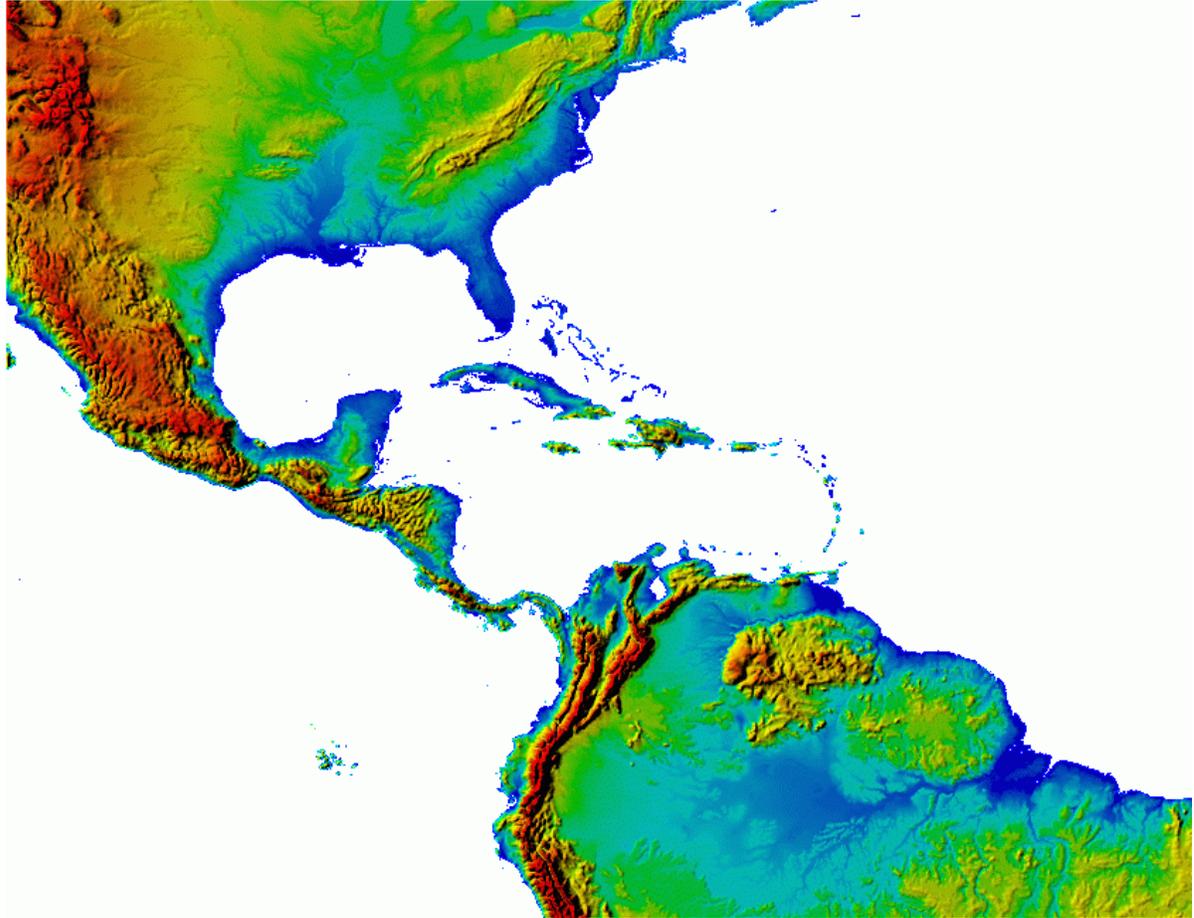


**NATIONAL PROGRAMMES OF ACTION FOR THE
PROTECTION OF THE COASTAL AND MARINE
ENVIRONMENT FROM LANDBASED SOURCES OF
POLLUTION:
THE CARIBBEAN EXPERIENCE**





Prepared in cooperation with the
**Global Programme of Action for the Protection
of the Marine Environment from Land-Based
Activities**

Note:

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LIST OF ACRONYMS

CBOs	Community Based Organizations
EIA	Environmental Impact Assessment
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Pollution
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
IMF	International Monetary Fund
IWCAM	Integrating Watershed and Coastal Area Management
LBS	Land Based Sources of Pollution
NEMS	National Environmental Management Strategy
NEP	National Environmental Policy
NOAA	National Oceanic and Atmospheric Administration
NPA	National Programme of Action for the Protection of the Coastal and Marine Environment from Land-based Sources of Pollution
NRCA	National Resources Conservation Authority
OECS	Organisation of Eastern Caribbean States
SIDS	Small Island Developing States
UNEP-CAR/RCU	United Nations Environment Programme – Caribbean Regional Coordinating Unit
UNEP-ROLAC	United Nations Environment Programme – Regional Office for Latin America and the Caribbean
WCR	Wider Caribbean Region
WSSD	World Summit on Sustainable Development

Chapter 1

INTRODUCTION

Background

The marine area of the Wider Caribbean encompasses the Caribbean Sea and the Gulf of Mexico and extends as far north as Florida in the United States of America to as far south and east as French Guiana on the North Coast of South America. This region includes Florida, Central America and the many small island nations and territories of the insular Caribbean (See Figure 1).

