock is brought up to and maintained at a healthy and sustainable level, the Saba Bank could generate 1000 to

1500 tons of fish each year. In an ideal situation, the Saba Bank could provide jobs for over a hundred people on Saba and Statia.

It is outside the scope of this study to formulate detailed recommendations for the development of the fishing sector and for the processing of its proceeds. However, the sector certainly seems to have potential and only relatively limited funds would be required to develop it. Support for the fishing sector would include minor investments in the facilities of the port(s) of Saba and Statia.

IX.5.6. Measures aimed at promoting the Netherlands Antilles

The measures proposed apply to the Netherlands Antilles in general and therefore to all the (separate) islands.

X. ECONOMIC IMPACT OF POLICY SCENARIOS

The policy scenarios of Chapters V to IX:
1. *CONTINUATION of the present policy;*
2. *LAISSEZ-FAIRE policy;*
3. *REGISTER PLUS policy;*
4. *INTEGRATED maritime policy;*
5. *FRAMEWORK policy,*

were quantified in order to determine their impact on the Netherlands Antilles' economy.

In *Chapters V* to *IX*, five policy scenarios were developed for the maritime sector of the Netherlands Antilles:

1. *CONTINUATION* of the present policy: in this scenario, it is assumed that there will be no changes in the current maritime economic policy;
2. *LAISSEZ-FAIRE* policy: in this scenario, it is assumed that there will be no maritime economic policy at all;
3. *REGISTER PLUS* policy: a set of measures aimed at promoting the Netherlands Antilles ship's register are adopted;
4. *INTEGRATED* maritime policy: a package of measures aimed at the maritime sector as a whole is implemented;
5. *FRAMEWORK* policy: the measures related to the maritime sector are embedded is a package of measures that will improve the structure of the Netherlands Antilles' economy.

In order to evaluate the economic impact of these scenarios, their major elements were quantified and used as a starting point for the EIS® analysis. *REGISTER PLUS* was thereby been included into *INTEGRATED*. Some overall economic developments, such as economic growth and the growth of the Caribbean cruise market growth are also taken into account. For each scenario, the impact on value added, employment and backflow was estimated.

In this chapter, a distinction between the *direct* and the *total* economic impact is made. The *direct* impact principally is the impact within the maritime sector itself, in other words the value added, employment and backflow created in the respective maritime subsectors. For cruise tourism it is the impact of purchases made by passengers and crew.[1] It thus shows how the respective policy scenarios work out on the maritime activities themselves.

The 'total' impact consists of three elements:
- *the 'direct' impact in the maritime sector itself;*
- *the 'indirect' impact in the supplying sectors;*
- *the 'induced' impact generated by the spending of income, profits and tax revenues.*

The *total* impact is the effect upon the whole economy. It includes three elements:

- the **direct** impact;
- the **indirect** impact, which is the effect of the purchases of goods and services in order to produce the maritime output;
- the **induced** impact, which is the impact of spending the incomes, profits and tax revenues generated by the direct plus indirect impact.

The total impact is given for the economy as a whole, whereas the direct impact separately considers the maritime subsectors.

This chapter analyses the direct and the total impact.

This chapter gives the results for Curaçao, Bonaire and the Windward Islands in three sections. Each of these is built up as follows:

- **first**, the factors that determine the direct impact are introduced, which are the proposed policy measures and some other economic developments;
- **second**, it is shown how these factors are translated to the direct value added, employment and backflow per activity;
- **third**, the total impact of the scenarios on the Island economy is given.

For a full description of the scenarios, the reader is referred to *Chapters V* to *IX*.

1 This approach is also applied for the oil terminal on Statia, where the impact of the workers' purchases is estimated.

X.1. ECONOMIC IMPACT ON CURAÇAO

X.1.1. DETERMINATION OF THE DIRECT ECONOMIC IMPACT

The direct impact on Curaçao is, on the one hand, determined by policy measures:
- *register-related measures;*
- *port-related measures;*
- *the construction of a cruise pier;*
- *promotional activities;*
- *general economic measures.*

In the scenario analysis of the EIS®, the direct economic impact is determined by *policy measures* and *economic developments*.

The *policy measures* and their principal effects are the following:

- **register-related** policy: this will have an impact on registered tonnage, and thus on register-related activities, such as the SINA and the law and trust offices;
- **port-related** policy: the incentive-driven change in the CPA-CPS concession is expected to boost sea-to-sea container transhipment. This will increase the output of the port and the shipping agents. On the other hand, transhipment is expected to diminish if the concession is not changed. This would also make the activities in the free zone fall significantly, since the number of direct calls by the international container lines would fall and the transport costs consequently rise.
- **cruise pier** construction: compared to the present berthing facilities, significantly larger vessels will be able to arrive at this pier. This will result in approximately 55 000 additional passengers in 2005;
- **promotional** activities: these are expected to have a positive impact on all maritime activities, although this is hard to quantify. Because of this, the results presented for *INTEGRATED* and *FRAMEWORK* may be regarded as an underestimation of the actual effects;
- **general economic** measures: these are expected considerably to strengthen the economy as a whole. As shown below, the maritime sector will also benefit from growth in this respect.

On the other hand, it is determined by economic developments:
- *growth in cruise tourism;*
- *local growth;*
- *world-wide growth.*

The following *economic developments* are considered:

- growth in **cruise tourism**: this will depend on the developments in the Deep Caribbean cruise market (see *Chapter IV* and *Volume II*), and the government decision regarding the construction of a new cruise pier. At the same time, it is an important factor in local economic growth;
- **local** economic growth: because of the 'open' character of the Netherlands Antilles economy, this will strongly depend on the world wide economic growth. However, some specific develop-

ments in Curaçao's maritime sector will also have an impact on local growth. These developments are a growth in cruise tourism and in container transhipment and the probable modernisation of the ISLA oil refinery. It needs to be stressed that, as shown above, the former two will depend on the policy measures regarding the cruise pier and port concessions;

- **world wide** economic growth: besides being a major determinant of local economic growth, world wide economic growth will directly affect the output of some specific maritime activities, such as shipping and the dry dock.

X.1.2. DIRECT ECONOMIC IMPACT PER SUBSECTOR

The direct economic impact of the respective scenarios is given in *Table X.1*. In this table, the estimated economic impact of the respective scenarios in 2005 are compared to the *CURRENT* impact (see *Chapter III*). This *CURRENT* impact refers to 1996, the year for which the maritime data was collected as part of the *Case Studies*.

The numbers between brackets represent expected local economic growth per year. As indicated in the previous section, this growth rate consists of two components:

1. **basic growth** per year as derived from the 'Curalyse' macro-economic model, which is estimated at 1.9%[2];
2. the **'structural' component** induced by specifically maritime developments which depend on the scenarios.

Under *CONTINUATION* and *LAISSEZ-FAIRE* the structural component is -0.3%.[3] Mainly because of the expected modernisation of the ISLA refinery, which may lead to a significant loss in labour income, and thus in value added. Under *INTEGRATED* it is -0.1%, which is 'lower' because of stronger growth in cruise tourism and container transhipment. Under *FRAMEWORK*, the basic growth rate is expected to be higher because of the measures that will improve the business environment on Curaçao. Note that an alternative growth percentage is given for *CONTINUATION* and *INTEGRATED*. This percentage is estimated assuming that the basic growth rate is zero.

2 See Micromacro Consultants (1996).

3 Note that all numbers are rounded up or down, so that the growth rates in the tables need not be precisely equal to the sum of the components from the text.

Table X.1 : Direct economic impact of maritime activities on Curaçao, 2005

Scenario (growth %)	*Shipping*	*Port-related*	*Agents*	*Dry dock*	*Register - related*	*Cruise tourism*	*Free zone*	*Total*	*Index*
Value added (000 NAf.)									
Current	6 591	37 173	9 407	45 134	1 628	11 007	35 839	**146 780**	**95%**
Continuation (-0.3%)	6 553	35 818	9 064	44 916	1 089	18 468	17 920	**133 827**	**87%**
Continuation (1.7%)	7 820	43 406	10 984	54 073	1 089	18 468	17 920	**153 760**	**100%**
Laissez faire (1.7%)	7 820	43 406	10 984	54 073	0	18 468	0	**134 752**	**88%**
Integrated (-0.1%)	6 601	45 238	11 199	45 064	3 814	21 477	35 839	**169 233**	**110%**
Integrated (1.8%)	7 868	52 858	13 086	54 239	3 814	21 477	35 839	**189 180**	**123%**
Framework (2.8%)	8 031	56 668	14 029	55 430	3 814	21 477	35 839	**195 288**	**127%**
Employment									
Current	72	386	133	758	31	334	639	**2 353**	**94%**
Continuation (-0.3%)	72	372	128	754	27	560	320	**2 232**	**89%**
Continuation (1.7%)	85	451	155	908	27	560	320	**2 505**	**100%**
Laissez faire (1.7%)	85	451	155	908	0	560	0	**2 159**	**86%**
Integrated (-0.1%)	72	445	158	757	49	651	639	**2 771**	**111%**
Integrated (1.8%)	86	519	184	911	49	651	639	**3 041**	**121%**
Framework (2.8%)	88	557	198	931	49	651	639	**3 113**	**124%**
Backflow (000 NAf.)									
Current	1 278	6 762	1 932	10 478	340	3 135	7 711	**31 636**	**95%**
Continuation (-0.3%)	1 270	6 515	1 862	10 426	239	4 814	3 855	**28 981**	**87%**
Continuation (1.7%)	1 516	7 895	2 256	12 552	239	4 814	3 855	**33 127**	**100%**
Laissez faire (1.7%)	1 516	7 895	2 256	12 552	0	4 814	0	**29 033**	**88%**
Integrated (-0.1%)	1 279	7 783	2 300	10 459	766	5 598	7 710	**35 895**	**108%**
Integrated (1.8%)	1 524	9 094	2 688	12 588	766	5 598	7 710	**39 968**	**121%**
Framework (2.8%)	1 555	9 750	2 881	12 863	766	5 598	7 710	**41 123**	**124%**

Source : Policy Research Corporation N.V.

The policy scenarios have little impact on shipping itself. The direct impact on merchant shipping depends on more local growth, whereas deep-sea towage it depends on world wide growth.

For *shipping*, two separate activities are considered, *viz.* merchant shipping and deep-sea towage. As merchant shipping basically concerns shipping between the ports of the Netherlands Antilles (and other ports in the region), the direct impact depends on local economic growth. Deep-sea towage directly depends on world wide economic growth. Because of the dependence on economic growth rather than policy measures, the results for the respective scenarios do not differ much. The value added, employment and backflow are only slightly higher under *INTEGRATED* than under *CONTINUATION* and *LAISSEZ-FAIRE*.

Port-related activities also basically depend on local growth. The concession arrangements of the respective scenarios will, however, have a significant impact on sea-to-sea container transhipment.

The development of *port-related activities* basically depends on local economic growth. The higher the level of welfare, the greater local demand will be, and the more goods will be imported via the port. The activities also directly depend on sea-to-sea container transhipment, which is subject to the decisions of the international container lines on whether to call at the port of Willemstad with direct or feeder services. However, these decisions may be influenced by the effects of the proposed changes in the concession agreements in the port (see *Chapter V*). So, these activities are influenced more by policy decisions than shipping is. This is shown by the effect of *INTEGRATED*. Under this scenario, the value added will be 9.5 million NA*f*. higher than under *CONTINUATION* and *LAISSEZ-FAIRE* in 2005, which will generate an additional 69 jobs and 1.2 million NA*f*. net tax revenue.

The activities of shipping agents directly depend on activities in the port.

The activities of *shipping agents* are assumed to be directly dependent on activities in the port. In comparison to *CONTINUATION* and *LAISSEZ-FAIRE*, the *INTEGRATED* scenario will result in 2.1 million NA*f*. value added, 30 jobs and a 430 000 NA*f*. net backflow to activities in the port of Willemstad.

The policy scenarios have little impact on the dry dock. The direct impact on emergency repair depends on local growth; on planned maintenance it depends on world wide growth.

Just as for shipping, two separate activities are considered for the *dry dock*, *viz.* emergency repair and planned maintenance. Emergency repair is usually carried out on ships that call at the port for loading and unloading. It thus depends on local economic developments. Planned maintenance is directly dependent on the world-wide economic growth. As indicated in *Chapter III*, some 80% of the turnover is generate by planned maintenance. Hence, just as for shipping, the results for the respective scenarios do not differ much. Value added is expected to be less than 0.2 million NA*f*. higher under *INTEGRATED* than under *CONTINUATION* and *LAISSEZ-FAIRE*. Under *FRAMEWORK*, just as for the other activities, the performance is somewhat better (1.4 million NA*f*.), basically because of the strengthened local economy. Furthermore, the increased labour flexibility proposed in this scenario should help to ensure the sustainability of the performance.

Register-related activities depend on the policy concerning the register. If successful, it may make a fairly substantial contribution to growth in the maritime sector.

The development of the *register-related activities* directly depends on the government policy concerning the Netherlands Antilles ship's register. Although this is a relatively small activity, its contribution to the growth of the maritime sector will be quite considerable if the *INTEGRATED* scenario is carried through successfully. As can be derived from *Table X.1*, this activity at present produces about 1% of the maritime sector's value added. Its contribution to value added growth, however, will be far more than proportional. Compared to the 1996 situation, in other words before tonnage started to decline, the value added may be 2.3 times higher in 2005 (2.2 million NA*f*.). Compared to 1997, it may even increase to 3.5 times (2.7 million NA*f*.).

Cruise tourism depends growth in the cruise market, which is expected to be considerable. It will be even more pronounced if a new pier is built and further measures are taken to improve tourism on the island.

Cruise tourism depends on growth in the Deep Caribbean cruise market, which is expected to be considerable in the next decade. Even without the new pier and without the improvement of the 'product Curaçao', the growth in tourist (and crew) expenditures will represent 7.5 million NA*f*. In value added, 226 new jobs and a 1.7 million NA*f*. increase in net backflow from the sectors that directly serving tourists. This will in itself have a strong effect on the local economy. If the pier is built, however, 55 000 additional passengers are expected, who represent an additional 3.0 million NA*f*., in value added, 91 jobs and a 780 000 NA*f*. backflow per year.

The free zone activities will decrease unless its competitive position changes. They will be safeguarded if that position is improved.

The activities of the *free zone* will decrease under the conditions of the *CONTINUATION* scenario. As indicated in *Chapter III*, its competitive position will then further be threatened. This is expected to result in a direct value added loss of 17.9 million NA*f*., a job loss of about 320, and a net tax revenue loss of no less than 3.9 million NA*f*. Under *LAISSEZ-FAIRE,* the free zone will be abolished, whereas only a small part of the activities will be taken over by the local wholesale sector. The free zone activities will be safeguarded when its competitive position is strengthened. As shown in *Chapter V*, this may be the case under *INTEGRATED*. The activities will then remain unchanged.

Without policy changes, the maritime sector on Curaçao will grow by only 5% over 8 years. If the proposed measures are implemented, growth will increase by at least 25%.

If no new policy is introduced (and the economy grows as expected), in 2005 the value added in the maritime sector will be 154 million NA*f*., employment 2 500, and of net backflow of 33 million NA*f*. Compared to the present situation, this represents a growth of only 5% over 8 years. Under *LAISSEZ-FAIRE*, the sector will be significantly smaller, because of the abolition of the free zone and the register.

Under *INTEGRATED*, the value added will be 189 million NA*f*., the number of jobs 3 000, and the backflow 40 million NA*f*. This represents a growth of about 25-30%, which is about 3% per year. Under *FRAMEWORK*, which will further boost local economic growth, another 6.1 million NA*f*. in value added, 73 jobs and a 1.6 million NA*f*. backflow may be expected.

X.1.3. TOTAL ECONOMIC IMPACT OF THE MARITIME SECTOR

Under CONTINUATION, the growth of the maritime sector will generate 23 million NAf. in value added on Curaçao, 420 jobs, and a net backflow of 5.3 million NAf. If the LAISSEZ-FAIRE is implemented, the maritime sector will cause a decline in the economy.

The total economic impact of the respective scenarios is given in *Table X.2*. If the purchases of the maritime sector (the *indirect* impact) and the spending of the generated labour income, profits and tax revenues (the *induced* impact) are taken into account, an additional 248 million NA*f*. in value added will be created in 2005 under the conditions of the *CONTINUATION* scenario. Including the *direct* impact, the maritime sector will then generate 402 million NA*f*. in value added. This is only 23 million more than is currently generated. The major cause of this moderate performance is the expected decline in free-zone activities. Employment and backflow will also increase only moderately, by 420 jobs and 5.3 million NA*f*., respectively.

Under *LAISSEZ-FAIRE*, if the free zone and the register are abolished, the performance will be even worse. Value added, employment and backflow will then decline by about 6.5% over 8 years.

Table X.2 : Economic impact of the maritime sector on the Curaçao economy, 2005

	Value Added (000 NAf.)			*Employment*			*Backflow (000 NAf.)*		
	Direct	*Total*	*Index*	*Direct*	*Total*	*Index*	*Direct*	*Total*	*Index*
Current	146 780	**378 836**	**94%**	2 353	**6 169**	**94%**	31 636	**83 038**	**94%**
Continuation (-0.3%)	133 827	**350 424**	**87%**	2 232	**5 801**	**88%**	28 981	**77 213**	**87%**
Continuation (1.7%)	153 760	**401 727**	**100%**	2 505	**6 590**	**100%**	33 127	**88 319**	**100%**
Laissez faire (1.7%)	134 752	**353 891**	**88%**	2 159	**5 772**	**88%**	29 033	**77 787**	**88%**
Integrated (-0.1%)	169 233	**436 047**	**109%**	2 771	**7 184**	**109%**	35 895	**95 371**	**108%**
Integrated (1.8%)	189 180	**486 989**	**121%**	3 041	**7 965**	**121%**	39 968	**106 318**	**120%**
Framework (2.8%)	195 288	**501 941**	**125%**	3 113	**8 183**	**124%**	41 123	**109 440**	**124%**

Source : Policy Research Corporation N.V.

Under the INTEGRATED MARITIME POLICY, the growth of the sector is expected to generate 108 million NAf. in value added, 1 800 jobs, and a net backflow of 23.3 million NAf. The implementation of a FRAMEWORK policy, is expected to result in 123 million NAf in value added, 2 000 jobs and a net backflow of 26.4 million NAf.

Under the *INTEGRATED MARITIME POLICY*, the total value added will be 487 million NA*f*.. This is 21% more than under *CONTINUATION*. The generated employment will be 8 000. This implies an increase by 1 800 jobs, which is over four times more than growth under *CONTINUATION*. The net backflow will turn the cape of 100 million NA*f*. As can be deduced from *Table X.1* above, the major contributors to this significantly better performance are port-related activities, shipping agents, cruise tourism and the free zone. The port and agents perform better because of boosted container transhipment. Cruise tourism performs better because of the larger number of vessels attracted by the new pier. The free zone, finally, will preserve its present size instead of declining.

X.2. ECONOMIC IMPACT ON BONAIRE

X.2.1. DETERMINATION OF DIRECT ECONOMIC IMPACT

The direct impact on Bonaire is determined by policy measures:
- *port-related measures;*
- *promotional activities;*
- *general economic measures.*

Just as for Curaçao, the direct economic impact of the policy scenarios is basically determined by *policy measures* and *economic developments*.

The *policy measures* and their basic effects are the following:

- **port-related** policy: this involves measures to improve the performance of the port of Kralendijk, such as port management and cruise berthing facilities. This is, however, not expected significantly to affect the local economy;
- **promotional** activities: these are expected to have a positive, albeit difficult to quantify, impact on the maritime sector. Nevertheless, the effect of the activities of the Bonaire Cruise Association (BCA) has been taken into account;
- **general economic** measures: these are expected considerably to strengthen the economy as a whole. As shown below, the maritime sector will also benefit from growth in this respect.

It is also determined by economic developments:
- *cruise tourism;*
- *local growth;*
- *world wide growth.*

The following *economic developments* are considered:

- Growth in **cruise tourism**: this will depend on the developments in the Deep Caribbean cruise market and the activities of the BCA;
- **local** economic growth: because of the 'open' character of the Netherlands Antilles' economy, this will strongly depend on world wide economic growth. However, growth in cruise tourism also have some impact on local growth (see *Table X.3*);
- **world wide** economic growth: as indicated above, this is a major determinant of local economic growth.

X.2.2. DIRECT ECONOMIC IMPACT PER SUBSECTOR

The direct economic impact of the respective scenarios is given in *Table X.3*. In this table, the small structural component induced in the cruise tourism growth has been taken into account. This is estimated at about 0.05% per year under *CONTINUATION* and *LAISSEZ-*

FAIRE, and at about 0.15% per year under *INTEGRATED* and *FRAMEWORK*.

Table X.3 : Direct economic impact of maritime activities on Bonaire, 2005

Scenario (growth %)	*Maritime services*	*Oil storage*	*Cruise tourism*	*Total*	*Index*
Value added (000 NAf.)					
Current	4 973	22 688	337	**27 997**	**94%**
Continuation (0.1%)	5 083	22 688	948	**28 719**	**97%**
Continuation (2.1%)	6 006	22 688	948	**29 642**	**100%**
Laissez faire (2.1%)	6 006	22 688	948	**29 642**	**100%**
Integrated (0.2%)	5 177	22 688	1 468	**29 333**	**99%**
Integrated (2.2%)	6 100	22 688	1 468	**30 256**	**102%**
Framework (3.2%)	6 561	22 688	1 468	**30 718**	**104%**
Employment					
Current	83	90	12	**185**	**82%**
Continuation (0.1%)	85	90	35	**209**	**93%**
Continuation (2.1%)	100	90	35	**225**	**100%**
Laissez faire (2.1%)	100	90	35	**225**	**100%**
Integrated (0.2%)	86	90	54	**230**	**102%**
Integrated (2.2%)	101	90	54	**245**	**109%**
Framework (3.2%)	109	90	54	**253**	**113%**
Backflow (000 NAf.)					
Current	961	1 839	74	**2 874**	**90%**
Continuation (0.1%)	982	1 839	207	**3 029**	**94%**
Continuation (2.1%)	1 161	1 839	207	**3 207**	**100%**
Laissez faire (2.1%)	1 161	1 839	207	**3 207**	**100%**
Integrated (0.2%)	1 000	1 839	321	**3 161**	**99%**
Integrated (2.2%)	1 179	1 839	321	**3 339**	**104%**
Framework (3.2%)	1 268	1 839	321	**3 428**	**107%**

Source : Policy Research Corporation N.V.

The maritime services basically depend on local economic growth.

The development of the *maritime services*, which are mainly port-related, will basically depend on local economic growth. The higher the level of welfare, the more goods will be imported via the port. As indicated in *Chapters III* and *IV*, growth in the Bonaire economy is expected to be limited in the coming decade. Moreover, policy measures are expected to have only a modest impact on this sector, basically as a result of the increased demand for goods imports, induced by an increase in cruise tourism.

Oil storage activities are expected to remain constant, irrespective of policy measures and economic growth.

O*il storage* activities are expected to remain constant. They are not influenced by policy measures or local economic growth. Furthermore, as the facilities are already operating near capacity. These activities will only increase if capacity is expanded. This, however, is not likely.

Cruise tourism depends on growth in the cruise market, which is expected to be considerable. Growth will be boosted even moore by the efforts of the BCA.

Thanks to the BCA's efforts to make the tourists' stay more comfortable, *cruise tourism* is expected to grow significantly more than without the efforts (see *Chapter VI*). Although the BCA has already started, its activities, these are considered to be part of the *INTEGRATED* scenario, because they indicate a *change* in the attitude towards cruise tourism, fitting in with the 'spirit' of the *INTEGRATED* scenario proposed by *Policy Research*. Under *CONTINUATION*, the increase to about 31 000 passengers in 2005 would result in a threefold rise in value added, employment and backflow in the serving sectors in comparison with the present situation. The activities of the BCA may attract another 17 000 passengers. Together with the crew, they would generate an additional 520 000 NA*f*. in direct value added, 19 jobs and a 110 000 NA*f*. backflow.

Without policy changes, the maritime sector on Bonaire will grow by about 10% over 8 years If the proposed measures are implemented, the growth rate will be about 15%.

If no new policy is introduced and the activities of the BCA are not considered, the value added in the maritime sector will total 29.6 million NA*f*. in 2005. Employment will then stand at 225 jobs , and the net backflow will be 3.2 million NA*f*. Compared to the present situation, this would mean an increase by 6% and for employment an increase by about 21% over 8 years.

Under *INTEGRATED*, the value added will be 30.3 million NA*f*., the number of jobs 245, and the backflow 3.3 million NA*f*..[4] Compared

[4] This may be slightly higher if the free zone attracts some additional economic activity. Currently, one potential investor is prepared to create 66 jobs in such a zone, 20 of which are to be filled by well-educated foreigners. The expenditure of the additional incomes will result in a modest direct effect on value added,

to *CONTINUATION*, the impact of *INTEGRATED* is still significant, but less pronounced than on Curaçao. Under *FRAMEWORK*, an additional 460 000 NA*f*. in value added may be expected.

X.2.3. TOTAL ECONOMIC IMPACT OF THE MARITIME SECTOR

Under CONTINUATION and LAISSEZ-FAIRE, growth in the maritime sector will generate 3.4 million NAf. in value added on Bonaire, 100 jobs, and a net backflow of 0.7 million NAf.

The total economic impact of the respective scenarios is given in *Table X.4*. Compared to 1997, an additional 3.4 million NA*f*. in value added is created on Bonaire under *CONTINUATION*. As can be deduced from the direct impact of *Table X.3*, roughly two thirds of this growth is induced by local economic growth, and one third by cruise tourism. Employment will grow by about 100, backflow by 690 000 NA*f*. *LAISSEZ-FAIRE* will have no specific implications for Bonaire.

