

CERMES Technical Report N° 47

Ecosystem-based management principles in the Caribbean

CARIBBEAN LAW INSTITUTE CENTRE (CLIC)
UWI, CAVE HILL CAMPUS, BARBADOS



**‘STRENGTHENING *PRINCIPLED OCEAN GOVERNANCE NETWORKS* -
TRANSFERRING LESSONS FROM THE CARIBBEAN TO THE WIDER OCEAN
GOVERNANCE COMMUNITY’**

PROGOVNET



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PREFACE

This project examines the extent to which Ecosystem Based Management Principles form part of Caribbean Environmental Law and of the degree to which these principles are applied by environmental regulators whether acting individually or in coordination with other regulators. It places particular emphasis on principled ocean governance.

There has never been a systematic examination or documentation of the extent to which Ecosystem Based Management Principles form part of Caribbean law, or of the degree to which these principles have been acted upon by regulators and the courts. Neither has there been a chronicle of the formal or informal network among environmental regulators and decision-makers. The PROGOVNET¹ Steering Committee has approved, in principle, the undertaking of the present project in order to remedy the foregoing deficiencies.

It is hoped that through this work Caribbean regulators, academics, non-governmental organisations, and the general public will be sensitised to the role that Ecosystem Based Management Principles play in principled ocean governance and to encourage the sustained and coordinated application of these principles.

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CONTENTS

Preface	i
Table of Cases.....	v
Table of legislation	vi
Primary Legislation.....	vi
Subsidiary Legislation	ix
Table of international instruments	x
Conventions	x
Declarations	xi
1 Ecosystem-based management	1
1.1 The Twelve Principles	2
1.2 The relevance of ecosystem-based management principles to Caribbean ocean governance	5
1.2.1 The Caribbean Sea	5
1.2.2 Problems facing the Caribbean Sea.....	5
1.2.3 Ocean Governance	8
1.2.4 To what extent are ecosystem-based management principles relevant to Caribbean ocean governance?	9
1.2.5 Conclusion	21
2 Multilateral Environmental Agreements and the Caribbean.....	22
2.1 Caribbean Implementation of Multilateral Environmental Agreements	22
2.1.1 Ramsar Convention.....	24
2.1.2 CITES	25
2.1.3 Basel Convention	25
2.1.4 Convention on Biological Diversity.....	26
2.1.5 United Nations Convention on the Law of the Sea.....	26
2.1.6 Ozone Convention.....	27
2.2 Is the Caribbean doing enough? – The misgivings and benefits of Caribbean implementation of Multilateral Environmental Agreements.....	27
2.3 Difficulties	28
2.4 Recommendations.....	29
2.5 Conclusion	29
3 Caribbean Enactment of Ecosystem-Based Management Principles.....	29
3.1 Legislation and Regulations.....	30
3.2 Conclusion	48
4 The Regulatory Regime of Ocean Governance in the Caribbean	48
4.1.1 Antigua and Barbuda	50
4.1.2 The Commonwealth of The Bahamas.....	50
4.1.3 Barbados	51
4.1.4 Belize	51

4.1.5	The Commonwealth of Dominica.....	52
4.1.6	The Co-operative Republic of Guyana	52
4.1.7	Grenada.....	53
4.1.8	Jamaica.....	53
4.1.9	St. Kitts and Nevis	55
4.1.10	Saint Lucia	55
4.1.11	St. Vincent and the Grenadines.....	56
4.1.12	The Republic of Trinidad and Tobago.....	56
4.2	Conclusion	59
5	The Adoption of Ecosystem-Based Management Principles in Caribbean Case Law.....	59
5.1	Principle One – The objectives of management of land, water and living resources are a matter of societal choice.....	61
5.2	Principle Two – Management should be decentralized to the lowest appropriate level	61
5.3	Principle Three – Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.....	62
5.4	Principle Four – Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context	62
5.5	Principle Five – Conservation of ecosystem structure and functioning in order to maintain ecosystem services should be a priority target of the ecosystem approach	63
5.6	Principle Six – Ecosystems must be managed within the limits of their functioning	63
5.7	Principle Seven – The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.....	64
5.8	Principle Eight – Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term	64
5.9	Principle Nine – Management must recognize that change is inevitable.....	64
5.10	Principle Ten – The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity	65
5.11	Principle Eleven – The ecosystem approach should consider all forms of relevant information including scientific, indigenous and local knowledge, innovations and practices.....	65
5.12	Principle Twelve – The ecosystem approach should involve all relevant sectors of society and scientific disciplines.....	65
5.13	Conclusion	66
6	Caribbean Constitutional Provisions Germane to Ocean Governance in the Caribbean	67
6.1	Old Model Constitutions.....	67
6.1.1	Jamaica.....	67
6.1.2	Barbados	69
6.1.3	The Co-operative Republic of Guyana	70
6.1.4	The Commonwealth of The Bahamas.....	72
6.2	New Model Constitutions	73
6.2.1	Saint Lucia	73
6.2.2	The Republic of Trinidad and Tobago & Belize.....	74

6.2.3	Antigua and Barbuda & St. Kitts and Nevis	75
6.2.4	Grenada & The Commowearth of Dominica	76
6.3	Conclusion	77
7	Conclusion	78

Citation

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TABLE OF CASES

<i>Alcoa Minerals of Jamaica Inc. v Herbert Broderick (Jamaica)</i> [2000] UKPC 11.....	53
<i>Attorney-General of Trinidad and Tobago v Ramesh Dipraj Kumar Mootoo</i> (1976) 28 WIR 304.....	60
<i>Aurelio Cal and Others v Attorney General of Belize and Another</i> (2007) 71 WIR 110.....	65, 66, 67
<i>Belize Institute for Environmental Law v Chief Environmental Officer et al</i> BZ 2008 SC 13.....	52, 53, 54, 57
<i>Benjamin v Attorney General et al</i> AG 2007 HC 54.....	52, 53, 54, 56, 57
<i>Delapenha Funeral Home Ltd. v The Minister of Local Government and Environment</i> JM 2008 SC 72.....	52, 53, 54, 55, 57, 58
<i>Fishermen and Friends of the Sea v (1) The Environment Management Authority and</i> <i>(2) BP Trinidad and Tobago LLC</i> TT 2005 PC 15, [2005] UKPC 32.....	52, 54, 55, 57, 58, 67
<i>Grape Bay Ltd. v Attorney General of Bermuda</i> [2000] 1 WLR 574.....	60
<i>Ibrelebbe v The Queen</i> [1964] AC 900.....	60
<i>Lopez-Ostra v Spain</i> 16798/90 [1994] ECHR 46	68
<i>National Trust for the Cayman Islands et al v The Planning Appeals Tribunal et al</i> KY 2000 GC 75.....	52,54,56,57
<i>Natural Resources Conservation Authority v Seafood and Ting International Ltd.;</i> <i>Natural Resources Conservation Authority v DYC Fishing Ltd.</i> (1999) 58 WIR 269.....	8, 24, 47
<i>Northern Jamaica Conservation Association et al v Natural Resources Conservation</i> <i>Authority & National Environmental and Planning Agency (No. 1)</i> ("Pear Tree Bottom No. 1") JM 2006 SC 49.....	52, 53,54, 61
<i>Northern Jamaica Conservation Association et al v Natural Resources Conservation</i> <i>Authority & National Environmental and Planning Agency (No. 2)</i> ("Pear Tree Bottom No. 2") JM 2006 SC 65	53,55
<i>People United Respecting the Environment ("PURE") and Rights Action Group</i> <i>("RAG") v The Environmental Management Authority and Alutrint Limited</i> (CV 2007-02263).....	53, 58
<i>People United Respecting the Environment ("PURE") v The Environmental</i> <i>Management Authority ("EMA")</i> No. 60 of 2000.....	52, 53
<i>R et al v ex parte Belize Alliance of Conservation Non-Governmental Organisations</i> ("BACONGO") BZ 2002 SC 14.....	52, 53,58
<i>R v Coffee Industry Board, ex parte Supreme Coffee Corporation Limited</i> JM 1998 SC 60.....	53,56
<i>Save Guana Cay Reef Association Limited and Clarke, ex parte The Queen v Major et al</i> BS 2008 CA 9.....	52, 53, 54,55,56
<i>Soodeen v Attorney-General of Trinidad and Tobago, High Court of Trinidad and Tobago,</i> No S-839 of 1996 (Unreported).....	65, 67
<i>Spencer v Attorney General of Antigua and Barbuda and Asian Village Antigua Ltd.</i> AG 1998 CA 3.....	60
<i>Talisman (Trinidad) Petroleum Ltd. v The Environmental Management Authority</i>	

Decision of Environmental Commission, No. EA3 of 2002, (Trinidad and Tobago).....	8, 52, 53, 54, 57
<i>Virgin Islands Environmental Council v Attorney General and Another</i> (“Beef Case”) Claim No. BVIHCV2007/0185 (Unreported).....	53, 55, 58
<i>Yanomami Community v Brazil</i> , Case 7615, Decision of 5 March 1985, Resolution 12/85 (Inter-American Commission on Human Rights).....	68

TABLE OF LEGISLATION

Primary Legislation

Antigua & Barbuda

Dumping At Sea Act (Cap. 141) (29/1975).....	28
Fisheries Act 2006 (No. 22 of 2006).....	28
Oil Pollution of Maritime Areas Act 1995 (No. 14 of 1995).....	28
Physical Planning Act 2003 (No. 6 of 2003).....	54
Ratification of Treaties Act (Cap. 364) (1/1987).....	20
Wild Birds Protection Act (Cap. 472) (3/1913).....	22

The Commonwealth of The Bahamas

Agriculture and Fisheries Act (Ch. 242) (50 of 1963).....	26, 27
Coast Protection Act (Ch. 204) (37 of 1968).....	26
Companies Act 1992 (Ch. 308) (18 of 1992).....	44
Continental Shelf Act (Ch. 5) (17 of 1970).....	26
Fisheries Resources (Jurisdiction & Conservation) Act (Ch. 244) (13 of 1977).....	26
Merchant Shipping (Oil Pollution) Act (Ch. 275) (17 of 1976).....	16, 26, 27

Barbados

Barbados Territorial Waters Act (Cap. 386) (1977-26).....	23
Coastal Zone Management Act (Cap. 394) (1998-39).....	11, 12, 17, 28, 44, 45, 61
Fisheries Act (Cap. 391) (1993-6).....	13, 28, 61
Marine Pollution Control Act (Cap. 392A) (1998-40).....	12, 28, 44, 45, 61, 62
National Conservation Commission Act (Cap. 393) (1982-8).....	61
Pesticides Control Act (Cap. 395) (1973-36 <i>et seq.</i>).....	61
Shipping (Incentives) Act (Cap. 90A) (1982-39).....	12
Soil Conservation (Scotland District) Act (Cap. 396) (1958-37 <i>et seq.</i>).....	61
Wild Birds Protection Act (Cap. 398) (1907-9 <i>et seq.</i>).....	61

Belize

Belize Port Authority Act (Cap. 233) (2 of 1976).....	45
Coastal Zone Management Act (Cap. 329) (5 of 1998).....	13
Dumping At Sea Act 1974 (UK).....	45
Environmental Protection Act (Cap. 328) (22 of 1992).....	26, 27, 45
Fisheries Act (Cap. 210) (1948).....	45
Maritime Areas Act (Cap. 11) (1 of 1992).....	45

The Commonwealth of Dominica

Beach Control Act (Chap. 42:04) (21 of 1966).....	29, 31, 32
Fisheries Act (Chap. 61:60) (11 of 1987).....	29, 32, 33, 34, 35
International Maritime Act 2000 (Act No. 9 of 2000).....	32
Solid Waste Management Act 2002 (Act No. 1 of 2002).....	22, 33
Territorial Sea, Contiguous Zone, Exclusive Economic and Fishery Zones Act (Chap. 1:11) (26 of 1981).....	30, 32, 34, 36
Water and Sewage Act (Chap. 43:40) (17 of 1989).....	29

The Co-operative Republic of Guyana

Environmental Protection Act 1996 (Act No. 11 of 1996)	13, 29, 20, 32, 33, 34, 45, 36, 46, 63
Maritime Boundaries Act 1977 (Act No. 10 of 1977).....	30, 31, 32, 63
Fisheries Act 2002 (Act No. 12 of 2002)	31, 63

Grenada

Bathing Places Act (Cap. 28) (Cap. 31-1958).....	31
Beach Protection Act (Cap. 29) (Act 67 of 1979).....	31
Fisheries Act (Cap. 108) (Acts 15 of 1986 and 25 of 1989).....	29, 31, 32, 33, 34, 35, 36, 46
Oil in Navigable Waters Act (Cap. 218) (Cap. 204-1958 and Act 64 of 1979).....	31, 32
Petroleum Act (Cap. 239) (Cap. 217-1958)	32
Petroleum and Natural Gas Deposits Act (Cap. 240) (Act 22 of 1989).....	30, 32
Territorial Sea and Maritime Boundaries Act (Cap. 318) (Act 25 of 1989).....	30, 32
Waste Management Act 2001(Act No. 16 of 2001).....	29, 34, 36

Jamaica

Beach Control Act (63 of 1955 et seq.).....	29, 30, 31, 32
Endangered Species (Protection, Conservation and Regulation of Trade) Act 2000 (Act 6 of 2000).....	16, 21
Exclusive Economic Zone Act 1991(Act 33 of 1991).....	30, 32
Fishing Industry Act 1975 (Act 17 of 1975).....	13, 16, 31

Harbours Act (Cap. 145) (Acts 1 of 1963 and 42 of 1969)	30
Maritime Areas Act 1996 (Act 25 of 1996).....	24, 30, 47
Natural Resources Conservation Authority Act 1991 (Act 9 of 1991).....	9, 12, 24, 28, 29, 30, 31, 32, 33, 34, 35, 36, 47, 60
Shipping Act 1998 (Act 8 of 1998)	48
Water Resources Act 1995 (Act 36 of 1995).....	29

St. Kitts and Nevis

Fisheries Act 1984 (No. 4 of 1984).....	39, 40, 41
Maritime Areas Act 1984 (No. 3 of 1984)	40
National Conservation and Environment Protection Act 1987 (No. 5 of 1987).....	23, 24, 40, 41, 48