Figure 1. Map of the Wider Caribbean Region



In many of these countries, land-based activities have been major causes of pollution of the coastal and marine environment. This has contributed significantly to the continual degradation of fragile and valuable marine ecosystems. These ecosystems include coral reefs, mangroves and sea grass areas, which serve as the critical natural resource base for the sustainable development of the region. They also harbour many species of reef fish,

molluscs, and crustaceans that are important to the tourism industry (diving, snorkelling) and near-shore fisheries. Over the years, these resources have been negatively impacted by human-induced land and marine-based activities, as well as climate variability and natural and man-induced disasters (UNEP, 1994; GESAMP, 2001).

The need to control and/or reduce pollution of the coastal and marine environment of the Caribbean Sea has propelled the development of a wide range of national, sub-regional and regional responses and initiatives. One of the first such regional responses was the development of the Protocol Concerning Pollution from Land-Based Sources and Activities (LBS Protocol) in 1999. This was developed within the legal framework of the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention).

The development and implementation of the LBS Protocol and more recently the formulation of National Programmes of Action for the Protection of the Coastal and Marine Environment from Land-based Sources of Pollution (NPAs) are being used to assist countries of the region to respond in a more integrated manner to the increasing threats to the marine environment from pollution. Whilst the NPA and the LBS Protocol represent two policy tools, they are complementary and can be used to support the mainstreaming of environmental management issues into national and regional development frameworks.

The Caribbean Environment Programme (CEP) of UNEP has been working in coordination with the UNEP Global Programme of Action (UNEP-GPA) towards the development of NPAs in the Caribbean Region. A few Caribbean countries have begun the process of developing NPAs to address issues of marine pollution from land-based activities. UNEP continues to work with other countries that are interested in developing similar programmes.

Objective

The aim of this report is to document the experiences that Caribbean countries have had in the development of NPAs and similar strategy documents. This will serve as a valuable guide for other countries interested in developing their NPAs by highlighting likely challenges, barriers, and constraints but more importantly possible solutions.

Chapter 2

MARINE POLLUTION ISSUES IN THE CARIBBEAN

The major land based sources of pollution affecting the Caribbean include:

2.1 Sewage and Nutrients

Effluent including domestic, industrial, agro processing and urban drainage waters are often discharged directly to the sea with minimal treatment (UNEP, 1994; UNEP, 1997; GESAMP, 2001; UNEP, 2004). This threatens the integrity of marine ecosystems in the region and poses a direct threat to human health. The continued lack of adequate wastewater and sewage treatment facilities identified in earlier studies (Vlugman, 1992), continues to be a major concern for the region.

2.2 Solid Waste and Litter

Solid waste including non-biodegradable man-made materials such as plastic (PET) bottles and bags are a major concern. These materials are used in the soft drink and retail industries and are particularly problematic for many islands and nearby marine areas. In some countries, debris in coastal areas is increasing. Studies conducted by Corbin and Singh (1993) found that in 1992 St Lucia recorded 1,100.2 items/km of coastline. In 2004, 195.2 items/km (Singh, 2005) of solid waste was found along selected coastline areas. Some of these items, for example plastics, upon degradation can release heavy metals like cadmium and mercury, which can harm important habitats.

2.3 Persistent Organic Pollutants

Agro-chemical pollution and subsequent eutrophication are believed to have harmful impacts on the coastal areas of the Caribbean and are reported to be a serious risk (UNEP, 1994). For example, in 1993, a large 'fish kill' off the coast of Trinidad (Point Lisas) was linked to harmful algal blooms (Institute of Marine Affairs, 2005). Studies conducted in Jamaica's Kingston Harbour confirmed the presence of pesticide residue, the result of non-point agricultural run-off into the marine environment (Mansingh and Wilson, 1995).

2.4 Oil (Hydrocarbons)

Hydrocarbon pollution in the Caribbean is one of the most significant threats to its marine biodiversity (UNEP, 1989). Maritime- and land-based activities are the major sources of hydrocarbon pollution in the region, and the threats posed from oil spill incidence are very high. Many countries are looking for appropriate measures for the disposal of used oil on land.