Table X.4 : Economic impact of the maritime sector on the Bonaire economy, 2005

	Value Added (000 NAf.)			*Employment*			*Backflow (000 NAf.)*		
	Direct	*Total*	*Index*	*Direct*	*Total*	*Index*	*Direct*	*Total*	*Index*
Current	27 997	**51 235**	**94%**	185	**1 009**	**91%**	2 874	**7 804**	**92%**
Continuation (0.1%)	28 719	**52 872**	**97%**	209	**1 064**	**96%**	3 029	**8 143**	**96%**
Continuation (2.1%)	29 642	**54 600**	**100%**	225	**1 105**	**100%**	3 207	**8 494**	**100%**
Laissez faire (2.1%)	29 642	**54 600**	**100%**	225	**1 105**	**100%**	3 207	**8 494**	**100%**
Integrated (0.2%)	29 333	**54 265**	**99%**	230	**1 110**	**100%**	3 161	**8 432**	**99%**
Integrated (2.2%)	30 256	**55 993**	**103%**	245	**1 151**	**104%**	3 339	**8 783**	**103%**
Framework (3.2%)	30 718	**56 857**	**104%**	253	**1 172**	**106%**	3 428	**8 958**	**105%**

Source : Policy Research Corporation N.V.

employment and backflow of 420 millionNA*f*., 14 jobs and 89 millionNA*f*., respectively.

Under the INTEGRATED MARITIME POLICY, growth in the sector is expected to generate 4.8 million NAƒ. in value added, 140 jobs, and a net backflow of 1.0 million NAƒ. After the implementation of the FRAMEWORK policy, this is expected to be 5.6 million NAƒ., 160 jobs and 1.2 million NAƒ., respectively.

Under the *INTEGRATED MARITIME POLICY*, the total value added will be 56.9 million NAƒ. This is 3% more than under *CONTINUATION*. The generated employment will be 1 200. This implies an increase by 140 jobs, which is one and a half times as much as under *CONTINUATION*. The net backflow will be 9.0 million NAƒ, which is 3% more than under *CONTINUATION*. Under *FRAMEWORK*, the impact will be 4 - 6% higher than under *CONTINUATION*.

X.3. ECONOMIC IMPACT ON THE WINDWARD ISLANDS

X.3.1. DETERMINATION OF DIRECT ECONOMIC IMPACT

The direct economic impact of the maritime activities is basically determined by *policy measures* and *economic developments*.

The direct impact on the Windward Islands is determined by policy measures:
- *port-related measures;*
- *the construction of the cruise pier;*
- *promotional activities;*
- *general economic measures.*

The *policy measures* and their basic effects are the following:

- **port-related** policy: because of the Sint Maarten port organisation and expansion plans, sea-to-sea container transhipment is expected to growquite considerably, at least if the first phase of the multi-purpose cargo terminal is completed as planned.
- **cruise pier** construction: The availability of a cruise pier is assumed to attract additional passengers; who would not visit the islands if the present tendering facilities on Sint Maarten were not replaced.
- **promotional** activities: these are expected to have a positive, albeit difficult to quantify, impact on all maritime activities. Nevertheless, the effect of activities aimed at improving the facilities for cruise passengers has been taken into account;
- **general economic** measures: these are expected considerably strengthen the economy as a whole. As shown below, the maritime sector will also benefit from growth in this respect.

It is also determined by economic developments:
- *cruise tourism;*
- *local growth;*
- *world wide growth.*

The following *economic developments* are considered:

- Growth in **cruise tourism**: this will depend on developments in the Eastern Caribbean cruise market, and government decisions regarding the accommodation of passengers (see *Chapter IV* and *Volume II*);
- **local** economic growth: because of the 'open' character of the Netherlands Antilles' economy, this will strongly depend on world wide economic growth. However, growth in cruise tourism and container transhipment also have an impact on the local growth. It needs to be stressed that, as shown above, these two factors will at the same time depend on the policy measures regarding the cruise pier and port concessions;
- **world wide** economic growth: as indicated above, this is a major determinant of local economic growth.

X.3.2. *DIRECT ECONOMIC IMPACT PER SUBSECTOR*

The direct economic impact of the respective scenarios is given in *Table X.5*. First of all, it is striking that the expected local growth rate is impressive. This is mainly induced by growth in cruise tourism, which is an important source of income for the Windward Islands. Even if growth in other economic activities stagnates, growth generated by cruise tourism will amount to almost one percent per year. If growth in other activities is included, the annual growth on the Windwards will thus stand at between 3 and 4%. Under the *FRAMEWORK*-scenario, this may increase at almost 5%.

Maritime services basically depend on local economic growth. However, policy measures regarding tourism and transhipment facilities are expected to have a significant impact on this sector as well.

M*aritime services*, which mainly comprise port-related activities (see *Chapter III*), basically depend on local economic growth. The higher the level of welfare, the more goods will be imported via the port. Furthermore, policy measures are expected to have a significant impact on this sector. First, local economic growth strongly depends on cruise tourism. As indicated above, cruise tourism may be affected by policy decisions. Second, port-related activities partly depend on the container transhipment, which is also subject to policy decisions. Without new policy measures, the value added will grow by 2.6 million NA*f*., employment by 43 and backflow by 510 000 NA*f*. *INTEGRATED* is expected to generate another 2.3 million NA*f*. in value added, 43 jobs and a 450 000 NA*f*. backflow.

Oil storage activities are expected to remain constant, irrespective of policy measures and economic growth.

O*il storage* activities on Statia are expected to remain constant. They are not influenced by policy measures or economic growth. Furthermore, as the facilities are already operating near capacity, these activities will only increase after extensive investments in new storage capacity, which are not expected. Because of data limitations, the impact is approximated by the spending effects of the employees' wages and income tax, and the company's corporate tax.[5]

[5] This way of approximating is comparable to the analysis of the impact of cruise tourism, where the expenditure of passengers and crew is considered. It implies, however, that the 200 employees are not included in *Table X.5*. If they were, comparability within the tables would be disturbed, as the direct value added and backflow generated by the oil terminal are not included either. So, for the sake of completeness, the purchases of goods and services by the employees is estimated to amount to 2.8 million NA*f*. (not given in the tables!). The government collects corporate and income taxes from the terminal and its employees, and spends

Table X.5 : Direct economic impact of maritime activities on the Windward Islands, 2005

Scenario (growth %)	*Maritime services*	*Oil storage*	*Cruise tourism*	*Total*
Value added (000 NAf.)				
Current	11 326	1 869	65 195	**78 390**
Continuation (0.9%)	12 028	1 869	95 306	**109 202**
Continuation (3.0%)	13 909	1 869	95 306	**111 083**
Laissez faire (3.0%)	13 909	1 869	95 306	**111 083**
Integrated (1.8%)	14 295	1 869	129 025	**145 188**
Integrated (3.8%)	16 176	1 869	129 025	**147 069**
Framework (4.8%)	17 116	1 869	129 025	**148 010**
Employment				
Current	188	50	1 539	**1 777**
Continuation (0.9%)	200	50	2 251	**2 501**
Continuation (3.0%)	231	50	2 251	**2 532**
Laissez faire (3.0%)	231	50	2 251	**2 532**
Integrated (1.8%)	237	50	3 048	**3 335**
Integrated (3.8%)	269	50	3 048	**3 367**
Framework (4.8%)	284	50	3 048	**3 382**
Backflow (000 NAf.)				
Current	2 233	412	14 436	**17 081**
Continuation (0.9%)	2 371	412	21 104	**23 887**
Continuation (3.0%)	2 742	412	21 104	**24 257**
Laissez faire (3.0%)	2 742	412	21 104	**24 257**
Integrated (1.8%)	2 818	412	28 570	**31 800**
Integrated (3.8%)	3 189	412	28 570	**32 171**
Framework (4.8%)	3 374	412	28 570	**32 356**

Source : Policy Research Corporation N.V.

these accordingly. The expenditure of both employees income and government directly creates 1.8 million NA*f* in value added, 50 jobs and an additional backflow of 0.4 million NA*f*. This is given in *Table X.5*. The 200 employees are added afterwards, and are included in *Table X.6*.

Cruise tourism depends on growth in the cruise market, which is expected to be considerable. It may be enhanced and made more sustainable if the tourist facilities are improved.

The development *of cruise tourism* depends on growth in the Eastern Caribbean cruise market, which is expected to be considerable in the next decade (see *Chapter IV*). Even without policy changes, expenditures will increase by 46%, and represent 95 million NA*f*. value added, 2 300 jobs and a 21 million NA*f*. net backflow in the sectors that directly serve tourists. This will in itself have a strong effect on the local economy. However, this growth may not be sustainable, because the present policy does not secure sufficient investments to accommodate passengers. If these investments are made, another 340 000 passengers may be expected (see *Chapter IV*). This would represent another 34 million NA*f*. in value added, 800 jobs and a 7.5 million NA*f*. backflow. If allocated properly, these investments may secure the sustainability of this performance.

Without policy changes, the maritime sector on the Windward Islands will almost double in importance over 8 years. If the proposed measures are implemented, it will more than double in importance. Furthermore, the sustainability of the economic impact will then be better guaranteed.

If no new policy is introduced, in 2005 value added in the maritime sector will be 111 million NA*f*., employment 2 500, and net backflow 24.3 million NA*f*. Compared to the present situation, this would mean an increase by 42% over 8 years, which is about 4.5% per year. This increase would mainly be the result of the growing number of cruise vessel calls. Its sustainability, however, is not guaranteed.

Under the *INTEGRATED MARITIME POLICY* scenario, the value added will be 147 million NA*f*., the number of jobs 3 400, and the backflow 32.2 million NA*f*. Including the workers on the Statia Oil Terminal, the number of jobs will stand at about 3 600.[6] Compared to *CONTINUATION*, the impact of the *INTEGRATED MARITIME POLICY* is still significant, but less pronounced than on Curaçao. The reason for this is that the impact of cruise tourism is already relatively strong under *CONTINUATION*. Under *FRAMEWORK*, an additional million NA*f*. in value added may be expected.

6 See *Note 5*.

The overflow of cruise tourists and other day-trippers from Sint Maarten could have a considerable spending impact on the economy of Saba. A number of 20 000 passenger visits seems to be a reasonable estimate for 2005, with an annual direct spending impact of 14 million NAf.

The effects on Statia are expected to be more modest because of the greater distance from Sint Maarten.

The *overflow of (cruise) tourists* from Sint Maarten to Saba and Statia could have a considerable impact on the economies of these islands, even if only small numbers of passenger visits were involved. In 1995, some 10 000 day-trippers visited Saba by boat (ferries) from Sint Maarten. If constructive regional co-operation could be achieved and a reliable and comfortable connection could be set up, this number could be increased to around 20 000 passenger visits per boat in 2005. On the basis of an average spending of 40 US$ per visitor per day[7], these numbers of passengers would have to a direct spending effect of 8 million US$ or 14 million NA*f*. Considering the scale of Saba's economy this is a considerable amount of money, which would also generate indirect and induced spending effects. As a result of the greater distance from Sint Maarten, the number of visitors and the subsequent spending impact is expected to be much lower on Statia.

X.3.3. *TOTAL ECONOMIC IMPACT OF THE MARITIME SECTOR*

Under CONTINUATION and LAISSEZ-FAIRE, growth in the maritime sector will generate 79 million NAf. in value added on the Windward Islands, 1,800 jobs, and a net backflow of 17.4 million NAf.

The total economic impact of the respective scenarios is given in *Table X.6*. Compared to 1997, value added, employment and backflow are expected to grow by about 40% under *CONTINUATION*. As can be deduced from the direct impact shown in *Table X.5*, this is basically induced by growth in cruise tourism. *LAISSEZ-FAIRE* will have no specific implications for the Windward Islands.

Under the INTEGRATED MARITIME POLICY, growth in the sector is expected to generate 167 million NAf. in value added, 3 770 jobs, and a net backflow of 36.6 million NAf. After the implementation of the FRAMEWORK policy, this is expected to be slightly higher, at 169 million NAf., 3 820 jobs and 37.0 million NAf., respectively.

Under the *INTEGRATED* scenario, the total value added will be 358 million NA*f*. This is 32% more than under *CONTINUATION*. The generated employment will be 8 300 jobs, which is 2 000 more than under *CONTINUATION*. The net backflow will be 78 million NA*f*. Under *FRAMEWORK*, the impact will be about 33% higher than under *CONTINUATION*.

7 Source: Integrated Tourism Development Master Plan Saba (1996).

Table X.6 : Economic impact of the maritime sector on the Windward Islands economy, 2005

	Value Added (000 NAf.)			*Employment*			*Backflow (000 NAf.)*		
	Direct	*Total*	*Index*	*Direct*	*Total*	*Index*	*Direct*	*Total*	*Index*
Current	78 390	**191 167**	**71%**	1 977	**4 494**	**71%**	17 081	**41 803**	**71%**
Continuation (0.9%)	109 202	**265 655**	**98%**	2 701	**6 193**	**98%**	23 887	**58 189**	**98%**
Continuation (3.0%)	111 083	**270 514**	**100%**	2 732	**6 290**	**100%**	24 257	**59 210**	**100%**
Laissez faire (3.0%)	111 083	**270 514**	**100%**	2 732	**6 290**	**100%**	24 257	**59 210**	**100%**
Integrated (1.8%)	145 188	**352 914**	**130%**	3 535	**8 172**	**130%**	31 800	**77 346**	**131%**
Integrated (3.8%)	147 069	**357 773**	**132%**	3 567	**8 269**	**131%**	32 171	**78 367**	**132%**
Framework (4.8%)	148 010	**360 202**	**133%**	3 582	**8 317**	**132%**	32 356	**78 878**	**133%**

Source : Policy Research Corporation N.V.

X.4. SUMMARY AND CONCLUSION

The main results of the EIS® analysis are summarised in *Table X.7*. For each scenario and the *CURRENT* situation, this table gives the deviation from *CONTINUATION* in absolute numbers and as an index. For example, the *CURRENT* value added generated by the Curaçao maritime sector (378.8 million NA*f*., see *Table X.2*) is 22.3 million NA*f*. lower than the 2005 value added under *CONTINUATION*. In percentage terms, it is 94% of the 2005 value added, so 6% lower.

If no new policy measures are adopted, the maritime sector of the Netherlands Antilles will grow modestly, following the local demand for goods and services. Under the conditions of the proposed *INTEGRATED MARITIME POLICY* (IMP), however, growth will be more pronounced. The basic reason is that this policy will better enable the maritime sector to attract 'autonomous' activities, which do not depend on local demand. Examples are cruise tourism and sea-to-sea container transhipment.

Table X.7 : Comparison of the policy scenarios with the continuation of the present policy, 2005

	Curaçao		*Bonaire*		*Windward Islands*		*Netherlands Antilles*	
	Difference	*Index*	*Difference*	*Index*	*Difference*	*Index*	*Difference*	*Index*
Current								
Value added (000 NAf.)	-22 892	94%	-3 364	91%	-79 347	71%	-105 603	85%
Employment	-421		-96		-1 796		-2 312	
Backflow (000 NAf.)	-5 281		-690		-17 407		-23 377	
Continuation								
Value added (000 NAf.)	0	100%	0	100%	0	100%	0	100%
Employment	0		0		0		0	
Backflow (000 NAf.)	0		0		0		0	
Laissez-faire								
Value added (000 NAf.)	-47 837	88%	0	100%	0	100%	-47 837	93%
Employment	-818		0		0		-818	
Backflow (000 NAf.)	-10 531		0		0		-10 531	
Integrated								
Value added (000 NAf.)	85 262	121%	1 393	104%	87 259	132%	173 913	124%
Employment	1 375		46		1 979		3 400	
Backflow (000 NAf.)	17 999		289		19 157		37 445	
Framework								
Value added (000 NAf.)	100 214	125%	2 258	106%	89 689	133%	192 160	126%
Employment	1 593		67		2 027		3 687	
Backflow (000 NAf.)	21 121		464		19 668		41 253	

Source : Policy Research Corporation N.V.

Without new policy measures, there will be modest growth, induced by the maritime sector. If the proposed measures are implemented, however, growth is expected to be more pronounced.

In 2005, and compared to the CONTINUATION of the present policy,
- *the effect on the national income will broadly be between 150 - 200 million NAf.;*
- *a 3 500 - 4 000 additional jobs will be created;*
- *government revenue will increase by about 35 - 40 million NAf.*

Via the purchases of the maritime sector and the expenditure of the generated income, this will have a considerable effect on the Netherlands Antilles' economy in the *INTEGRATED MARITIME POLICY* scenario. Compared to the *CONTINUATION* of the present policy, the total increase would amount to 174 million NA*f*. and 3 400 jobs on all five islands together. The increase in the government budget would be 37 million NA*f*. If the IMP was embedded in the proposed *FRAMEWORK* policy, the effects would be about 10%more pronounced. They would then be expected to amount to 192 million NA*f*., 3 700 jobs and 41 million NA*f*.

The *FRAMEWORK* policy is thus the most beneficial alternative with respect to the Netherlands Antilles' maritime sector. In this policy, the *INTEGRATED MARITIME POLICY* measures specifically aimed at the maritime sector, are embedded in a proper macro-economic policy (see *Chapter V.5*). This *FRAMEWORK* policy then provides the conditions under which the maritime sector to operate.

XI. CONCLUSIONS AND RECOMMENDATIONS

XI.1. CONCLUSIONS

There is a need for restructuring the Netherlands Antillean economy, in which the maritime sector plays an important role.

The macro-economic analysis of *Chapter II* shows that the economy of the Netherlands Antilles, and especially Curaçao's, is in need of a restructuring and stimulation programme on the basis of an '*Inspiring Plan*'. A first conclusion of the *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* is that the maritime sector is very important, both in terms of its strategic position within the islands' economies, and in terms of its economic significance (see *Chapter III*). The current economic significance of the maritime sector is summarised in *Table XI.1*.

XI.1.1. CURRENT ECONOMIC SIGNIFICANCE

The maritime sector of the Netherlands Antilles accounts for a total in value added of 621 million NAf. Nearly 11 700 jobs depend on it. Moreover, the maritime sector generates a total backflow to government of 132 million NAf.

The fundamental importance of the maritime sector for the Antillean economy is obvious, from the results in *Table XI.1* The maritime sector of the Netherlands Antilles accounts for a total value added of 621 million Na*f*, nearly 11 700 jobs depend on it. On Curaçao, 11% of total employment is related to the maritime sector. For the other islands this figure is even higher: 17% for Bonaire, and 19% for the Windward islands. The maritime sector generates a total backflow of over 132 million NA*f*. to all levels of government.

Qualitatively the maritime sector is even more important: the island economies of the Netherlands Antilles depend on the maritime sector for the supply of production factors and consumer goods. Moreover, the maritime sector has strong links with other sectors in the economy.

It needs to be emphasised that *qualitatively* the maritime sector is even more important: island economies such as the Netherlands Antilles depend largely, if not exclusively, on the maritime sector for the provision (and export) of raw materials, semi-manufactured articles, capital goods and consumer goods. Moreover, as is shown in this report, the maritime sector has strong links with other (sub)sectors, such as free zone trading activities and cruise tourism. Because of the strong links with the rest of the economy, an integrated approach was chosen for the study of the maritime sector and its potential.

Table XI.1 : Current significance of the maritime sector of the Netherlands Antilles, 1997.

Value added (000 NA*f*.)	*direct*	*indirect*	*induced*	*total*	*% GDP*
Curaçao	146 779	45 236	186 822	**378 837**	**± 12%**
Bonaire	27 998	2 624	20 614	**51 236**	**± 19%**
Windwards	78 391	27 122	85 654	**191 167**	**± 25%**
Total	253 168	74 982	293 090	621 240	

Employment	*direct*	*indirect*	*induced*	*total*	*% empl.*
Curaçao	2 353	570	3 247	**6 170**	**± 11%**
Bonaire	185	81	744	**1 010**	**± 17%**
Windwards	1 977	402	2 114	**4 493**	**± 19%**
Total	4 515	1 053	6 105	11 673	

Backflow (000 NA*f*.)	*direct*	*indirect*	*induced*	*total*
Curaçao	31 636	9 964	41 438	**83 038**
Bonaire	2 874	418	4 512	**7 804**
Windwards	17 081	5 832	18 891	**41 804**
Total	51 591	16 214	64 841	132 646

Source : Policy Research Corporation N.V.

XI.1.2. *POLICY SCENARIOS*

The maritime sector's economic significance may be further improved by new policy measures. To this end, five scenarios were considered by Policy Research:
1. *CONTINUATION of the present policy;*
2. *LAISSEZ-FAIRE policy;*
3. *REGISTER PLUS policy;*
4. *INTEGRATED maritime policy;*
5. *FRAMEWORK policy.*

Moreover, an in-depth analysis of the maritime sector has shown that there is potential for greater economic significance. In *Chapters V* to *IX*, alternative sets of policy measures are introduced and discussed in a qualitative manner. In *Chapter X*, the impact of the most important measures was quantified in the EIS® analysis. In brief, the following policy scenarios were considered for each of the five islands:

1. the *CONTINUATION* of the present maritime policy;
2. the introduction of a *LAISSEZ-FAIRE* policy, which would imply that no specific measures were taken (or continued) to support the maritime sector;
3. the introduction of a *REGISTER PLUS strategy*, with more attention for the image of the register of the Netherlands Antilles in terms of the level of service and the quality of the ships in the register;
4. the introduction of an *INTEGRATED MARITIME POLICY*, aimed at developing shipping itself and its related activities in the (ports of the) Netherlands Antilles;
5. the introduction of a *FRAMEWORK POLICY with MARITIME FOCUS*, combining the *integrated maritime policy* with an improved *general economic policy*.

The following package is recommended:
- *a FRAMEWORK POLICY with MARITIME FOCUS;*
- *including an INTEGRATED MARITIME POLICY;*
- *and a REGISTER PLUS approach.*

In principle, the measures recommended by *Policy Research* are included in the *FRAMEWORK POLICY with MARITIME FOCUS* scenario. This implies the introduction of an *INTEGRATED MARITIME POLICY*, including a *REGISTER PLUS* approach, in combination with an improved *GENERAL ECONOMIC POLICY*. For a detailed description of these scenarios and the included policy recommendations, the reader is referred to *Chapters V* to *IX*.

These recommendations build on an extended Input-Output analysis, the results of which are summarised in Table XI.2.

By means of Input-Output analysis, the effects of the considered policy scenarios on the economic significance of the maritime sector were modelled and estimated. To this end, three separate Input-Output models were used, for Curaçao, Bonaire and the Windward islands respectively. The results of the analysis were presented in detail in *Chapter X*, and summarised in *Table XI.2*.

*As shown in this table, the FRAMEWORK scenario will generate a strong increase in economic activity. Moreover, this increase is considered **sustainable**.*

If the *FRAMEWORK POLICY with MARITIME FOCUS* is implemented the following objective may realistically be achieved :

> *the expansion of sustainable economic activity in the maritime sector, in the form of additional value added and employment on the five islands of the Netherlands Antilles.*

Table XI.2 : Comparison of the policy scenarios with the continuation of the present policy, 2005.

	Curaçao		*Bonaire*		*Windward Islands*		*Netherlands Antilles*	
	Difference	*Index*	*Difference*	*Index*	*Difference*	*Index*	*Difference*	*Index*
Current								
Value added (000 NAf.)	-22 892	94%	-3 364	91%	-79 347	71%	-105 603	85%
Employment	-421		-96		-1 796		-2 312	
Backflow (000 NAf.)	-5 281		-690		-17 407		-23 377	
Continuation								
Value added (000 NAf.)	0	100%	0	100%	0	100%	0	100%
Employment	0		0		0		0	
Backflow (000 NAf.)	0		0		0		0	
Laissez-faire								
Value added (000 NAf.)	-47 837	88%	0	100%	0	100%	-47 837	93%
Employment	-818		0		0		-818	
Backflow (000 NAf.)	-10 531		0		0		-10 531	
Integrated								
Value added (000 NAf.)	85 262	121%	1 393	104%	87 259	132%	173 913	124%
Employment	1 375		46		1 979		3 400	
Backflow (000 NAf.)	17 999		289		19 157		37 445	
Framework								
Value added (000 NAf.)	100 214	125%	2 258	106%	89 689	133%	192 160	126%
Employment	1 593		67		2 027		3 687	
Backflow (000 NAf.)	21 121		464		19 668		41 253	

Source : Policy Research Corporation N.V.

In general, a FRAMEWORK policy is
- *incentive-driven;*
- *transparent;*
- *cluster-oriented;*
- *stability-enforcing.*

The *FRAMEWORK POLICY* is characterised by being:

- *incentive-driven*: the government should not step into the shoes of the entrepreneur because it does not possess the necessary market information;
- *transparent*: a *FRAMEWORK POLICY* consists of clear and straightforward measures. As a result there is no room for 'perverse' strategies of individual companies aimed at obtaining exceptional or special government support;
- *cluster-oriented*: a *FRAMEWORK POLICY* is often aimed at a cluster of activities. The maritime sector in the braod sense used in the A-EIS project is such a cluster. All activities will directly and indirectly benefit;
- *stability-enforcing*: it is important to build a long-term 'partnership' between the government and the maritime sector in order to solve its problems. The *FRAMEWORK POLICY* represents a long-term vision and commitment, providing the sector with a competitive and stable business environment.

Moreover, a *FRAMEWORK POLICY* is based on the principles of subsidiarity and limited government intervention. Consequently, these effects are expected to be sustainable and can be accomplished with relatively limited (financial) efforts.

Compared to CONTINUATION, the FRAMEWORK scenario may generate an additional ***192 million NAf. in*** *value added,* ***3 600 jobs****, and a* ***41 million NAf.*** *backflow to the government.*

In comparison with the *CONTINUATION* of the present policy, in the period until 2005 the *FRAMEWORK POLICY with MARITIME FOCUS* will generate an increase in a **value added of nearly 200 million NAf.**, which is the contribution to the country's Gross Domestic Product. Moreover, the *FRAMEWORK POLICY* is expected to create **more than 3 600 additional jobs** throughout the Antillean economy. Finally, the **backflow** to the government will increase by **more than 40 million NAf.** each year as a result of the introduction of the *FRAMEWORK POLICY*.