Saint Lucia

Fisheries Act (Cap.7.15) (Act 10 of 1984).....	39, 40, 49, 66
Forest, Soil and Water Conservation Act (Cap.7.09) (Acts 6 of 1945 and 11 of 1983).....	23
Maritime Areas Act (Cap.1.16) (Act 6 of 1984).....	40, 49
Merchant Shipping (Oil Pollution) Act 1996 (No. 11 of 1996)	12, 40
Oil in Navigable Waters Act (Cap.6.07) (Acts 8 of 1929, 7 of 1972 and 6 of 1984).....	49
Plant Protection Act (Cap.7.12) (Act 21 of 1988).....	23
Saint Lucia National Trust Act (Cap.6.02) (Act 16 of 1975).....	38, 39
Water and Sewerage Act 2004 (No. 14 of 2005).....	40

St. Vincent and the Grenadines

Beach Protection Act (Cap. 331) (Act 10 of 1981)	40
Convention on Oil Pollution Damage Act 2002 (Act No. 6 of 2002)	40
Dumping At Sea Act 2002 (Act No. 53 of 2002)	40
Fisheries Act (Cap. 52) (Act 8 of 1986).....	38, 40, 41
High Seas Fishing Act 2001 (Act No. 26 of 2001).....	38, 40
Management of Ship-Generated Solid Waste Act 2002 (Act No. 16 of 2002).....	40
Marine Parks Act 1997 (Act No. 9 of 1997).....	40, 41
Maritime Areas Act (Cap. 333) (Act 15 of 1983).....	40
National Parks Act 2002 (Act No. 33 of 2002).....	38, 40
Town and Country Planning Act 1992 (Act No. 45 of 1992).....	38
Wildlife Protection Act (Cap. 55) (Act 16 of 1987).....	38

The Republic of Trinidad and Tobago

Archipelagic Waters and Exclusive Economic Zone Act (Chap. 51:06) (Act 24 of 1986).....	23
Continental Shelf Act (Chap. 1:52) (Act 43 of 1969).....	23, 66
Environmental Management Act 2000 (Chap. 35:05) (Act 3 of 2000).....	8, 13, 15, 23, 24, 36, 37, 38, 39, 41, 49, 54
Fisheries Act (Chap. 67:51) (Act 39 of 1916).....	37
Institute of Marine Affairs Act (Chap. 37:01) (Act 15 of 1976).....	8, 49

Marine Areas (Preservation & Enhancement) Act (Chap. 37:02) (Act 1 of 1970).....	37
Territorial Sea Act (Chap. 1:51) (Act 38 of 1969).....	23, 66
Tobago House of Assembly Act (Chap. 25:03) (Act 40 of 1996).....	50

Subsidiary Legislation

Belize

Dumping At Sea Act (Overseas Territories) Order (No. 1831 of 1975).....	45
Hol Chan Marine Reserve (Amendment) Regulations 1989 (S. I. No. 113 of 1989).....	45

Dominica

Fisheries (Soufriere/Scotts Head Fisheries Management Area) Notice 1998 (S. R. & O. No. 18 of 1998).....	46
---	----

Jamaica

Natural Resources (Hazardous Waste) (Control of Transboundary Movement) Regulations 2002 (L.N. 149A/2002).....	22
Natural Resources (Marine Parks) Regulations 1992 (L. N. 41B/92 & 701/2003).....	12

St. Vincent and the Grenadines

Fisheries Regulations 1987 (S. R. & O. No. 1 of 1987).....	38
Marine Parks (Tobago Cays) Declaration Order 1997 (S. R. & O. No. 40 of 1997).....	38, 40
Marine Parks (Tobago Cays) Regulations 1998 (S. R. & O. No. 26 of 1998).....	38, 40

The Republic of Trinidad and Tobago

Certificate of Environmental Clearance Rules (LN 104/2001).....	36
Environmentally Sensitive Areas Rules (LN 64/2001).....	36
Environmentally Sensitive Species Rules (LN 63/2001).....	36
Water Pollution Rules 2001 (LN 130/2001).....	15, 38

CONSTITUTIONS

Constitution of Antigua and Barbuda 1981.....	60, 67
Constitution of Barbados 1966.....	61, 62
Constitution of The Commonwealth of The Bahamas 1973.....	63, 64
Constitution of Belize 1981.....	66, 67
Constitution of The Commonwealth of Dominica 1978.....	68, 69
Constitution of The Co-operative Republic of Guyana 1980.....	12, 13, 62, 63

Constitution of Grenada 1973.....	68, 69
Constitution of Jamaica 1962.....	59, 60, 61, 64
Constitution of St. Kitts and Nevis 1983.....	67
Constitution of Saint Lucia 1978.....	65
Constitution of the Republic of Trinidad and Tobago 1976.....	66, 67, 68

TABLE OF INTERNATIONAL INSTRUMENTS

Conventions

ACS Convention	Convention Establishing the Association of Caribbean States.....	51
Agreement to Revised Treaty	Agreement to Enable the Entry into force of the Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy.....	30, 32
American Declaration	American Declaration of the Rights and Duties of Man.....	68
Basel Convention	Convention on the Transboundary Movements of Hazardous Wastes and their Disposal.....	19, 20, 22
BPOA	Programme of Action for the Sustainable Development of Small Island Developing States.....	5, 12
Cartagena Convention	Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region.....	5, 9, 12, 16, 19, 46, 50, 51, 63
CBD	Convention on Biological Diversity.....	2, 4, 5, 18, 19, 20, 22, 23, 24, 39, 42, 52
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora.....	19, 21, 22, 37, 39
CLC	International Convention on Civil Liability for Oil Pollution Damage.....	48
CNP	Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere.....	19
European Convention on Human Rights	Convention for the Protection of Human Rights and Fundamental Freedoms	68
FAO Code of Conduct for Responsible Fisheries	Code of Conduct for Responsible Fisheries.....	5, 63
Fund Conventions	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage; as amended by Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage; as amended by Protocol of 1992 to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage.....	48, 63
Intervention Convention	International Convention Relating to Intervention on the High Seas in Case of Oil Pollution Casualties.....	48

Kyoto Protocol	Protocol to the United Nations Framework Convention on Climate Change.....20, 21
1999 LBS Protocol	Protocol Concerning Pollution from Land-Based Sources and Activities to the Cartagena Convention.....5, 9, 16, 19
London Convention	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.....5, 12, 15, 20, 45, 48
London Protocol	Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.....5, 12, 20
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships.....5, 6, 16, 19, 48, 51, 63
MARPOL Protocol	Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships.....19
Montreal Protocol	Montreal Protocol on Substances that Deplete the Ozone Layer.....20, 23
OECS Treaty	Treaty Establishing the Organisation of Eastern Caribbean States.....43
Oil Spills Protocol	Protocol Concerning Co-Operation in Combating Oil Spills in the Wider Caribbean Region.....5, 9, 16, 19
Ramsar Convention	Convention on Wetlands of International Importance especially as Waterfowl Habitat.....19, 21
Revised Treaty	Revised Treaty of Chaguaramas Establishing the Caribbean Community (“CARICOM”) Including the CARICOM Single Market and Economy.....30, 32
Rotterdam Convention	Rotterdam Convention on Prior Informed Consent for Certain Hazardous Chemicals and Pesticides in International Trade.....20
1990 SPAW Protocol	Protocol Concerning Specially Protected Areas and Wildlife (“SPAW”) in the Wider Caribbean Region.....5, 9, 16, 19, 50, 51
STCW 78/95	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers.....48
Stockholm Convention	Stockholm Convention on Persistent Organic Pollutants.....20
SUA Protocol	Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf.....63
UNCCD	United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa.....20, 46
UNCLOS	United Nations Convention on the Law of the Sea.....9, 14, 19, 23, 30, 43, 48, 59, 64
UNFCCC	United Nations Framework Convention on Climate Change.....20, 21
Vienna Convention	Convention for the Protection of the Ozone Layer.....19
 Declarations	
Agenda 21	Agenda 21: Programme of Action for Sustainable Development....12, 41
Rio Declaration	Rio Declaration on Environment and Development.....12, 31, 60, 61

St. George's Declaration	St. George's Declaration of Principles for Environmental Sustainability in the OECS.....12, 37
Stockholm Declaration	United Nations Declaration on the Human Environment.....12

1 ECOSYSTEM-BASED MANAGEMENT

The incessant degradation of coastal and marine ecosystems has impelled scientists and policy-makers to call for an ecosystem-based approach² to managing human activities that affect these systems. This innovative management approach integrates biological, social and economic factors into a comprehensive strategy aimed at protecting and enhancing sustainability, diversity and productivity of our natural resources. This approach is a shift away from conventional management paradigms that are often short-term and consider humans to be independent of nature. Environmentalists, politicians and scientists alike have called for this new management approach that focuses on entire ecosystems, including the people and communities that live there,³ rather than managing one issue or resource in isolation. The goal of ecosystem based management is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need.⁴

While modern science suggests that ecosystem based management is the only effective way to address connections between species and people,⁵ there are varying opinions as to how this ecological approach may be best achieved. It has been succinctly suggested that the keys to success for ecosystem based management are (1) using good science; (2) inclusive collaboration that recognises everyone will not get what they want; (3) realistic expectations; (4) flexibility to adapt to rapidly changing conditions in dynamic ecosystems; and (5) adaptive management that utilises efficient, workable and affordable analysis, planning and implementation processes.⁶

Policy experts and scientists (in providing information about coasts and oceans to United States policy-makers), have identified the following as key concepts that form the foundation for an ecosystem-based approach to management:⁷

- **The key interactions among species within an ecosystem are essential to maintain if ecosystem services are to be delivered.** Ecosystems are highly interactive and interconnected. Ecosystem based management focuses on the role of *key* interactions, rather than on all interactions, recognizing that not all interactions within the ecosystem are of equal importance.
- **The dynamic and complex nature of ecosystems requires a long-term focus and the understanding that abrupt, unanticipated changes are possible.** It is difficult to predict the abundances of species, especially over long time periods, as they may change abruptly and with little warning. Ecosystem based management therefore uses an adaptive management approach in the face of resulting uncertainties.
- **Ecosystems can recover from many kinds of disturbance, but are not infinitely resilient.** There is often a threshold beyond which an altered ecosystem may not return to its previous state. Ecosystem-based management recognises that features such as the full natural complement of species, genetic diversity among species, and the lack of stress from other

² The ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organisation which encompass the essential processes and interactions among organisations and their environment. The ecosystem approach recognises that humans are an integral component of ecosystems (Malawi 1998).

³ N. L. Christensen *et al*, 'The Report of the Ecological Society of America Committee on the Scientific Basis for Ecosystem-Based Management' (1996).

⁴ K. L. McLeod *et al*, 'Scientific Consensus Statement on Marine Ecosystem-Based Management' (2005).

⁵ Susan Giannettino et al, 'Broadscale Assessments and Ecosystem Management: Four Perspectives' 21 JLREL (2001) 331.

⁶ *Id.*, 334.

⁷ N. L. Christensen *et al*, 'The Report of the Ecological Society of America Committee on the Scientific Basis for Ecosystem-Based Management' (1996) 2.

sources, will enhance the ability of the ecosystem to recover from environmental perturbations.

- **Ecosystem services are nearly always undervalued.** Although some goods (such as fish and shellfish) have considerable economic value, many essential services, such as, climate regulation, nutrient recycling and protection of shorelines, are commonly not assigned economic worth. Generally, they are not considered in policy decisions and are at risk.

The earth's biological resources are vital to humanity's social and economic development, however, the threat to species and ecosystems has never been as great as it is today. Species extinction caused by human activities continues at an alarming rate. Environmental degradation resulting from all types of industrial activity has become a serious impediment to economic development and the alleviation of poverty.⁸ In response, the United Nations Environment Programme (UNEP)⁹ in November 1988 explored the need for an international convention on biological diversity, the result of which was the adoption of the Convention on Biological Diversity (CBD)¹⁰ at Nairobi, Kenya in May 1992, of which 168 countries are now Parties. The CBD is a strong proponent for the adoption and implementation of the ecosystem-based management approach (EBM)¹¹ and has identified twelve salient principles of the ecosystem approach, each of which merits some discussion.¹²

1.1 The Twelve Principles

The official identification of the ecosystem based management principles (EBMPs) emanated from the Fifth Conference of the Parties to the Convention on Biological Diversity, which met at Nairobi, Kenya from 15 to 26 May 2000.¹³ These principles are as follows:

Principle 1: *The objectives of management of land, water and living resources are a matter of societal choice.*

The rationale for this principle is that different sectors of society view ecosystems in terms of their own cultural, economic and societal needs. Ecosystems should be managed for their intrinsic value and for their tangible or intangible benefits for humans in a fair and equitable way.¹⁴

Principle 2: *Management should be decentralized to the lowest appropriate level.*

The parties to the Convention decided that management should involve all stakeholders and balance local interests with the wider public interest. It was felt that greater efficiency, effectiveness and equity may be achieved through decentralized systems.

Principle 3: *Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.*

The possible impacts of management intervention in ecosystems need to be carefully considered as they often have unpredictable effects on other ecosystems.

⁸ J. G. Martin and A. L. MacNaughton, 'Sustainable Development: Impacts of Current Trends on Oil and Gas Development' (2004) 24 JLREL 257.

⁹ See Institutional and Financial Arrangements for International Environmental Co-operation (adopted 15 December 1972) UNGA Res. 2997 of 1972.

¹⁰ (Adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79, 31 ILM 818 (1992) ("CBD").

¹¹ COP 9, Decision IX/7, Bonn, Germany, 19-30 May 2008.

¹² The twelve principles are complementary and interlinked (see para. B6, Decision V/6).

¹³ COP 5, Decision V/6, Nairobi, Kenya, 15-26 May 2000 (see para. B6).

¹⁴ *Id.*

Principle 4: *Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem management programme should:*

- a. *Reduce those market distortions that adversely affect biological diversity;*
- b. *Align incentives to promote biodiversity conservation and sustainable use;*
- c. *Internalize costs and benefits in the given ecosystem to the extent feasible.*

Alignment of incentives will allow those who control the resources to benefit and ensure that those who generate environmental costs (e.g. pollution) will not escape liability (“polluter pays” principle).