2.5 Sediment Mobilization

Siltation of nearshore areas is a major problem facing the Caribbean Region. High levels of sediment are deposited in bays via river systems which themselves have been degraded due to poor land-use practices, such as tree cover removal in Haiti (Ministère de l'Environnement, 2001). Deforestation along riverbanks and slopes, and uncontrolled and/or poorly controlled construction in coastal areas are common occurrences (Singh, 2005). Pumice and silt from quarry operations in islands such as Grenada and Jamaica have contributed to the smothering of nearby reefs, thereby causing major disturbances in the habitats (Department of Economic Affairs, 2001; NRCA, 2001). Farming steep gradients (for example coffee cultivation in Jamaica) also sends sediments to nearby coastal areas (Singh, 2005).

Chapter 3

THE LBS PROTOCOL

The LBS Protocol is a legal instrument for the Wider Caribbean Region (WCR) to control and reduce pollution of the coastal and marine environment from land-based sources and activities. Recognizing the dependency of the WCR on its coastal and marine resources which support two of the region's major economic activities – tourism and fisheries –,s implementation of the *LBS Protocol will:*

- **Reduce Priority Pollutants** by establishing effluent and emissions limitations and/or best management practices for these pollutants; AND
- **Promote Information Exchange** by establishing mechanisms for cooperation in monitoring, research and the exchange of scientific and technical information on land-based sources.

Some of the critical aspects of the LBS Protocol are highlighted in Figure 2.

Domestic wastewater is the number one point source category for pollution of the marine environment in the Wider Caribbean Region. Table 1 provides guidelines for the discharges of effluent into different categories of coastal waters.

Figure 2: Source Categories, Activities and Associated Pollutants of Concern for the LBS Protocol

LAND BASED SOURCES AND ACTIVITIES

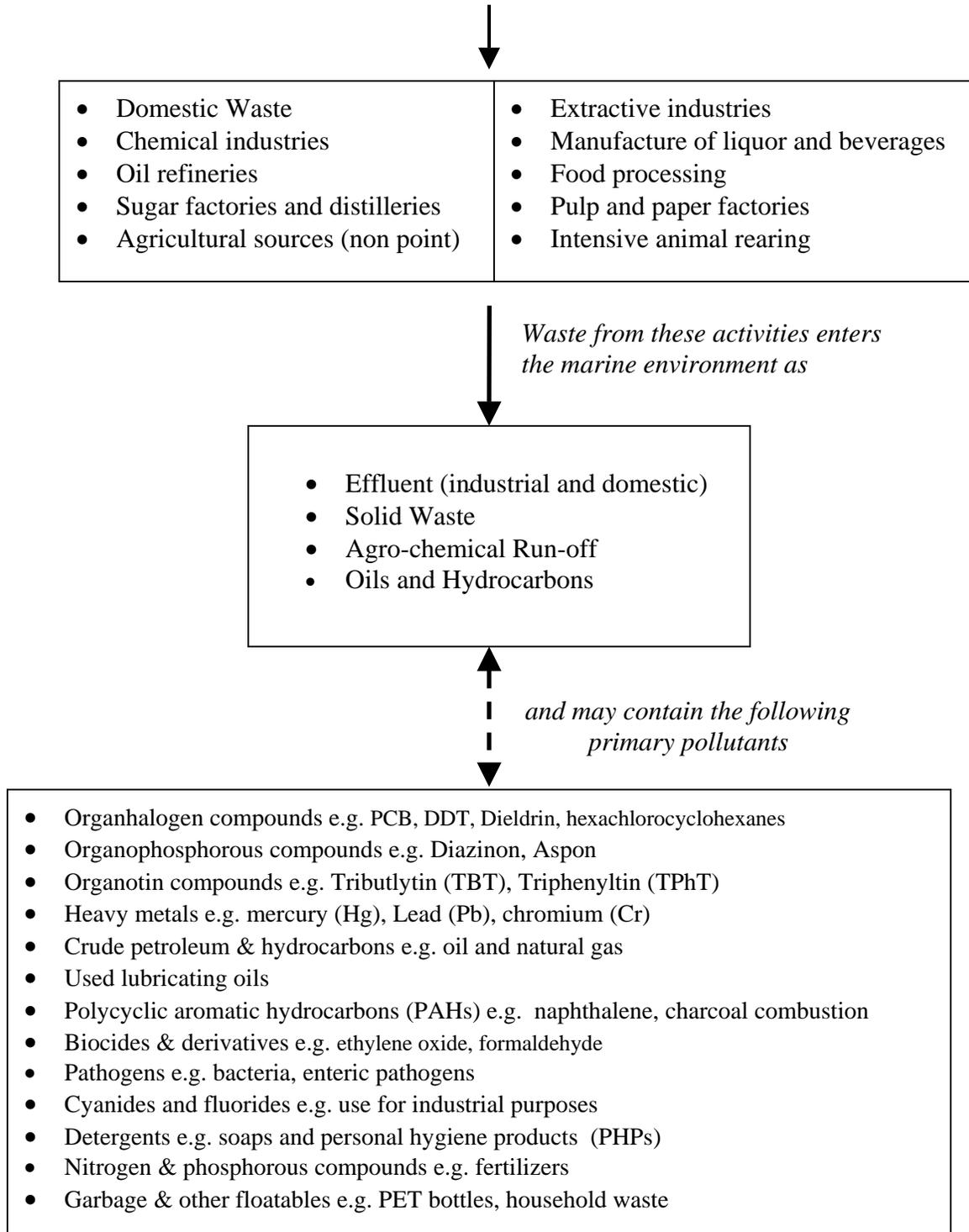


Table 1: Sewage Effluent Guidelines as Stipulated in Annex III of the LBS Protocol (Source: LBS Protocol)