XI.1.3. *GENERAL CONCLUSIONS*

Clearly, the most favourable effects on the development of the maritime sector are expected from the implementation of an *INTEGRATED MARITIME POLICY*, preferably supported by an improved *general economic policy*. The introduction of a *FRAMEWORK POLICY with MARITIME FOCUS* is therefore strongly recommended by *Policy Research* for all islands of the Netherlands Antilles.

The recommended policy should be incorporated into an 'Inspiring Plan' for the economy of the Netherlands Antilles. This is the responsibility of the national and the Island Governments.

Moreover, the recommendations for the maritime sector should be incorporated into the overall '*Inspiring Plan*' for the restructuring and stimulation of the economy of the Netherlands Antilles. It is the responsibility of the central government and the respective Island Governments to develop this plan, preferably in close consultation with the private sector, the Dutch government and international organisations such as the International Monetary Fund (IMF) and the Inter-American Development Bank (IDB).

A similar approach is recommended for some other key sectors.

As indicated, this study has resulted in concrete recommendations for the maritime sector. In order to follow up the more general recommendations of the IDB report (1997), a similar approach recommended for other sectors, such as the financial offshore sector, tourism, telecommunications, manufacturing, and fishery.

XI.2. POLICY RECOMMENDATIONS: IMPLEMENTATION MATRICES

The recommendations are elaborated in a series of 'implementation matrices' for
- *the national government;*
- *the Island Governments;*
- *the Dutch and Kingdom governments.*

In this section, the concrete policy recommendations are presented in a series of *implementation matrices*. As indicated, for a detailed discussion of the recommendations and the underlying considerations, the reader is referred to *Chapters V* to *IX*.

Such a matrix contains a detailed plan for implementation, including allocation of
- *priorities;*
- *responsibilities.*

An implementation matrix does not merely contain policy recommendations, but a concrete plan for their implementation as well. As such, the implementation matrix identifies the responsible level(s) of government and provides an overview of the concrete actions required. Moreover, the implementation matrix shows the order in which the proposed measures be implemented. Finally, the matrices contain '*Milestones*', which reflect recommendations with respect to the timing of the implementation phase.

In order to facilitate and support the decision-making process following the A-EIS project, implementation matrices are drawn up for:
- the national government of the Netherlands Antilles;
- the respective Island Governments of Curaçao, Bonaire, Sint Maarten, Statia and Saba;

– the government of the Netherlands and the Kingdom of the Netherlands as a whole.

In the following sections these implementation matrices are presented. The most important recommendations are discussed in greater detail in the accompanying text.

XI.2.1. National Government

The implementation matrix for the national level is given in Table XI.3.

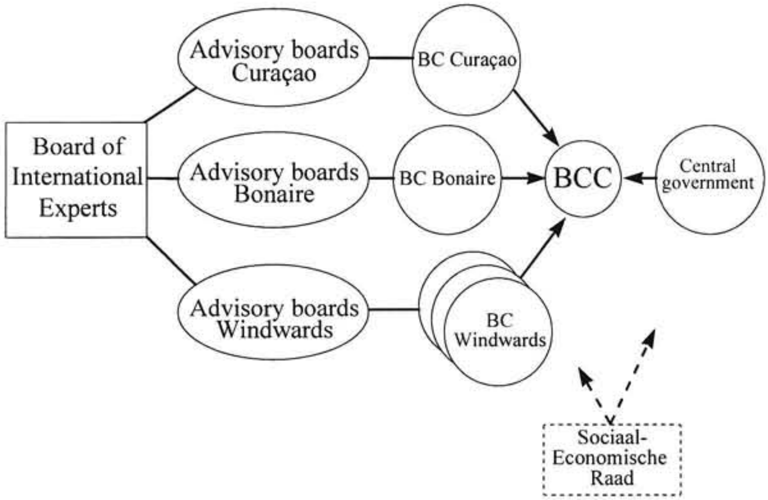
Table XI.3 presents the implementation matrix at the level of the national government of the Netherlands Antilles.

XI.2.1.1. Government structure

At national level the institutionalisation of the IDB Task Force (or BCC) as a central government body for the implementation of economic policy should be given top priority.

Top priority should be given to adjusting government structure, by means of the institutionalisation of the '*Beleidscoördinatiecommissie*' (BCC) or *IDB Task Force* as a central government body for the implementation of economic policy. The BCC should be responsible for the co-ordination of economic policy in the Netherlands Antilles. This implies that the BCC should not just be responsible for the maritime sector, but should also monitor and stimulate the development of other sectors. One of the other principal tasks of the BCC is to reduce and bypass bureaucratic obstacles or 'red tape'. The already existing BCC should remain a part of the Ministry of Economic Affairs, but co-ordinate the policies of all other Ministries and governmental organisations such as the National Bank. Moreover, the BCC should be the link between the national and Island Governments with respect to economic policy. The proposed government structure is presented in *Figure XI.1*.

Figure XI.1 : Government structure



Source : Policy Research Corporation N.V.

The BCC is to:
- *co-ordinate economic policy at ministerial and governmental levels;*
- *executes the recommendations of the A-EIS study;*
- *be part of the Department of Economic Affairs;*
- *consist of one or two officials, supported by an advisory board and a group of civil servants.*

More details are given in Figure XI.1.

One or two high-calibre officials of the Department of Economic Affairs should be the pivotal figures in the BBC. They should be supported by an interdepartmental group of civil servants of the *Services for Economic Affairs* of all five islands. The Island governments should also be supported by sector-related *Advisory Boards* made up by Antillean and international experts. These specialised *Advisory Boards* are to provide the Island Governments with indispensable sector-specific expertise. In addition to these 'local' Advisory Boards, *Boards of International Experts* can provide the credibility and countervailing power which is sometimes necessary to withstand pressures from powerful private parties.

In line with the IDB track for the restructuring and stimulation of the economy of the Netherlands Antilles, the BCC should be responsible for monitoring and co-ordinating the implementation of the recommendations of the A-EIS study.

XI.2.1.2. General economic policy

Further points of attention for the national level are:
- *the implementation of the IDB recommendations;*

As was mentioned before, solid economic development will support growth in the maritime sector. The government of the Netherlands Antilles is therefore urged to continue and speed up the implementation of the general recommendations of the Inter-American Development Bank.

XI.2.1.3. Attraction of foreign investment

- *the attraction of foreign investment by promotional activities, the reduction of bureaucracy, and fiscal measures;*

In order to revive the Antillean economy, the attraction of foreign investment is essential. To this end, a streamlined promotional organisation should be established at national level. Moreover, foreign investors in any sector should be attracted by the introduction of a new taxation system, the simplification of investment procedures (reduction of 'red tape'), the granting of tax holidays, and subsidies related to training and education for local employees. The government practice of providing investment guarantees to (foreign) investors should be discontinued.

XI.2.1.4. Registration of ships

- *the establishment of a ship's register characterised by high quality standards, independence of the Dutch register, high service levels and active promotion.*

Although the economic significance of the ship's register and the related offshore sector is rather limited, the issue is high on the political agenda. In order further to develop this subsector, the ship's register should be reorganised into a service-oriented one-window operation. The Shipping Inspectorate of the Netherlands Antilles (SINA) is not expected to be willing and able to become the operator of the register. The maritime financial offshore sector should therefore consider taking the initiative of jointly operating the one-window register. In principle, the register should aim for the higher end of the market and attempt to attract as much tonnage as possible, provided international safety and environmental standards are met. The register should be operated completely independently from the Dutch register. For purposes of marketing, the Netherlands Antilles should use a separate flag, underlining the independent position within the Dutch Kingdom. The improved register should be actively promoted.

Table XI.3 : Implementation matrix for the national government of the Netherlands Antilles

Recommendations				
	Action(s) required			
Formulation of Inspiring Plan				
1 Institutionalise economic policy	a	Institutionalisation of the BCC (IDB Task Force)		
	b	Installation of sector-specific Advisory Boards		
	c	Implementation of IDB recommendations		
	d	Performance of sector studies for tourism, fishery, air transport		
2 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months		
Improvement of General Economic Policy				
1 Improve government structure	a	Execution of the Reinventing Government process		
	b	Reduction of red tape		
	c	Privatisation of public companies		
			i	Regulate liberalised markets
	d	Delegation of decision-making to island government		
2 Spur economic growth	a	Stimulation of the economy, with focus on service sectors		
	b	Introduction of New Fiscal Framework		
	c	Liberalisation of the capital market		
			i	Remove credit ceiling for investment
			ii	Introduce foreign competition on local market
	d	Introduction of new labour market legislation		
			i	Reduce minimum wage level
			ii	Facilitate flexible deployment of labour
3 Provide beneficial boundaries	a	Underlining the importance of training and education		
			i	Provide funding for training projects
			ii	Use training as a subsidy measure to attract investment
	b	Introduction of measures to reverse brain drain		
			i	Provide reasonable housing
			ii	Actively approach Antillean expatriates
	c	Stimulation of tripartite co-operation		
			i	Institutionalise the 'Akuerdo di Amandelweg'
	d	Modernisation of the legal framework		
			i	Modernise labour market legislation: flexibiltiy, minimum
			ii	Modernise customs legislation
4 Attract foreign investment	a	Reduction of red tape and other obstacles to investment		
			i	Simplify/speed up procedure for work and residence permits
			ii	Simplify and speed up procedure to grant tax holidays
			iii	Allow employment of spouses of foreign employees
	b	Inducement of changes in (service) attitude (service awareness)		
			i	Start up training and education projects in all sectors
	c	Simplification and increase of favourable tax treatment		
			i	Grant tax holidays on a simple, institutionalised and uniform basis
			ii	Simplify procedures for establishment in free zones and E zone
	d	Institutionalisation of training as a subsidy measure to attract investment		
5 Introduce cluster-specific measures (service)	a	Performance studies: financial offshore, (cruise) tourism, fishery, air transport		
	b	Financial offshore		
			i	Liberalise telecommunications market
			ii	Introduce New Fiscal Framework
	c	(Cruise) tourism		
			i	Improve the attitude towards providing service through training programm
			ii	Support small-scale (local) initiatives: no guarantees, but training subsidies
			iii	Build additional attractions and facilities, improve quality hotels
			iv	Increase promotional efforts, emphasise diversity of the islands
			v	Integrate promotional efforts: maritime sector, tourism and retail sector
			vi	Reconsider monopoly KLM
			vii	Intensify regional co-operation: Southern Caribbean Group, ACS
	d	Fishery		

Table XI.3

Responsibility	Priority	Milestones	Details in Chapter
Minister of Economic Affairs	top	Sept. 1998	V.4
Island governments	top	Sept. 1998	V.4
BCC (IDB Task Force)	high	1998	V.5
BCC (IDB Task Force)	high	1998 / 1999	V.5
BCC (IDB Task Force) / external consultant	top		-
BCC (IDB Task Force)	top	1998 / 1999	V.5
All government levels (external consultant)	high		V.5
Island governments	moderate	July 1999	V.5
Island governments	moderate		V.5
Central government	high		V.5
All government levels	top		V.5
Minister of Finance (external consultant)	high	July 1999	V.3 / V.5
Minister of Finance / Bank N.A.	high	July 1999	V.5
Bank N.A.	high		V.5
Minister of Finance	moderate		V.5
Department of Labour / CBJAZ	high	Dec. 1998	V.5
Department of Labour / CBJAZ	moderate		V.5
Department of Labour / CBJAZ	high		V.5
Department of Labour / CBJAZ	top		V.5
Min. of Education / Min. of Economic Affairs	high		V.5
National promotional organisation / Task Force	high		V.5
All government levels	high		V.5
BCC (IDB Task Force)	moderate		V.5
Centrum Voorlichting Antillianen / Arbeids Advies Dienst	high		V.5
Government & social partners	top	1998	V.5
Government & social partners	top		V.5
CBJAZ (Netherlands)	high		V.5
Department of Labour / CBJAZ	high		V.4 / V.5
Department of Finance / CBJAZ	moderate		V.4 / V.5
All government levels	high	Dec. 1998	V.5
Department of Labour / CBJAZ	high		V.5
Department of Finance / Island government	high		V.5
Department of Labour	moderate		V.5
Department of Education	high		V.5
Department / Island services of Education / Task Force	high		V.5
Department of Finance / Island government	high	Dec. 1998	V.5
Department of Finance / Island government	high		V.5
Curinde / Island government Curaçao	moderate		V.5
All government levels	high		V.4 / V.5
BCC (IDB Task Force) (external consultant)	high	1998 / 1999	V.5
BCC (IDB Task Force)	-		-
BCC (IDB Task Force) / island services	moderate		V.5
Department of Finance	moderate		V.5
BCC (IDB Task Force) / Tourism associations	-		-
All government levels	high		V.5
Island governments	moderate		V.5
Island governments	high	Dec. 1999	V.5
Island governments / tourism boards	high		V.5
BCC (IDB Task Force) / island governments	high		V.5
National government, Task Force	moderate		V.5
Island governments	high	Sept. 1998	V.5
Department of Economic Affairs	-		-

Formulation of Maritime Policy			
1 Stimulate registration of ships	a	Institutionalisation of choice for 'high quality' register	
	b	Introduction of a separate Antillean flag	
	c	Upgrading of service: one-window approach, operated by sector	
	d	Shift towards more active promotion: travelling representative, etc.	
2 Modernise legislation	a	Application of international agreements on safety & manning	
	b	Introduction of modern safety and environmental legislation	
	c	Application for separate IMO membership	
	d	Intensification of network of bilateral tax agreements	
	e	Introduction organisational structure for Port State Control and Coast Guard	
3 Stimulate maritime training and education	a	Organisation of demand-driven projects: flexible and phased approach	
		i	Centralise training on Curaçao, decentralised projects on local demand
		ii	Organise short courses, both for seafarers and shore-based personnel
		iii	Provide scholarships and grants (if necessary)
		iv	Use available teaching staff and infrastructure
		v	Introduce train-the-trainers programme in the longer run
		vi	Use training as subsidy measure to attract (maritime) investment
		vii	Promote maritime professions and career opportunities
	b	Discontinuation of existing 'zeevaartschool'	
	c	Stimulation of growth to regional function in longer run	
		i	Provide scholarships and grants for international students
		ii	Provide cheap housing
		iii	Promote projects throughout region, e.g. Association of Caribbean States
4 Co-ordinate Defense and Coast Guard efforts			
5 Improve government structure	a	Institutionalisation of the BCC (IDB Task Force)	
	b	Installation of Maritime Advisory Boards	
		i	Appoint island representatives in Maritime Advisory Board
		ii	Appoint international maritime experts
	c	Application of subsidiarity principle	
6 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months	

BCC (IDB Task Force) / CBJAZ	high	Sept. 1998	V.3
BCC (IDB Task Force) / CBJAZ	high		V.3
Maritime Financial Offshore sector	high	Sept. 1998	V.3
Maritime Financial Offshore sector	high	Sept. 1998	V.3
BCC / CBJAZ / SINA	high		V.4
BCC / CBJAZ / SINA	high		V.3 / V.4
Department of Economic Affairs	high		V.3 / V.4
Department of Finance / VOB	moderate		V.3 / V.4
BCC (IDB Task Force)	moderate		V.5
Department / Island services of Education	-		-
Department / Island services of Education	moderate		V.4
BCC (IDB Task Force) / Island Service of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	low		V.4
Department / Island services of Education	high		V.4
BCC / promotional organisation	moderate		V.4
Island government of Curaçao	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
BCC (IDB Task Force)	moderate		V.4
Department of Economic Affairs	top	Sept. 1998	V.4
Island governments	top	Sept. 1998	V.4
Island governments	top		-
BCC (IDB Task Force)	top		-
All government levels	high		V.4
BCC (IDB Task Force) / external consultant	top		-

XI.2.2. *ISLAND TERRITORY OF CURAÇAO*

The implementation matrix for Curaçao is given in Table XI.4.

There are two basic priorities for the island.

Table XI.4 shows the implementation matrix for the Island Government of Curaçao. The foremost tracks of maritime policy for Curaçao should concern port organisation and cruise tourism.

XI.2.2.1. ***Port organisation and container transhipment***

The first priority concerns port organisation. Willemstad should be operated as a 'landlord port' rather than as a 'tool port'..

Contrary to the present situation, the port of Willemstad should be operated as a 'landlord port'. To realise a landlord port model, the existing concession agreements between the public Curaçao Ports Authority (CPA) and private stevedoring company Curaçao Port Services (CPS) should be revised.

This is to be achieved by a revision of the concession between the CPA and the CPS, which is due in 2001 and should enter the agenda in 1998. The revised concession should encourage the CPS to attract more sea-to-sea container transhipment.

In order to provide the CPS shareholders with more incentives to pursue a pro-active and 'state of the art' transhipment marketing strategy, the revision should aim to increase the share of fixed components in the stevedore's cost structure. Higher fixed costs will induce the CPS to achieve economies of scale by increasing the number of containers handled. As the growth potential for local cargoes is limited, the stevedore will have to realise the scale increase by means of attracting sea-to-sea transhipment. In turn, the larger the scale of the container operation, the higher the chances for the port of Willemstad to attain the status of 'subregional hub', which is of fundamental importance from a macro-economic point of view. The excellent organisation of the container terminal, its high productivity by regional standards, and the favourable perception by international shipping lines are important assets with regard to achieving this status.

Failure to achieve sub-regional hub status is expected to result in the loss of most direct calls by international shipping lines. As a result, the Curaçao economy would not benefit from the world wide decrease in shipping rates induced by new systems of multi-layered feedering. Moreover, the loss of direct calls could even lead to an absolute increase in freight rates, causing inflation and a deterioration of the competitive position of the island. Trade sectors, and especially the free zone in the port of Willemstad, would suffer most hardest from such a development.

A first opportunity to revise the agreements will present itself in July 2001. It is recommended that an early start should be made on preparations and negotiations.

XI.2.2.2. Cruise tourism

The second priority concerns cruise tourism. This does not only involve the construction of the megacruise pier and the lowering of harbour tariffs.

Another top priority for Curaçao is the continued development of cruise tourism. The importance of developing cruise tourism has already been recognised by the CPA and the Island Government, as proved by the recent decision to build a megacruise pier and the introduction of attractive harbour tariffs for cruise vessels.

It also involves:
- *developing more tourist attractions;*
- *improving the attitude towards tourists;*
- *intensifying the co-operation with the CTDB, the SCG and the cruise lines.*

In addition, the Island Government should aim to improve the 'product Curaçao' by providing additional attractions. Another important aspect is changing the pervasive negative attitude towards providing services to tourists, through elaborate of training and education programmes. Moreover, co-operation is essential if Curaçao is to become a preferred cruise destination in the Deep Caribbean. Further co-operation, both at island level, between the CPA and the Curaçao Tourism Development Bureau (CTDB)[1], and internationally, e.g. in the Southern Caribbean Group (SCG) is a must. In general, all investments with regard to cruise tourism should be made in close consultation with the cruise lines and their umbrella organisations.

1 Already institutionalised in the Curaçao Cruise Action Group.

Table XI.4 : Implementation matrix for the Island of Curaçao

Recommendations			Action(s) required
Facilitation of General Economic Growth			
1 Improve port organisation	a		Introduction of a landlord port model
	b		Revision of the concession agreement
		i	Negotiate new agreements
		ii	Formulate criteria with respect to minimum performance standards
		iii	Sign agreement on new concession and performance standards
		iv	Implement new agreements in 2001
2 Promote inter-island shipping	a		Investigation of possibilities for shipping between Windwards (feasibility stud
	b		Stimulation of international co-operation
		i	Intensify participation in Association of Caribbean States
3 Stimulate cruise tourism	a		Construction of mega cruise pier
	b		Stimulation of (international) co-operation
		i	Intensify Southern Caribbean Group
		ii	Intensify co-operation at island level: CTDB, CPA and Punda retail sector
	c		Continuation of competitive port tariff structure for cruise vessels
	d		Provision of competitive bunkering services
		i	Discontinue monopoly of Curoil
		ii	Co-operation CPA and providers of bunkers: tariff package
	e		Promotion of Curaçao as cruise destination
		i	Promote strengths more actively: cultural diversity etc.
	f		Exploration of the possibilities of (limited) home porting
		i	Perform market and feasbility study
		ii	Actively approach candidate cruise lines in co-ordinated effort
	g		Improvement of the product Curaçao
		i	Increase the number of attractions and facilities (e.g. restaurants)
		ii	Support small-scale (local) initiatives: no guarantees, but training subsidies
		iii	Train personnel in tourist sector and taxi drivers
4 Monitor progress of implementation	a		Follow-up calender of agreements and priorities: every 3 months
Stimulation of the Maritime Cluster			
1 Stimulate container transhipment	a		Inducement of a pro-active transhipment strategy CPS
		i	Revision of the CPS-CPA concession agreement
		ii	Facilitate flexible deployment of labour (change legislation and CAO)
	b		Stimulation of co-operation between CPA, CPS and local shipping agents
		i	Intensify Marketing Action Group
		ii	Revive Curaçao Shipping Association
2 Support ship repair	a		Facilitation of flexible use of labour
		i	Change labour market legislation
3 Stimulate bunkering activities	a		Introduction of competition in bunker market: discontinue monopoly
	b		Facilitation of bunkering in the port of Willemstad
		i	Offer additional bunker points: CPS, cruise pier, bunker barge
		ii	Continue to offer attractive package of port tariffs
		iii	Offer wide range of bunker and white oil products (lubricants)
		iv	Consider opening tank cleaning facility at Bullen Bay
4 Stimulate free zone development	a		Improvement of competitive position free zone
		i	Revise the CPS-CPA concession agreement: lower tariffs
		ii	Increase promotional activities
		iii	Modernise customs legislation
5 Stimulate yachting and related actvities	a		Construction of marina infrastructure and other mooring facilities
		i	Perform market and feasibility study
		ii	Provide investment support to private initiatives: tax holidays, training, …
	b		Investments in ship repair facilities (at Spanish Water)
		i	Perform market and feasibility study

Table XI.4

Responsibility	Priority	Milestones	Details in Chapter
Island government / CPA	top	1998-2001	IV / V.4
BCC (IDB Task Force) / Island gov. / CPA	top	1998-2001	IV / V.4
Island government (CPA) / CPS	top	1999	IV / V.4
CPA / external consultant	top	Dec. 1998	IV / V.4
CPA / CPS	top	1998-2001	IV / V.4
CPA / CPS	top	1998-2001	IV / V.4
BCC / Co-ordinator Maritime Affairs Windwards	moderate		VII.4
BCC (IDB Task Force) (co-ordination)	moderate		V.5
BCC (IDB Task Force)	moderate		V.5
Island government / CPA	high	March 1999	IV / V.4
BCC (IDB Task Force)	high		V.4
CPA / CTDB / BCC (IDB Task Force)	high	Sept. 1998	IV / V.4
CPA / CTDB / Punda retail sector	moderate		V.5
CPA	high		V.4
CPA	-		V.4
BCC (IDB Task Force)	moderate		V.4
CPA / CUROIL / third party	high		V.4
CPA / CTDB	high	Sept. 1998	V.5
CPA / CTDB	high		V.5
CPA / CTDB	high		V.5
CPA / CTDB	high		V.5
CPA / CTDB	high		V.5
BCC (IDB Task Force) (co-ordination)	high		V.5
Island gov. / CTDB / Chamber of Commerce / VBC	high		V.5
Island government	high		V.5
CTDB (cruise lines)	high		V.5
BCC (IDB Task Force) / external consultant	top		-
BCC (IDB Task Force) (co-ordination)	top	1998-2001	V.4
Island government (CPA) / CPS	top	1998-2001	V.4
Department of Labour / social partners	top	Dec. 1998	V.4
CPA	high		V.4
CPA / CPS / shipping agents	top	Sept. 1998	V.4
Shipping agents	moderate / high		V.4
Department of Labour / social partners	top	Dec. 1998	V.5
Department of Labour / CBJAZ	top		V.5
Island government / BCC (IDB Task Force)	moderate		V.4
CPA	high	March 1999	V.4
CPA / CPS / Curoil	high		V.4
CPA	high		V.4
CPA / Curoil / other providers	high		V.4
CPA	moderate		V.4
Curinde / BCC (IDB Task Force)	high		V.4
BCC (IDB Task Force) / Island gov. / CPA	top	1998-2001	V.4
Curinde	high		V.4
Department of Finance / CBJAZ	high		V.4
CPA / Island government	moderate		V.4
CPA (external consultant)	moderate	July 1999	V.4
Island government	moderate		V.4
BCC (IDB Task Force) (co-ordination)	moderate		V.4
CPA / CDM (external consultant)	moderate		V.4

Provision of beneficial boundary conditions			
1 Support maritime training and education	a	Organisation of demand-driven projects: flexible and phased approach	
		i	Centralise training on Curaçao, decentralised projects on local demand
		ii	Organise short courses, both for seafarers and shore-based personnel
		iii	Provide scholarships and grants (if necessary)
		iv	Use available teaching staff and infrastructure
		v	Introduce train-the-trainers programme in the longer run
		vi	Use training as subsidy measure to attract (maritime) investment
		vii	Promote maritime professions and career opportunities
	b	Discontinuation of existing 'zeevaartschool'	
	c	Stimulation of growth to regional function in longer run	
		i	Provide scholarships and grants for international students
		ii	Provide cheap housing
		iii	Promote projects throughout region, e.g. Association of Caribbean States
2 Increase promotion of maritime opportunities	a	Co-ordination of promotion efforts: 'Dutch Caribbean'	
		i	Stimulate co-operation/merger of promotional organisations
		ii	Integrate promotion: offshore, tourism, investment, et cetera
		iii	No separate maritime promotion organisation: task force
		iv	Promote maritime professions and career opportunities
	b	Introduction of active approach: participation & organisation internationally	
3 Modernise safety and environmental regulation	a	Updating of legislation for the port of Willemstad (if necessary)	
	b	Arrangement of position of pilots within government, independent of CPA	
4 Improve maritime government organisation	a	Institutionalisation of the BCC (IDB Task Force) at national level	
	b	Installation of Maritime Advisory Board	
		i	Appoint island reps in BCC and Maritime Advisory Board
		ii	Appoint international maritime experts
	c	Division of responsibilities: policy-making versus operational services	
		i	Formulate port policy, supported by Advisory Board
		ii	Delegate operational tasks to CPA
5 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months	
Stimulation of other sectors			
1 Financial offshore	a	Continue liberalisation of the telecommunications market	
	b	Stimulation of introduction of New Fiscal Framework by National government	
2 Tourism	a	Stimulation of stay-over tourism: high end of the market	
		i	Improve the attitude towards providing service through training programm
		ii	Support small-scale (local) initiatives: no guarantees, but training subsidie
		iii	Build additional attractions and facilities, improve quality of hotels
		iv	Increase promotional efforts, emphasise island characterisitics
	b	Stimulation of cruise tourism	
		i	Integrate promotional efforts: maritime sector, CTDB and retail sector
		ii	Discontinue monopoly KLM
		iii	Intensify regional co-operation: Southern Caribbean Group
3 Fishery	a	Provision of funds and support for small-scale projects to improve efficiency	
	b	Protection of fishing grounds Netherlands Antilles: Saba Bank	
	c	Development and strengthening of the link with tourism	
4 Telecommunication	a	Continue liberalisation of the telecommunications market: end monopoly	
	b	Provision of legal and policy framework for liberalised telecom sector	
5 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months	

Source: Policy Research Corporation N.V.