Principle 5: *Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.*

The conservation of the dynamic relationships between and among species and their abiotic environment is of greater significance for the long term maintenance of biological diversity than simply the protection of species.

Principle 6: *Ecosystems should be managed within the limits of their functioning.*

Management should exercise due caution to environmental conditions that limit natural productivity and ecosystem functioning and diversity.

Principle 7: *The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.*

The ecosystem approach is based upon the hierarchical nature of biological diversity and should be bounded by spatial and temporal scales that are appropriate to the objectives.

Principle 8: *Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.*

The rationale for this ecosystem based management principle is the human tendency to favour short-term gains and immediate benefits over future ones.

Principle 9: *Management must recognise that change is inevitable.*

Apart from their inherent dynamics of change, ecosystems are beset by a complex of uncertainties and potential “surprises” in the human, biological and environmental realms. The ecosystem approach must utilise adaptive management in order to anticipate and cater for such changes and events.

Principle 10: *The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.*

There has been a tendency in the past to manage components of biological diversity either as protected or non-protected. There is a need to shift to more flexible situations, where conservation and use are seen in context and the full range of measures is applied in a continuum from strictly protected to human-made ecosystems.

Principle 11: *The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.*

Information from all sources is critical to arriving at effective ecosystem management strategies.

Principle 12: *The ecosystem approach should involve all relevant sectors of society and scientific disciplines.*

Experts and stakeholders at local, regional and international levels should be involved in this ecosystem approach, as most problems of biological diversity management are complex.

These pragmatic principles provide the framework for which this new management approach should be executed, and are very important to the issue of Caribbean ocean governance.

1.2 The relevance of ecosystem-based management principles to Caribbean ocean governance

1.2.1 The Caribbean Sea

A healthy ocean is integral to a functioning planet. It is critical to Caribbean economies, health and culture. The Caribbean Sea, in particular, is important to the region and a key area in which the principles of ecosystem-based management (EBM) may be applied. The Millennium Assessment describes the importance of the earth's seas in the following terms:

No feature of Earth is more complex, dynamic, and varied than the layer of living organisms that occupy...its seas, and no feature is experiencing more dramatic change at the hands of humans than this extraordinary, singularly unique feature of Earth...It follows that large-scale human influences over this biota have tremendous impacts on human well-being. It also follows that the nature of these impacts, good or bad, is within the power of humans to influence.¹⁵

Man's well-being, indeed his existence, depends, to a substantial degree, on what the Earth's seas provide, and the Caribbean Sea is no exception. The Caribbean Sea provides certain services, namely (i) basic services such as food, water and bio-chemicals; (ii) regulating services such as disease control, detoxification, and climate and flood regulation; (iii) cultural services such as recreation, education, aesthetic enjoyment and spiritual fulfilment; (iv) services related to employment such as fishing, trade, and tourism; and (v) other ancillary services such as transportation and communication.

1.2.2 Problems facing the Caribbean Sea

The Caribbean Sea has been classified as a Large Marine Ecosystem (LME) and as such faces unique challenges to its management since it has: (1) the most geopolitical components of complexity in the world; (2) the highest number of potential maritime boundaries in the world; and (3) the largest number of Small Island Developing States (SIDS) of any LME in the world. Additionally, the Caribbean Sea is difficult to manage because it is affected by a complicated mixture of stakeholders within and outside the region (such as CARICOM; the G-3 Free Trade Agreement States such as Mexico, Colombia and Venezuela; the Central American states; and non-grouped countries such as Cuba and the Dominican Republic). The Caribbean Sea is also one of the busiest shipping regions in the world.¹⁶

¹⁵ World Resources Institute, 'Ecosystems and Human Well-being: Biodiversity Synthesis' (Report of the Millennium Ecosystem Assessment 2005) 18 <<http://www.millenniumassessment.org/documents/document.354.aspx.pdf>> accessed 2 June 2010.

¹⁶ See Ambassador Luis Fernando Andrade, 'The Caribbean Sea as a Special Area in the Context of Sustainable Development' (Power Point Presentation at Regional Meeting entitled 'Economic Relations between Latin America and the Caribbean and the European Union and the VI Bi-regional Summit in Madrid,' Caracas 2010) Slides 1 to 6 <http://www.sela.org/DB/ricsela/EDOCS/SRed/2010/02/T023600003919-0-The_Caribbean_Sea_as_a_special_area_in_the_contetxt_of_sustaninable_development.pdf> accessed 3 June 2010; See also, Robin Mahon and John Ogden, 'IMCC/IMPAC-2 Symposium Proposal' (Symposium Proposal for the International Marine Conservation Congress (IMCC/IMPAC-2) 2008) 1 <http://www2.cedarcrest.edu/imcc/Program_Abstracts/data/documents/s71027.pdf> accessed 2 June 2010 where Mahon and Ogden note in relation to the geopolitical complexity of the region:

The Wider Caribbean Region is the most geopolitically complex region in the world. The close proximity of a total of 44 countries and dependencies with various degrees of autonomy presents unique governance challenges. The fact that the countries range from among the largest (e.g. Brazil and USA) to among the smallest (e.g. Barbados and St. Kitts and Nevis), and from the most developed to the least developed adds to this complexity as there is an extremely wide range in their capacities for governance. The variety of languages, legal regimes and cultures is a further complicating factor.

Leading scientists have concluded that “the loss of marine biodiversity¹⁷ is increasingly impairing the ocean’s ability to produce seafood, resist diseases, filter pollutants, maintain water quality and recover from perturbations, such as over-fishing and climate change.”¹⁸ This is confirmed by the Millennium Ecosystem Assessment, which states:

Changes in biodiversity due to human activities were more rapid in the past 50 years than at any time in human history, and the drivers of change that cause biodiversity loss and lead to changes in ecosystem services are either steady, show no evidence of declining over time, or are increasing in intensity. Under the four plausible future scenarios developed by the MA, these rates of change in biodiversity are projected to continue, or to accelerate.¹⁹

In relation to the Caribbean Sea, these changes in biodiversity are driven by overfishing, land-based pollution, marine-based pollution, loss of habitat from coastal development, and climate change. These impacts are significant, as lower levels of biodiversity reduce the ability of the Caribbean Sea to supply the goods and services the region is so dependent on.

Mahon and Ogden note that:

A number of monitoring programs have documented the decline of Caribbean marine resources and degradation of coastal ecosystems from relentless human disturbances over the past 50 years or more. While governments have achieved some successes with measures to control overexploitation, habitat destruction and land based impacts including small marine protected areas, this effort has failed to reverse the regional trends of decline. Poor regional level governance and in particular weak mechanisms for utilisation of scientific information are considered to be the key reasons for the failure to prevent continued degradation.²⁰

Given the importance of the Caribbean Sea, its problems and stakeholders, it is clear that only conscious intervention on the part of states will protect it. And while Caribbean states have shown their commitment to principled ocean governance through several environmental agreements,²¹ despite these declarations of commitment to principled ocean governance, the

¹⁷ Art. 2 of the CBD defines “biological diversity,” also known as “biodiversity,” as “the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.”

¹⁸ B. Worm *et al* ‘Impacts of Biodiversity Loss on Ocean Ecosystem Services’ (2006) 314 (3) *Science* 787–790.

¹⁹ World Resources Institute, ‘Ecosystems and Human Well-being: Biodiversity Synthesis’ (Report of the Millennium Ecosystem Assessment 2005) vi

<<http://www.millenniumassessment.org/documents/document.354.aspx.pdf>> accessed 2 June 2010.

²⁰ Robin Mahon and John Ogden, ‘IMCC/IMPAC-2 Symposium Proposal’ (Symposium Proposal for the International Marine Conservation Congress (IMCC/IMPAC-2) 2008) 1

<http://www2.cedarcrest.edu/imcc/Program_Abstracts/data/documents/s71027.pdf> accessed 2 June 2010.

²¹ See e.g., Arts. 5 (pollution from ships), 6 (pollution from dumping), 7 (pollution from land-based sources), 8 (pollution from seabed activities), and 9 (airborne pollution) of the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (adopted 24 March 1983, entered into force 11 October 1986) 1506 UNTS 157 (“Cartagena Convention”). Note that in the Cartagena Convention the “convention area” is defined as “the marine environment of the Gulf of Mexico, the Caribbean Sea and the areas of the Atlantic Ocean adjacent thereto, south of 30 deg north latitude and within 200 nautical miles of the Atlantic coasts of the States referred to in Art. 25 of this Convention”; See also, Protocol Concerning Specially Protected Areas and Wildlife (“SPA/W”) in the Wider Caribbean Region (adopted 18 January 1990, entered into force 17 June 2000) 2180 UNTS 101 (“1990 SPA/W Protocol”); Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region (adopted 24 March 1983, entered into force 11 October 1986) 22 ILM 240 (1983) (“Oil Spills Protocol”); Protocol Concerning Pollution from Land-Based Sources and Activities to the Cartagena Convention (adopted 6 October 1999, not yet in force) <http://www.cep.unep.org/pubs/legislation/lbsmp/final%20protocol/lbsmp_protocol_eng.html> accessed 31 July 2010 (“1999 LBS Protocol”); CBD (*supra*); Code of Conduct for Responsible Fisheries (adopted 31 October 1995) FAO Doc. 95.20/Rev/1 (“FAO Code of Conduct for Responsible Fisheries”); Programme of Action for the Sustainable Development of Small Island Developing States (1994) *reprinted in* Report of the Global Conference on the Sustainable Development of Small Island Developing States A/Conf.167/9 <<http://www.sidsnet.org/docshare/other/BPOA.pdf>> accessed

generally low political stature of ocean affairs is most often an impediment to this issue of ocean governance, as the matter of ocean affairs is subsidiary to other activities having higher priority (for example, a department of fisheries under the Ministry of Agriculture). Not surprisingly, resource allocation too is subject to change if the need arises, as was seen in Peru in 1970, when the Ministry of Fisheries was granted autonomy from Agriculture as a result of the growing importance of fisheries to the nation's economy.²²

Additionally, many of these Conventions are of themselves inadequate in dealing with the environmental issues of the Caribbean. Take for example, the International Convention for the Prevention of the Pollution from Ships (MARPOL 73/78).²³ This Convention places limits and conditions for dumping in *specific* areas, leaving the largest portion of the Caribbean Sea unprotected. Annex 1 (oil) prohibits discharge within 43 nautical miles (NM) of the nearest land; Annex 11 (noxious substances) – 12 NM; Annex 1V (sewage) – comminuted and disinfected, 3 NM, but not comminuted and disinfected, 12 NM. The result of the inadequate provisions of MARPOL 73/78 is illustrated below.²⁴

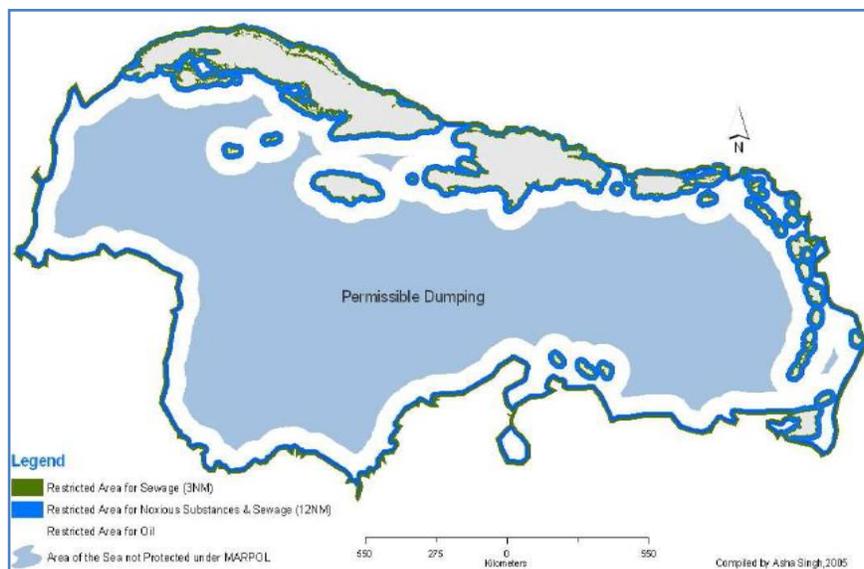


Figure 1 Caribbean Sea (areas protected and not protected under MARPOL)

In Singh's analysis of Caribbean ocean governance,²⁵ she speaks about the repetitive nature of these agreements. Indeed, many of the stipulations in these agreements are similar in scope and are consequently redundant. Other challenges to proper ocean governance in the region include

31 July 2010 ("Barbados Programme of Action" or "BPOA"); International Convention for the Prevention of the Pollution from Ships (adopted 2 November 1973, entered into force 2 October 1983) 1340 UNTS 184, 12 ILM 1319 (1973) ("MARPOL 73/78"); and Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (adopted 29 December 1972, entered into force 30 August 1975) 1046 UNTS 120, 11 ILM 1294 (1972) ("London Convention"), as amended by the Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (adopted 7 November 1996, entered into force 24 March 2006) 36 ILM 1 (1997) ("London Protocol").

²² Stella M. Vallejo, 'New structures for Decision Making in Integrated Ocean Policy' in Peter Bautista Payoyo (ed), *Ocean Governance: Sustainable Development of the Seas* (United Nations University Press, Tokyo 1994).

²³ 1340 UNTS 184, 12 ILM 1319 (1973).

²⁴ Image reproduced from Asha Singh 'Governance in the Caribbean Sea: Implications for Sustainable Development' (Research Paper, United Nations - Nippon Foundation Fellowship Programme 2008)

<http://www.un.org/Depts/los/nippon/unfff_programme_home/fellows_pages/fellows_papers/singh_0809_guyana.pdf> accessed 1 June 2010.

²⁵ *Id.*

(1) poor commitment;²⁶ (2) poor co-operation;²⁷ and (3) ignorance. If states do not know their boundaries then they will be unable to ascertain what they are governing.

Debatably, however, the biggest challenge for the Caribbean lies in the implementation of the required measures to give effect to the principles that have been identified at various stages because the reality is that despite the signing and ratification²⁸ of multilateral environmental treaties (MEAs), Caribbean oceans still remain in danger.