CLASS I WATER		
Area	Measured parameter	Discharge Limit
-areas of coral reefs, sea grass and mangroves	Total suspended solids	30 mg/l
	BOD ₅	30 mg/l
-critical breeding grounds, nurseries	pH	5-10 pH units
-habitat areas designated under SPAW	Domestic and industrial waste (fats, oil and grease)	15 mg/l
- designated SPAW areas	Faecal coliform	200 mpn/100 ml
- recreational waters	E coli	126 org/100ml
	Enterococci	35 org/100 ml
	Floatables	Should not be visible
CLASS II WATER		
Water in the Convention Area that does not fall into a Class I water	Total suspended solids	150 mg/l
	BOD ₅	150 mg/l
	pH	5-10 pH units
	Domestic and industrial waste (fats, oil and grease)	50 mg/l
	Floatables	Should not be visible

3.1 STATUS OF LBS PROTOCOL AS AT DECEMBER 2005

COUNTRY	SIGNATORY	TO RATIFY & ACCEDE	RATIFIED	DATE
COLUMBIA	✓			02/10/2000
COSTA RICA	✓			06/10/1999
DOMINICAN REPUBLIC	✓			03/08/1999
FRANCE (TERRITORIES)	✓			06/10/1999
NETHERLANDS (TERRITORIES)	✓			06/10/1999
USA (TERRTORIES)	✓			06/10/1999
PANAMA			✓	09/07/2003
TRINIDAD & TOBAGO			✓	28/03/2003
ANTIGUA & BARBUDA		✓		
THE BAHAMAS		✓		
BARBADOS		✓		
BELIZE		✓		
CUBA		✓		
DOMINCA		✓		
GRENADA		✓		
GUATEMALA		✓		
GUYANA		✓		
HAITI		✓		
HONDURAS		✓		
JAMAICA		✓		
MEXICO		✓		
NICARAGUA		✓		
ST. KITTS & NEVIS		✓		
ST. LUCIA		✓		
ST. VINCENT & GRENADINES		✓		
SURINAME		✓		
UNITED KINGDOM (TERRITORIES)		✓		
VENEZUELA		✓		

The LBS Protocol requires nine instruments of ratification or accession before it enters into force (becomes legally binding to signatories).

Chapter 4

NPA DEVELOPMENT IN THE CARIBBEAN

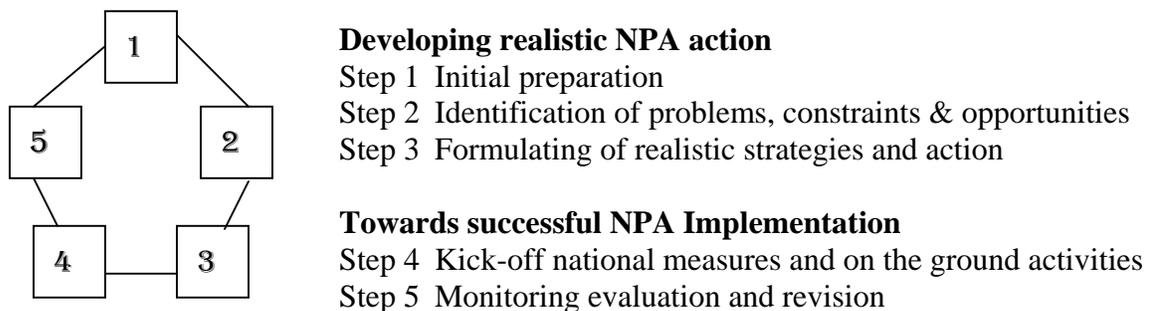
Background

UNEP-GPA in collaboration with UNEP-ROLAC and UNEP-CAR/RCU have identified National Programmes of Action for the Prevention of Marine Pollution from Land-Based Sources and Activities (NPAs) as possible frameworks through which pollution prevention could be addressed in a comprehensive and integrated manner in individual countries.

NPAs should not be viewed as a final prescriptive document; but rather as a combination of processes that facilitate the implementation of a range of related regional and global obligations. The objectives of NPAs may be covered by existing national and regional strategies and action plans. The participatory process for their further development and integration make them very effective management tools.