Department / Island services of Education	-	Sept. 1998	
Department / Island services of Education	moderate		V.4
BCC (IDB Task Force) / Island Service of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	low		V.4
Department / Island services of Education	high		V.4
BCC (IDB Task Force) / promotional organisation	moderate		V.4
Island government of Curaçao	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
Department / Island services of Education	moderate		V.4
BCC (IDB Task Force) (co-ordination)	-	Dec. 1998	
BCC (IDB Task Force)	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
BCC (IDB Task Force) / national promotional organisation	high		V.5 /.../ IX.5
CBJAZ / CPA / SINA	moderate		V.4
Island government of Curaçao	high		V.4
Department of Economic Affairs	top	Sept. 1998	V.4
BCC (IDB Task Force)	top	Sept. 1998	V.4
Island government of Curaçao	top	Sept. 1998	-
Island governments	top	Sept. 1998	-
National government / island governments	high		V.4
Island government of Curaçao	high	Sept. 1998	V.4
BCC (IDB Task Force)	high		V.4
BCC (IDB Task Force) / external consultant	top		-
Island government of Curaçao / Department of Transport	high		V.5
Island governments	high	Dec. 1999	V.5
BCC (IDB Task Force) (co-ordination)	high		V.5
Department / Service of Education / CTDB / Task Force	high		V.5
Island government of Curaçao	moderate		V.5
Island government of Curaçao / CTDB / Task Force	high	Dec. 1999	V.5
CTDB	high		V.5
CPA / CTDB / retail sector	high		V.5
CPA / CTDB / retail sector	high	Sept. 1998	V.5
Department of Traffic & Transport (external consultant)	high		V.5
BCC (IDB Task Force) (co-ordination)	high	Sept. 1998	V.5
Island service of Agriculture, Cattle-breeding and Fishery	moderate		V.5
National government / Coast Guard	high		V.5
CTDB / private intitiatives	moderate		V.5
Island government of Curaçao	high		V.5
National government / island government / CBJAZ	high		V.5
BCC (IDB Task Force) / external consultant	top		-

XI.2.3. ISLAND TERRITORY OF BONAIRE

The implementation matrix for Bonaire is given in Table XI.5.

Just as for Curaçao, there are two basic priorities.

Table XI.5 presents the implementation matrix at the level of the Island Government of Bonaire. With respect to maritime policy, the priorities for the Island Government should be to improve the (physical) organisation of the port and to attract additional cruise vessels to the island.

XI.2.3.1. Port of Kralendijk

The first priority concerns the port. An improved port organisation will serve as a basic condition for relieving the congestion and making the port more attractive for cruise tourism.

The port infrastructure of Kralendijk should be modified in order to relieve congestion (at the South pier) and make the port more attractive to cruise tourism. Moreover, a clear structure for the organisation of the port is recommended: the Island Government, represented by an upgraded Bonaire Port Authority (BPA), should remain responsible for the management, operation and development of the port. The port should be operated as a 'landlord port', with the Island Government as the owner of the port's infrastructure. The port infrastructure (piers and quays) should be operated as a common user facility, accessible to licenced stevedoring companies and their accredited employees.

XI.2.3.2. Cruise tourism

The second priority concerns the cruise tourism itself. The current efforts of the BCA should be continued, and extended by
- *improving the functioning of the port;*
- *intensifying the co-operation with SCG and the cruise lines.*

In order further to stimulate cruise tourism on Bonaire and attain a level of nearly 50 000 passenger visits by 2005, the Island Government, the BPA and Tourism Corporation Bonaire (TCB), co-operating in the Bonaire Cruise Association (BCA), should:

- continue to improve the product Bonaire (island-related factors) along the lines of their current efforts. This would involve upgrading the port area, improving restaurants and shopping facilities, promoting existing attractions and providing additional ones, offering training programs for taxi-drivers and employees in tourism-related jobs. As indicated, all actions should be taken in consultation and co-operation with cruise lines;
- improve the organisation and facilities of the port of Kralendijk (port-related factors);
- further increase existing international co-operation with respect to developing itineraries and promoting ports in the Deep Caribbean as cruise destinations, e.g. through the Southern Caribbean Group.

Table XI.5 : Implementation matrix for the Island of Bonaire

Recommendations			Action(s) required
Facilitation of General Economic Growth			
1 Improve port organisation	a		Upgrading of the Harbour and Pilotage Service to Bonaire Port Authority
		i	Install strategic cell (general manager)
		ii	Develop port policy and port regulations (tariffs)
		iii	Develop master plan for cruise tourism in cooperation with TCB
		iv	Develop master plan for yachting and marina sector
	b		Introduction of landlord port model with common-user facility
		i	Grant licences to stevedores
		ii	Set personnel requirements and introduce port entrance restrictions
		iii	Introduce nautical and safety regulation and surveillance
	c		Reorganisation of port infrastructure: small investments
2 Stimulate cruise tourism	a		Improvement of the product Bonaire (island-related factors)
		i	Promote strengths more actively: clean environment, diversity etc.
		ii	Increase the number of attractions and facilities (e.g. restaurants)
		iii	Train personnel in tourist sector and taxi drivers
		iv	Market Bonaire as 'island of art'
	b		Improvement of the port of Kralendijk (port-related factors)
		i	Upgrade port environment, improve (sanitary) facilities
		ii	Reorganise port infrastructure: small investments in piers and quays
		iii	Stimulate provision of bunkering services
	b		Stimulation of (international) co-operation
		i	Intensify activities Southern Caribbean Group: develop Deep Caribbean
		ii	Intensify co-operation at island level: Bonaire Cruise Association
3 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months
Stimulation of the Maritime Cluster			
1 Upgrade port infrastructure	a		Decision on upgrading port infrastructure (no further studies)
		i	Adjust middle pier to accommodate local ro/ro vessels
		ii	Adjust North pier for larger cruise vessels: additional boulders
		iii	Perform maintenance on ro/ro facility South pier
	b		Seeking funding from KabNA or EU
2 Stimulate bunkering activities	a		Introduction of competition in bunker market: discontinue monopoly
	b		Facilitation of bunkering in the port of Kralendijk (bunker barge)
		i	Offer attractive package of port tariffs
		ii	Offer wide range of bunker and white oil products (lubricants)
3 Stimulate yachting and related actvities	a		Construction of marina infrastructure and other mooring facilities
		i	Perform market and feasibility studies
		ii	Seek funding (KabNA, EU) or private investors
		iii	Use training of personnel as subsidy to attract investors
	b		Investments in ship repair facilities
		i	Perform market and feasibility study
		ii	Seek funding (KabNA, EU) or private investors
		iii	Use training of personnel as subsidy to attract investors
	c		Facilitation of registration of yachts in the Netherlands Antilles
	d		Promotion of Bonaire as hurricane-free yachting paradise
		i	Organisation of regatta
		ii	Increase co-operation of BPA with TCB and national promotion
	e		Constraint: environmental protection (STINAPA)
4 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months

Responsibility	Priority	Milestones	Details in Chapter
Island government of Bonaire	top	Dec. 1998	VI.4
Island government of Bonaire	top	Dec. 1998	VI.4
Bonaire Port Authority	high	March 1999	VI.4
Bonaire Port Authority / Tourism Coporation Bonaire	top	March 1999	VI.4
Bonaire Port Authority	moderate		VI.4
Bonaire Port Authority	high	March 1999	VI.4
Bonaire Port Authority	high	March 1999	VI.4
Bonaire Port Authority	high	March 1999	VI.4
Bonaire Port Authority	high		VI.4
Island government / Bonaire Port Authority	top	Sept. 1999	VI.4
Island government / Tourism Corporation Bonaire	high	Dec. 1999	VI.4
Tourism Corporation Bonaire	high		VI.4
Island government / Tourism Corporation Bonaire	high		VI.4
Island government / Tourism Corporation Bonaire	high		VI.4
Tourism Corporation Bonaire	moderate		VI.4
Island government / Bonaire Port Authority	high	Sept. 1999	VI.4
Island government / Tourism Corporation Bonaire	high		VI.4
Island government / Bonaire Port Authority	high		VI.4
Bonaire Port Authority	moderate		VI.4
Bonaire Port Authority	high		VI.4
Bonaire Port Authority / Tourism Coporation Bonaire	high	Sept. 1998	VI.4
Bonaire Port Authority / Tourism Coporation Bonaire	high		VI.4
BCC (IDB Task Force) / external consultant	top		-
Island government of Bonaire	top	Sept. 1998	VI.4
Bonaire Port Auhtority	high		VI.4
Bonaire Port Auhtority	high		VI.4
Bonaire Port Auhtority	high		VI.4
Island government of Bonaire	high	Sept. 1998	VI.4
Island government of Bonaire	moderate		VI.4
Curoil & CPA / BOPEC / other suppliers	moderate		VI.4
Bonaire Port Auhtority	moderate		VI.4
Curoil / BOPEC / other suppliers	moderate		VI.4
Island government of Bonaire	moderate		VI.4
Bonaire Port Auhtority (external consultant)	moderate		VI.4
Island government of Bonaire	moderate		VI.4
Island government of Bonaire	moderate		VI.4
Public-private initiative	moderate		VI.4
Bonaire Port Auhtority (external consultant)	moderate		VI.4
Island government of Bonaire	moderate		VI.4
Island government of Bonaire	moderate		VI.4
SINA / VOB	moderate		V.3 / VI.4
Tourism Corporation Bonaire	moderate		VI.4
Tourism Corporation Bonaire	moderate		VI.4
Bonaire Port Auhtority / Tourism Corporation Bonaire	moderate		VI.4
Island government of Bonaire	top		-
BCC (IDB Task Force) / external consultant	top		-

Provision of beneficial boundary conditions		
1 Support maritime training and education	a	Organisation of demand-driven projects: flexible and phased approach
		i Centralise training on Curaçao, decentralised projects on local demand
		ii Organise short courses, both for seafarers and shore-based personnel
		iii Provide scholarships and grants (if necessary)
		iv Use available teaching staff and infrastructure
		v Introduce train-the-trainers programme in the longer run
		vi Use training as subsidy measure to attract (maritime) investment
		vii Promote maritime professions and career opportunities
2 Increase promotion of maritime opportunities	a	Co-ordination of promotion efforts: 'Dutch Caribbean'
		i Stimulate co-operation/merger of promotional organisations
		ii Integrate promotion: offshore, tourism, investment, et cetera
		iii No separate maritime promotion organisation: task force
		iv Promote maritime professions and career opportunities
	b	Introduction of active approach: participation & organisation internationally
3 Modernise safety and environmental regulation	a	Introduction of legislation and regulations for the port of Kralendijk
4 Improve maritime government organisation	a	Institutionalisation of the BCC (IDB Task Force) at national level
	b	Installation of Maritime Advisory Board
		i Appoint island reps in BCC and Maritime Advisory Board
		ii Appoint international maritime experts
	c	Bonaire Port Authority responsible for both policy and operational tasks
5 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months
Stimulation of other sectors		
1 Tourism	a	Stimulation of stay-over tourism: high end of the market
		i Improve the attitude towards providing service through training programm
		ii Support small-scale (local) initiatives: no guarantees, but training subsidies
		iii Increase promotion efforts, emphasise island characteristics
		iv Reconsider monopoly KLM
	b	Stimulation of cruise tourism
		i Integrate promotional efforts: Bonaire Cruise Association
		ii Intensify regional co-operation: Southern Caribbean Group
		iii Build additional attractions and facilities
2 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months

Source: Policy Research Corporation N.V.

Department / Island services of Education	moderate	Sept. 1998	V.4 / VI.4
Department / Island services of Education	moderate		V.4 / VI.4
BCC (IDB Task Force) / Island Service of Education	moderate		V.4 / VI.4
Department / Island services of Education	moderate		V.4 / VI.4
Department / Island services of Education	moderate		V.4 / VI.4
Department / Island services of Education	low		V.4 / VI.4
Department / Island services of Education	high		V.4 / VI.4
BCC (IDB Task Force) / promotional organisation	moderate		V.4 / VI.4
BCC (IDB Task Force) (co-ordination)	-	Dec. 1998	-
BCC (IDB Task Force)	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
BCC (IDB Task Force) / national promotional organisation	high		V.5 /.../ IX.5
Bonaire Port Authority	high	March 1999	VI.4
Department of Economic Affairs	top	Sept. 1998	VI.4
BCC (IDB Task Force)	top	Sept. 1998	VI.4
Island government of Bonaire	top	Sept. 1998	-
Island governments	top	Sept. 1998	-
Island government of Bonaire	high		VI.4
BCC (IDB Task Force) / external consultant	top		-

BCC (IDB Task Force) (co-ordination)	high		VI.5
Department / Service of Education / TCB / Task Force	high		VI.5
Island government of Bonaire	moderate		VI.5
Tourism Corporation Bonaire	high		VI.5
Department of Traffic & Transport (external consultant)	high		V.5
Bonaire Port Auhtority / Tourism Corporation Bonaire	high		V.4
Bonaire Port Auhtority / Tourism Corporation Bonaire	high		V.4
Bonaire Port Auhtority / Tourism Corporation Bonaire	high		V.4
Island government of Bonaire / TCB / Task Force	high		VI.5
BCC (IDB Task Force) / external consultant	top		-

XI.2.4. ISLAND TERRITORY OF SINT MAARTEN

The implementation matrix for Sint Maarten is given in Table XI.6.

There are two basic priorities.

Table XI.6 presents the implementation matrix at the level of the Island Government of Sint Maarten. With respect to maritime policy, the priorities of the Island Government of Sint Maarten should concern investments in and the organisation of the port, and the further development of cruise tourism on the island.

XI.2.4.1. Port of Philipsburg

The first priority concerns the port. A 'Co-ordinator for Maritime Affairs' will develop and monitor a policy for all three Windward islands.

A *Co-ordinator for Maritime Affairs* in the *Service for Economic Affairs* should be responsible for the development of a port and maritime policy, and should provide the players in the port with guidance and objectives. The Co-ordinator would also be responsible for the other Windward islands.

A new multi-purpose cargo terminal and cruise pier should be
- *built in phases;*
- *managed by a private terminal operator;*
- *operated as a 'common user facility'.*

The cruise pier should be operated by the SMPA.

The newly-constructed multi-purpose cargo terminal and cruise pier should be owned by the Island Government. The Sint Maarten Port's Authority (SMPA) should remain responsible for technical and nautical management, as well as safety in the port. Moreover, the SMPA should operate the new cruise pier, and collect the head tax and other port charges.

The construction of a multi-purpose cargo terminal in the port of Philipsburg should be executed in phases, depending on the development of local and especially transhipment cargoes. The new multipurpose terminal should be operated as a common user facility. The Island Government should therefore lease out the terminal to a Terminal Operating Company (TOC), on the basis of a revenue sharing formula.

XI.2.4.2. Cruise tourism

The second priority concerns cruise tourism. Building a new pier has a lower priority than,
- *addressing the problem of congestion on the island;*
- *upgrading public facilities;*
- *requiring training programmes to encourage local employees to the local employees to provide excellent service.*

Notwithstanding its expected positive effects, the projected construction of a new cruise pier is not considered to be a top priority. Instead of building a new pier, the possibility of restoring the old pier should be examined, while alternative plans for the development of the port should be considered. Top priority should be given to the introduction of a number of *flanking measures*, in order to maintain the existing basis for cruise tourism.

However, the construction of the new cruise pier is not rejected, provided that funds are also available to solve the land-side problems facing the development of cruise tourism on Sint Maarten.

It should be emphasised that the construction of the new cruise pier is not rejected, provided that funds are also available to solve the land-side problems facing the development of cruise tourism on Sint Maarten. For instance, a new traffic plan should be drawn up for the town of Philipsburg so as to solve the existing problems of congestion. Moreover, the quality of all kinds of facilities in the port and in the town of Philipsburg needs to be upgraded, *e.g.* more public phones, automatic teller machines (ATM), sanitary facilities and rubbish disposal points.

The education and especially the training of personnel is an important factor as well. The people of Sint Maarten have a favourable attitude towards cruise tourism, and are generally considered by cruise passengers as very nice and helpful. Nevertheless, employees in service professions can be trained to provide more information and a higher level of service. An important occupational group in this respect are the island's taxi-drivers. In co-operation with cruise lines, the island should train its taxi-drivers to act as tour-guides as well.

Especially the latter priority needs the attention of the government. It requires the development of a balanced labour market program.

Finally, the development of cruise tourism on Sint Maarten will have a substantial impact on the island's entire economy. The expected effects on the labour market special attention of the Island Government, and make an active labour market policy necessary. In order to be able to meet the future demand for qualified personnel, the development of a balanced programme of education and training projects is essential.

Table XI.6 : Implementation matrix for the Island of Sint Maarten			
Recommendations			**Action(s) required**
Facilitation of General Economic Growth			
1 Improve port organisation	a	Introduction of a new port organisation structure	
		i	Establish Port Holding NV and NV Cargo and NV Cruise
		ii	Arrange for SMPA to operate cruise pier
		iii	Develop port policy and port regulations
		iv	Introduce new system of port tariffs (simplified and restructured)
		v	Develop realistic marketing strategy for container transhipment
		vi	Develop master plan for yachting and marina sector
	b	Introduction of landlord port model	
		i	Operate multi-purpose terminal as common-user facility
		ii	Grant concession and licence to terminal operating company
		iii	Set personnel requirements and introduce port entrance restrictions
		iv	Introduce nautical and safety regulation and surveillance
2 Promote inter-island shipping	a	Investigation of possibilities for shipping between Windwards (feasibility stud	
	b	Stimulation of international co-operation	
		i	Intensify participation in Association of Caribbean States
3 Stimulate cruise tourism	a	Improvement of the product Sint Maarten (island-related factors)	
		i	Develop a plan for the upgrading of the island
		ii	Promote strengths more actively: clean environment, diversity etc.
		iii	Increase the number of attractions and facilities (e.g. restaurants, shops)
		iv	Train personnel in tourist sector and taxi drivers
		v	Stimulate overflow of cruise tourists to neighbouring islands
		vi	Draw up a new traffic plan to fight congestion in Philipsburg
	b	Improvement of the port of Philipsburg (port-related factors)	
		i	Restore old pier for cruise and fishery vessels
		ii	Build new cruise pier (no priority) in consultation with cruise lines only
		iii	Use small tender pier in town centre
		iv	Upgrade port environment, improve (sanitary) facilities
		v	Stimulate provision of bunkering services
	c	Introduction of an active labour market policy	
		i	Monitor demand and supply, both quantitatively and qualitatively
		ii	Develop and introduce an integrated training and education programme
3 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months	
Stimulation of the Maritime Cluster			
1 Upgrade port infrastructure	a	Execution of investment plans for port improvement	
		i	Construct first phase of multi-purpose terminal: 225 m berth, 40.000 m²
		ii	Restore old pier for cruise and fishery vessels
		iii	Build new cruise pier (no priority) in consultation with cruise lines only
		iv	Continue levy of head tax to finance investments
	b	Seek funding from KabNA, EU and banks	
2 Stimulate yachting and related actvities	a	Construction and restoration of marina infrastructure and mooring facilities	
		i	Perform market and feasibility study for mega yacht marina
		ii	Seek funding (KabNA, EU) or private investors
		iii	Support private investments: tax holidays
		iv	Use training of personnel as subsidy to attract investors
	b	Support ship repair for yachts	
		i	Use training of personnel as subsidy to attract investors
	c	Facilitation of registration of yachts in the Netherlands Antilles	
	d	Promotion of Sint Maarten as yachting centre	
		i	Organisation of regatta
		ii	Increase co-operation at island level: intensify Marine Trades Association
	e	Constraint: environmental protection (STINAPA)	
3 Monitor progress of implementation	a	Follow-up calender of agreements and priorities: every 3 months	

Responsibility	Priority	Milestones	Details in Chapter
Island government of Sint Maarten / Maritime Co-ordinator	top	Dec. 1998	VII.4
Island government of Sint Maarten	high		VII.4
Island government of Sint Maarten	top		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		IV / VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		IV / VII.4
Maritime Co-ordinator	moderate		VII.4
Island government of Sint Maarten / Maritime Co-ordinator	top	Dec. 1998	VII.4
Island government of Sint Maarten / Maritime Co-ordinator	top		VII.4
Island government of Sint Maarten	top		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		VII.4
Sint Maarten Port Authority	high		VII.4
BCC (IDB Task Force) / Maritime Co-ordinator	high		V.4 / VII.4
BCC (IDB Task Force) (co-ordination)	moderate		V.5
BCC (IDB Task Force)	moderate		V.5
Island government / Maritime Co-ordinator	top		IV / VII.4
Island government / tourism association	top	Dec. 1998	IV / VII.4
Island government / tourism association	high		IV / VII.4
Island government of Sint Maarten	top		IV / VII.4
Island government of Sint Maarten (cruise lines)	top		IV / VII.4
Maritime Co-ordinator / Tourism Associations	top		IV / VII.4
Island government of Sint Maarten	top		IV / VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		VII.4
Island government of Sint Maarten	high		VII.4
Island government of Sint Maarten	moderate		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	top		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	moderate		VII.4
Island government of Sint Maarten (external consultant)	moderate / high	Dec. 1998	VII.4
Island government of Sint Maarten (external consultant)	moderate / high		VII.4
Island government of Sint Maarten (external consultant)	moderate / high		VII.4
BCC (IDB Task Force) / external consultant	top		-
Island government of Sint Maarten / Maritime Co-ordinator	high		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high	Dec. 1999	VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	moderate		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	moderate		VII.4
Maritime Co-ordinator / Sint Maarten Port Authority	high		VII.4
Island government of Sint Maarten / Maritime Co-ordinator	moderate		VII.4
Maritime Co-ordinator (external consultant)	moderate	Dec. 1998	VII.4
Maritime Co-ordinator (external consultant)	moderate		VII.4
Island government of Sint Maarten	moderate		VII.4
Island government of Sint Maarten	moderate		VII.4
Island government of Sint Maarten / Maritime Co-ordinator	moderate		VII.4
Island government of Sint Maarten	moderate		VII.4
SINA / VOB	moderate		V.3 / VII.4
Tourism Association / Marine Trades Association	moderate		VII.4
	moderate		VII.4
Maritime Co-ordinator	moderate		VII.4
	top		-
BCC (IDB Task Force) / external consultant	top		-

Provision of beneficial boundary conditions			
1 Support maritime training and education	a		Organisation of demand-driven projects: flexible and phased approach
		i	Centralise training on Curaçao, decentralised projects on local demand
		ii	Organise short courses, both for seafarers and shore-based personnel
		iii	Provide scholarships and grants (if necessary)
		iv	Use available teaching staff and infrastructure
		v	Introduce train-the-trainers programme in the longer run
		vi	Use training as subsidy measure to attract (maritime) investment
		vii	Promote maritime professions and career opportunities
2 Increase promotion of maritime opportunities	a		Co-ordination of promotion efforts: 'Dutch Caribbean'
		i	Stimulate co-operation/merger of promotional organisations
		ii	Integrate promotion: maritime, tourism, investment, et cetera
		iii	No separate maritime promotion organisation: task force
		iv	Promote maritime professions and career opportunities
	b		Introduction of active approach: participation & organisation internationally
3 Modernise safety and environmental regulation	a		Introduction of legislation for the port of Philipsburg and coastal waters
		i	Stimulate co-operation between SMPA, STINAPA, Coast Guard
4 Improve maritime government organisation	a		Institutionalisation of the BCC (IDB Task Force) at national level
	b		Installation of Maritime Advisory Board
		i	Appoint island reps in BCC and Maritime Advisory Board
		ii	Appoint international maritime experts
	c		Division of responsibilities: policy-making versus operational services
		i	Appoint Maritime Co-ordinator within Island Service for Economic Affair
		ii	Delegate operational tasks to SMPA
5 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months
Stimulation of other sectors			
1 Tourism	a		Stimulation of stay-over tourism: high end of the market
		i	Further improve the attitude towards providing service through training
		ii	Support small-scale (local) initiatives: no guarantees, but tax holidays, trai
		iii	Build additional attractions and facilities, improve quality of hotels
		iv	Increase promotion efforts, emphasise island characteristics
	c		Co-ordination of promotional efforts: 'Dutch Caribbean'
		i	Co-ordinate promotion: establish 'Sint Maarten Cruise Association'
		ii	Co-operation/merger of promotional organisations
		iii	Integrate promotional efforts: offshore, tourism, investment, et cetera
		iv	No separate maritime promotion organisation: task force
		v	Introduction of active approach: participation & organisation internationall
	d		Promotion with emphasise on 'marquee' value of the islands (for tourism)
2 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months

Source: Policy Research Corporation N.V.