Excessive human use continues to strain marine life and vital coastal habitats, and both living and non-living resources in the oceanic and coastal environments are increasingly threatened by overfishing, oil spills, toxic pollution, and anthropogenic waste. At this juncture, one thing is apparent – the Caribbean is in dire need of an effective and proficient implementation plan to give effect to the ecosystem-based management principles (EBMPs). Indeed, at the 1992 World Summit on Sustainable Development (WSSD),²⁹ it was clear that the time had come to take practical steps for sustained actions that would address these environmental issues, rather than hosting political and philosophical debates.³⁰

The ecosystem approach promises to be the most practicable and appropriate approach to this regional issue of ocean governance, as it incorporates human involvement in the ecosystem, which is an essential component of principled ocean governance. It stresses, furthermore, principles of sustainability, adaptability, conservation, protection, participation and equity, which are vital to the successful execution of ocean governance in the Caribbean. The EBMPs are directly applicable to the effective governance of Caribbean oceans.

1.2.3 Ocean Governance

Ocean governance is

the ability to govern the ocean as prescribed in forms of legal instruments and/or customary international law and supplemented by policy, programme and institutional interventions at the international, regional and national levels, all done in a holistic manner with effective synergies among the various entities, taking into consideration the social, cultural and economic factors.³¹

Governance, in particular, has been defined as

²⁶ *Id.* The Caribbean Sea has been designated a “special area” for garbage under Annex V, MARPOL 73/78 since 1993.

²⁷ *Id.* The inability to incorporate all jurisdictions in such initiatives like the Caribbean Large Marine Ecosystem (“CLME”) will render it ineffective.

²⁸ See Asha Singh ‘Governance in the Caribbean Sea: Implications for Sustainable Development’ (Research Paper, United Nations - Nippon Foundation Fellowship Programme 2008)

<http://www.un.org/Depts/los/nippon/unff_programme_home/fellows_pages/fellows_papers/singh_0809_guyana.pdf>

accessed 1 June 2010. Singh has blamed the unsuccessful outcome of some environmental treaties on low ratification and non-memberships.

²⁹ 2002/Johannesburg Declaration on Sustainable Development (adopted 4 September 2002) A/CONF. 199/20.

³⁰ G. Pararas-Carayannis, ‘Ocean Governance and Sustainability- Present Trends- Future Challenges’ (Plenary Lecture- 30th Pacem in Maribus (Peace in the Oceans). A Year after Johannesburg. Ocean Governance and Sustainable Development: Ocean and Coasts - a Glimpse into the Future) Organized by National Academy of Sciences of Ukraine, IOI, and National Commission of Ukraine for UNESCO, Kiev, Ukraine, October 26-30, 2003 / Published in ‘A Gateway to Sustainable Development’ (Proceedings of the 30 International Conference *Pacem in Maribus*, International Ocean Institute, Sevastopol 2004) 90-101<<http://www.drgeorgepc.com/OceanGovernance.html>> accessed 17 March 2010.

³¹ Asha Singh ‘Governance in the Caribbean Sea: Implications for Sustainable Development’ (Research Paper, United Nations - Nippon Foundation Fellowship Programme 2008) 22

<http://www.un.org/Depts/los/nippon/unff_programme_home/fellows_pages/fellows_papers/singh_0809_guyana.pdf> accessed 1 June 2010.

...the whole of public as well as private interactions taken to solve societal problems and create societal opportunities. It includes the formulation and application of principles guiding those interactions and care for institutions that enable them.³²

Governance is made up of three components – *actors*, *interactions*, and *principles*. Actors refer to any social unit possessing agency or power of action. These include individuals, leaders, state departments, associations, international organizations, and households. Interactions are a specific form of action, undertaken by actors in order to remove obstacles and tread new pathways. Principles guide actors and interactions. These are the ethical values, assumptions and world-views used by actors in problem-solving.³³

From these definitions, it is evident that ocean governance is an integrative approach to addressing the issues facing the Caribbean Sea, and, like the EBM approach, involves consideration of social, cultural and economic factors. Governance also calls for the formulation and application of principles relating to care of the ocean. The twelve principles of ecosystem-based management are, therefore, an integral part of ocean governance. They define the goals and values by which the instant issues are to be addressed.

Costanza posits that the six core principles for sustainable ocean governance are responsibility, scale-matching, precaution, adaptive management, full cost allocation, and participation.³⁴ Mahon and others submit, on the other hand, that the “substantial principles” guiding ocean governance are sustainability, efficiency, rationality, inclusiveness, equity, precaution, and responsiveness.³⁵ They also consider that ocean governance should be guided by certain “procedural principles” which will make the decision-making process transparent, accountable, comprehensive, inclusive, representative, informed, and empowered.³⁶ It is noteworthy that all of these themes closely match the EBMPs and this apparent similarity only goes to show the special role and relevance that these principles have in Caribbean ocean governance.

1.2.4 To what extent are ecosystem-based management principles relevant to Caribbean ocean governance?

Principle One

A large component of this principle is the idea of public participation in the decision making process. The Republic of Trinidad and Tobago (“Trinidad and Tobago”) has legislation, in the form of the Institute of Marine Affairs Act³⁷ serves as a mandate to educate the public by the dissemination of information. There is no necessary involvement per se of the public element. However, the Environmental Management Act 2000³⁸ through section 28 goes a step further and outlines a stringent process by which the public input is required. By virtue of this section, the Environmental Management Authority is required to deposit with the public any information regarding the undertaking of any new environmental action. The public is accordingly given a

³² Bavinck Kooiman *et al* (eds), *Fish for Life: Interactive Governance for Fisheries* (Amsterdam University Press, Amsterdam 2005) 17.

³³ *Id.*, 18.

³⁴ Robert Costanza *et al*, ‘Principles for Sustainable Governance of the Oceans’ (1998) 281 *Science* 198, 199.

³⁵ Robin Mahon, Lucia Fanning, and Patrick McConney, ‘Principled Ocean Governance for the Wider Caribbean Region’ (Paper resulting from Caribbean Regional Symposium held at the University of the West Indies, Barbados 2008) 8, Table 1 <http://marineaffairsprogram.dal.ca/Files/Mahon,_Fanning,_McConney_Principled_ocean_governance.doc> accessed 1 June 2010.

³⁶ *Id.*, 8, Table 2.

³⁷ (Chap. 37:01) (Act 15 of 1976), (Trinidad and Tobago).

³⁸ (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

specified time in which to lodge any comments or concerns on the matter which the Authority must seriously consider.

The issue of public participation was also highlighted at a judicial level,³⁹ being the centre of discussion of the role which it plays on the decision making process.

While the principle itself speaks to the management of land, water and living resources, it is submitted that in so far as the management of water resources is concerned, this principle bears a strong applicability to this region by virtue of the strong linkage to the larger concept of public participation. The fact that legislators and adjudicators found the need to comment upon the matter is surely further evidence of this.

Principle Two

Research has revealed that there is an immense demand for cohesiveness and a common vision among world leaders, non-governmental organisations and other similar interest groups with regard to sustainable ocean governance. Decentralization, essentially speaks to the dissemination of environmental responsibility, and constructive participation and involvement at every level. At its core, it is really the acknowledgement that every individual, by virtue of his inevitable dependence on the environment, specifically marine ecosystem benefits and services, must engage in its preservation and vitality. Human beings are an essential part of the ecosystem, and ecosystem-based management is an approach that appreciates this fact.

Decentralization from research gathered primarily takes the form of community meetings, and the dissemination of information to the general public *via* flyers, newspaper articles and lectures. However, the effectiveness of these measures is questionable; they are subjective and human intensive, in that the success of their initiative is heavily dependent upon the desire of a particular interest group to assiduously implement and sustain them.

Stakeholders and parties to these meetings often include local media, governmental representatives and other relevant interest groups. Often, certain groups that may harbour an interest are not well represented, or may feel marginalized and not attend. Therefore, not all interested parties are able to give an input into this collective effort. Feasible contributions and suggestions may be used by the government in constructing policies and measures, which although is a step toward progress, is quite time-consuming. These are just a few of the challenges facing the decentralization of the Caribbean region's attempt at managing marine ecosystems.

Ecosystem-based management must be moulded to fit the demands of the particular ecosystem in question and the needs of the human population relying on it. Sustainable development and a method of facilitating a viable ecosystem are two concepts that must be married. It must be tailored to suit the Caribbean's unique situation, and is not an approach to be employed wholesale. Thus, decentralization and the forum given by the public to voice concerns and suggestions will assist greatly in the shaping of the approach to be utilised.

Principle Three

³⁹ Acting Justice of Appeal Panton in *Natural Resources Conservation Authority v Seafood and Ting International Ltd.; Natural Resources Conservation Authority v DYC Fishing Ltd.* (1999) 58 WIR 269 made the point that matters as important as the environment could not be left to the whims of individuals or business interests. It was here that the need for public participation could be imputed; *See also, Talisman (Trinidad) Petroleum Ltd. v The Environmental Management Authority*, Decision of Environmental Commission, No. EA3 of 2002, (Trinidad and Tobago) where Hosein J even outlined the benefits of having the public participate in this crucial process.

This is arguably the most relevant principle. At the molecular level it encourages ecosystem managers to consider the effects of their activities on other ecosystems. Ecosystem managers need to engage in an integrated approach to ocean governance in the Caribbean, as all the ecosystems are linked. “The living marine resources of the Caribbean Large Marine Ecosystem (CLME) are often shared between countries and the management and the recovery of depleted fish stocks will require cooperation at various geopolitical scales, but there are at present inadequate institutional, legal and policy frameworks or mechanisms for managing shared living marine resources across the region. There is a lack of capacity at the national level and information is lacking, particularly with relation to the trans-boundary distribution, dispersals and migrations of these organisms.”⁴⁰ Therefore, there is a need to recognise the interrelated nature of the marine ecosystem in the Caribbean and adopt measures in keeping.

This principle also advocates the need for regional governmental co-operation in ecosystem management. Individual countries need to do their part to ensure that their activities do not negatively affect their neighbours. This can be achieved through the adoption of a number of Regional Seas Conventions and Protocols⁴¹ to which a number of Caribbean countries are already signatories. “Integrated Coastal Management (ICM) generally implies collective consideration of the uses of products and services provided by the coastal environment to determine an ‘optimal mix’.”⁴² It simply involves balancing multiple uses of the ocean, whilst maintaining its overall integrity. Hence, it is imperative that an assessment be made, prior to the activity, of its possible effects on adjacent and other ecosystems. For example, in Jamaica the Natural Resources Conservation Authority Act 1991⁴³ gives the National Environmental and Planning Agency the power to request that an environmental impact assessment (EIA) be conducted as a part of a permit application.

If the potential impacts of activities are not undertaken, conflict may arise. One such issue is in relation to territorial waters and the supply of licences to fish, which was the nature of the conflict which arose between Barbados, and Trinidad and Tobago.⁴⁴ “Barbadian fishermen are prohibited from fishing for flyingfish in Tobago waters south of Barbados without a licence. One of the reasons offered by the Tobagonian fishermen is that Barbadians have been overfishing and if the numbers are not controlled, this could make the situation worse and there will be no fish for Barbadians or Tobagonians.”⁴⁵ The conflict eventually went to arbitration, where the Hague Permanent Court of Arbitration ruled mostly in favour of Trinidad and Tobago under the United Nations Convention on the Law of the Sea (UNCLOS).⁴⁶ The court added that, “Trinidad and Tobago and Barbados are under a duty to agree upon the measures necessary to co-ordinate and ensure the conservation and development of flyingfish stocks, and to negotiate in good faith and conclude an agreement that will accord fisher folk of Barbados access to fisheries within the exclusive economic zone of Trinidad and Tobago, subject to the limitations and conditions of that agreement, and to the right and duty of Trinidad and Tobago to conserve and manage the living resources of waters within its jurisdiction.”⁴⁷ Similar issues arose between Trinidad and

⁴⁰ - - ‘Sustainable Management of the Shared Marine Resources of the Caribbean Large Marine Ecosystem (“CLME”) and Adjacent Regions Project’ (Caribbean Large Marine Ecosystem (“CLME”) Project 2006) <http://www.iwlearn.net/iw-projects/Fsp_11279947037> accessed 26 March 2010.

⁴¹ See (1) Cartagena Convention; (2) Oil Spills Protocol; (3) 1990 SPAW Protocol; and (4) 1999 LBS Protocol.

⁴² Donald F. Boesch, *Scientific requirements for ecosystem-based management in the restoration of Chesapeake Bay and Coastal Louisiana* (University of Maryland Center for Environmental Science, Maryland 2005).

⁴³ SS. 9 and 10, Natural Resources Conservation Authority Act 1991 (Act 9 of 1991) (Jamaica).

⁴⁴ See *Barbados-Trinidad and Tobago Maritime Boundary Arbitration* (11 April 2006), 45 ILM 798 (2006).

⁴⁵ B. A. Rohlehr and I. B. Beddoe, *Social Studies for the Caribbean: CXC Core Units and Options* (2002) 91.

⁴⁶ (Adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3 (“UNCLOS”).

⁴⁷ Ulrika Lomas, ‘Hague Tribunal Rules over Barbados/Trinidad Maritime Dispute’ (Brussels 2006) <LawAndTax-News.com> accessed 26 March 2010.

Tobago, and Venezuela, whereby “licences are given to a quota of fishermen to fish in Venezuelan waters at a specified time of the year. There is a reciprocal agreement when Venezuelan fishermen can fish in Trinidad waters.”⁴⁸ Therefore, as interconnected ecosystems there is a duty on each independent ecosystem to assist the other to the extent that their assistance does not render their own ecosystem incapable of efficient survival, and such issues need to be considered in the management of such ecosystems. In fact, a number of regional projects⁴⁹ aimed at informing marine environmental management in the Caribbean have adopted this principle as their objective.