It is recommended to use a logical framework when designing the NPA Process so that activities are not undertaken in an *ad hoc* manner. This will facilitate a continued development of the programme over the medium- and long-term. Moreover, it makes the NPA process more transparent and accessible to the many and diverse stakeholders and end-users. A graphical representation of the logical NPA framework is shown in figure 3.

Figure 3: A flexible and cyclical NPA framework



Countries embarking on the development of NPAs, should therefore streamline the process into existing national frameworks, which will best support the country's demographic, political, cultural, economic and social situations. This will enable the NPA to be used and implemented effectively. While the approaches may vary from country to country, the development and implementation of NPAs can further enhance regional cooperation and integration while addressing specific national priorities and needs in pollution prevention and control.

One example of a related sub-regional framework and policy that can mutually support the development and implementation of NPAs in the Caribbean region is the **Saint George's Declaration of Principles for Environmental Sustainability** developed by the Organization of Eastern Caribbean Countries (OECS) and the associated Regional Environmental Management Strategy (REMS) which is the supporting regional policy document. The OECS countries have used the REMS as a basis for the development of National Environmental Management Strategies (NEMS) in each of their member countries. NEMS provide a mechanism for linking several existing national environmental policies, strategies and action plans. They are also opportunities to develop holistic long-term sustainable implementation strategies for environmental management that take into account obligations of multilateral environmental agreements while addressing national priorities and needs.

Table 2: Highlights and Achievements of NPAs

Major Events	Year	Achievements	Comments
Global Recognition that land-based activities have significant impact on the marine environment	1995	The Global Programme of Action for Protection of the Marine Environment from Land Based Activities (GPA) developed	GPA requested governments to initiate Actions at national levels and forge regional cooperation to prevent degradation of marine areas from Land Based Activities. These actions may be implemented through the development of National Programmes of Action (NPA)
Intergovernmental Meeting formulated Declaration on Land Based Sources of Pollution	2001	Montreal Declaration on the Protection of the Marine Environment from Land-based Activities developed which highlighted the causes and effects of marine degradation from land-based sources of pollution. This Declaration was presented at the WSSD in 2002.	The meeting put forward the GPA as a suitable means of improving international coastal and oceans governance under ocean-related conventions, including strengthening the regional seas conventions and protocols.
UNEP develops Handbook on the Development and Implementation of NPAs	2002	Guiding tool on the formulation of NPA to assist policy makers in the implementation of the GPA finalized.	The Handbook is being applied in the Caribbean in conjunction with efforts to implement the objectives of the Cartagena Convention and its Protocols, particularly the LBS Protocol.
Caribbean Countries begin development of NPAs	2004	Four Pilot Caribbean countries agreed to develop NPAs (Some countries already have existing NPA-like programmes). The countries were Barbados, Jamaica, Saint Lucia, and Trinidad & Tobago.	Please refer to Table 3 for current status.
UNEP strengthens Cooperation and Collaboration to facilitate NPA development and implementation	2004	NOAA and UNEP–GPA signed a Memorandum of Understanding to promote and support the development of National Programmes of Action (NPAs) in the Wider Caribbean region.	Currently NOAA is working with countries in the Wider Caribbean Region to facilitate NPA development
Mauritius Strategy reflects importance of NPA development for addressing pollution from Land Based Sources	2005	Urges SIDS and international partners to fully implement the GPA/NPA in order to address SIDS vulnerability issues.	Particular reference to clause 26 pg 8 of the Draft Mauritius Strategy for the further implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (2005)
NPA is recognised as management tool for OECS countries of the Caribbean	2005	OECS and UNEP CAR/RCU signed a MOU to promote the implementation of NPAs in the framework of the NEMS. In addition, a MOU was signed to harmonise the activities and goals pursuant to the Cartagena Convention.	UNEP-CAR/RCU under the AMEP Work Programme is the lead agency in the region for supporting the development of NPAs The first Regional NPA workshop for the Caribbean was held in August, 2005

Chapter 5

SYNERGIES BETWEEN NPAs AND LBS PROTOCOL

While NPAs and the LBS Protocol have different legal frameworks, they can both serve as important management tools. The NPA is an integrated national management framework to prevent, reduce and control marine pollution from land-based sources and activities while the LBS Protocol is a regional legal instrument which can support the development and implementation of national policies and laws. In the Caribbean context, these two tools can be applied in a complementary manner and NPAs or other similar national strategies can be used to promote both the importance of the LBS Protocol and its effective implementation. Some examples from the region include:

Costa Rica

1. Since the NPA is a voluntary instrument and is neither nationally nor internationally binding, in contrast to, Multilateral Environmental Agreements (MEAs), Conventions and Protocols, it is often easier to gain political acceptance and support. This was the case for Costa Rica in their approval for the development of an NPA. However, the NPA will be used as a tool to generate greater commitment and support to the formal accession to the LBS Protocol and its effective implementation.