Department / Island services of Education	moderate	Sept. 1998	V.4 / VII.4
Department / Island services of Education	moderate		V.4 / VII.4
BCC (IDB Task Force) / Island Service of Education	moderate		V.4 / VII.4
Department / Island services of Education	moderate		V.4 / VII.4
Department / Island services of Education	moderate		V.4 / VII.4
Department / Island services of Education	low		V.4 / VII.4
Department / Island services of Education	high		V.4 / VII.4
BCC (IDB Task Force) / promotional organisation	moderate		V.4 / VII.4
BCC (IDB Task Force) (co-ordination)	-	Dec. 1998	-
BCC (IDB Task Force)	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
BCC (IDB Task Force) / national promotional organisation	high		V.5 /.../ IX.5
Island government of Sint Maarten / SMPA / STINAPA	high		VII.4
Maritime Co-ordinator	high		VII.4
Department of Economic Affairs	top		VII.4
BCC (IDB Task Force)	top	Sept. 1998	VII.4
Island government of Sint Maarten	top	Sept. 1998	V.4 / VII.4
Island governments	top	Sept. 1998	V.4
Island governments of Windward islands	high	Sept. 1998	VII.4
Island governments of Windward islands	top	Sept. 1998	VII.4
Sint Maarten Port Authority	high		VII.4
BCC (IDB Task Force) / external consultant	top		-
BCC (IDB Task Force) (co-ordination)	high	Sept. 1998	VII.5
Department / Service of Education / Tourism association	high		VII.5
Island government of Sint Maarten	moderate		VII.5
Island government of Sint Maarten / private initiatives	high / top	Dec. 1999	VII.5
Island government of Sint Maarten	high		VII.5
BCC (IDB Task Force) (co-ordination)	-		-
Maritime Co-ordinator	high	Dec. 1998	V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		VII.5
National promotional organisation	high		VII.5
BCC (IDB Task Force) / external consultant	top		-

XI.2.5. ISLAND TERRITORY OF STATIA

The implementation matrix for Statia is given in Table XI.7.

The basic priorities concern the development of three new maritime activities.

Table XI.7 presents the implementation matrix at the level of the Island Government of Statia. At present, the maritime sector of Statia is small. Considering the current idle capacity of the port, the (autonomous) development of the Statia economy will not require large investments in the port infrastructure. With respect to maritime policy, the priorities for the Island Government of Statia should therefore concern the possibilities to develop new maritime activities, such as inter-island shipping, yachting and fishery.

XI.2.5.1. *Inter-island shipping*

The first activity is inter-island shipping. A scheduled shipping line may attract the 'overflow' of tourists from Sint Maarten, which may have a significant impact on the island economy.

The connections between Sint Maarten and the other Leeward islands, more specifically Statia and Saba, are mostly unscheduled or tourism-related. Only 'irregular' cargo services exist between the Dutch and other Windward islands. It is recommended to further investigate the potential of inter-island shipping connections between the Dutch and other Windward islands. Especially with respect to the transportation of tourists (and irregular cargo), a number of feasibility studies should be performed. On the basis of these studies it should be decided whether it is attainable to organise a *pilot project*. Especially the possibilities of creating an overflow of tourists from Sint Maarten to neighbouring islands, such as Saba and Statia, should be investigated. Modest numbers of tourists will already have a considerable impact on the economy of these small islands.

XI.2.5.2. *Marine tourism: yachting and small cruise vessels*

The second activity is yachting and windjammer tourism. This requires:
- *the development of marina infrastructure;*
- *the improvement of the attractiveness for tourism.*

Investments could be considered for two specific market segments: yachting and small cruise vessels (windjammers). Nowadays, the port of Oranjestad lacks even the most basic facilities to accommodate yachts and small cruise vessels. In principle, the Island Government could take the initiative to develop and co-ordinate such a project. The development of marina infrastructure can be considered a government task just like 'normal' port infrastructure. In addition to improving the island's port infrastructure, the 'product Statia', the '*Historical Gem*' has to be improved as well, in order to attract yachts and small cruise vessels. Co-operation with the other (Dutch) Windward islands is crucial in this respect.

XI.2.5.3. Fishery

The third activity is fishery. Ecologically justified fishing on the Saba Bank could generate about 100 jobs on Statia and Saba.

Currently, only a handful of fishing boats from Saba and Statia operate on the Saba Bank, although its economic potential is significant. The Dutch government introduced an 'Economic Fishery Zone of the Netherlands Antilles and Aruba' in 1993 to protect the economic and ecological importance of the Saba Bank, which could generate 1 000 to 1 500 tons of fish each year and provide jobs for over a hundred people on Saba and Statia.

It is outside the scope of this study to formulate detailed recommendations for the development of the fishing sector and the processing of its proceeds. However, the sector certainly seems to have potential and relatively limited funds would be required to develop it. Support for the fishing sector would include minor investments in facilities in the port(s) of Saba and/or Statia.

Table XI.7 : Implementation matrix for the Island of Statia

Recommendations			Action(s) required
Facilitation of General Economic Growth			
1 Improve port organisation	a		Rationalisation of Harbour Service
	b		Introduction of new port regulations
		i	Develop port policy and port regulations
		ii	Introduce new system of port tariffs (simplified and restructured)
	c		Develop master plan for the yachting and marina sector
2 Promote inter-island shipping	a		Investigation of possibilities for shipping between Windwards (feasibility stud
		i	Stimulate overflow of cruise tourists from Sint Maarten
	b		Stimulation of international co-operation
		i	Intensify participation in Association of Caribbean States
3 Stimulate cruise tourism	a		Improvement of the product Statia (island-related factors)
		i	Promote strengths more actively: clean environment, diversity etc.
		ii	Increase the number of attractions and facilities (e.g. restaurants, shopping)
		iii	Train personnel in tourist sector and taxi drivers
	b		Improvement of the port of Oranjestad (port-related factors)
		i	Provide mooring buoy or berth for small cruise vessels (windjammers)
		ii	Investigate feasibility of constructing marina infrastructure
		iii	Upgrade port environment, improve (sanitary) facilities
4 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months
Stimulation of the Maritime Cluster			
1 Stimulate yachting and related actvities	a		Construction of marina infrastructure and mooring facilities
		i	Perform market and feasibility studies
		ii	Seek funding (KabNA, EU) or private investors
		iii	Support private investments: tax holidays, training
	b		Facilitation of registration of yachts in the Netherlands Antilles
	c		Promotion of Statia as yachting destination
		i	Organise regatta
		ii	Increase co-operation with other Windward islands: yachting tour
	e		Constraint: environmental protection (STINAPA)
2 Monitor progress of implementation	a		Follow-up calender of agreements and priorities: every 3 months

Responsibility	Priority	Milestones	Details in Chapter
Island government of Statia / Harbour Master	high	Dec. 1998	VIII.4
Harbour Service	moderate		VIII.4
Maritime Co-ordinator / Harbour Service	moderate	March 1998	VIII.4
Harbour Service	moderate	July 1999	VIII.4
Maritime Co-ordinator / Harbour Service	high	July 1999	VIII.4
BCC / Maritime Co-ordinator (external consultant)	top	July 1999	VIII.4
Maritiem Co-ordinator / Tourism Associations	top		VIII.4
BCC (IDB Task Force) (co-ordination)	moderate		VIII.4
BCC (IDB Task Force)	moderate		VIII.4
Island government of Statia / Hotel & Tourism Association	high	Dec. 1999	VIII.4
Hotel & Tourism Association / promotional organisation	high		VIII.4
Island government of Statia / Hotel & Tourism Association	high		VIII.4
Island government of Statia / Hotel & Tourism Association	moderate		VIII.4
Island government of Statia / Harbour Service	high		VIII.4
Island government of Statia / Harbour Service	high		VIII.4
Harbour Service (external consultant)	top	Sept. 1998	VIII.4
Island government of Statia / Harbour Service	high		VIII.4
BCC (IDB Task Force) / external consultant	top		-
Island government of Statia / Harbour Service	top	Sept. 1998	VIII.4
Harbour Service (external consultant)	top	Sept. 1998	VIII.4
Island government of Statia	high	Dec. 1998	VIII.4
Island government of Statia	moderate		VIII.4
SINA / VOB	moderate		V.3 / VIII.4
Hotel & Tourism Association / promotional organisation	high		VIII.4
Harbour Service / Hotel & Tourism Association	high		VIII.4
Maritime Co-ordinator / Tourism Associations	high		VIII.4
Island government of Statia	top		VIII.4
BCC (IDB Task Force) / external consultant	top		-

Provision of beneficial boundary conditions			
1 Support maritime training and education	a	Organisation of demand-driven projects: flexible and phased approach	
		i	Centralise training on Curaçao, decentralised projects on local demand
		ii	Organise short courses, both for seafarers and shore-based personnel
2 Increase promotion of maritime opportunities	a	Co-ordination of promotion efforts: 'Dutch Caribbean'	
		i	Stimulate co-operation/merger of promotional organisations
		ii	Integrate promotion: tourism, investment, et cetera
		iii	No separate maritime promotion organisation
		iv	Promote maritime professions and career opportunities
	b	Introduction of active approach: participation & organisation internationally	
3 Modernise safety and environmental regulation	a	Introduction of legislation for the port of Oranjestad and coastal waters	
		i	Stimulate co-operation between harbour master, STINAPA, Coast Guard
4 Improve maritime government organisation	a	Institutionalisation of the BCC (IDB Task Force) at national level	
		Installation of Maritime Advisory Board	
		i	Appoint island reps in BCC and Maritime Advisory Board
		ii	Appoint international maritime experts
	c	Division of responsibilities: policy-making versus operational services	
		i	Appoint Maritime Co-ordinator within Island Service for Economic Affair
		ii	Regular consultation: co-ordinator and harbour masters Windwards islands
		iii	Delegate operational tasks to Harbour Service (Harbour Master)
5 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months	
Stimulation of other sectors			
1 Tourism	a	Stimulation of tourism: high end of the market	
		i	Further improve the attitude towards providing service through training
		ii	Support small-scale (local) initiatives: no guarantees, but tax holidays, trai
		iii	Build additional attractions and facilities, improve quality hotels
		iv	Increase promotion efforts, emphasise island characteristics
	b	Co-ordination of promotional efforts: 'Dutch Caribbean'	
		i	Co-ordinate promotion: strengthen 'Hotel & Tourism Association'
		ii	Promote 'marquee' value of the island: 'Historical Gem'
2 Fishery	a	Protection of the Economic Fishery Zone	
		i	Enforcement by Coast Guard
		ii	Consider installation of Saba Bank Fishery Insitute
		iii	Monitor development stock (fish and lobster)
	b	Stimulation of fishery on Saba and Statia	
		i	Subsidise small projects to improve methods, fleet and material
		ii	Construct mimimum facilities in the ports of Oranjestad and Fort Bay
3 Monitor progress of implementation	a	Follow-up calendar of agreements and priorities: every 3 months	

Source: Policy Research Corporation N.V.

Department / Island services of Education	moderate	Sept. 1998	V.4 / VIII.4
Department / Island services of Education	moderate		V.4 / VIII.4
BCC (IDB Task Force) / Island Service of Education	moderate		V.4 / VIII.4
BCC (IDB Task Force) (co-ordination)	-	Sept. 1998	-
BCC (IDB Task Force)	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
BCC (IDB Task Force) / national promotional organisation	high		V.5 /.../ IX.5
Maritime Co-ordinator / STINAPA / Coast Guard	high	July 1999	VIII.4
Maritime Co-ordinator	high		VIII.4
Department of Economic Affairs	top	Sept. 1998	V.4 / VIII.4
BCC (IDB Task Force)	top	Sept. 1998	VIII.4
Island government of Statia	top	Sept. 1998	V.4 / VIII.4
Island governments	top	Sept. 1998	V.4
Island governments of Windward islands	high		VIII.4
Island governments of Windward islands	top	Dec. 1998	VIII.4
Maritme Co-ordinator	high		VII.4 / VIII.4
Maritme Co-ordinator	high		VII.4 / VIII.4
BCC (IDB Task Force) / external consultant	top		-

BCC (IDB Task Force) (co-ordination)	high		VIII.5
Department / Service of Education / Tourism association	high		VIII.5
Island government of Statia	moderate		VIII.5
Island government of Statia / private initiatives	high / top		VIII.5
Island government of Statia	high		VIII.5
BCC (IDB Task Force) (co-ordination)	-	Dec. 1998	-
Island government of Statia	moderate		V.5 /.../ IX.5
Hotel & Tourism Association / promotional organisation	moderate		V.5 /.../ IX.5
Kingdom of the Netherlands	top		VIII.5 / IX.5
Coast Guard / BCC (IDB Task Force)	top		VIII.5 / IX.5
National government / island governments	high		VIII.5 / IX.5
Saba Bank Fishery Institute	moderate		VIII.5 / IX.5
Maritme Co-ordinator / Island governments	high		VIII.5 / IX.5
Island governments / KabNA / EU	high		VIII.5 / IX.5
Island governments / KabNA / EU	high		VIII.5 / IX.5
BCC (IDB Task Force) / external consultant	top		-

XI.2.6. ISLAND TERRITORY OF SABA

The implementation matrix for Saba is given in Table XI.8.

Just as for Statia, the basic priorities concern the development of three new activities.

Table XI.8 presents the implementation matrix at the level of the Island Government of Saba. At present, the maritime sector of Saba is small. Considering the current idle capacity of the port, the (autonomous) development of the Saba economy will not require large investments in the port's infrastructure. As for Statia, the priorities for the Island Government of Saba should therefore concern the possibilities to develop new maritime activities, such as inter-island shipping, yachting and fishery.

XI.2.6.1. *Inter-island shipping*

The first activity is inter-island shipping. A scheduled shipping line may channel an 'overflow' of tourists from Sint Maarten, which may have a significant impact on the island economy. The island's environmental assets require a sustainable and therefore gradual and limited development of tourism.

As indicated, Sint Maarten boasts a huge number of (cruise) tourists in the high season. Small ferries from Sint Maarten to Saba already carry about 50 day-trippers and divers each way per day. Clearly, the possibilities of increasing the overflow of tourists to Saba should be investigated. Modest numbers of tourists would already have a considerable impact on the economy of these small islands. However, in the case of Saba this would also imply an impact on the environment of the island, which is its most important asset with respect to tourism. In order to protect the environment, the Island Government has wisely chosen a path of selective tourism development, laid down in the 'Integrated Tourism Development Master Plan'. The number of tourists is consciously limited, while only sustainable activities are promoted.

XI.2.6.2. *Marine tourism: yachting and small cruise vessels*

The second activity is yachting and windjammer tourism. This requires a series of feasibility studies for further investments.

The number of cruise ship calls has been going down for some years, largely as a result of increased competition by alternative destinations. In order to facilitate visits to Saba by ferries and cruise vessels (windjammers), a single-point mooring buoy has been installed. The current port infrastructure apparently hampers the development of yachting and cruise tourism on Saba. In order to assess to which extent investment in the port can be justified, feasibility studies into the various investment alternatives have to be performed.

XI.2.6.3. Fishery

The third activity is fishery. Ecologically sustainable fishing on the Saba Bank could generate about 100 jobs on Statia and Saba.

Currently, only a handful of fishing boats from Saba and Statia operate on the Saba Bank, although its economic potential is significant. The Saba Bank could generate 1000 to 1500 tons of fish each year, providing jobs for over a hundred people on Saba and Statia.

As indicated, it is outside the scope of this study to formulate detailed recommendations for the development of the fishing sector and the processing of its proceeds. However, the sector certainly seems to have potential and only relatively limited funds would be required to develop it. Support for the fishing sector would include minor investments in facilities in the port(s) of Saba and/or Statia.

Table XI.8 : Implementation matrix for the Island of Saba

Recommendations			Action(s) required
Facilitation of General Economic Growth			
1 Improve port organisation	a		Develop port policy and port regulations
	b		Develop master plan for the yachting and marina sector
2 Promote inter-island shipping	a		Investigation of possibilities for shipping between Windwards (feasibility stud
		i	Stimulate overflow of cruise tourists from Sint Maarten
	b		Stimulation of international co-operation
		i	Intensify participation in Association of Caribbean States
3 Stimulate cruise and day-tripper tourism	a		Further improvement of the product Saba (island-related factors)
		i	Promote strengths more actively: clean environment, etc.
		ii	Increase the number of attractions and facilities (e.g. restaurants, shopping)
		iii	Train personnel in tourist sector and 'taxi drivers'
	b		Improvement of the port of Fort Bay (port-related factors)
		i	Provide mooring buoy or berth for small cruise vessels (windjammers)
		ii	Investigate feasibility of constructing marina infrastructure
		iii	Upgrade port environment, improve (sanitary) facilities
	c		Constraint: selective growth in order to protect environment
4 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months
Stimulation of the Maritime Cluster			
1 Stimulate yachting and related actvities	a		Construction of marina infrastructure and mooring facilities
		i	Perform market and (technical) feasibility study
		ii	Seek funding (KabNA, EU) or private investors
		iii	Support private investments: tax holidays, training
	b		Facilitation of registration of yachts in the Netherlands Antilles
	c		Promotion of Saba as yachting destination
		i	Increase co-operation with other Windward islands: yachting tour
	d		Constraint: environmental protection (STINAPA)
2 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months

Responsibility	Priority	Milestones	Details in Chapter
Harbour Master / Maritime Co-ordinator	high	July 1998	IX.4
Harbour Master / Maritime Co-ordinator	high	July 1998	IX.4
BCC / Maritime Co-ordinator (external consultant)	top		IX.4
Maritiem Co-ordinator / Saba Tourist Bureau	top		IX.4
BCC (IDB Task Force) (co-ordination)	moderate		IX.4
BCC (IDB Task Force)	moderate		IX.4
Island government of Saba / Saba Tourist Bureau	high		IX.5
Island government of Saba / Saba Tourist Bureau	high		IX.5
Island government of Saba / Saba Tourist Bureau / private	high		IX.5
Island government of Saba / Saba Tourist Bureau	high		IX.5
Island government of Saba / Maritime Co-ordinator	-		IX.5
Harbour Master / Maritime Co-ordinator / KabNa	high		IX4
Maritime Co-ordinator (external consultant)	moderate	Dec. 1998	IX4
Island government of Saba / private initiatives	high		IX4
Island government of Saba	top		-
BCC (IDB Task Force) / external consultant	top		-
Island government of Saba / Harbour Service	high		IX.4
Harbour Service (external consultant)	top	Sept. 1998	IX.4
Island government of Saba	moderate	Dec. 1998	IX.4
Island government of Saba	moderate		IX.4
SINA / VOB	moderate		V.3 / IX.4
Saba Tourist Bureau / national promotional organisation	high		IX.5
Maritime Co-ordinator / Tourism Associations	high		IX.4
Island government of Saba	top		IX.4
BCC (IDB Task Force) / external consultant	top		-

Provision of beneficial boundary conditions			
1 Support maritime training and education	a		Organisation of demand-driven projects: flexible and phased approach
		i	Centralise training on Curaçao, decentralised projects on local demand
		ii	Organise short courses, both for seafarers and shore-based personnel
2 Increase promotion of maritime opportunities	a		Co-ordination of promotion efforts: 'Dutch Caribbean'
		i	Stimulate co-operation/merger of promotional organisations
		ii	Integrate promotion: tourism, investment, et cetera
		iii	No separate maritime promotion organisation
		iv	Promote maritime professions and career opportunities
	b		Introduction of active approach: participation & organisation internationally
3 Modernise safety and environmental regulations	a		Introduction of legislation for the port of Fort Bay and coastal waters
		i	Stimulate co-operation between harbour master, STINAPA, Coast Guard
4 Improve maritime government organisation	a		Institutionalisation of the BCC (IDB Task Force) at national level
			Installation of Maritime Advisory Board
		i	Appoint island reps in BCC and Maritime Advisory Board
		ii	Appoint international maritime experts
	c		Division of responsibilities: policy-making versus operational services
		i	Appoint Maritime Co-ordinator within Island Service for Economic Affair
		ii	Regular consultation: co-ordinator and harbour masters Windwards islands
		iii	Delegate operational tasks to Harbour Service (Harbour Master)
5 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months
Stimulation of other sectors			
1 Tourism	a		Stimulation of tourism: high end of the market, 'green' tourism
		i	Further improve the attitude towards providing service through training
		ii	Support small-scale (local) initiatives: no guarantees, but tax holidays, trai
		iii	Build additional attractions and facilities, improve quality of hotels
		iv	Increase promotion efforts, emphasise island characteristics
	b		Co-ordination of promotional efforts: 'Dutch Caribbean'
		i	Co-ordinate promotion: establish 'Tourism Association'
		ii	Promote 'marquee' value of the island: 'Unspoiled Queen'
2 Fishery	a		Protection of the Economic Fishery Zone
		i	Enforcement by Coast Guard
		ii	Consider installation of Saba Bank Fishery Insitute
		iii	Monitor development stock (fish and lobster)
	b		Stimulation of fishery on Saba and Statia
		i	Subsidise small projects to improve methods, fleet and material
		ii	Construct mimimum facilities in the ports of Oranjestad and Fort Bay
3 Monitor progress of implementation	a		Follow-up calendar of agreements and priorities: every 3 months

Source: Policy Research Corporation N.V.

Department / Island services of Education	moderate	Sept. 1998	V.4 / IX.4
Department / Island services of Education	moderate		V.4 / IX.4
BCC (IDB Task Force) / Island Service of Education	moderate		V.4 / IX.4
BCC (IDB Task Force) (co-ordination)	-	Dec. 1998	-
BCC (IDB Task Force)	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
National promotional organisation	moderate		V.5 /.../ IX.5
BCC (IDB Task Force) / national promotional organisation	high		V.5 /.../ IX.5
Maritime Co-ordinator / STINAPA / Coast Guard	high	July 1998	IX.4
Maritime Co-ordinator	high		IX.4
Department of Economic Affairs	top		V.4 / IX.4
BCC (IDB Task Force)	top	Sept. 1998	IX.4
Island government of Statia	top	Sept. 1998	V.4 / IX.4
Island governments	top	Sept. 1998	V.4
Island governments of Windward islands	high	Sept. 1998	IX.4
Island governments of Windward islands	top	Dec. 1998	IX.4
Maritme Co-ordinator	high		VII.4 / IX.4
Maritme Co-ordinator	high		VII.4 / IX.4
BCC (IDB Task Force) / external consultant	top		-
BCC (IDB Task Force) (co-ordination)	high		IX.5
Department / Service of Education / Saba Tourist Bureau	high		IX.5
Island government of Saba	moderate		IX.5
Island government of Saba / private initiatives	high / top		IX.5
Island government of Saba	high		IX.5
BCC (IDB Task Force) (co-ordination)	-	Dec. 1998	-
Island government of Saba	moderate		V.5 /.../ IX.5
Saba Tourist Bureau / national promotional organisation	moderate		V.5 /.../ IX.5
Kingdom of the Netherlands	top		VIII.5 / IX.5
Coast Guard / BCC (IDB Task Force)	top		VIII.5 / IX.5
National government / island governments	high		VIII.5 / IX.5
Saba Bank Fishery Institute	moderate		VIII.5 / IX.5
Maritme Co-ordinator / Island governments	high		VIII.5 / IX.5
Island governments / KabNA / EU	high		VIII.5 / IX.5
Island governments / KabNA / EU	high		VIII.5 / IX.5
BCC (IDB Task Force) / external consultant	top		-

XI.2.7. THE DUTCH GOVERNMENT AND THE KINGDOM

The implementation matrix for the Netherlands and the Kingdom is given in Table XI.9.

The recommendations are divided into three categories.

Table IX.9 presents the implementation matrix at the level of the government of the Netherlands and the Dutch Kingdom. The recommendations are divided into three categories: 'development policy', 'maritime issues' and 'general principles for the government of the Kingdom'.

XI.2.7.1. Development policy

The first category concerns 'development policy', of which the most important elements are
- *streamlining of the concerning application for funding for development projects;*
- *support with regard to updating and streamlining overall legislation.*

Existing channels for the funding of development projects through the *Cabinet for Netherlands Antillean and Aruban Affairs* (KabNA) and the Department for Development Co-operation (DEPOS) should be improved where possible. At present, the application procedures frequently take a long time. On the one hand this is because applicants provide incomplete information. On the other hand, the existing procedures often leave room for debate and discussion. By evaluating projects on their individual merits using a uniform instrument on the basis of objective (economic) arguments, the task of KabNA's could be considerably facilitated. The development of a uniform project evaluation methodology is therefore recommended.

If requested to do so, the Netherlands should provide the Netherlands Antilles with support in updating the overall legislative framework.. In this respect it is very important to set objectives before new legislation is developed or the relevant legislation of the Kingdom is adopted. The Netherlands should avoid overburdening the Antillean administration with new legislation. The principle of subsidiarity should be applied, which implies that new legislation should be introduced at the lowest governmental level possible.

XI.2.7.2. Maritime issues

The second category concerns 'maritime issues', of which the most important element is the guidance in establishing an independent ship's register.

As indicated, with respect to maritime affairs, the most striking aspect of the relationship between the Netherlands Antilles and the Netherlands concerns the registration of ships. The Netherlands should facilitate and support the increased independence of the ship's register of the Netherlands Antilles.

To this end, some of the existing legislation at the level of the Kingdom will have to be either changed or abolished, especially legislation concerning the safety and manning aspects of sea-going vessels.

Moreover, the Statute of the Kingdom (Koninkrijksstatuut) already allows for the introduction of legislation which would grant the countries the right to use separate (trading) flags. Such legislation should be introduced to allow a powerful marketing strategy by the private operator of the Antillean ship's register.

XI.2.7.3. General principles for the government of the Kingdom

The third category comprises 'general principles for the government of the Kingdom' and, in particular, addresses the attitude of the Dutch government to the Netherlands Antilles, which should be regarded as a 'favoured developing country' rather than as a 'former colony'.