The tragic reality is, however, that “governance issues confronting the sustainable use of goods and services and environmental sustainability in the seas...are very complex due to the very high population pressure (the number of people living near the coasts); the wide range of economic activities in the coastal and marine areas; the changing use and consumption patterns; the uneven economic development among countries, and socioeconomic, political, cultural, religious complexities, albeit with a strong traditional connectivity. Most governments still maintain a “development first” policy or attitude. Management measures remain weak.”⁵⁰ Therefore, this integrated approach to ecosystem management needs to come from the top down, starting with the regional heads of governments. However, one must acknowledge the many challenges that governments may have to overcome in light of a range of competing demands to make this a reality.

Principle Four

Another principle of particular importance to Caribbean ocean governance is Principle 4 which highlights the need to understand and manage the ecosystem in an economic context. This principle is of paramount importance as the marine economic sectors of the Caribbean contribute highly to the regional and national Gross Domestic Product (GDP). This is often assessed through “an effect on production approach” looking at a number of variables such as the fisheries revenue, the economic value of tourism and recreation, the shoreline protection services performed by coral reefs and losses of revenue due to degradation.⁵¹ Hence, regional governments in recognising the economic value of the marine environment should promote initiatives to ensure its sustainable use.

An illustration of the economic importance of the marine ecosystems can be found in the coral reefs and mangroves of the Caribbean. “These biologically rich habitats provide important ecosystem services to local and regional economies, including tourism, shoreline protection, and fisheries. Coral reefs supply much of the sand for the region’s beautiful beaches, and draw divers and snorkelers to explore the diversity of marine life that they support. Stretching along great lengths of Caribbean coastline, reef and mangrove ecosystems also provide a natural barrier that

⁴⁸ B. A. Rohlehr and I. B. Beddoe, *Social Studies for the Caribbean: CXC Core Units and Options* (2002) 91.

⁴⁹ See - - ‘Sustainable Management of the Shared Marine Resources of the Caribbean Large Marine Ecosystem (“CLME”) and Adjacent Regions Project’ (Caribbean Large Marine Ecosystem (“CLME”) Project 2006)

<http://www.iwlearn.net/iw-projects/Fsp_11279947037> accessed 26 March 2010, the goal of which is “to implement legal, policy and institutional (SAP) reforms regionally and nationally to achieve sustainable transboundary living marine resource management”; See also a project of the Academic Council of the United Nations System (“ACUNS”), entitled ‘Sustainable Governance of the Caribbean Sea’ which seeks to “to explore the prospects for sustainable, integrated, coordinated regional governance of the Caribbean Sea by studying the linkages that exist horizontally, across and within national borders.”

⁵⁰ Chua Thia-Eng, ‘Regional Cooperation in Ecosystem-based Management in the Seas of East Asia: The Partnership Approach’ (Presentation part of a panel discussion on international cooperation to implement ecosystem approaches at the regional and global levels)

<http://www.un.org/Depts/los/consultative_process/documents/7_Chua2.pdf> accessed 2 June 2010.

⁵¹ World Resources Institute, ‘Value of Coral Reefs and Mangroves in the Caribbean: Economic Valuation Methodology V3.0.’ (2009) <http://pdf.wri.org/coral_reefs_methodology_2009.pdf> accessed 2 June 2010.

protects the land from the worst ravages of tropical storms. As reefs and mangroves degrade and disappear, these services are diminished, resulting in economic losses to coastal communities.”⁵² Furthermore, “deterioration of the coral reefs might in the long run keep diving and snorkeling tourists from coming to the islands, with severe consequences for the economies of the Caribbean, most of which are heavily dependent on tourism. So, because of the economic value of reefs, financial support from the government is hardly a luxury, but more of a stark necessity. Yet presently the level of financial support from governments is far too low.”⁵³ It is for this reason that the Coastal Zone Management Act of Barbados,⁵⁴ should be praised as an entire section (namely, section 22)⁵⁵ is devoted to the protection of the coral reef, especially in light of the significant economic role played by the coral reef in the tourism of the country. Hence, this approach encourages ecosystem managers to assess the costs and benefits of the particular ecosystem, thereby reducing market distortions and instead promoting biodiversity conservation and sustainable use.

This principle also underscores the need for economic valuations of the marine environments of the Caribbean to be conducted. In fact, most studies suggest that “the economic benefits derived from coral reefs are vital to the economies of small island states in the Caribbean. Economic valuation of these benefits helps to guide the wise, sustainable use of these resources.”⁵⁶ One particular study done on the economic valuation of the coral reefs in St. Lucia and Trinidad and Tobago, illustrated that, “coral reef-associated tourism contributes significantly to the economies of both pilot sites. The valuation focuses on tourists visiting at least in part due to coral reefs — estimated at 40 per cent of visitors to Tobago and 25 per cent in St. Lucia.”⁵⁷ Additionally, “direct economic impacts from visitor spending on accommodation, reef recreation, and miscellaneous expenditures in 2006 are estimated at US \$43.5 million for Tobago and US \$91.6 million for St. Lucia. This comprises 15 per cent and 11 per cent of GDP, respectively, in Tobago and St. Lucia.”⁵⁸ Therefore, an economic analysis of the coral reefs in the Caribbean suggests that their presence is extremely beneficial and as a result, approaches should be adopted to procure sustainable use of these valuable resources.

Another report, entitled ‘Reefs at Risk in the Caribbean’ highlighted the effect of hurricanes on the coral reefs and the economic implications of such damage. It stated that “hurricanes have been important in shaping the Caribbean. Reefs can recover from these storms, but not necessarily, and they’re less likely to recover with all the added stress from other sources. This has economic implications.” According to the author’s calculations, “continuing degradation of the region’s coral reefs could reduce net annual revenues from dive tourism – which provided an estimated \$2.1 billion in 2000 – by as much as US \$300 million per year by 2015. The author estimates the reefs to provide goods and services with an annual net economic value in 2000 between \$3.1 billion and \$4.6 billion from fisheries, dive tourism, and shoreline protection services.”⁵⁹

⁵² World Resources Institute, ‘Economic Valuation of Coral Reefs in the Caribbean: Supporting the Sustainable Management of Coral Reefs and Mangroves by Quantifying their Economic Value’

<<http://www.wri.org/project/valuation-caribbean-reefs>> accessed 27 March 2010.

⁵³ Jeannette van Ditzhuijzen, ‘Governments Protect the Coral Reefs!’ (Netherlands Antilles Coral Reef Initiative (“NARCI”), Caribbean Coral Reef Conference - 2nd NACRI Meeting). <<http://www.nacri.org/CCRCreport.html>> accessed 10 March 2010.

⁵⁴ (Cap. 394) (1998-39) (Barbados).

⁵⁵ *Id.*, s. 22.

⁵⁶ Laretta Burke *et al*, ‘Coastal Capital. Economic Valuation of Coral Reefs in Tobago and St. Lucia’ (2008).

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ - -, ‘Alarm Sounded for Caribbean Coral’ *BBC News* (22 September 2004) <<http://news.bbc.co.uk/2/hi/sci/tech/3679332.stm>> accessed 10 March 2010.

This principle also highlights the need to internalize costs and benefits in the given ecosystem to the extent that it is feasible. For example, in making recommendations to ensure the continual survival of a presently damaged reef in Oistins in 2001, “Oistins fishermen were encouraged to place their fishing pots next to the patch reefs on the sandy bottom, where they could also trap just as many fish, rather than dropping the pots on the delicate corals.”⁶⁰ Therefore, the suggestion was one which internalized the costs and benefits in the ecosystem to the extent that it was feasible.

The recognition of potential gains from management, in an economic context, can help to create legislation aimed at promoting biodiversity conservation and sustainable use. In Barbados, for example, “most of the island's population and the majority of its economic activities are located within a narrow coastal band. The coastal zone is undeniably one of the island's most valuable economic and social assets.”⁶¹ This economic assessment of the value of the Barbadian coast in part led to the development of the Coastal Zone Management Act,⁶² which provides “a comprehensive, statutory basis for coastal zone management and planning in Barbados. It seeks to coordinate and update the existing, fragmented statutes relevant to coastal management, and makes provision for the protection of coral and other marine reserves, the creation of marine reserves and the identification of critical areas of concern not covered by current legislation.” Other methods may include the use of economic instruments to shape sustainable use of the marine environment in the Caribbean such as charges, subsidies, quotas, fines and incentives. In fact, in Barbados, tax incentives are used to promote the use alternative sources of energy, e.g. solar energy. This is in operation at a number of hotels in Barbados. Furthermore, under Barbados' Shipping (Incentives) Act,⁶³ tax and duty incentives are granted to certain shipping companies. This allows the Barbadian government to have some control over the ships entering its seas. Additionally, such ships would then be subjected to the laws of Barbados aimed at preventing maritime pollution.⁶⁴

Principle Five

The relevance of this principle to Caribbean ocean governance is evident in the prominence given to conservation in United Nations (UN) Declarations, regional agreements, domestic legislation, and guidelines for environmental agencies.

For example, the importance of conservation is highlighted in the Millennium Assessment,⁶⁵ Agenda 21,⁶⁶ the Rio Declaration on Environment and Development (Rio Declaration),⁶⁷ and the United Nations Declaration on the Human Environment (Stockholm Declaration).⁶⁸ Regional agreements and treaties also emphasize conservation, such as the Convention on the Prevention

⁶⁰ Terry Ally, ‘Happy Sea: Cleaner, Healthier Waters Around Barbados’ *Daily Nation* (Barbados 24 April 2001) <<http://terryally.org/library/2001/20010424natp40.html>> accessed 2 June 2010.

⁶¹ Coastal Zone Management Unit of Barbados, ‘Legislation’ (2010) <<http://www.coastal.gov.bb/category.cfm?category=5>> accessed 21 March 2010.

⁶² (Cap. 394) (1998-39), (Barbados).

⁶³ (Cap. 90A) (1982-39), (Barbados).

⁶⁴ See Marine Pollution Control Act (Cap. 392A) (1998-40), (Barbados).

⁶⁵ World Resources Institute, ‘Ecosystems and Human Well-being: Biodiversity Synthesis’ (Report of the Millennium Ecosystem Assessment 2005) 7 <<http://www.millenniumassessment.org/documents/document.354.aspx.pdf>> accessed 2 June 2010.

⁶⁶ See Chapter 17, at 17.75, Agenda 21: Programme of Action for Sustainable Development (adopted 14 June 1992) U.N. GAOR, 46th Sess., Agenda Item 21, UN Doc A/Conf.151/26 (1992) (“Agenda 21”).

⁶⁷ See Principles 3 and 27, Rio Declaration on Environment and Development (adopted 14 June 1992), UNGA Res. 47/190 (1992), 31 ILM (1992) (“Rio Declaration”).

⁶⁸ See Principles 3 and 5, United Nations Declaration on the Human Environment (adopted 16 June 1972) 11 ILM 1416 (1972) (“Stockholm Declaration”).

of Marine Pollution by Dumping of Wastes and Other Matter (London Convention),⁶⁹ St. George's Declaration of Principles for Environmental Sustainability in the OECS (St. George's Declaration),⁷⁰ and the Programme of Action for the Sustainable Development of Small Island Developing States (Barbados Programme of Action or "BPOA").⁷¹ Additionally, conservation is prioritized in domestic legislation concerning shipping,⁷² marine parks,⁷³ fishing, and in constitutions.⁷⁴ Finally, various conservation agencies have the performance of conservation tasks as part of their mandate.⁷⁵

Principle Seven⁷⁶

This principle falls within the broader general environmental principle of sustainable utilisation of natural resources. The main consideration here is that decision-makers or managers in the discharge of their duties should develop and implement plans at various scales from the largest area to the smallest patch in order to work within the natural limits of an ecosystem. To this end managers may limit activities in ocean spaces to those that utilise the natural functioning of an ecosystem, consequently conserving the natural resources located therein.

Under the Fisheries Act of Barbados⁷⁷ one of the objectives of the Act enumerated in section 3 (3) is that fisheries management and development shall ensure the optimum utilisation of the fisheries resources in the waters of Barbados for the benefit of the people of Barbados. This provision embodies the wider principle of sustainable utilisation and it is submitted that designing management plans at appropriate scales is relevant to fulfilling that objective.

In Belize the Coastal Zone Management Act⁷⁸ provides that the Chief Executive Officer is responsible for developing a comprehensive coastal zone management plan that shall include, *inter alia*, under section 23 (1) (d), proposals for the reservation of water in the coastal zone for certain uses, or for the prohibition of *certain activities in certain areas of the coastal zone*.⁷⁹ Such a plan must consider, therefore, the right ecological parameters in which to implement conservation strategies.

The Fishing Industry Act 1975 of Jamaica⁸⁰ has relevance in ocean governance as it empowers the Minister to declare fish sanctuaries, as well as, decide what activities are allowed in, for example, Jamaica's exclusive economic zone. Under section 25 (g) the Minister is empowered to

⁶⁹ 1046 UNTS 120, 11 ILM 1294 (1992), as amended by the London Protocol 36 ILM 1 (1997) to which Antigua and Barbuda, Barbados, Jamaica, St. Lucia, St. Vincent and the Grenadines are Parties.

⁷⁰ See St. George's Declaration of Principles for Environmental Sustainability in the OECS, April 2001.

⁷¹ See Winston Anderson, *Caribbean Instruments on International Law* (1994) 553.

⁷² See e.g., s. 297, Merchant Shipping (Oil Pollution) Act 1996 (No. 11 of 1996), (Saint Lucia).

⁷³ See Natural Resources (Marine Parks) Regulations 1992 (L. N. 41B92 &701/2003), (Jamaica).

⁷⁴ See Arts. 25 and 36, Constitution of the Co-operative Republic of Guyana 1980.

⁷⁵ Note Jamaica's Natural Resources Conservation Authority, which is established under s. 3 of the Natural Resources Conservation Authority Act 1991 (Act 9 of 1991), (Jamaica). Under ss. 4 (1) (a) and (d), and 4 (2) (e), of the same Act the Authority is to "take such steps as are necessary for the effective management of the physical environment of Jamaica so as to ensure the conservation, protection and proper use of its natural resources" and "advise the Minister on matters of general policy relating to the management, development, conservation and care of the environment." The Authority is also responsible for developing, implementing and monitoring plans and programs relating to the management of the environment and the conservation and protection of natural resources; See also, Trinidad and Tobago's Environmental Management Authority which is established under the Environmental Management Act 2000 (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago), and Guyana's Environmental Protection Agency which is formed under the Environmental Protection Act 1996 (Act No. 11 of 1996), (Guyana).