Jamaica

2. The process for the development of NPAs can also generate national dialogue on the various legal obligations for supporting agreements and protocols such as the LBS Protocol. This can assist in providing decision-makers in the region with information supporting the ratification/accession of the Protocol and to create an enabling environment for effective implementation. This was the case in the development of the NPA in Jamaica.

Trinidad & Tobago

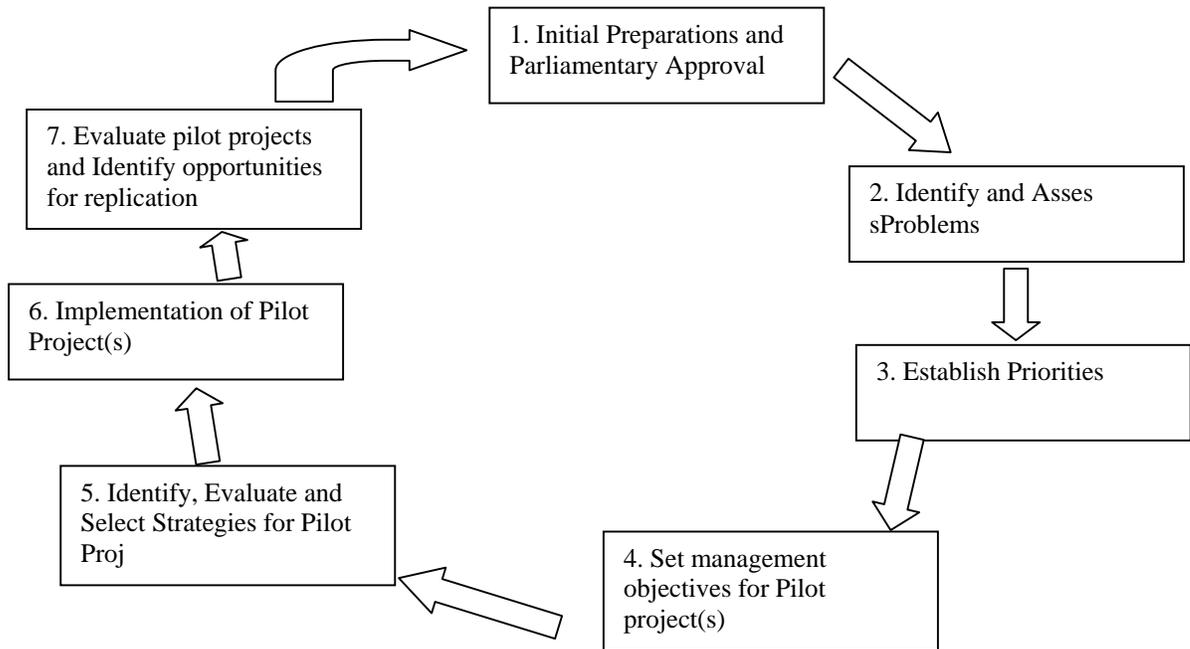
3. Components of the NPA include identification of land-based activities contributing to pollution of the marine environment, an evaluation of their contribution, and recommendations for remedial and preventative measures to reduce contamination. These activities are consistent with specific objectives

and obligations of the LBS Protocol. In Trinidad and Tobago, the activities which were implemented within the framework of the NPA directly met specific obligations of the LBS Protocol to which it has acceded.

Chapter 6

NPAs: LESSONS LEARNT

Figure 4: The NPA Cycle - adapted for the Caribbean



6.1 Initiating the NPA Process

- An effective NPA requires “will” by all the stakeholders. Participating agencies must be totally committed to all phases of the process. These phases include formulation, implementation, monitoring and evaluation.

Columbia found that the formulation process was complicated because the assigning of responsibilities in the process was a major challenge.

- Cooperation between civil society and private sector is very important in engendering national ownership.

Costa Rica found that the involvement of all stakeholders from the earliest stages of the NPA process together with support from partnerships between NOAA, UNEP-CEP and GPA were key enabling features of their NPA process.

- The NPA process should have a suitable organizational scheme, which must include a management framework, financial support, and monitoring and evaluation mechanisms.
- There must be a clear definition of the goals from the outset of the process in order to ensure the success of preventing marine degradation.

There are several enabling factors, which will contribute to the success of the development of an MPA. These include awareness, commitments, goals and legal framework. Some of the specific country lessons are outlined below.

6.2 Awareness

- The NPA will not be effective without adequate awareness. This must be targeted at all levels of society, including the private sector and political partners.

Columbia, embarked on public awareness at all levels, and found that this was critical to the success of their NPA process.

Costa Rica, on the other hand had difficulty in embarking on the development of a NPA due to an initial lack of awareness. There was therefore an initial requirement to inform all stakeholders of the objectives of and relationships between the GPA, the NPA, and LBS Protocol.