In general, the Dutch government and its civil servants should consider and treat the Netherlands Antilles like any other favoured developing country, not as a former colony. This also means that the Dutch government should no longer respond to Antillean demands for support, which take advantage of the country's colonial past. This requires a change to a more objective and detached attitude. Moreover, one has to realise that solutions to Dutch problems are not always applicable to the Netherlands Antilles. The nature and scale of the problems are completely different. Furthermore, the government of the Netherlands (as well as the Netherlands Antilles) should avoid entering into emotional debates, such as the registration of ships.

Table XI.9 : Implementation matrix for the Netherlands and the Kingdom

Recommendations		Action(s) required
Development policy		
Improve functioning KabNA	a	Development of a uniform instrument for the evaluation of projects
	b	Adjustments in project evaluation procedures
		i Reduce red tape in evaluation of projects
		ii Evaluate (small) projects on individual basis, no more 'project packages'
2 Provide assistance in legal matters (at request)	a	Introduction of New Fiscal Framework
	b	Modernisation of general legal framework
		i Identify goals and objectives before developing legislation
	c	Modernisation and upgrading of maritime legislation
		i Change 'Schepenwet' (Shipping Act)
Maritime matters		
1 Change relationship with respect to the registration	a	Introduction of separate registers and inspections
		i Confirm more independent position of the Netherlands Antilles: separate flag
		ii Arrange membership of international organisations (e.g. IMO)
		iii Stop inspections of List 1 vessels: complete separation
2 Change maritime legislation at level of Kingdom	a	Facilitation of more independent position of the Antilles
		i Reduce legislation at level Kingdom with respect to safety and manning (Schepenwet)
		ii Provide assistance (on request) to Netherlands Antilles to fill subsequent voids in legislatio
		iii Introduce possibility to use separate (trading) flags within the Kingdom
	b	Establishment of new relationship on basis of Port State Control
		i No focus on ships of the Netherlands Antilles
General Principles for the government of the Kingdom		
1 Change paternalistic attitude towards Antilles	a	Introduction of more objective and business-like attitude
2 Stop transferring 'Dutch' systems and solutions	a	Scale of the Antillean economy and problems demand different solutions
	b	Antillean legislative apparatus cannot cope with Dutch-type legislation
3 Stop thinking in terms of 'competences'	a	Work towards practical solutions
4 Avoid debate on the basis of emotions	a	Decisions should be based on objective (economic) arguments
5 Change exisiting project-relayed support	b	Support on the basis of long-term plans (program financing)
	c	Monitoring of programs joint responsibility of Antilles and Netherlands
6 Increase 'soft' support	a	Maintain balance between 'hard' and 'soft' measures
7 Modernise the 'Statuut'	a	Clear identification of competences
	b	Principle of Subsidiarity
8 Defend interest of the Antilles in the EU	a	Cabotage
	b	OCT arrangement

Source: Policy Research Corporation N.V.

Responsibility	Priority	Milestones	Details in Chapter
KabNA (external consultant)	top	Dec. 1998	V.5
KabNA / DEPOS	high		
KabNA / DEPOS	high		
KabNA / DEPOS	high		
Government of the Netherlands Antilles / Dutch Ministry of Finance	high		V.3 / V.5
CBJAZ / Dutch Ministry of Justice / KabNA (external consultants)	high		V.5
Government of the Netherlands Antilles (external consultant)	top		V.5
Dutch Ministry of Transport / Dutch Ministry of Justice	high		V.4
Dutch Ministry of Transport / Dutch Ministry of Justice	high		V.4
Dutch Ministry of Transport / Dutch Shipping Inspectorate / SINA	high	Sept. 1998	V.3
Dutch and Antillean Ministries Transport / SINA	high		V.3
Dutch Ministry of Transport / Dutch Ministry of Justice	moderate		V.3
Dutch Shipping Inspectorate / SINA	high		V.3
Dutch Ministry of Transport / Dutch Ministry of Justice	high	Sept. 1998	V.3
Dutch Ministry of Transport / Dutch Ministry of Justice	high		V.3
Dutch Ministry of Transport / Dutch Ministry of Justice	moderate		V.3
Dutch Ministry of Transport / Dutch Ministry of Justice	high		V.3
Dutch Ministry of Transport / Dutch Shipping Inspectorate / SINA	high		V.3
Dutch Shipping Inspectorate	high		V.3
Dutch government in general	high		-
Dutch government in general	top		-
Dutch government in general	top		-
Dutch government in general	top		-
Dutch government in general	high		-
Dutch government in general	high		-
Dutch government in general / KabNA / Antillean government	high		-
Dutch government in general	high		-
Dutch government in general	top		-
Dutch government in general	top		-
Dutch government in general / Dutch Ministry of Transport	high		-
Dutch government in general	moderate		V.4

XI.3. CLOSING REMARKS

*This study provides a large number of concrete policy recommendations, which are laid down in a **readily implementable plan** for the development of the maritime sector of the Netherlands Antilles.*

The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* has provided decision-makers with an insight into the composition of the maritime sector and its economic significance. Moreover, the study has identified the strengths and weaknesses of the sector and its subsectors. In order further to develop the maritime sector, policy alternatives have been developed and evaluated. Based on the *ex ante* evaluation of the policy scenarios, the A-EIS project has resulted in a large number of detailed and concrete policy recommendations for all levels of government involved.

The recommendations constitute a FRAMEWORK POLICY with MARITIME FOCUS, and will generate considerable economic growth.

In brief, this report presents a **readily implementable plan** for the further development of the maritime sector of the Netherlands Antilles. The expected effects have been quantified beforehand, and show that the implementation of a *FRAMEWORK POLICY with MARITIME FOCUS* will generate over **3 600 jobs** and nearly **200 million NA*f.* in value added**. Finally, the **additional backflow** to the government of over **40 million NA*f.*** a year is expected to easily outweigh the costs related to the implementation of the *FRAMEWORK POLICY.*

The implementation of the recommendations should be the responsibility of the Beleidscoördinatiecommissie (BCC) also known as the IDB Task Force, but will require the support of all other parties involved.

By means of the bottom-up approach, *Policy Research* has succeeded in providing the policy makers of the Netherlands Antilles with a **basis for the further implementation** of these recommendations. The top priority for the government of the Netherlands Antilles should now be to institutionalise the '*Beleidscoördinatiecommissie*' (BCC), better known as the *IDB Task Force*, making it a central government body. The BCC should co-ordinate and monitor the implementation process of the A-EIS project. Moreover, it is of the utmost importance that *Key Players* in the various subsectors should assume their responsibilities and take the lead in the further development of their sector, building on the **momentum of the A-EIS project**.

ANNEX A LIST OF INTERVIEWED KEY PLAYERS

Naam / surname	Voornaam / name	Functie / function
Aster	Karel Jan	Managing Director
Bakmeijer	S.C.	Managing Director
Barnard	J.C.	Directie Int. Fiscale Zaken
Beharie	Neville O.	Economist Advisor, Region 3
Bennett-Merkman	Edris	Commissioner
Beukenboom	R.	Gedeputeerde economische zaken
Blok	T.	Direkteur
Blokland	Maureen	Head Department Preliminery National Accounts
Born	Peter	Loods
Britt	Richard	Director
Brown	Clarence W.	Terminal Manager
Bruney	Franklin	Shipping Coordinator
Buncamper	Eddy	Director
Calmera	Runy	Medewerker algemeen economische beleid
Camelia-Römer	S.	Statenlid
Chacuto	Abrin	Penningmeester
Chak	Sigrid Y. Ng	Hoofd dienst onderwijs
Chance	Hubert	Chairman - Supervisory Board of Director
Chance	Capt. L.	Minister Verkeer, Vervoer & Telecommunicatie
Chemaly	Deanna	Directeur
Chong	Ramon R.	Hoofd van Dienst
Colmenares	Eliecer J.	Terminal Manager
Comenencia	Paul R.J.	Executive Director
Corporaal	Hans	Managing Director
Cova	Marcos F.A.	Division Manager LPG, Retail & Aviation
Cova	Errol	President
Crawford	Kenny	
Croes	M.	
Curiel	Randy	Executive Assistant to the Commissioner
Daal	E.	
Da Costa Gomez	Frank	Direkteur
Daryanani	J.J.P.	Managing Director
Davelaar	Charles	Managing Director
Deen	A.G.	Principal Surveyor
de Freitas mevr.	M.	
De Jongh	E.	Manager Curaçao / eigenaar
De Jongh	I.	Manager Bonaire
De Jongh-Hart	G.	Representative
De la Fuente	J.	Directeur / eigenaar
De Lannooy	Ersilia Th. M.	Economic Policy
De Veer	Eduardo	President and Chief Executive Officer
de Wit	Jan	Managing Director
Dragt	Dirk	Attorney at law
Eikelenboom	Hendrik J.	President
Eisden	Cedric	Gedeputeerde Economische zaken
Elias	Gregory	Lawyer - Managing Director

Organisatie / organisation	Rol / role A-EIS project
Curaçao Port Services Inc., N.V.	Lid prepcom
Ing Fatum	
Ministerie voor Financiën, Nederland	
Inter-american Development Bank (IDB)	
The Island Government of St. Eustatius	
Eilandbestuur van Bonaire	Lid stuurgroep
ZEHATRAN	
CBS	
Curaçaose Loodsen Vereniging (CLV)	
Shipping Inspectorate NA (SINA)	Voorzitter stuurgroep
Statia Terminals N.V.	
S.E.L. Maduro & Sons (W.I.) Inc.	
St. Maarten Port Services N.V.	Lid prepcom
Dienst Economische Zaken Curaçao	
PNP	
ABVO	
Servisio di Enseñansa	
Sint Maarten Ports Authority N.V. (SMPA)	
Decro Trust N.V.	
Dienst Economische Zaken	
Bonaire Petroleum Corporation N.V.	Lid prepcom
Curaçao Chamber of Commerce & Industry	
Skibs Hassel Antilles NV	Lid prepcom
Curoil N.V.	
Kamara Sindikal	
Maduro & Curiel Bank	
Rocargo Services NV	Lid prepcom
Island Government of Curaçao	plv. Lid stuurgroep / lid prepcom
Bank Nederlandse Antillen	
Gomez Enterprises	Lid prepcom
Hermanos Lalo	
Hato Area Development Company	
Lloyd's Register of Shipping	
ASINA	
Don Andres Shipping Curaçao	
Don Andres Shipping Bonaire	
Don Andres Shipping Curaçao	
Peeters Divers Corporation	Lid prepcom
Department of Economic Affairs	
Meta Corp	
Intis	
Nauta Dutilh	
Antelecom	Lid stuurgroep
Eilandbestuur Curçao	Lid stuurgroep
Intertrust	

Ellis	Maarten	Professor
Eshuis	André	
Evertsz	Mario	Managing Director
Ferreira	J.A.M.	Docent
Fleming	Diana	Head Department Economic Affairs
Fraai	Renald	Vertegenwoordiging Nederland
Frankel	R.	Havenmeester Curaçao
Geysen	Roel	Manager Business Development
Gielen	J.	Directeur
Gijsbertha	Carlos	IT/Accounting Manager
Gijsbertha	Randolf	President
Gittens	Murvin H.V.	Harbour Master
Godett	Anthony	Statenlid
Goedgedrag	Frits	Gezaghebber
Gonzales	Lex	Attorney at law
Goslinga	Jochem	Adviseur
Gustowski	Steve J.	Shipping Manager
Haal	K.A.N.	Director
Hansen	Ole Geisler	Royal Danish Consul
Hassell	James Ray	Island Council Member
Hassell	Steve	Commissioner
Heyliger	Theo	Gedeputeerde Economische Zaken
Henriquez	Harold	Minister of Finance
Hernandez	Javier	Direkteur
Hoffmann	Jan	Economista Marítimo Unidad de Transporte
Hoo	Sonny	Havenmeester Port of Philipsburg
Huisman	Ekke	Managing Director
Huizinga	J.H.	Beleidsmedewerker/plv. Directeur
Ignacio	Roland	Vice-voorzitter
Isabella	S.	Vice-voorzitter
Jansen	J.H.	
Jansen	W.H.	advocaat
Jeanpierre	Eric	Directie
Johnson	Eddy	Pilot
Klein Schiphorst		Beleidsmedewerker
Kruithof	Jan	Ministerie van Financiën Nederland
Kuster	Ivan	Hoofd dienst Financiën
Lagendijk	Jan J.	Managing Director
Lapré	Marcella A.	Beleidsmedewerker
Lindendorp	Bert	Directie
Locadia	Etienne R.	Lt. Governor
Lopez Ramirez	Richard	Managing Director
Marchera	Norman	Adjunct Island Secretary
Marcos	R.	Penningmeester
Martina	Don	Statenlid
Meijer	Hugo	Managing Director

Loyens & Volkmaars	
Smeets, Advocaten- notarissenkantoor	Lid prepcom
Curaçao Droogdok Maatschappij	
Zeevaartschool N.A.	Lid prepcom
Island Government of Sint Maarten	Lid stuurgroep
Curaçao Inc.	
Curaçao Ports Authority	Lid prepcom
Curaçao, Inc.	
Cargill	Lid prepcom
S.E.L. Maduro & Sons (Curaçao.) Inc.	
Petroleum Workers Federation of Curaçao	
Harbour Service Statia	Lid stuurgroep
FOL	
Eilandgebied Bonaire	
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Departement Verkeer & vervoer	Lid stuurgroep
Bonaire Shipping Co. Ltd.	Lid prepcom
Continental Milling	
M & MC Associates	
Saba	
Island Territory of Saba	Lid stuurgroep
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Council of Ministers	
ISLA Refinery	
UN CEPA : Comisión Económica para América Latina y el Caribe	
Sint Maarten	Lid prepcom
Indel	
Kabinet vor Nederlands-Antilliaanse en Arubaanse Zaken	
ABVO	
Petroleum Workers Federation of Curaçao	
New World Shipping	
de Brauw, Blackstone en Westbroek	Lid prepcom
Belastingen Nederlandse Antillen	Lid prepcom
Sint Maarten Ports Authority N.V. (SMPA)	
Kabinet vor Nederlands-Antilliaanse en Arubaanse Zaken	
Fiscale Faciliteiten Zeescheepvaart	
Eilandgebied Curaçao	Werkgroep methodologie
Lagendijk Shipping Curaçao	
Shipping Inspectorate NA (SINA)	Lid stuurgroep / lid prepcom
Int. Fiscale Zaken	
Island Territory of Sint Eustatius	
Curaçao Port Authority	Lid prepcom / plv. lid stuurgroep
Island Territory of Sint Eustatius	
Petroleum Workers Federation of Curaçao	
MAN	
S.E.L. Maduro & Sons (Curaçao.) Inc.	Lid prepcom

Meijnders	Erwin	Sectorleider Maritieme Infrastructuur
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Mendes De Gouveia	Eduardo	Managing Director
Mulders	B.W.A.M.	
Nederlof	Remco	Financial Manager
Nederlof	Ton	Managing Director
Nieuwpoort	Ger	Hoofd Afdeling Zeescheepvaart
Nothias	Pièrre	General Manager
Offerman	G.R.I.	Business Economist Economic Policy
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Paige	Michele M.	President
Pascal	E.V.	Executive Assistant to the Minister
Paulina	Elfried	Head General Economic Policy
Pelgrim	George	President
Pennings	A.C.	
Pengel-Calmez, mevr.	V.	Beleidsmedewerker
Perret-Gentil	H.	President
Peters	Liberia	Medewerker mevr. Camelia-Römer
Ponsen	J.J.	Direkteur
Pourier	Miguel	Premier van de Nederlandse Antillen
Priest	Leonard F.	Commissioner
Profas	Alfeo	Wnd. Landsbemiddelaar
Richardson	D.	Gezaghebber
Rodrigues	J.J.	Manager Personnel & Organization
Rojer	Hubert	Voorzitter
Romero	A.G.	Onderdirecteur Financieel-Economische Zaken
Rossen	A.J.G.	Hoofd dienst Financiën
Rouse	Lasil	Director
Saleh	J.	Gouverneur van de Nederlandse Antillen
Salzbach	Angel	Gedeputeerde
Saverys	Virginie	Director. General Secretary
Schmidt	Carlyle	President
Scholma	Mark	Loods
Schriel	Robert	
Schrijver	Henk	Manager Marketing Research
Seferina	O.A.	Directeur der Belastingen en Douane
Semerel	Oscar	Algemeen Sekretaris
Seraus	John	Assistant Managing-Director
Siebesma	C.B.	Managing Director
Sierhuis	Jan	Manager Marketing and Commercial Affairs
Sillé	R.I.L.	Departement Financiën
Sint Jago	Rob J.	Havenmeester
Sint Jago	R.J.P.	Hyportheekbewaarder
Smeulders	Eric	Managing Director
Smit	Sandra	Landsbemiddelaar
Sollman	Philip	Directeur

Ministerie van Verkeer & Waterstaat DG Goederenvervoer	
Department of Economic Affairs Netherlands Antilles	Lid stuurgroep
Curaçao Inc.	Lid prepcom
Nationale Investerings Bank	
Dammers & Van der Heide. Shipping & Trading (Antilles) Inc.	
Seatrade	
Ministerie van Verkeer & Waterstaat DG Goederenvervoer	Lid stuurgroep
Curaçao Trading Co. (St. Maarten) N.V.	
Departement Economische Zaken	plv. Lid stuurgroep
Foreign Investment Agency Curaçao	
Florida Caribbean Cruise Association	
Departement Verkeer & vervoer	
Department of Economic Affairs	Werkgroep methodologie
Carribean International Maritime Co. N.V. (Intermar)	
Seacon Ship Management	Lid prepcom
Buitenlands Economisch beleid Departement E.Z.	
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Staten Nederlandse Antillen	
Dammers & Van der Heide Shipping & Trading (Antilles) Inc.	
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Bureau Landsbemiddelaar	
Eilandgebied Sint Maarten	
Curaçao Drydock Company Inc.	
ABVO	
Bank van de Nederlandse Antillen	Werkgroep methodologie
Eilandgebied Bonaire	Lid prepcom
Statia Port Services	
Eilandgebied Curaçao	Lid stuurgroep
CMB	
Carlyle Shipping	
CLV	
REMPEITC	
Tourism Corporation Bonaire	
Directie der Belastingen N.A.	
Central General of Curaçao Workers	
Aruba Ports Authority N.V.	
Anthoom Trust Company N.V.	
CPA	Lid prepcom
Directie Belastingen	Lid stuurgroep / lid prepcom
Kralendijk (Bonaire)	plv. Lid stuurgroep
Nederlandse Antillen	
Curinde	Lid prepcom
Bureau Landsbemiddelaar	
IMTA	

Sorton	S.A.E.	Lt. Governor
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Statie	O.	Havenmeester Bonaire
Stewart-de Geus	Lily-Anne	Director of Product Development
Suarez Garcia	Enrique	Commercieel direkteur
Ten Hoopen	H.G.H.	Directeur
Tijssen	Theo	Directeur Economische Zaken
Tjon Tam Pau	Mildred	Lid Commissie Modernisering Scheepvaart
Tromp	B.	
van Bebber	Matthieu	Directeur
van Burken	Ronald	
van Buurt	Gerard	Beleidsmedewerker
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van der Kwast	Henry A.	Chief Executive Officer
van der Laan	J.	Eilandsecretaris
van den Stoom	Wim F.	Account Manager
van der Sluys	L.C.J.	Business Unit Manager
van der Vuurst	D.	Beleidsmedewerker
van Klaveren	John	Beleidsmedewerker
van Vliet	Joop	Managing Director
Veenhuizen	Doedo	Deputy Director Commercial & Financial Affairs
Velasquez	Bobby	President/CEO
Versluis	Anthonie F.	Industrial Eng. Business Administration
Voges	Jacky	Directeur
Volbeda	B.J.	Managing Director
Vroon	Piet	Directeur/Eigenaar
Willem	Mike	Minister Sociale Zaken & Arbeid
Wind	G.K.	Managing Director
Winklaar	Aquilles Th.	Financial Controller
Woodley	J.C.A.	Gedeputeerde Economische Zaken
Wygaerts	Luc	Specialist Offshore banking
Zimmerman	Juan Pablo	President
Zuniga	Marco	

Island Territory of Saba	
Servisio di Enseñansa	
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NLSI	
Eilandgebied Bonaire	Lid prepcom
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Kralendijk Port Services	Lid prepcom
Avond-MTS Curaçao	
ISLA Refinery	
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RDM Technology Holding	
Foreign Investment Agency Curaçao	
Maduro Holding Inc.	
Island Territory of Saba	
CITCO - Curaçao International Trust Company N.V.	Lid prepcom
Smit International (Antilles) NV	
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Milieu & Infrastructuur KabNA	
Anthony Veder & Co. N.V.	
CPA	
Bobby's Marina N.V. - St. maarten N.A.	Lid prepcom
DEPOS	
Stichting Monumentenzorg	
Nationale Investerings Bank	Lid prepcom
Vroon B.V., Shipowners, shipbrokers & shipmanagers	
CEMAR	
Bonaire Petroleum Corporation N.V.	
Eilandgebied St. Eustatius	
KPMG	
Kooperativa di Transporte Multiple	
Sint Maarten Port Services	

ANNEX B THE CONTENTS AND ROLE OF INPUT-OUTPUT ANALYSIS

B.1. INTRODUCTION

Since its advent in the 1920s, Input-Output Analysis has become an established tool for the analysis of economic interdependence among sectors and regions.

Input-Output Analysis derives its name from the work of Wassily Leontief, which earned him the Nobel Prize in economic science in 1973., Leontief's aim, like with Léon Walras' a hundred years before him, or even earlier François Quesnay's "*tableau économique*" was to analyse the interdependence of a country's industrial sectors in a systematic way [1]. This is why the term *inter-industry analysis* is sometimes used. The body of literature on Input-Output Analysis is vast and articles on the subject have appeared in almost all journals of economics and regional science[2].

The principle behind Input-Output Analysis is relatively simple. Each sector produces goods or services to satisfy:

- the *intermediate demand* of all other sectors in an economy that use its output as an input;
- the *final demand* for consumption and investment goods, including all demand from abroad.

In the basic Input-Output model, the final demand of households, government, investors and foreign sectors generates a 'rippling effect' of intermediate demand for the inputs of all sectors.

Final demand is usually considered exogenous. This means that it is assumed to be independent of the producers' output decisions. Instead, a change in final demand may be due to changes in tastes, price, disposable income or government expenditures.

1 See Leontief (1936, 1966).

2 Thorough reviews of regional Input-Output models can be found in Polenske (1980) and Rose & Miernyk (1989).

The basic reasoning behind Input-Output Analysis is that a change in a commodity's final demand will not only have an impact on the sector(s) producing that commodity, but also on all supplying sectors. In turn, the supplying sectors will also demand more inputs, and so on. Thus, a 'rippling effect' is generated and dispersed throughout the economy. By the time the 'ripple' subsides, total spending exceeds initial spending, total production exceeds the production for final consumption, and total employment exceeds employment in the production of the goods for final consumption. **The strength of Input-Output Analysis lies mainly in its ability to capture and summarise these multiplicative *indirect effects* on output, household incomes and labour requirements**.

This effect may, however, constitute an overestimation. This will be the case if the resources needed to produce increased output must be released from other activities.

It must be stressed that the economic effects thus derived only reflect gross impacts. A net impact would also reflect all opportunities available elsewhere in the economy for the resources used directly by the sector and indirectly by the other sectors. In other words, in a situation of full employment of labour and/or capital, the resources needed for increased demand must be released from the production of other goods and services, and the net effect may ultimately be negligible. Input-Output Analysis does not take account of such secondary effects. Likewise, if the demand change is negative, Input-Output Analysis does not account for the re-employment opportunities of the resources released from production.

In practice, however, it is unlikely that the net effect will deviate significantly from the gross effect:

- as full employment only holds in rare cases, it is not likely that all resources needed to satisfy increased demand will have to be released from other uses. Such problems may only exist in the short run if there is a shortage of labour with the specific skills needed;
- it is not likely that all resources that become unemployed after a fall in demand will immediately find new employment.

So, the gross effects measured by Input-Output Analysis may constitute an overestimation of the actual effects, which is, however, not expected to be very considerable. Moreover, the gross effect shows the extent to which re-employment opportunities need to be sought in the case of decreasing activity in a given sector.

The basic data source is the Input-Output table. This study will, however, utilise a Supply & Use table, which is closely related to an Input-Output table.

Traditionally, the Input-Output table is the basic data source for Input-Output Analysis. An Input-Output table gives a detailed representation of the goods and services flows between sectors. An Input-Output table is therefore compiled on a sector by sector or a commodity by commodity basis. This study, however, uses a 'Supply & Use table', which explicitly interrelates sectors and commodities, *i.e.* sectors *making* commodities and sectors *using* commodities. Its advantage therefore lies in the explicit consideration of sectors *and* commodities. An increasing number of countries are now compiling such tables in accordance with United Nations recommendations[3], which show that the Supply & Use table actually serves as a basic source for the compilation of Input-Output tables.

B.2. THE SUPPLY & USE TABLE

Formally, the Supply & Use table of an economy is described by two types of linear equations. The first type shows the demand for and supply of *goods and services* in the economy. The second type shows the sales and cost account of the *sectors*. Usually, imported goods and services are included in the first type of equations, so that the 'rest of the world' is considered as a separate 'sector' in the second type. *Figure B.1* gives a simplified representation of the Supply & Use table for Curaçao. For illustrative reasons, the rows and columns for transport and communications are explicitly given. These rows and columns do, however, not aim to be complete.

In a Supply table,
- *a column shows a sector's supply of goods and services;*
- *a row shows the total sales of a good or service, including imports.*

The origin of a commodity used in the economy is found by reading across the relevant row of the Supply table. In the case of transport and communications, the services are either supplied by the transport sector or imported. Note that a commodity may be supplied by more than one sector. For example, building materials are produced by both the mining sector and the manufacturing sector.