⁷⁶ No findings were made from the research for the instant project in relation to Principle six.

⁷⁷ (Cap. 391) (1993—6), (Barbados).

⁷⁸ (Cap. 329) (5 of 1998), (Belize).

⁷⁹ Emphasis added.

⁸⁰ (Act 17 of 1975), (Jamaica).

make regulations prescribing or prohibiting methods of fishing within certain areas or at certain periods.

In Trinidad and Tobago, the Environmental Management Act 2000⁸¹ establishes the Environmental Management Authority (EMA) whose duties are to, *inter alia*, co-ordinate, facilitate and oversee the execution of the national environmental strategy and programmes. Principle 7, as aforementioned is consistent with the general environmental principle of sustainable utilisation of resources found in section 4 (d) (1) of the Act which provides that the Authority is charged with the duty to develop and effectively implement policies in relation to the conservation and wise use of the environment, as well as, to provide adequately for meeting the needs of present and future generations. Furthermore, section 16 (b) of the Environmental Management Act 2000 stipulates that the general function of the Authority is to *develop and implement policies and programmes for the effective management and wise use of the environment*.

The Constitution of Co-operative Republic of Guyana 1980 is the only one within the Commonwealth Caribbean which expressly provides for the protection of the environment and states at Article 36 that “in the interest of present and future generations, the State will protect and make rational use of its land, mineral and water resources, as well as its fauna and flora, and will take all appropriate measures to conserve and improve the environment.” The provision encapsulates the principle of sustainable utilisation and is, therefore, consistent with Principle 7. The guiding principle of sustainable use of resources to promote conservation is also found under section 4 (1) (h) of the Environmental Protection Act 1996 of the Co-operative Republic of Guyana (“Guyana”).

Principle Eight

Principle 8 is relevant, given the fact that it will take years to implement measures geared towards sustaining the Caribbean Sea’s biodiversity, such as common policies on waste management, land use, and fisheries; surveillance and monitoring controls; and raising public awareness on issues facing the sea.⁸²

Principle Nine

Change is caused by drivers.⁸³ These can either be direct (such as pollution) or indirect (such as population increase leading to pollution). Also, they can be internal (habitat destruction) or external (global climate change). Regardless of the form of impact, collectively they influence productivity and sustainability of ecosystem services.

Global climate change is one of the major players in the changes that the ecosystem is facing. The Caribbean Sea Ecosystem Assessment (CARSEA) Report⁸⁴ highlights the fact that increased intensity, frequency of tropical storms and rising sea temperatures can potentially in the future

⁸¹ (Chap. 35:05) (Act 3 of 2000) (Trinidad and Tobago).

⁸² Asha Singh ‘Governance in the Caribbean Sea: Implications for Sustainable Development’ (Research Paper, United Nations - Nippon Foundation Fellowship Programme 2008) 25
<http://www.un.org/Depts/los/nippon/unff_programme_home/fellows_pages/fellows_papers/singh_0809_guyana.pdf> accessed 1 June 2010.

1.1 ⁸³ Green Facts, ‘What are the most critical factors causing ecosystem changes?’ (Scientific Facts on Ecosystem Change 2005)

1.2 <<http://www.greenfacts.org/en/ecosystems/millennium-assessment-3/4-factors-changes.htm#0p0>> accessed 15 March 2010.

⁸⁴ - - ‘Caribbean Sea Ecosystem Assessment (CARSEA) Report’
<http://www.millenniumassessment.org/documents_sga/Carseaper cent20Ecosystemper cent20AssessmentCropperWEB.pdf> accessed 25 March 2010.

have a significant impact on the Caribbean Sea ecosystem and its elements. In particular, it affects the coral reefs which are a major part of the Caribbean Sea ecosystem with incidences of “bleaching” (a phenomenon wherein the corals lose their symbiotic algae, which is extremely important for coral survival), which could lead to further disastrous effects with regards to marine life, and hurricanes amongst others.⁸⁵

The UNCLOS indirectly has a part to play. Under its international shipping rules which allows for innocent passage⁸⁶ of vessels through the Caribbean, the ecosystem is exposed to more pollution, contamination of nuclear materials, and overfishing.

Management cannot predict the events of the future; however, planning for expected changes can be helpful for the ecosystem. Also, management should be prepared to adapt the present plans to suit the needs of the changing environment.

- Stemming from the CARSEA report, it was suggested that a council comprising the affected states (i.e. the Wider Caribbean), be set up to manage the ecosystem. It should be noted that the Association of Caribbean States (ACS) has already set up a Commission of the Caribbean Sea.⁸⁷
- Implementing pilot projects such as the Caribbean Coastal Marine Productivity Program (CARICOMP)⁸⁸ (a regional scientific programme to study coastal ecosystem productivity) which was used to monitor, evaluate and compare any changes in the ecosystem and use the findings to enhance the ecosystem situation.
- In discussing the role of management, the Minister of Environment, Water resources and Drainage, Barbados, Dr. The Hon. Denis Lowe emphasised that “effective governance of the Caribbean Sea can only be achieved if every country that borders that great sea is involved.”⁸⁹

Two of the main foreign exchange earners of Caribbean states are tourism and fishing. Therefore, any changes to the ecosystem will be felt by these industries. Tourism-dependent countries such as Antigua and Barbuda and Barbados will suffer; but even more will the poor economies of Caribbean countries. These Caribbean states will not really have a chance to enjoy the benefits of their resources.

Principle Ten

There has been a tendency in the past to manage components of biological diversity either as protected or non-protected areas. There is a need to shift to more flexible situations, where conservation and use are seen in context, and the full range of measures are applied in a continuum from strictly protected to human-made ecosystems.

Principle Eleven

Principle eleven is also especially relevant since information and knowledge on the impact of human activity in the Caribbean Sea will supply ecosystem managers with the necessary

⁸⁵ - - Raunekk, ‘What are the Effects of Global Warming in the Caribbean?’ in Sarah Malburg (ed), *Bright Hubl – Science & Technology Articles* (Article on Weather and Climate Change 2010)

<<http://www.brighthub.com/environment/science-environmental/articles/66449.aspx#ixzz0kWcbVzdd>> accessed 29 March 2010.

⁸⁶ See, Art. 52, UNCLOS 1833 UNTS 3.

⁸⁷ - - ‘Caribbean Sea: Caribbean Sea Ecosystem Assessment (CARSEA)’

<<http://www.millenniumassessment.org/en/SGA.Carsea.aspx>> accessed 26 March 2010.

⁸⁸ See UNESCO, ‘Caribbean Coastal Marine Productivity Program (“CARICOMP”): Sustaining Coastal Biodiversity Benefits and Ecosystem Services’ (Pilot Project) <<http://www.unesco.org/csi/act/caricomp/summary14.htm>> accessed 29 March 2010.

⁸⁹ Carol Gaskin ‘Barbados Minister Says Ocean’s Governance linked to Region’s Survival’ *Caribbean Net News* (26 October 2009) <<http://www.caribbeanetnews.com/news-19492--26-26--.html>> accessed 21 March 2010.

information to make more informed and effective decisions. At present, under section 40 (1) of the Environmental Management Act 2000 of Trinidad and Tobago,⁹⁰ the EMA may require the person applying for a permit to provide results of research or analysis. A “lack of knowledge represents a major barrier to sustainable management of the shared marine resources, even if an adequate mechanism for effective region-wide ecosystem-based management was in place.”⁹¹

Information regarding the specific features of the marine ecosystem in the Caribbean would be helpful in generating policies and programmes to help manage it. For example, the use of agricultural chemicals is high in the Caribbean. “Agricultural chemicals such as fertilizers and pesticides pollute the waters of all Caribbean islands. Farmers use fertilizers (rich in nitrates and phosphates) to grow healthy crops.”⁹² “Runoff from agricultural areas is loaded with chemicals from fertilizers, herbicides and pesticides, and industrial effluents, which end up in lakes, streams and groundwater sources.”⁹³ Sewage is another major problem, as discharge of waste produced by persons, often gets into the water sources including the streams, groundwater, lakes, rivers and seas.⁹⁴ “In the Caribbean, this problem has been made worse by building on land in watershed areas (land between two rivers) and building large hotels on beach fronts (often without planning permission). Some hotels discharge their untreated waste directly into the sea, therefore contaminating the coastal waters.”⁹⁵

Section 5 (1) of Trinidad and Tobago’s Water Pollution Rules 2001⁹⁶ addresses these concerns. “The shipping industry and boat owners also contribute to coastal water pollution, as many visiting and local boats discharge their waste directly into the sea. Tourist ships with thousands of visitors that sail on the waters of the Caribbean sometimes leave behind trails of untreated sewage that pollute the sea.”⁹⁷ The Merchant Shipping (Oil Pollution) Act⁹⁸ specifically addresses these issues. Moreover, a number of Caribbean states have signed MARPOL 73/78⁹⁹ dealing with the issue of pollution from ships. However, the main Caribbean problem is “overfishing-because of the demand for fish, there is a tendency always to overfish; a poor distribution system, and abuse by large boats of the seabeds. This causes destruction of fish eggs and thus affects natural replenishment of the fish stock.”¹⁰⁰ Therefore, it is necessary to have knowledge on the specific problems affecting the ecosystems of the Caribbean, as a whole, if they are to be properly managed. In fact, many of the issues that have been highlighted are being addressed through legislation, in one form or another. For example, the Fishing Industry Act

⁹⁰ See also, Section 48 (1) of the Environmental Management Act 2000 (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago) where an application is made, and under ss. 50 (3), 53 (3), 57 (4) or 60 (2) for the grant of a permit or licence, and under ss. 50 (1), 53 (1), 57 (1) or 60 (1). Where the Environmental Management Authority requires further information for the purpose of dealing with the application, the Authority may require the person to provide results of research or analysis to be undertaken by such a person.

⁹¹ - - ‘Sustainable Management of the Shared Marine Resources of the Caribbean Large Marine Ecosystem (“CLME”) and Adjacent Regions Project’ (Caribbean Large Marine Ecosystem (“CLME”) Project 2006) <http://www.iwlearn.net/iw-projects/Fsp_11279947037> accessed 26 March 2010.

⁹² Florence Dalgerty *et al*, *Integrated Science for Caribbean Schools Book 3* (2002) 146.

⁹³ B. A. Rohlehr and I. B. Beddoe, *Social Studies for the Caribbean: CXC Core Units and Options* (2002).

⁹⁴ See London Convention 1046 UNTS 120, 11 ILM 1294 (1992).

⁹⁵ Florence Dalgerty *et al*, *Integrated Science for Caribbean Schools Book 3* (2002) 147.

⁹⁶ S. (5) (1) of the Water Pollution Rules 2001 (LN 130/2001), (Trinidad and Tobago) states: “A person shall not release a water pollutant into any water approved by a competent governmental entity for human consumption without treatment or where treatment has been limited solely to disinfection.” (Note that these Rules were made on 22 June 2001, but were never laid in Parliament.)

⁹⁷ Florence Dalgerty *et al*, *Integrated Science for Caribbean School Book 3* (2002) 147.

⁹⁸ (Ch. 275) (17 of 1976), (The Bahamas).

⁹⁹ 1340 UNTS 184, 12 ILM 1319 (1973).

¹⁰⁰ B. A. Rohlehr and I. B. Beddoe, *Social Studies for the Caribbean: CXC Core Units and Option* (2002) 91.

1975 of Jamaica¹⁰¹ addresses the issue of overfishing in section 19, whereby the Minister has the authority to declare a closed season¹⁰².

Furthermore, the demands of the specific countries can also be ascertained through information gathering. For example, in Jamaica, “pollution of the major rivers such as Rio Minho, Rio Cobre, Black River, as well as, Kingston Harbour becomes increasingly serious. Kingston Harbour is seriously polluted by industrial waste, sewerage and oil spills...resulting in half of the bottom waters of the inner harbour being under abiotic condition and the entire harbour being unfit for bathing.”¹⁰³ Trinidad and Tobago’s marine environmental issues include water pollution from agricultural chemicals, industrial wastes, raw sewage, and oil pollution of beaches. Guyana is also affected by water pollution from sewage, and agricultural and industrial chemicals. St. Vincent and the Grenadines, confronts issues of pollution of coastal waters and shorelines from discharges by pleasure yachts and other effluents. Barbados has experienced pollution of its coastal waters from waste disposal by ships; while The Commonwealth of The Bahamas (“The Bahamas”) has a serious coral reef decay problem.¹⁰⁴ Therefore, knowledge of the specific problems being faced by the countries of the Caribbean Sea makes principled management of the ecosystem easier.

Although a number of regional agencies¹⁰⁵ have undertaken to generate marine research, a number of international bodies have also assisted in doing the same. For example, the International Union for Conservation of Nature (IUCN) has been very instrumental in highlighting through its Red List the extent to which some species in the Caribbean may be becoming endangered. This ought to serve to alert regional NGOs and governments to implement policies and laws to ensure that total extinction does not occur. In fact, a number of Caribbean marine species were cited on the Red List, such as the *Carcharhinus perezii* also known by the common name, Caribbean Reef Shark, listed as “near threatened.” Other marine species such as the *Narcine bancroftii* or the Caribbean electric ray is now critically endangered. The list also includes The Caribbean monk seal or *Monachus tropicalis*, which once inhabited the Caribbean Sea, but is now regionally extinct. On the other hand, it must be noted that the list also contains a number of marine species with which we need not be concerned at the moment, such as the *Etmopterus hillianus* or the Caribbean lanternshark. Some countries may utilise such information generated by these lists in their legislation. An example of such is the Endangered Species (Protection, Conservation and Regulation of Trade) Act 2000 of Jamaica.¹⁰⁶ Additionally, it is important to recognise the existence of the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)¹⁰⁷ aimed at protecting the endangered marine life in the Caribbean. Therefore, the constant generation of information is a mandatory requirement of a management system that intends to meet the growing needs of the Caribbean marine environment. It is inconsequential whether that information was generated by locals as its utility is of greater importance.