Saint Lucia conducted an educational and sensitization campaign, which included:

- *Working with CBO's to generate interest in issues*
- *Showing people how the LBS affects them on a daily basis*
- *Involving resource users in the process*
- *Developing a sense of stewardship*

6.3 Commitment

- Joint co-operation at local, national and regional levels are vital for success.

Costa Rica created interdisciplinary and inter-institutional cooperation.

St Lucia has an advisory committee and a multi-agency working group for Coastal Zone Management. This group is responsible for overseeing pilot, project activities carried out as part of their NPA process.

- Early government endorsement of the NPA can decrease the time lag and hindrances of the process.

Trinidad and Tobago's NPA process began at the political level where the government parliamentary members appointed a 'select committee' to oversee the process and endorse the NPA at the beginning of the cycle.

6.4 Goals

- The NPA must form part of the overall policy on environmental management in the country. It must identify high-, medium-, and long-term projects, prioritise them, and develop implementation plans including how these plans will be financed.

6.5 Legal Framework

- Comprehensive national, institutional and legal frameworks are important enabling tools for the development and implementation of a NPA Process. These frameworks should be able to deal with existing priorities and problems, but be flexible enough to respond to emerging national, regional and global imperatives.
- There is a further need for implementation, compliance and enforcement of legislation and policies that deal with land-based sources of pollution. Principles in the NPA should be included in environmental, resource management and planning legislation and in environmental regulations such as provision for Environmental Impact Assessments (EIAs).

Chapter 7

NPAs: CHALLENGES EXPERIENCED

This section summarizes the general and specific challenges, which can occur in the development of NPAs. It does not take into account delays, which may arise from natural or man-made disasters.

Countries embarking on the development of NPAs should be cognizant of these challenges so that appropriate corrective measures can be taken early in the process.

7.1 General challenges

1. Technical and financial limitations are among the major hurdles in the development of a NPA.

Technical limitations can be overcome through the development of strategic partnerships at the national, regional and international levels. The collaboration between NOAA, UNEP/GPA and UNEP-CAR/RCU is one such example where assistance has been provided based on areas of expertise.

2. Difficulties may be experienced in ‘bringing together’ agencies and institutions from various sectors both in terms of logistical constraints but also in reaching consensus on priority issues.
3. Funding constraints exist at all stages of the NPA process. However it is a major problem in the scoping phase, which occurs prior to the commencement of the NPA. In this phase, an immense amount of work is required, for which dedicated financing, especially for consultations, should be identified. In addition, the time lag between project approval and disbursement of funds can be long.

E.g.1 St Lucia cited finance as a major constraint.

E.g.2 Colombia’s NPA is supported by a national budgetary allocation, environmental funds (management of treaties),

donor countries, polluters' tax and international creditors such as IMF.

AND

E.g 3 Jamaica's NPA is supported by annual government subventions given to public sector departments to finance their operations.

4. The repositioning of the NPA and the LBS within the National Priorities of Action is a challenge for some countries.
5. Availability and sharing of information is a challenge for many countries and in some cases, the lack of inter-agency cooperation exacerbates the problem.

7.2 Specific Challenges

7.2.1 How to Identify and Assess the Problem?

- These challenges include:
 - ✓ Identifying the issues affecting the marine environment
 - ✓ Identifying the stakeholders and relevant agencies to participate in the process
 - ✓ Initiating the process and getting commitment for the next phase
 - ✓ Obtaining Agreements from agencies
 - ✓ Getting access to accurate and updated scientific data and information
 - ✓ Making the link between environmental management and socio-economic developmental priorities.

7.2.2 How to Set Management Objectives and Select Pilot Projects

- Selection of pilot projects may be difficult. In Trinidad and Tobago it proved difficult to demonstrate short-term achievements for the pilot NPA project that was originally selected. Therefore, geographic consideration and scale must be given careful consideration in the selection of any pilot study. Some other issues to be considered in the choice of pilot project include: resource availability, replicability, severity of the problem, and stakeholder acceptance and support.

7.2.3 How to obtain Programme Support Elements and National Endorsement?

- Obtaining political support and endorsement for the development of NPAs can be challenging. BUT, early political endorsement is critical to the process. Experience from countries who have embarked on NPA development processes illustrate the importance of ensuring adequate time for consultation and mobilization of support at the community, technical and political levels.

E.g., In Trinidad the Cabinet-appointed Committee was very slow in reaching consensus in the NPA process. Projected timelines for NPA development must therefore be realistic and take into account long bureaucratic processes.

Chapter 8

NPAs AS POLICY TOOLS FOR DEVELOPMENT

NPAs are very important tools for addressing marine degradation in an integrated and holistic manner. The development and implementation of related national strategies as well as the supporting frameworks provided by regional and international environmental agreements can strengthen the national capacity to prevent, reduce and control pollution from land-based sources and activities.

Effective integration of NPAs into existing national development planning policies and frameworks will be critical in ensuring that the principles of sound environmental management are mainstreamed at the national level.