3 See CEC *et al.* (1993).

Figure B.1 : Simplified representation of the Supply & Use Table of Curaçao

Supply Table		Agriculture & Mining	Manufac-turing	Sectors **Transport & Communications**	Other Services	Imports	Total supply
	Agricultural goods			(n.a.)			
	Manufactured goods			(n.a.)			
Goods & Services	**Transport**	(n.a.)	(n.a.)	Domestic	(n.a.)	Imports	Supply
	Communications	(n.a.)	(n.a.)	Domestic	(n.a.)	Imports	Supply
	Other services			(n.a.)			
	Total Sales			Turnover			

Use Table		Agriculture & Mining	Manufac-turing	Sectors Transport & Communications	Other Services	Personal consumption	Sectors Gov't ex-penditures	**Private investment**	Exports	Total Demand
	Agricultural goods			Victuals						
	Manufactured goods			Parts						
Goods & Services	**Transport**	Bulk	Liner	Towing	Tourism	Local bus	(n.a.)	**(n.a.)**	**Cross-trades**	Demand
	Communications	Telephone	Mail	Ship radio	On-line information	Telephone	(n.a.)	**(n.a.)**	**Mail**	Demand
	Other services			Insurance						
	Labour			Wages (social sec. contributions)						
	Capital			Depreciation						
Value Added	Indirect taxes			Subsidies						
	Entrepreneurship			Operating surplus						
	Total outlays			**Turnover**						

Source : Policy Research Corporation N.V.

In a Supply table,
- *a column shows a sector's supply of goods and services;*
- *a row shows the total sales of a good or service, including imports.*

The origin of a commodity used in the economy is found by reading across the relevant row of the Supply table. In the case of transport and communications, the services are either supplied by the transport sector or imported. Note that a commodity may be supplied by more than one sector. For example, building materials are produced by both the mining sector and the manufacturing sector.

In a Use table,
- *a column shows a sector's outlays for goods and services, labour, capital, entrepreneurship and taxation;*
- *a row shows the intermediate and final demand for a good or service.*

The demand for a commodity is found by reading across the relevant row of the Use table. In the case of transport and communications the services are, among others, bought by:

- *mining* for the transport of stone;
- *manufacture* for the transport of containerised goods;
- *other services* for providing on-line information;
- *households* for providing telephone services;
- *foreign companies* for servicing the country's imports and exports.

The tables thus give a detailed description of
- *intermediate deliveries between sectors;*
- *final demand;*
- *primary cost, including value added;*
- *market shares.*

The intermediate demand is given in the *upper left* area of the Use table, the final demand in the *upper right*. Note that for transport two categories of final demand are not defined. First, sales to government are usually considered intermediate deliveries to a 'public services' sector. Second, the transport sector does by definition not produce investment goods.

Obviously, the total supply of a commodity as given by the Supply table must match its total demand as given by the Use table. So, for each commodity the row sums of both tables should be equal. For *goods*, this is not obvious at first sight. Supply surpluses may be stocked, shortages withdrawn from stocks. As variations in stocks are considered a part of demand, however, the goods' row sums of both tables should be equal by definition as well.

As a consequence of the row-wise representation of the commodities, the sales and cost account of a sector is found by reading vertically down the corresponding columns. In the case of transport, the sector for example:

- sells transport services;
- sells communications services;

- buys victuals from the agricultural sector;
- buys fuel from the manufacturing sector;
- buys finance and insurance from the other services sector;
- pays taxes and receives subsidies;
- employs labour, capital (depreciation) and entrepreneurship (profits).

The Supply table presents the sales structure, while the Use table contains the cost structure. The Use table also provides information on the purchase of primary costs, which generate value added in the production process.

The sales are given in the Supply table, the costs in the Use table. Hence, the Use matrix does not only give the purchases of intermediate commodities. It also gives payments to primary production factors, such as labour and capital. Profit is thereby interpreted as payment to a primary factor called 'entrepreneurship'. These *primary costs* are found in the *lower left* area. They are labelled *value added*, as they represent the (sales) value that is added to the (purchase) value of the goods and services used in the production process. Of course, as the profits are included in the costs, the total sales of a sector must match its total costs. So, for each sector, the column sums of both tables should be equal.

Note that the use of transport equipment is embodied in depreciation and thus included in value added. This implies that their purchase is not recorded as an intermediate input, but in the investments column of the transport equipment sector, which is part of manufacturing in *Figure B.1*.

The number of commodities and sectors included in a Supply & Use table can vary from a few to several hundred. This depends on the desired level of disaggregation and the particular problem at hand. For example, transport can be considered as a single sector or, as in this study, broken down into its subsectors.

The relations described in a Supply & Use table are fairly stable over time.

As compiling Input-Output and Supply & Use tables is an expensive and time-consuming exercise, they are often outdated by the time of issue. This criticism is, however, sometimes unjustified. A considerable body of research has reported on the remarkable temporal stability of inter-industry relations. Furthermore, rigorous techniques to update the tables with minimum data requirements have also been developed.

With the advent of inexpensive computing power, the problems related to the computational requirements of Input-Output Analysis have virtually been eliminated. The methodology has thus become a widely used tool in policy evaluation. The United Nations is recommending it as a planning tool for developing countries and has sponsored a standardised system of economic accounts for the development of Input-Output models[4].

B.3. THE BASIC MATHEMATICAL REPRESENTATION

B.3.1. SUPPLY & USE TABLES AND NATIONAL ACCOUNTS

As the variations in stocks are included in final demand, the corresponding row sums of the Supply and the Use table are logically balanced. They give the market equilibrium per commodity.

Let u_{ij} be the value of commodity *i* purchased as an input by sector *j*. Then, the total demand for commodity *i* (q_i) is distributed throughout the economy as:

$$q_i = \sum_{j=1}^{J} u_{ij} + f_i, \qquad i=1,\ldots,I, \quad \text{(II.1)}$$

where f_i represents the purchases of commodity *i* for final use and *J* the number of sectors. It is thus given as the sum of the elements of the corresponding row in the Use matrix. The total supply of commodity *i* is given as the sum of the elements of the corresponding row in the Supply matrix:

$$q_i = \sum_{j=1}^{J} v_{ij} + m_i, \qquad i=1,\ldots,I, \quad \text{(II.2)}$$

where v_{ij} is the value of commodity *i* sold by sector *j*, and m_i the import value. Total demand and supply in the economy is thus given by summing *(II.1)* and *(II.2)* over *i*:

$$\begin{aligned} Q = \sum_{i=1}^{I} q_i &= \sum_{i=1}^{I}\sum_{j=1}^{J} u_{ij} + \sum_{i=1}^{I} f_i \\ &= \sum_{i=1}^{I}\sum_{j=1}^{J} v_{ij} + \sum_{i=1}^{I} m_i \end{aligned} \quad \text{(II.3)}$$

In simplified notation, *(II.3)* is written as:

$$U + F = V + M, \quad \text{(II.4)}$$

4 See, for example, Bulmer-Thomas (1982) and Miller & Blair (1985).

which means that the sum of intermediate and final demand is equal to the total supply of domestic and imported goods.

As profits are included in primary cost, the column sums of the Supply and the Use table are logically balanced. They give the cost account per sector.

They are represented by the technical and market share coefficients. Mathematically the model can be written as a system of linear equations.

Analogously, a sector's output value is given as the sum of its total costs, including profits,

$$x_j = \sum_{i=1}^{I} u_{ij} + y_j, \qquad j=1,\ldots,J, \quad \text{(II.5)}$$

where y_j is the value added created by the sector. It is thus given as the sum of the elements of the corresponding column in the Use matrix. Its output is also given as the sum of its sales, as represented by the corresponding column in the Supply matrix:

$$x_j = \sum_{i=1}^{I} v_{ij}, \qquad j=1,\ldots,J. \quad \text{(II.6)}$$

The balance of sales and costs is thus given by:

$$\begin{aligned} X = \sum_{j=1}^{J} x_j &= \sum_{j=1}^{J}\sum_{i=1}^{I} u_{ij} + \sum_{j=1}^{J} y_j \\ &= \sum_{j=1}^{J}\sum_{i=1}^{I} v_{ij} \end{aligned} \qquad \text{(II.7)}$$

In simplified notation, *(II.7)* is written as:

$$U + Y = V, \qquad \text{(II.8)}$$

which means that the sum of intermediate and primary costs is equal to total output.

From *(II.4)* and *(II.8)* it follows that:

$$U + F = U + Y + M,$$

so

$$F = Y + M \qquad \text{or} \qquad Y = F - M. \qquad \text{(II.9)}$$

If all sectors are taken together, the double-counted intermediate deliveries cancel each other out. Hence, total value added is identical to total final demand minus imports. This is equivalent to the macro-economic equality of National Product and National Income.

Equation (II.9) is the basic National Accounts identity, in which Y is Gross National Income (GNI) and *(F-M)* is Gross National Product (GNP). GNP is thus read as the final use of goods and services, from which imports are excluded. *Annex II.1* indicates how this is related to other customary definitions of National Product and National Income.

B.3.2. *THE SUPPLY & USE MODEL*

Input-Output Analysis assumes:
- *fixed relationships between inputs and outputs;*
- *fixed market shares.*

One of the main features of Input-Output Analysis is its assumption of *constant returns to scale*. Consider the typical *technical coefficient*, as derived from the Use matrix:

$$a_{ij} = \frac{u_{ij}}{x_j}, \qquad i = 1,\ldots.,I, j = 1,\ldots.,J. \quad \text{(II.10)}$$

This simple Input-Output ratio shows the value of the commodity i used as an input in the production of an Na*f*.'s worth of output of sector j. In basic Input-Output Analysis, once the coefficients have been derived from observed data, they are assumed to remain constant. So, *economies of scale* are not allowed for, and inputs are used in fixed proportions. No factor substitution is possible in the sector's *production function.*

An analogous assumption holds for the *constancy of market shares*. For each commodity, the market shares are derived from the Supply matrix:

$$b_{ij} = \frac{v_{ij}}{q_i}, \qquad i = 1,\ldots.,I, j = 1,\ldots.,J. \quad \text{(II.11)}$$

It shows the value of the commodity i supplied by sector j per Na*f*.'s worth of demand for commodity i. As above, once the coefficients have been calculated from observed data, they are assumed to remain constant. So, no gains or losses in market share are possible in this basic model.

Employing matrix notation and using *(II.10)* and *(11.11)*, the system of equations in *(II.1)* and *(II.6)* can be written as[5]:

$$\mathbf{q} = \mathbf{Ax} + \mathbf{f} \qquad \text{(II.12)}$$

and

5 Boldfaced letters denote matrices and vectors. For readers unfamiliar with matrix notation and operations, the summation notation (S) is used parallel to matrix notation, to the extent possible.

$$\mathbf{x} = \mathbf{B}'\mathbf{q}\,, \qquad \text{(II.13)}$$

where **q** and **f** are the (Ix1) commodity output and final demand vectors, **x** is the (Jx1) sector output vector, **A** is the (IxJ) matrix of technical coefficients, **B'** is the (JxI) transposed matrix of market shares.

The basic model can be extended by 'endogenising' parts of final demand, for example household expenditure of generated labour income. Such a model is known as a 'closed' model, compared to the 'open' basic model.

As mentioned before, final demand for a commodity is usually considered to be exogenous to the model. In other words, it is determined by considerations independent of a sector's output. Under this assumption, the model is known as an *open* model. In practice, this is of course rarely the case. Final demand for, say, consumer goods may indeed be determined by prices, tastes etc., but also by consumer income, which is a function of output produced in the economy. Furthermore, income distribution also has a bearing on final demand. Given this interdependence between final demand and production, *closed* systems are often used[6]. In such a system, parts (or even all) of total demand are considered as endogenous sectors. They are included through the addition of extra rows and columns. If all final demand is endogenised, the model is said to be *completely closed.* Apart from the mathematical problems involved in such a model, it is rarely found in practice, because at least part of final demand (for example exports) can be considered exogenous. Disadvantages inherent in using closed Input-Output models are the increased data requirements and the effort of modelling the relationship between income and expenditures in an adequate way.

Substituting *(II.13)* into *(11.12)*,

$$\mathbf{q} = \mathbf{A}\mathbf{B}'\mathbf{q} + \mathbf{f}\,, \qquad \text{(II.14)}$$

and considering the assumption of exogenous final demand, the solution to the open system in terms of commodities is given by:

6 Usually, the terms *open* and *closed* refer to the standard Input-Output model (see *Chapter II.4*). An excellent example of a closed model built from a Supply & Use system is given in Cloutier & Thomassin (1994).

$$\mathbf{q} = (\mathbf{I} - \mathbf{AB}')^{-1}\mathbf{f}\,. \tag{II.15}$$

The solution of the model is represented by a matrix, and can be stated in terms of commodities or sectors. Each element of such a matrix shows the output of a commodity or sector, as generated by demand for another commodity. The elements thus summarise the rippling effects of exogenous demand changes.

Each element α_{ik} of the matrix $(\mathbf{I\text{-}AB'})^{-1}$ gives the impact on the demand for commodity *i* as a result of a change in final demand for commodity *k*, *viz.* $\Delta q_i = \alpha_{ik}\Delta f_k$. **Its importance lies in the fact that this coefficient captures in a single figure a series of *direct* and *indirect* effects.** It thus measures the subsided 'rippling effects' introduced at the beginning of this chapter[7].

Using the market share equations *(II.13)* the impact is translated into domestic production per sector:

$$\mathbf{x} = \mathbf{B}'(\mathbf{I} - \mathbf{AB}')^{-1}\mathbf{f}\,. \tag{II.16}$$

This is equivalent to[8]:

$$\mathbf{x} = (\mathbf{I} - \mathbf{B}'\mathbf{A})^{-1}\mathbf{B}'\mathbf{f}\,, \tag{II.16'}$$

where **B'f** allocates final demand per commodity into final demand per sector. Let $\mathbf{p} = \mathbf{B'f}$, then

$$\mathbf{x} = (\mathbf{I} - \mathbf{B}'\mathbf{A})^{-1}\mathbf{p}\,. \tag{II.17}$$

Analogous to *(11.15)*, each element β_{jk} of $(\mathbf{I\text{-}B'A})^{-1}$ gives the impact of a change in demand for the commodities produced by sector *k* upon the output of sector *j*. For the impact upon the whole domestic economy, the elements are simply summed over the individual sectors. As will be shown in *Chapter II.4*, expression *(II.17)* is very closely related to the solution of a model based on an Input-Output table.

So, the strength of Input-Output modelling lies in the systematic consideration of indirect production effects.

7 No further explanation is given here. Suffice it to say that the matrix in *(II.15)* indeed 'translates' changes in final demand **f** to commodity output **q**. For an adequate explanation, the reader is referred to Miller & Blair (1985).

8 This becomes clear by setting $\mathbf{B'(I\text{-}AB')^{-1}} = \mathbf{(I\text{-}B'A)^{-1}B'}$, and multiplying both sides by $(\mathbf{I\text{-}AB'})$ and $(\mathbf{I\text{-}B'A})$. The result is also obtained directly by substituting *(II.12)* into *(11.13)*.

From the above, the model's strength thus becomes apparent in the property that its solution captures both the direct and indirect economic impact of demand changes.

B.3.3. MULTIPLIERS IN INPUT-OUTPUT ANALYSIS

The elements of the solution matrices are used for the calculation of summary measures. These are known as 'multipliers'.

From the model solutions, a number of useful summary measures known as *multipliers* can be produced. These are numerical expressions aimed at capturing the impacts of a change in final demand on, for example, gross output in the economy, household incomes and employment.

In general, a multiplier shows the impact of a final demand change on another economic variable. Examples of such variables are output, labour income and employment.

Multipliers are often categorised as *simple* and *total* multipliers depending on whether or not the model is closed to households. In open systems, multipliers capture the direct and indirect effects of a change in final demand. In closed systems, households are considered an endogenous sector, producing labour and spending income. The total multipliers then also capture the *induced* effects of increased spending by households, as a result of their now higher incomes. As a result, the numerical value of a total multiplier is often significantly higher than that of the simple one.

The most straightforward and commonly used multiplier is the *output multiplier*, from which other measures such as *income* and *employment multipliers* are derived. The latter are often preferred in Input-Output Analysis. First, multipliers stated in terms of income and employment are more relevant policy indicators. Second, income and employment data are more readily available than data on final demand needed for the required calculations.

B.3.3.1. Output multipliers

The basic multiplier is the output multiplier. For any sector, it is equal to the column sum of the matrix.

Assume that final demand for the services produced by the maritime sector increases by one Na*f*. $\Delta\mathbf{p(t)}$ will thus be a (Jx1) column vector with a one at the maritime sector element and zeroes elsewhere[9]. The economic impact of this change is given by

$$\Delta\mathbf{x(M)} = (\mathbf{I} - \mathbf{B}'\,\mathbf{A})^{-1}\,\Delta\mathbf{p(M)}\,. \tag{II.18}$$

It is not difficult to recognise this as the M^{th} column of $(\mathbf{I}\text{-}\mathbf{B'A})^{-1}$. The simple output multiplier of the maritime sector is then defined as the sum of that column:

$$O_M = \mathbf{i}'(\mathbf{I} - \mathbf{B}'\,\mathbf{A})^{-1}\,\Delta\mathbf{p(M)} = \sum_{j=1}^{J}\beta_{jM}\,. \tag{II.19}$$

In a closed model, total output is defined analogously. The multiplier then also captures the economic impact of consumption expenditures resulting from the generated income.

In terms of intersector structure, the output multiplier is a measure of 'backward links'.

As was mentioned before, the output multiplier measures the direct and indirect effects on the whole economy as a result of a one Na*f*. change in the demand for maritime services. Expressed alternatively, it measures the *backward lines* of the maritime sector. The label 'backward' comes from the nature of the links, as solely relating to the links with *supplying* sectors. This rather partial view on intersector links is inherent in the nature of basic Input-Output Analysis. By analogy, the *forward linkages* would solely relate to links with *purchasing* sectors. For analytic purposes, these forward linkages are less relevant, and require careful modelling considerations. They are therefore not discussed any further[10].

To see whether the maritime multiplier is relatively weak or strong, it can be compared to the other sectors' multipliers. In such a comparison, the *power of dispersion* is often used as a summary

9 In the Make & Use table for Curaçao there is no separate maritime sector. As will be introduced in *Chapter IV*, an estimation will be made by extensive field research.

10 The reader is referred to *e.g.* Ghosh (1958), Oosterhaven (1988, 1996) and Dietzenbacher *et al.* (1993).

Some helpful measures in the interpretation of the output multiplier are:
- *power of dispersion;*
- *coefficient of variation;*
- *sensitivity of dispersion.*

measure. It divides the multiplier by that of the average multiplier for all sectors. It is thereby preferable to apply the weighted average as a basis for comparison. Clearly, a value above one indicates a strong, and a value below one, a weak impact.

Two other helpful measures in the interpretation of the output multiplier are the *coefficient of variation* and the *sensitivity of dispersion*. The former analyses whether the economic impact of the maritime sector is concentrated in only a few sectors, or spread evenly throughout the economy. The latter takes opposite scope to the power of dispersion. It analyses whether the maritime sector is likely to experience output changes. More detail on these three multiplier-related measures are given in *Annex II.2*.

B.3.3.2. Income and employment multipliers

The income multiplier translates the output multiplier into the required labour outlays.

Income multipliers, as mentioned above, are derived from output multipliers. They capture the effect of changes in final demand on incomes earned by households for the provision of their labour services to the production process. They are calculated by multiplying vector $\Delta\mathbf{x(M)}$ of *(II.18)* by a vector of labour coefficients **h'**. The typical element h_j of this vector shows the amount of labour costs per Afl. output of sector j:

$$I_M = \mathbf{h}'(\mathbf{I}-\mathbf{B}'\mathbf{A})^{-1}\Delta\mathbf{p(M)} = \sum_{j=1}^{J} h_j \beta_{jM} \, . \qquad \text{(II.20)}$$

It captures the direct and indirect income effects on the whole economy due to a one Afl. change in demand for maritime services. If the system is closed with respect to households, then the direct, indirect and induced income effects on the economy are summarised by the total household income multiplier of the maritime sector. Similar multipliers can be calculated for the other components of value added.

The employment multiplier translates the output multiplier into the number of workers needed.

Employment multipliers are quite similar to income multipliers. The only difference is that physical labour inputs are used instead of the value of labour services. Sectoral employment coefficients can be obtained from labour statistics, and substitute **h'** in *(II.20)* to obtain the employment multiplier E_M. It measures the number of additional jobs in the economy required to meet an Afl.'s increase in the demand for maritime services. The total employment multiplier, which also captures the induced employment effects of the new household expenditures, can be calculated in the same way.

The 'Type I' and 'Type II' multipliers relate total labour outlays (or employment) to labour outlays (or employment) for the initially demanded commodity. They refer to the open and the closed model, respectively.

Particularly for policy-making purposes, it is sometimes of interest to calculate the effect of a change in sectoral income and employment on total income and employment in the economy. These multipliers are known as *Type I* and *Type II multipliers*, for open and closed models respectively[11]. The Type I multiplier for income is simply defined as

$$_{(I)}I_j = I_j / h_j, \qquad i=1,\ldots..,I. \quad \text{(II.21)}$$

and analogously for employment. It thus differs from the income multiplier in that it relates the effects to the income and employment generated in the maritime sector, instead of to the output of the sector. So, the simple income multiplier shows income generated in all sectors per unit of *output* of the maritime sector, and the Type I income multiplier shows the income generated in all sectors per unit of *income* earned within the maritime sector. The Type II multiplier is derived and interpreted analogously.

B.3.3.2.1. *Cumulative costs*

The measurement of 'cumulative cost' translates the income multiplier into the absolute direct and indirect labour cost generated by an actual (change in) final demand.

If the actual change in demand instead of a one Afl. change is applied in *(II.20)*, *i.e.* $\Delta\mathbf{p}$ instead of $\Delta\mathbf{p(M)}$, then the total income generated by a given demand change is calculated. This translates the multiplier into an absolute figure representing the labour embodied in the demand change. For this reason, it is a more attractive measure in the analysis of economic impact than the mere income multiplier. It is known as the analysis of *cumulative cost*, and can principally be carried out for all other components of value added, such as depreciation, indirect taxes and operating surplus[12]. Analogously,

11 See Miller & Blair (1985).

12 See Bossier *et al.* (1984) and Peeters (1992), for an introduction and analysis of cumulative costs.

cumulative cost can be calculated for actual demand instead of a one Afl. change, *i.e.* **p** instead of $\Delta\mathbf{p(M)}$.

The *cumulative cost index* also builds on the income multiplier. Analogous to the power of dispersion, it compares the maritime income multiplier to the income multipliers of the other sectors[13]. Likewise, similar indices are calculated for the other components of value added.

B.4. SUPPLY & USE *VS.* INPUT-OUTPUT TABLES

Input-Output tables are derived from Supply & Use tables. There are three basic types of derivation:
- *sector-by-sector;*
- *commodity-by-sector;*
- *commodity-by-commodity.*

Input-Output tables are closely related to Supply & Use tables. They have the same basic structure as the Use tables, with intermediate and final demand in the upper areas and primary cost in the lower. A fundamental property is that the number of rows and columns of intermediate demand are equal. Considering intermediate demand, there are three basic types:

- *sector-by-sector*: the rows of the Use table are transformed from a commodity classification to a sector classification. This is the traditional and most commonly used type of Input-Output table, introduced in more detail below;
- *commodity-by-sector*: the rows of the Use table are aggregated in such a way that there is a one-to-one relationship between the commodity and sector classification. This type thus resembles the Use table most;
- *commodity-by-commodity*: the 'sector technology' definition of the columns is transformed into a 'commodity technology' definition. Though this is theoretically the most ideal Input-Output table, it is often difficult to derive from the available statistical data[14].

Because of its relevance for this study, and its close relationship to the measures introduced in *Chapter II.3*, this section will mainly focus on the *sector-by-sector* type.

The sector-by-sector table is basically obtained from the Use table in two steps. First, each of the I rows is divided into J rows for the

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13 See Peeters (1992).

14 See *e.g.* Rainer & Richter (1992), Konijn (1994) and Konijn & Steenge (1995), for the problems and solution techniques involved.

The sector-by-sector table is derived from the Use table by
- *dividing the commodity rows by sector of origin;*
- *aggregating the result into sector rows.*

sectors producing the commodities, and one for the imports. Second, the outcome is aggregated sector-wise. To the extent possible, the division is done by using additional information. For the remainder, it is done proportionally[15]. After this transformation, the Input-Output model can be stated directly as

$$\mathbf{x} = \mathbf{A}_{IO}\mathbf{x} + \mathbf{p}, \tag{II.22}$$

and solved as

$$\mathbf{x} = (\mathbf{I} - \mathbf{A}_{IO})^{-1}\mathbf{p}. \tag{II.23}$$

One way of dividing the rows is to use the market shares of the Supply table. So, the Supply & Use model as introduced in this chapter is a special case of the sector-by-sector Input-Output model.

From this solution it is easily seen that the solution *(II.17)* from the Supply & Use tables is a special case of this general Input-Output model, *viz.* where $\mathbf{B'A} = \mathbf{A}_{IO}$. In other words, a sector-by-sector table underlying *(II.17)* is obtained by dividing the rows of the Use table just in proportion to the market shares of the Supply table, so without using additional information. This is precisely what the matrix multiplication **B'A** involves.

With regard to the other two types of Input-Output table, the model is precisely the same as *(II.22)* and *(II.23)*. The difference lies in the way in which it is derived from the Supply & Use tables. Discussing this is, however, outside the scope of this study.

B.5. CONCLUSION

Input-Output Analysis
- *models the complete chain of indirect output effects in the economy;*
- *can easily be augmented to analyse the effects on other variables than output.*

In this chapter two outstanding merits of Input-Output Analysis have come to the fore:

1. if there is a significant change in demand for a given commodity, it will of course affect the output and employment of the sector producing that commodity. Because of the implied purchases of intermediate inputs it will also affect the sectors supplying that sector, the sectors that supply the supplying sectors, and so on. Input-Output Analysis is able to capture the complete chain of indirect demand into one measure;
2. the principal outcome of the model is total output per sector. With the use of additional data, however, the output effects can be transferred to the impact upon a wealth of other economic

15 See CBS (1993).

variables. Examples of these are National Income, employment, government budget and environmental degradation.