¹⁰¹ (Act 17 of 1975), (Jamaica).

¹⁰² See s. 19 (1) of the Fishing Industry Act 1975 (Act 17 of 1975), (Jamaica) where the Minister may, from time to time, by order declare any period to be a closed season for any species of fish specified in such order.

¹⁰³ B.A. Wade, ‘Coastal Water Pollution in Jamaica with Special Reference to Kingston Harbour’ (1972).

¹⁰⁴ The Caribbean Disaster Emergency Response Agency (“CDERA”), ‘About Us: Participating States – The Bahamas’ <http://www.cdera.org/members_bs.php> accessed 19March 2010.

¹⁰⁵ See (1) The Center for Sponsored Coastal Ocean Research (CSCOR); (2) The Central Caribbean Marine Institute; (3) The Little Cayman Research Center; (4) The Caribbean Marine Research Center; (5) The Joint Institute for Caribbean Marine Studies; and (6) The Caribbean Conservation Corporation.

¹⁰⁶ (Act 6 of 2000), (Jamaica).

¹⁰⁷ 22 ILM 221 (1983). See also its three Protocols, namely the Oil Spills Protocol, 1999 LBS Protocol, and 1990 SPAW Protocol.

Scientific research is also very helpful in the management of ecosystems. A study¹⁰⁸ done by a team of UK scientists showed that “coral reefs across the Caribbean have declined by 80 per cent in three decades. They believe [that] the causes are both natural and human, but [they] found no evidence of climate change damage.”¹⁰⁹ The team from the University of East Anglia and the Tyndall Centre for Climate Change Research reported their findings in the online journal *Science Express*, for the benefit of others. They went on to add that, “although most of the loss occurred in the 1980s, there is no evidence the rate of loss is slowing. There is obviously less coral to be lost, simply because most has gone already.”¹¹⁰ The importance of this study is that the team was the first to pull information together from across the region and put a hard figure on coral decline. This may be seen as a classic example of the use of a scientific study on the state of the Caribbean marine environment conducted by non locals specifically aimed at providing information for the benefit of locals. Such scientific information may even be used to highlight the need for coral reef protection legislation. In fact, the Caribbean Coral Reef Conference held in 2002¹¹¹ was aimed at encouraging regional governments to protect their respective coral reefs through much needed legislation.¹¹²

Although forms of quantitative data, such as statistics may be important, it usually needs to be supplemented by qualitative data, to provide theories and explanations for the occurrence of certain trends. One book published in 2005¹¹³ attributed this massive decline in coral reefs to coral bleaching. The author explained that “more than half of the coral colonies in the Cayman Islands, St. Maarten, Saba, Guadeloupe, Martinique, Barbados, Jamaica and Cuba bleached during 2005.” This then led to high levels of coral mortality in the Lesser Antilles and French West Indies. In fact, “73 per cent of all *Colpophyllia* and *Diploria* coral colonies died in Trinidad and Tobago.” Hurricanes also contributed to coral decline. In his words, “...2005 broke all records for hurricane activity in the wider Caribbean with 26 tropical storms including 13 hurricanes. These included Hurricanes “‘Dennis’ that struck Grenada, Cuba and Florida; ‘Emily’ hit Mexico; ‘Katrina’ caused massive damage around New Orleans...Many of these hurricanes caused considerable damage to the reefs via wave action and runoff of muddy, polluted freshwater.”¹¹⁴ Therefore, the use of scientific information in ecosystem management may be complimented by qualitative information, to create a rich dynamic and a complete explanation of the marine environmental trends that are occurring in the Caribbean. In fact, the book went on to give advice to coral managers stating that, “the major target for management is to reduce direct human damage to reefs so as to encourage the natural adaptation mechanisms to build up reef resilience.” Additionally, “coral reef managers (need to) directly engage with local communities, informing them of what is happening and bring them on board to find solutions to conserve their coral reefs.”¹¹⁵

Principle Twelve

¹⁰⁸ Alex Kirby, ‘Caribbean Coral Suffers “Phenomenal” Loss’ *BBC News* (17 July 2003).

<<http://news.bbc.co.uk/2/hi/science/nature/3072741.stm>> accessed 19 March 2010.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ See Jeannette van Ditzhuijzen, ‘Governments Protect the Coral Reefs!’ (Netherlands Antilles Coral Reef Initiative (“NACRI”), Caribbean Coral Reef Conference - 2nd NACRI Meeting). <<http://www.nacri.org/CCRCreport.html>> accessed 10 March 2010, where representatives of Caribbean marine parks, coral reef conservation organisations, grassroots groups, as well as, representatives from the private sector and government services at a Caribbean Coral Reef Conference held at Kurá Hulanda Conference Center, Curaçao, October 24-29, 2002, discussed the urgency of reef conservation.

¹¹² See s. 22, Coastal Zone Management Act (Cap. 394) (1998-39), (Barbados).

¹¹³ Clive Wilkinson and David Souter (eds), *Status of the Caribbean Coral Reefs after Bleaching and Hurricanes in 2005* (Global Coral Reef Monitoring Network, and Reef and Rainforest Research Centre, Townsville 2008).

¹¹⁴ *Id.*

¹¹⁵ *Id.*

Principle twelve speaks to the need for active participation from the relevant sectors of society and the utilization of all forms of information practicable in the decision-making process. Cooperation among the Member States of the Caribbean is key to developing an effective plan for ocean governance in the region. Stakeholders of the wider Caribbean need to identify the principles that are most relevant to their particular circumstance in the region,¹¹⁶ and the principled ocean governance process should be a reflection of these principles.¹¹⁷ According to Mahon and others, "...the final product must be tailored to the context of the region where it will be used."¹¹⁸ The utilization of all types of environmental and scientific knowledge and expertise in the region should also be used to make informed decisions and implement sound policies. This knowledge should be disseminated (to students and ordinary citizens) *via* education and training in ocean-related sciences. In the words of Pararas-Carayannis:

"There has never been a more critical time for the nations of the world to increase their investment in ocean science, research and education and training of marine specialists. This may be a long-term investment, but one that will pay off handsomely in the future if ocean sustainability is to be achieved."¹¹⁹

1.2.5 Conclusion

Conventional management approaches are unable to tackle the challenges faced by ocean ecosystems today. Thus, there is a need for a more comprehensive ecosystem-based management. This integrated approach to management considers the entire ecosystem, the linkages across systems, and the cumulative impacts of different human sectors. Scientists have conceded that it will never be possible to fully understand the inner workings of ecosystems, nor to accurately predict the consequences of management interventions. This fact further bolsters support for an ecosystem-based management approach, as this approach is precautionary and adaptive given the dynamics of ecosystems.

The Pew Oceans Commission and the US Commission on Ocean Policy concluded that human activities on land, along the coast and in the ocean, are unintentionally but seriously affecting marine ecosystems. Both Commissions called for a more integrated and comprehensive ecosystem-based approach founded on principles of sustainability, adaptation and participatory governance and that uses the best available science.¹²⁰

The authorities suggest that for all practical purposes the EBM approach is the most promising management approach to confront the urgent issue of proper ocean governance.¹²¹ Human activities continue to threaten living and non-living marine resources despite MEAs which in reality have little influence over Caribbean nations.

¹¹⁶ Initiatives like that of the 2008 Regional Symposium (*supra*) that requires participants to rank principles in order of importance should be followed, as it gives an indication as to where our priorities lie in the region, or rather where we believe it should lie. (*See* n.16).

¹¹⁷ *See* EMBP 1 which states: "The objectives of management of land, water and living resources are a matter of societal choice."

¹¹⁸ Robin Mahon, Lucia Fanning, and Patrick McConney, 'Principled Ocean Governance for the Wider Caribbean Region' (Paper resulting from Caribbean Regional Symposium held at the University of the West Indies, Barbados 2008) 8, Table 1 <http://marineaffairsprogram.dal.ca/Files/Mahon,_Fanning,_McConney_Principled_ocean_governance.doc> accessed 16 March 2010.

¹¹⁹ G. Pararas-Carayannis, 'Ocean Governance and Sustainability- Present Trends- Future Challenges' (Plenary Lecture- 30th Pacem in Maribus (Peace in the Oceans). A Year after Johannesburg. Ocean Governance and Sustainable Development: Ocean and Coasts - a Glimpse into the Future) Organized by National Academy of Sciences of Ukraine, IOI, and National Commission of Ukraine for UNESCO, Kiev, Ukraine, October 26-30, 2003 / Published in 'A Gateway to Sustainable Development' (Proceedings of the 30 International Conference *Pacem in Maribus*, International Ocean Institute, Sevastopol 2004) 90-101 <<http://www.drgeorgepc.com/OceanGovernance.html>> accessed 17 March 2010.

¹²⁰ *Id.*

¹²¹ Pew Oceans Commission, 'America's Living Oceans: Charting a Course for Sea Change' (Report to the Nation: Recommendations for a New Ocean Policy 2003) <<http://www.pewoceans.org>> accessed 14 March 2010.

At the core of the ecosystem-based management approach are the twelve principles outlined by the CBD to ensure their successful implementation. These principles are directly applicable to any discussion on the successful execution of an EBM approach to Caribbean ocean governance, as they provide the framework within which principled ocean governance should be administered. And though EBMPs were neither originally nor specifically designed for the Caribbean region, they can nonetheless be adapted to govern the oceans of the Caribbean. These principles will pave the way to proper ocean governance in the Caribbean.

2 MULTILATERAL ENVIRONMENTAL AGREEMENTS AND THE CARIBBEAN

2.1 Caribbean Implementation of Multilateral Environmental Agreements

Treaties are the most commonly used and fastest growing source of international environmental law generally.¹²² This is certainly the case in the Caribbean where there are more than 100 Multilateral Environmental Agreements (MEAs) that have relevance.¹²³ The levels of ratification or accession have been significant. All of these treaties have as their object the protection or management of some aspect of the environment. Environmental law treaties exhibit different philosophical underpinnings which determine the means by which the environment is managed. Though a number of different systems of protection may be advanced the EBM approach which was articulated in the CBD appears to dominate. This approach to environmental management considers the ecosystem as a whole, including human activities. The object of the approach is the maintenance of a healthy, productive and resilient ecosystem so that it can provide services to both humans and the planet on a sustainable basis. The EBM approach differs from other approaches which largely embrace anthropocentrism; though it displays elements of that philosophy, as well as ecocentrism, it is largely utilitarian in character.¹²⁴

Caribbean states are parties to a number of MEAs which express EBMPs. These treaties include the Convention on the Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention);¹²⁵ Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere (CNP);¹²⁶ Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention);¹²⁷ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);¹²⁸ International Convention for the Prevention of Pollution from Ships,¹²⁹ as modified by the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships¹³⁰ (MARPOL 73/78); United Nations Convention on the Law of the Sea (UNCLOS);¹³¹ Convention for the Protection and

¹²² Winston Anderson, 'Multilateral Environmental Agreements on Biological Diversity: Impact on Commonwealth Caribbean Judicial Decision-Making' (Power Point Presentation at Dalhousie Public Lecture 2009) <http://docs.google.com/viewer?a=v&q=cache:iUBlhtomY84J:law.dal.ca/Files/MEL_Institute/Reports/Dalhousie2009PublicLectureWinstonAnderson.pdf+winston+anderson+and+meas&hl=en&pid=bl&srcid=ADGEESji_aH2MH2-kPvZTwnl201ZW-HTUa5TTxvzXyjLwvcEetjQV9-54y3OAYvXjDdbBqp57Z5aKFdr9FmF-n9d-eENplsZeBM6fivOemy0w-Os9Os1WJ7LMOhEAemnAfkEjCHqqAH&sig=AHIEtbSu-NDKtqVocow_nyiaV0QuURm0zg> accessed 2 June 2010.

¹²³ Winston Anderson, "Implementing MEAs in the Caribbean: Hard Lessons from *Seafood and Ting*" [2001] 10 (2) Review of European Community and International Environmental Law 227, 227.

¹²⁴ Winston Anderson, 'The Principles of the Ecosystem Based Management Approach Research Project (Legal)' (First Draft 2009).

¹²⁵ (Adopted 22 March 1989, entered into force 5 May 1992) 1673 UNTS 126, 28 ILM 657 (1989) ("Basel Convention").

¹²⁶ (Adopted 12 October 1940, entered into force 30 April 1942) 161 UNTS 193 ("CNP").

¹²⁷ (Adopted 2 February 1971, entered into force 21 December 1975) 996 UNTS 245, 11 ILM 963 (1972) ("Ramsar Convention").

¹²⁸ (Adopted 3 March 1973, entered into force 1 July 1975), 993 UNTS 243, 12 ILM 1085 (1973) ("CITES").

¹²⁹ 1340 UNTS 184, 12 ILM 1319 (1973) ("MARPOL 73/78"). Note however, that together the International Convention for the Prevention of Pollution from Ships, and its 1978 MARPOL Protocol are referred to as "MARPOL 73/78".

¹³⁰ (Adopted 17 February 1978, entered into force 2 October 1983) 1340 UNTS 61, 17 ILM 546 (1978) ("1978 MARPOL Protocol").

¹³¹ 1833 UNTS 3.

Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention);¹³² Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region (1990 SPAW Protocol);¹³³ Protocol Concerning Co-Operation in Combating Oil Spills in the Wider Caribbean Region (Oil Spills Protocol);¹³⁴ Protocol Concerning Pollution from Land-Based Sources and Activities to the Cartagena Convention (LBS Protocol);¹³⁵ Convention for the Protection of the Ozone Layer (Vienna Convention);¹³⁶ Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol);¹³⁷ Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention),¹³⁸ as amended by the Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Protocol);¹³⁹ CBD;¹⁴⁰ United Nations Framework Convention on Climate Change (UNFCCC),¹⁴¹ as amended by the Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol);¹⁴² Convention on Prior Informed Consent for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention);¹⁴³ Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention);¹⁴⁴ and the United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD).¹⁴⁵

By virtue of being parties to these agreements, it is clear that CARICOM states are for the most part strong supporters of MEAs. Yet be that as it may, many have still failed to incorporate the provisions of these agreements into their domestic laws. While it is acknowledged that this is partly due to economic constraints where most CARICOM states lack the financial resources to implement their obligations under MEAs, arrangements must be still put in place to have MEAs nationalized so that they become part of the domestic law of Caribbean states.