8.1 Existing NPA Programmes

A NPA programme may or may not be referred to as a NPA. Other titles may well be more appropriate, especially if the NPA is linked to existing integrated programmes or sectoral policies such as sustainable development or poverty reduction strategies, integrated health and environment programmes, or sectoral strategies on water quality, marine protected areas, fisheries, agriculture or tourism. The important issue is not the title, but rather the inclusion of concrete action to address harmful effects of land-based activities on the coastal and marine environment.

Examples of countries with existing NPA programmes include:

- **Saint Lucia**

Saint Lucia's NPA Programme consists of the following:

- ✓ **Coastal Zone Management Policy:** This is a guiding policy document for NPA implementation in Saint Lucia.
- ✓ **National Environmental Policy:** This document addresses the maintenance and enhancement of biodiversity, natural productivity and the

environment for human health. It also seeks to address the fulfilment of regional and international objectives.

- **Barbados**

Barbados' NPA Programme consists of the following:

- ✓ Barbados Coastal Zone Management Programme
- ✓ Barbados Legislation and the LBS Protocol

- **Jamaica**

Jamaica's NPA Programme consists of the following:

- ✓ National Programme of Action

8.2 NPA HANDBOOK

The NPA Handbook entitled 'UNEP Handbook on the Development and Implementation of a National Programme of Action for the Protection of the Marine Environment from Land-based Activities', developed by the UNEP-GPA, has been revised based on the experiences in the development and implementation of NPAs in the Caribbean and elsewhere.

The new guide, entitled 'Protecting Coastal and Marine Environments from Land-based Activities – A Guide for National Action', provides greater flexibility and guidance for countries that are embarking on a NPA process.

8.3 Recommendations of the Open Regional Workshop on National Programmes of Action (NPAs) from the Third Meeting of the Interim Scientific, Technical and Advisory Committee (ISTAC) to the Protocol Concerning Pollution from Land-based Sources and Activities in the Wider Caribbean Region (LBS) (Mexico City, Mexico, 22 - 26 August 2005)

The workshop on National Programmes of Action for the Prevention of Marine Pollution was convened to deliberate on the progress of the development and implementation of National Programmes of Action for the Prevention of Marine Pollution from Land based Sources (NPA) in the region. This forum allowed countries throughout the wider Caribbean to share their individual experiences.

NPAs, by determining necessary priorities and implementation strategies, are recognised as mechanisms for strengthening and facilitating the LBS Protocol. An NPA is envisioned as a management plan to address prevention of marine pollution from land based sources. It is a flexible instrument adapted to each country's reality. The goal of the NPA is to assist the national or regional government, industry, and local communities in the prioritization of economic and social development objectives.

It is recognised that in order for NPAs to be implemented, it is important that they be built on realistic assumptions of capacities and resources that are available to the country, both from domestic and international sources. It is further recognised that for NPA development, all relevant stakeholders should be included in the process.

Barriers and Constraints

The presentations and subsequent discussions identified many lessons learnt, challenges, constraints and barriers to the implementation of the NPAs. These include:

- Lack of adequate financial resources;
- Insufficient capacity both at the institutional and technical levels, which are required for implementation;

- Lack of effective mechanisms for the decentralisation process (transfer of responsibility). This process is often not accompanied by the provision of the necessary supporting framework (legal, financial, enforcement and monitoring etc.), which allows local governments to implement their responsibilities;
- Inadequate knowledge and ownership of marine environmental issues, which are perceived to be barriers to the prioritisation of the NPAs.

Other issues mentioned were:

- Time constraints in the development process;
- Endorsement and ratification of the LBS Protocol;
- Empowerment of communities.

Recommendations

This workshop identified the following recommendations of action for consideration by ISTAC.

- Urge countries to develop NPAs in order to facilitate and guide the implementation of the LBS Protocol.
- Recommend, for implementation in the OECS countries, that the NPA process be integrated into the existing NEMS in order to avoid duplication.
- Urge ISTAC to continue its efforts to strengthen capacity for the development and implementation of LBS/NPA activities. In addition there should be increased experience-sharing in the region, including methods/tools in order to strengthen implementation of the LBS Protocol.
- Facilitate implementation of NPAs through clearly-defined short, medium and long-term plans.
- Initiate activities on strengthening long-term sustainable financing (domestic resource mobilisation and efficient leverage of international sources), activities on socioeconomic/affordability constraints and strategic planning/sequencing of action.
- Develop, through ISTAC, a mechanism to assist countries in addressing barriers and constraints to the development and implementation of NPAs.
- Increase focus on economic valuation and environmental health cost assessments.

- Increase awareness/initiatives on the benefits from LBS activities.
- Increase involvement of the academic community.

Other matters for consideration

- Harmonization of standards
- Creation of a clearinghouse at project level
- Donor meeting/dialog forum on marine/LBS

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