On the other hand, Input-Output Analysis is also rigid in some ways. Sometimes this can easily be overcome. At other times this must be kept in mind when interpreting the results:

A drawback is the relative rigidity of the model:
- *only the gross impact of demand changes measured;*
- *no allowance for price changes;*
- *no allowance for supply induced effects;*
- *no allowance for technological change;*
- *outdated Input-Output tables;*
- *no expenditure effects of generated income.*

- the models only measure the gross impact of demand changes. They do not take account of bottle-necks in labour and capital (sub)markets, nor do they take account of alternative opportunities for released labour and capital. The actual impact of demand changes may therefore be smaller than estimated by the model;
- the models do not allow for price changes. In practice, demand growth will often be accompanied by an increase in prices. This may somewhat mitigate the actual output growth;
- the models are usually fully demand-driven. They do not allow for exogenous changes in supply;
- the models no not allow for input substitution and economies of scale;
- because of the very disaggregated data requirements, the tables are often outdated by the time they are published;
- the models do not usually take into account the expenditure effects of generated income. This may therefore underestimate the outcomes somewhat;

Some of these constraints are not relevant, some must be borne in mind while interpreting the results of the analyses, some are overcome by a more sophisticated model.

Concerning the first three of these constraints, it should thus be borne in mind that the multipliers are interpreted to be an upper limit of the actual economic impact of demand changes. These shortcomings can be overcome by introducing flexible prices and market constraints into the model. Models adapted as such are known as *Computable General Equilibrium* models, and require sophisticated solution techniques. The fourth and fifth constraints become more serious the longer the time periods involved. As the technical coefficients appear to be quite stable, this will not have significant repercussions for analyses covering a time span of 5 to 10 years. Moreover, the *bottom-up* approach applied in this study guarantees up-to-date information on the maritime sector. The last constraint is overcome by applying a closed model of the kind introduced in this chapter. Drawbacks inherent in closing the model may be increased data requirements and the effort needed for adequately to model the relation between income and expenditures.

ANNEX C MACRO-ECONOMIC PERFORMANCE OF THE NETHERLANDS ANTILLES

Table C.1 : Government Revenues in the Netherlands Antilles (mln. NA*f*), 1990-1996

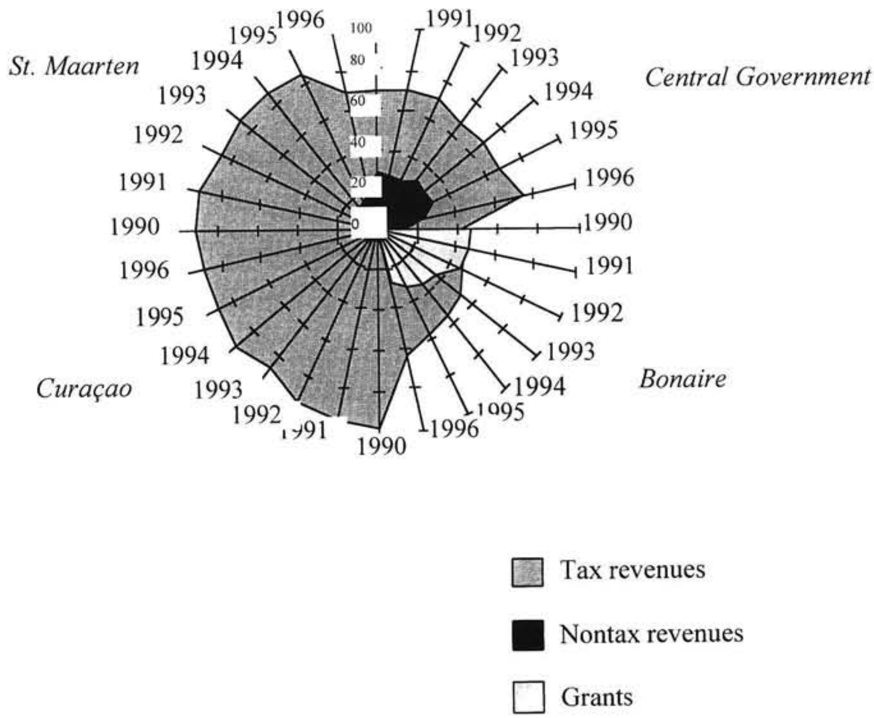
	Central Government				Bonaire			
	1990	*1993*	*1995*	*1996*	*1990*	*1993*	*1995*	*1996*
Total Revenues	**337.9**	**452.3**	**477.3**	**498.2**	**32.4**	**39.6**	**46.8**	**44.1**
Tax Revenues	231.4	303.2	321.8	372.7	13.5	21	26.8	27.7
Nontax revenues	96.9	138.3	146.8	118.6	4.1	3.8	5.2	4.3
Capital revenues	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Grants	9.5	10.8	8.5	6.7	14.8	14.8	14.8	12.0
Total expenditures	**360.2**	**439.5**	**554.8**	**593.4**	**31.2**	**46.7**	**49.3**	**48.2**
Current Expenditures	332.9	420.3	522.4	542.7	31.0	42.8	43.2	46.9
Capital Expenditures	27.3	19.2	32.4	50.7	0.2	3.9	1.6	2.4
Investments	8.3	11.7	20.7	26.1	0.2	3.9	1.6	2.4
Capital transfers	0.4	0	0	12.5	-	-	-	-
Net lending	9	-1.4	-1	11	-	-	-	-
Amortization	9.6	8.9	12.7	1.1	-	-	-	-
Budget Balance	**-22.3**	**12.8**	**-77.5**	**-95.2**	**1.2**	**-7.1**	**-2.5**	**-4.1**

	Curacao				Sint-Maarten			
	1990	*1993*	*1995*	*1996*	*1990*	*1993*	*1995*	*1996*
Total Revenues	**553.3**	**753.4**	**786.8**	**799.1**	**77.5**	**105.5**	**143.9**	**147.0**
Tax Revenues	533.7	645.2	695	702.3	70.1	92	121.7	101.8
Nontax revenues	19.3	66.5	62.9	72.6	7.4	13.5	21.4	26.7
Capital revenues	0.3	0.4	0.0	0.7	0.0	0.0	0.8	0.2
Grants	0.0	41.3	28.9	23.5	0.0	0.0	0.0	18.3
Total expenditures	**655.4**	**861.7**	**912.6**	**893.1**	**76.7**	**96.9**	**150.8**	**157.8**
Current Expenditures	583.3	788.4	860.1	841.6	72.9	96.9	125.3	143.5
Capital Expenditures	72.1	73.3	52.5	24.2	3.8	0	25.5	14.3
Investments	33.1	42.3	32.9	15.8	3.8	0	23.8	12.6
Capital transfers	7.5	7.5	7.5	-	0	0	0	0
Net lending	14.1	-1.2	-12.8	8.4	0	0	1.7	1.7
Amortization	17.4	24.7	24.9	27.3	-	-	-	-
Budget balance	**-102.1**	**-108.3**	**-125.8**	**-94.0**	**0.8**	**8.6**	**-6.9**	**-10.8**

	Total				Total in % GDP			
	1990	*1993*	*1995*	*1996*	*1990*	*1993*	*1995*	*1996*
Total Revenues	**1001.1**	**1350.8**	**1454.8**	**1488.4**	**30.77**	**35.48**	**36.0**	**37.23**
Tax Revenues	848.7	1061.4	1165.3	1204.5	26.1	27.9	28.9	30.1
real prices	*848.7*	*995.7*	*1040*	*1039*	*26.1*	*26.16*	*25.74*	*25.99*
Nontax Revenues	127.7	222.1	236.3	222.2	3.9	5.8	5.9	5.6
Capital revenues	0.4	0.4	1	1.1	0.0	0.0	0.0	0.0
Grants	24.3	66.9	52.2	60.535	0.7	1.8	1.3	1.5
Total expenditures	**1123.5**	**1444.8**	**1667.5**	**1692.5**	**34.54**	**38.0**	**41.29**	**42.33**
Budget balance	-122.4	-94.0	-212.7	-204.1	-3.8	-2.5	-5.3	-5.1

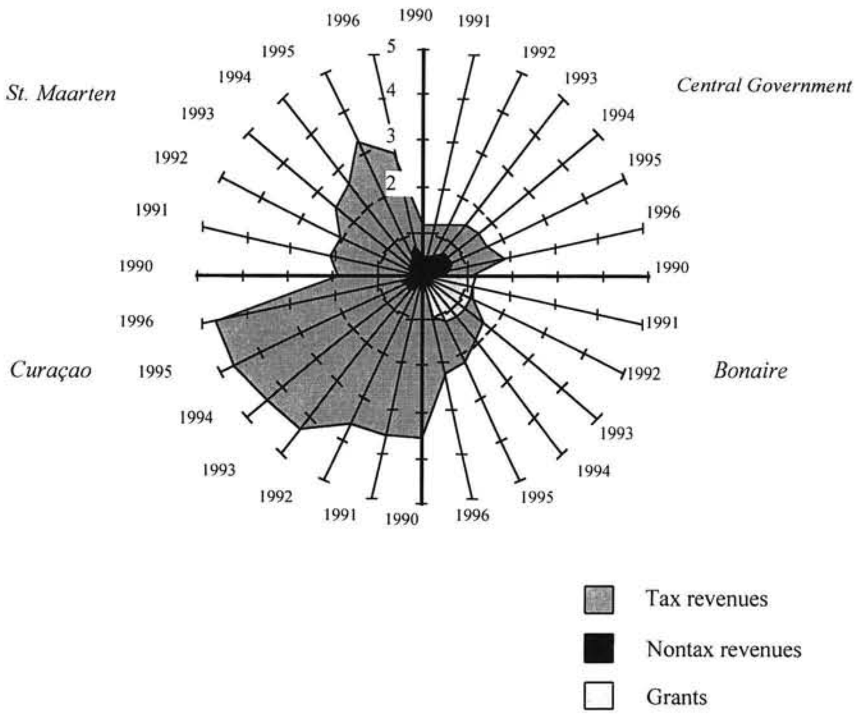
Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

Figure C.1 : Government Revenues (in percentages of total), 1990-1996



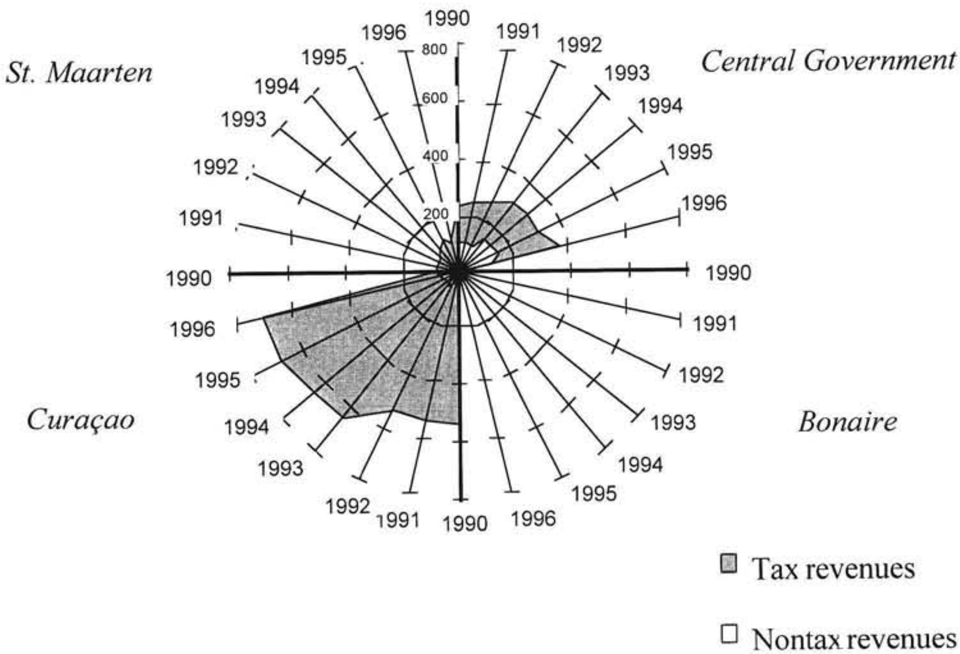
Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

Figure C.2 : Government Revenues per head ('000 NA*f*), 1990-1996



Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

Figure C.3 : Government Revenues (mln. NA*f*), 1990-1996



Source : Policy Research Corporation N.V., based on Central Bureau of Statistics

ANNEX D ALTERNATIVES FOR THE ORGANISATION OF THE SHIP'S REGISTER

In this *Annex* alternatives are evaluated with respect to the organisation and operation of the ship's register of the Netherlands Antilles. The most important consideration is whether the improved *REGISTER PLUS* should be operated by the SINA or by a private operator. Two alternatives are evaluated in this respect (see *Table D.1*):

1. *the register and its related activities are integrated into the one-window approach, and operated by the SINA*. In principle, the current number of SINA staff will only slightly rise (2), while additional activities are integrated, namely the register itself and the issuing of radio licences. Moreover, the register and the inspection will be operational on a 24 hours-a-day basis. In the context of the 'high quality approach', the SINA will continue to work with IACS classification societies only. In addition, SINA experts will continue to perform (first) inspections, and set standards for and monitor the quality of the classification societies. However, the majority of the inspections are carried out by the classification societies[1], not by SINA experts. This way, no increase in in-house inspection staff will be necessary when the register expands. Finally, intensive promotional activities are to be started, in order to market the new approach and attract additional tonnage;
2. *the control, management and operation of the register will be contracted out to a private commercial organisation* (e.g. to the maritime offshore sector on Curaçao by means of a construction comparable to the agreement between Liberia/Marshall Islands and International Registries Inc.). This way the government will be assured of a certain revenue from tonnage taxation and/or concession fees, while the costs related to the register and the Shipping Inspectorate can be severely reduced or even eliminated.

1 A part of the inspections is at present being carried out by the Dutch Shipping Inspectorate (NLSI) on behalf of the SINA. In the new situation this will no longer be the case.

A private integrated register is not expected to use in-house inspectors/experts, only classification societies and is therefore expected to have fewer costs. On the other hand, it should be emphasised that a private register has less revenue (no tonnage tax, no inspection fees) and a concession fee to pay. On a macro-economic level the costs of both options are also compared: even if the government closes down the SINA (and the register), it will continue to incur the costs of paying 'reduced pay' ('wachtgeld') and welfare ('onderstand') for a number of years.

Table D.1 : Register Plus: one-window approach, public and private alternative.

Activities	Present situation	Register Plus SINA	Register Plus Private operator
Register	Registrar of mortgages	SINA	Private operator
Bareboat register	SINA	SINA	Private operator
Ship Documents	SINA	SINA	Private operator
Crew Documents	SINA	SINA	Private operator
Radio Licence	Bureau Telecommunication	SINA	Private operator
Inspections	SINA Class societies	SINA Class societies	Class societies SINA (meta control)

Source : Policy Research Corporation N.V.

Table D.2 presents the economic significance of the register for a number of alternatives:

- column 1 represents the effect in 2005 of the *present organisation* and cost structure of the register, with registered ships accounting for a total tonnage of around 800 000 GT;
- column 2 represents the break-even situation of the *REGISTER PLUS* strategy pursued by the SINA. The micro-economic break-even point is at a total tonnage of 2.8 million GT in 2005;
- column 3 represents the *REGISTER PLUS* situation at a break-even tonnage for a private operator with a local operation on Curaçao. It is assumed that the operator is not yet involved in ship registration, and can therefore not benefit from economies of scale. The break-even tonnage (3.9 million GT) for a private operator is higher because the tonnage tax revenues will accrue to the government of the Antilles, and not to the private operator;
- for comparison, column 4 reflects the economic impact of the *REGISTER PLUS* strategy by SINA at the break-even tonnage of the private operator (3.9 million GT);

- column 5 reflects the break-even situation for a private operator, starting up new registration activities (no economies of scale) outside Curaçao, e.g. in New York or London. Due to the higher price and labour cost level, the break-even tonnage is even higher, namely 5.2 million GT;
- column 6 represents the break-even situation for an existing registration company (e.g. International Registries Inc.). This private operator would operate the register outside Curaçao, and would benefit from considerable economies of scale by integrating the service into an existing operation. Therefore, the break-even tonnage is a mere 1.1 million GT;
- for comparison, column 7 is based on the same off-island, integrated private operator, but at the *REGISTER PLUS* break-even tonnage of the SINA (first column).

Table D.2 : Overview of the economic effects of alternative organisations of the Antillean ship's register in 2005.

	1	*2*	*3*	*4*	*5*	*6*	*7*
	***Register Plus** current tonnage*	***Register Plus** SINA break-even*	***Register Plus** private local break-even*	***Register Plus** SINA break-even private operator*	***Register Plus** private off-island break-even*	***Register Plus** private off-island break-even scale economies*	***Register Plus** private off-island scale economies*
tonnage	*800 000*	*2 800 000*	*3 900 000*	*3 900 000*	*5 200 000*	*1 100 000*	*2 800 000*
value added	*2 228 000*	*10 433 000*	*12 989 000*	*14 936 000*	*16 319 000*	*3 502 000*	*8 598 000*
employment	*44*	*158*	*186*	*220*	*230*	*47*	*128*
backflow	*752 000*	*3 607 000*	*4 389 000*	*5 499 000*	*5 513 000*	*1 179 000*	*1 838 000*

Source : Policy Research Corporation N.V.

On the basis of these alternatives and the concomitant economic effects, the following inferences are made:

- in *Chapter III* it became clear that, although the SINA itself is not self-financing in the present situation, the subsector register-related activities make a positive contribution to Curaçao's economy;
- at the current level of tonnage a *REGISTER PLUS* operation by the SINA would not break even in 2005. Although the SINA would be loss-making, the effect of the register-related subsector would still be positive at macro-economic level. This implies that the Antillean government should continue registration activities: if the register is closed down, all maritime offshore activities will disappear as well;

- the SINA would break even at 2.8 million GT of registered ships. This implies that a substantial amount of additional tonnage would have to be attracted in order to make the SINA profitable. Although not considered impossible, such an increase could only be realised by means of a distinct product and the active promotion of the Antillean register. As indicated, however, the SINA does not need to be profitable as it is a government organisation: the macro-economic effect of the registration activities will be positive;
- a private operator starting 'from scratch', either on or outside of Curaçao, would need to attract an even larger amount of tonnage to break even. This is considered highly unlikely without very intensive promotion, the costs of which are not even included in the analysis. Therefore, the operation of the Antillean register by a completely *new* private operator is not expected to be possible;
- an existing private operator, or a new operation integrated into an existing organisation would be able to make a profit at much lower tonnage levels, because of economies of scale resulting from existing activities:
    - i it may be hard to find an independent and *bonafide* operator willing to represent the Antilles, as the register and its profit-potential are only small. Although the register has potential, it is not expected to attract a very substantial amount of tonnage[2];
    - ii however, the maritime financial offshore sector on the Netherlands Antilles stands to gain from a positive development of the register. As indicated in *Chapter V*, the sector itself should consider jointly operating the register. In this case the one-window register would not need to be profitable in itself, as the sector would benefit by means of its own related activities. Moreover, if the one-window operation is jointly operated by the financial offshore, and integrated into an existing organisation (*e.g.* the CPA), it is expected to break-even at a tonnage near the lower boundary of the range between 1.1 million GT (integrated private operator outside Curaçao, column 6) and 3.9 million GT (new independent private operator on Curaçao, column 3).

2 For instance, although the register of the Marshall Islands has grown explosively over the last years, it is not considered successful by its private operator. Moreover, it is doubtful whether such a combined operation would benefit the Netherlands Antilles and no conflicts of interest would arise.

In conclusion, as the SINA is not a suitable operator, the maritime financial offshore itself (trust companies) should seriously consider operating the one-window register in a joint operation. It is up to the sector to take the initiative for development of the ship's register.

ANNEX E INTER-ISLAND SHIPPING

Table E.1 and *Figure E.1* present the results of a detailed evaluation of the potential and costs of an inter-island connection between the Leeward islands and the Windward islands.

Table E.1 : Traffic forecast for a weekly inter-island connection between Curaçao and the Windward islands, 1998-2010.

	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
TEU Curaçao - Sint Maarten	500	500	525	578	664	764	878
Return TEU	100	100	105	116	133	153	176
Operating subsidy (Naf.)	1 690 805	1 690 805	1 628 784	1 518 954	1 316 093	1 113 231	910 369
Traffic growth (est.)	0%	5%	10%	15%	15%	15%	10%
	2005	**2006**	**2007**	**2008**	**2009**	**2010**	
TEU Curaçao - Sint Maarten	966	1 063	1 169	1 286	1 415	1 485	
Return TEU	193	213	234	257	283	297	
Operating subsidy (Naf.)	707 508	504 646	301 784	67 911	0	0	
Traffic growth (est.)	10%	10%	10%	10%	5%	5%	

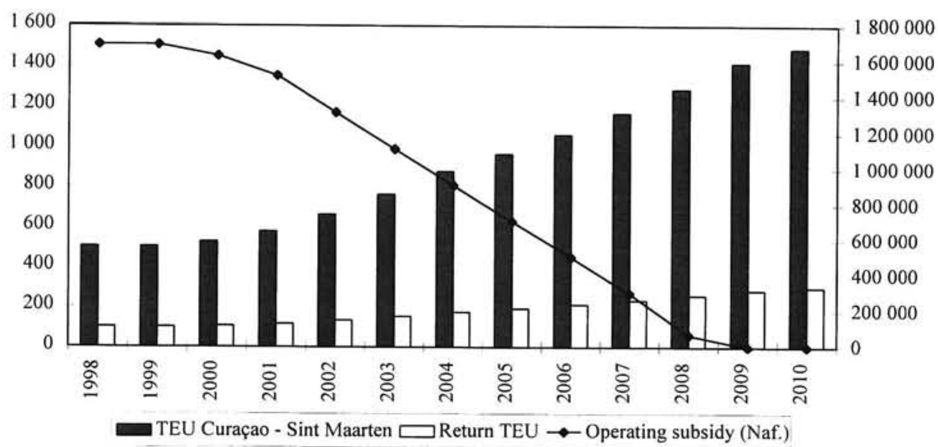
Source : Policy Research Corporation N.V.

The analysis is based on the following assumptions:

- the vessel operated is relatively small, with a tonnage of 500 GT and a capacity of 38 TEU. In this respect the vessel is comparable to the 'OLAF' and the 'Don Andres', currently used for inter-island cargo transport between the Leeward islands by existing shipping companies;
- the service maintains a schedule of one round trip per week;
- the utilisation of the vessel's capacity depends on the total cargo flows between Curaçao and Sint Maarten. The imbalance in the cargo flows between the two sets of islands is an important constraint for the profitable operation of a regular service. Initially, 25% of the vessel's capacity will be used on the Curaçao to Sint Maarten route and 5% on the return voyage. In 2005, the figures will be 50% and 10%, respectively.

- a rather optimistic projection for the growth in traffic flows is used: after a start-up period, an annual growth rate of initially 15% and later 10% is forecast;
- the freight rates are estimated at 2 450 US$ for a 40 ft container (2 TEU) and 1 650 US$ for a 20ft container;
- all costs incurred by the operator are included in the analysis:
  a the costs of the vessel: depreciation, maintenance, fuel and lubricants, provisions, classification, insurance, *etc.*;
  b crew costs, based on a total of 12 sea-going and 2 shore-based employees;
  c container lease costs, based on 3 sets of 38 containers;
  d port and handling charges;
  e agency fees, based on a fixed fee and 104 port calls per year;
- the loss incurred by the operator is subsidised by the central government of the Netherlands Antilles. No port charge reductions are included in the figures. However, a total exemption from port charges would only result in a 4% decrease of total costs.

Figure E.1 : Traffic forecast (left scale) and annual operating subsidy (right scale) for a regular inter-island connection between Curaçao and the Windward islands, 1998-2010.



Source : Policy Research Corporation N.V.

The conclusion of this analysis is clear: even on the basis of optimistic traffic projections, a regular weekly inter-island shipping service between the Leeward islands and the Windward islands is not feasible without a very considerable operating subsidy. The total subsidy for the loss-generating start-up period would amount to over 11 million NA*f.* between 1998 and 2008.

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The *Economic Impact Study (EIS®) for the Maritime Sector of the Netherlands Antilles* (A-EIS) provides decision-makers with an insight in the composition of the maritime sector and its economic significance. Moreover, the study has identified the strengths and weaknesses of the sector and its sub-sectors. The following sub-sectors are distinguished in the quantitative analyses of the EIS®: *shipping, port-related services, shipping agents, ship repair, services related to the registration of ships, free zone activities, oil refining, storage and transhipment* and *cruise tourism*. In order to further develop the maritime sector, policy alternatives were developed and evaluated. Based on the *ex ante* evaluation of the policy scenarios, the A-EIS project has resulted in a large number of detailed and concrete policy recommendations for all levels of government involved.

This report presents a **ready-to-implement plan** for the further development of the maritime sector of the Netherlands Antilles. Detailed recommendations are formulated for both *the Central Government* and the *Island Governments* of Curaçao, Bonaire, Sint Maarten, Statia and Saba. The expected effects are quantified beforehand, and show that the implementation of a *FRAMEWORK POLICY with MARITIME FOCUS* will generate over **3 600 jobs** and nearly **200 million NAƒ. in value added.** Finally, the **additional backflow** to the government of over **40 million NAƒ.** a year is expected to easily outweight the costs related to the *FRAMEWORK POLICY.*

By means of the bottom-up approach, *Policy Research* has succeeded to provide the policy makers of the Netherlands Antilles with a **basis for the further implementation** of these recommendations. All levels of government in the Netherlands Antilles should co-ordinate and monitor the implementation process of the A-EIS project. Moreover, it is of the utmost importance that *Key Players* in the various subsectors assume their responsibility to take the lead in further developing their sector, building on the **momentum of the A-EIS project.**

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