MEA implementation and compliance (or the lack thereof) is influenced by the failure of the relevant government institutions to adequately inform the public of the commitments made under these instruments. Assistance is deficient where it is crucial to enhancing multilateral environmental and sustainable development negotiations and strategies, and implementation of MEA provisions.

Research has revealed that one of the major difficulties faced in implementation of MEAs obligations by CARICOM states is the absence or scarcity of domestic legislation which incorporate these MEAs. Most CARICOM Member States are based on dualist systems and in effect know nothing of self-executing treaties. Therefore the concept of dualism poses a problem to the implementation of MEAs in the Caribbean. What is more, little has been done by CARICOM states with the exception of Antigua and Barbuda to remedy this situation.

¹³² 22 ILM 221 (1983).

¹³³ 2180 UNTS 101.

¹³⁴ 22 ILM 240 (1983).

¹³⁵ 1546 UNTS 119, 13 ILM 352 (1974).

¹³⁶ (Adopted 22 March 1985, entered into force 22 September 1988) 1513 UNTS 323, 26 ILM 1529 (1987).

¹³⁷ (Adopted 16 September 1987, entered into force 1 January 1989) 26 ILM 1550 (1987).

¹³⁸ 1046 UNTS 120, 11 ILM 1294 (1992).

¹³⁹ 36 ILM 1 (1997).

¹⁴⁰ 1760 UNTS 79, 31 ILM 818 (1992).

¹⁴¹ (Adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107, 31 ILM 849 (1992).

¹⁴² (Adopted 11 December 1997, entered into force 16 February 2005) 2303 UNTS 148, 37 ILM 22 (1998).

¹⁴³ (Adopted 10 September 1998, entered into force 24 February 2004) 38 ILM 1 (1999).

¹⁴⁴ (Adopted 22 May 2001, entered into force 17 May 2004) 40 ILM 532 (2001).

¹⁴⁵ (Adopted 17 June 1994, entered into force 26 December 1996) 1954 UNTS 3, 33 ILM 1328 (1994).

Antigua and Barbuda sought to remedy this situation by promulgating the Ratification of Treaties Act¹⁴⁶ which provides for a “pressure point” for Parliamentary action. The Act stipulates that treaties to which Antigua and Barbuda is a party to “shall not enter into force with respect to Antigua and Barbuda unless it has been ratified or its ratification has been authorized or approved in accordance with the provisions of this Act.”¹⁴⁷ This signifies the country’s commitment to honouring its obligations under international law treaties. Empirical studies suggest there has, in that country, been an improvement in implementing legislation in relation to treaties adopted after 1987 as compared with those imported before that critical date.

With the advent of the Ratification of Treaties Act a number of international conventions have been ratified by the Antigua and Barbuda Parliament including the CBD,¹⁴⁸ UNFCCC,¹⁴⁹ Basel Convention,¹⁵⁰ and Montreal Protocol.¹⁵¹ However, Antigua and Barbuda has not gone far enough in keeping with their commitments under the MEAs which they have actually ratified. No specific legislation has been enacted by Antigua and Barbuda to meet the provision of CITES,¹⁵² Ramsar Convention,¹⁵³ Kyoto Protocol,¹⁵⁴ and UNFCCC¹⁵⁵ to give examples.

However, in light of all the problems which Caribbean countries face with implementing their obligations under MEAs, they have still managed to successfully undertake some acts of implementation. Some countries have done more than others,¹⁵⁶ but the overall picture reflects a region that has in some ways sought to honour its treaty obligations within the context of very limited resources.

2.1.1 Ramsar Convention

A regional perspective of Caribbean implementation of the Ramsar Convention shows that although the provisions of the Convention have not been translated into domestic legislation, some countries have fulfilled obligations under the treaty. In accordance with the obligation created under Article 2 of the Convention the following countries have designated sites indicated as Wetlands of international importance:

- Barbados – Graeme Hall Swamp
- Antigua and Barbuda – Codrington Lagoon
- The Bahamas – Inagua National Park
- St. Lucia – Mankote mangrove and Savannes Bay
- Belize – Crooked Tree Wildlife Sanctuary and Sarstoon Temash National Park
- Trinidad – Buccoo Reef, Caroni Swamp and Nariva Swamp
- Jamaica – Black River Lower Morass, Palisadoes and Portland bight Wetlands and Cays.

¹⁴⁶ (Cap. 364) (1/1987), (Antigua and Barbuda).

¹⁴⁷ *Id.*, s. 3.

¹⁴⁸ 1760 UNTS 79, 31 ILM 818 (1992).

¹⁴⁹ 1771 UNTS 107, 31 ILM 849 (1992).

¹⁵⁰ 1673 UNTS 126, 28 ILM 657 (1989).

¹⁵¹ 26 ILM 1550 (1987).

¹⁵² (Adopted 3 March 1973, entered into force 1 July 1975), 993 UNTS 243, 12 ILM 1085 (1973).

¹⁵³ 996 UNTS 245, 11 ILM 963 (1972).

¹⁵⁴ 2303 UNTS 148, 37 ILM 22 (1998).

¹⁵⁵ 1771 UNTS 107, 31 ILM 849 (1992).

¹⁵⁶ This may be a function of the resources which each possesses, as well as, the susceptibility of each to environmental degradation.

2.1.2 CITES

The research revealed that St. Kitts and Nevis is the only country that has implemented CITES by way of incorporation; this it did some fifteen years after the treaty entered into force. Nevertheless other territories have undertaken other substantive acts of implementation in pursuance of treaty obligations. Jamaica's Endangered Species (Protection, Conservation and Regulation of Trade) Act 2000¹⁵⁷ was promulgated to ensure the codification of Jamaica's obligation under the CITES.¹⁵⁸ The Endangered Species Act governs international and domestic trade in endangered species in and from Jamaica. The Act has also gone a step further by creating an institution for carrying out the provisions of the Act. It establishes a Management and Scientific Authority. Combined, these two authorities determine whether a species is at risk, vulnerable or threatened. They advise on trade matters and monitor grant of permits, certificates and quotas in order to ensure sustained survival of such species.

In Barbados a conservation initiative was undertaken in 1987 to protect the small number of hawksbill turtles which was later renamed the Barbados Sea Turtle Project (BSTP). This project pursues the aims of CITES. Aspects of CITES are addressed in the Wild Birds Protection Act¹⁵⁹ of Antigua and Barbuda. Trinidad and Tobago has honoured its CITES obligation to regulate trade in named species through the production of a list of import or export negative listed items which cannot be imported or exported without the approval of a specific licence. The list consists of, *inter alia*, all animal species, wild flora and fauna covered under the Convention and all plant species, tissue culture and propagation material listed therein.

2.1.3 Basel Convention

The Basel Convention¹⁶⁰ is the most comprehensive global environmental agreement on hazardous and other wastes. The Convention aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes. The Convention entered into force in 1992. Though there has been no incorporation of the Convention, Trinidad and Tobago has passed legislation establishing the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region as a body corporate within Trinidad and Tobago. The provision of services for the implementation of the Basel Convention to states party to the Convention in the region is part of the centre's mandate which evinces an intention on Trinidad's part to honour its convention commitments.

Both St. Kitts and Nevis and Antigua and Barbuda are parties to the Basel Convention but no projects have been implemented under these programs since becoming signatories. In keeping with provisions under the Convention, Jamaica restricts the import of hazardous wastes and other wastes for recovery. Under section 6 (1) of the Natural Resources (Hazardous Waste) (Control of Transboundary Movement) Regulations 2002,¹⁶¹ the importation of hazardous wastes into any area under the jurisdiction of Jamaica is prohibited. The importation of hazardous wastes for recovery or final disposal is prohibited. In keeping with some of the provisions of this

¹⁵⁷ (Act 6 of 2000), (Jamaica).

¹⁵⁸ 993 UNTS 243, 12 ILM 1085 (1973); *See also*, Davis Mattis Laleta, 'Jamaica's Commitment To The Conservation And Management Of Natural Resources Ten Years in Retrospect' (Paper, National Environmental and Planning Agency, Kingston 2002)

<http://www.nrca.org/legal/discussion_10Y_in_retro.htm> accessed 2 June 2010.

¹⁵⁹ (Cap. 472) (3/1913), (Antigua and Barbuda).

¹⁶⁰ 1673 UNTS 126, 28 ILM 657 (1989).

¹⁶¹ (L. N. 149A/2002).

Convention, The Commonwealth of Dominica (“Dominica”) restricts the export of hazardous wastes and other wastes for final disposal. The Solid Waste and Management Act 2002¹⁶² assists in meeting these objectives. A permit must be obtained in writing from the Marine Administrator who in consultation with the Chief Environmental Officer refuse or issue permits for the transboundary movement of waste. It is clear then that territories of the region have made attempts at honouring their commitments to obligations under this convention. Countries have been attempting, through domestic legislation, to ensure that provisions from this Convention are complied with.

St. Lucia restricts the import, export, and transit of hazardous material for final disposal and for recovery.¹⁶³ In regards to reduction and/or elimination of hazardous waste generation, St. Lucia has, *inter alia*, conducted collaborations with the private sector; provided training in the area of hazardous waste management and biomedical waste management plans; and facilitated public awareness programs.¹⁶⁴

2.1.4 Convention on Biological Diversity

Generally, Caribbean implementation of MEAs by incorporation into domestic laws has been poor as illustrated by the sparsity of implementing domestic environmental law provisions evident in the statute books of the region. The Convention of Biological Diversity exemplifies this. The research shows that to-date, no Caribbean country has translated the provisions of this convention into domestic legislation. However, since implementation as suggested above is not limited to acts of incorporation, Caribbean implementation of this treaty cannot rightly be assessed as a failure. Measures have been put in place in various jurisdictions of the region to secure compliance with the objectives of the Convention. The Environmental Management Authority in Trinidad has designated environmentally sensitive areas and species for protection. The Grenada government produced a biodiversity strategy and action plan which promotes the conservation of wildlife. The National Conservation and Environment Protection Act 1987 of St. Kitts and Nevis¹⁶⁵ focuses on biodiversity protection.

St. Lucia has worked to effectively manage and conserve over 10 per cent of its forest ecosystem.¹⁶⁶ St. Lucia has also enacted domestic legislation to facilitate the implementation of the CBD, “including the Forest Management and Plant Protection Act [*sic*], the Forest, Soil and Water Conservation Act, the Wild Life Protection Act, the Forest Management Plan, the Fisheries Act, and the Plant Protection Act.”¹⁶⁷ St. Lucia has established several protected areas, many of which have faced criticism for lacking management plans and regulation.¹⁶⁸ Despite these criticisms St. Lucia has experienced many achievements over the past years with the successful conservation of plants like mauby, latanye, and mangrove, in addition to animals like the whip tail lizard and the leather back sea turtle.¹⁶⁹

2.1.5 United Nations Convention on the Law of the Sea

¹⁶² (Act No. 1 of 2002), (Dominica).

¹⁶³ Convention on Biological Diversity, ‘Saint Lucia – Details: Status and Trends of Biodiversity’ (Information-National Information-Country Profiles) <<http://www.cbd.int/countries/profile.shtml?country=lc>> accessed 2 June 2010.

¹⁶⁴ *Id.*

¹⁶⁵ (No. 5 of 1987), (St. Kitts and Nevis).

¹⁶⁶ Convention on Biological Diversity, ‘Saint Lucia – Details: Status and Trends of Biodiversity’ (Information-National Information-Country Profiles) <<http://www.cbd.int/countries/profile.shtml?country=lc>> accessed 2 June 2010.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ - - ‘Celebrate International Year of Biodiversity 2010’ *The Voice* (St. Lucia 31 December 2009)

<http://www.thevoiceslu.com/features/2009/december/31_12_09/Celebrate_International_Year_of_Biodiversity_2010.htm> accessed 2 April 2010.

The UNCLOS has not been directly incorporated into Barbados' legislation. Notwithstanding, it still has a strong presence within its domestic legislation. The Barbados Territorial Waters Act¹⁷⁰ was enacted after the UNCLOS entered into force and a cursory examination of its provisions demonstrates that it must have contemplated the convention. In Trinidad and Tobago the Archipelagic Waters and Exclusive Economic Zone Act,¹⁷¹ Continental Shelf Act,¹⁷² and Territorial Sea Act¹⁷³ respectively, incorporate portions of the treaty.

2.1.6 Ozone Convention

St. Lucia has demonstrated its commitment to the protection of the ozone layer with a 92 per cent "reduction in its consumption of chlorofluorocarbons (CFCs)." Trinidad implemented a plan dubbed the "Terminal Phase Out Management Plan" in which it undertook to cease importing CFCs in 2007 and was able to report zero consumption in 2007.¹⁷⁴

2.2 Is the Caribbean doing enough? – The misgivings and benefits of Caribbean implementation of Multilateral Environmental Agreements

As noted earlier, Caribbean states are parties to a large number of MEAs, but very few of these MEAs have been in fact expressly incorporated into domestic legislation. There is legislation within the Caribbean Community, which observes the principles underlying MEAs and this is made visible in the provisions of the existing domestic legislation of a number of these states; but this legislation pre-dates most, if not all, of the MEAs in question. Therefore most CARICOM states have a situation where their legislation has implemented MEA principles, but not necessarily multilateral environmental agreements *per se*. Take for example Jamaica, which has about fifty-two pieces of pre-MEA legislation. Matters like this should be taken into account when evaluating the Caribbean's implementation of its MEA obligations. Trinidad, Dominica, St. Kitts and Nevis, The Bahamas, St. Lucia, and Barbados are no exception. All CARICOM states have some piece of legislation which pre-date MEAs, but which also address and implement some of the provisions of MEAs. A number of CARICOM states have gone the route of amending pre-MEA legislation to better enable their territories to fulfil their treaty obligations. Though in most, if not all instances, the amended pieces of legislation make no reference to MEAs they ought to be regarded as part of the implementation which is the reasonable inference to draw since the amendments came after acceptance of the treaty obligations. It is anticipated that with these CARICOM states now preparing national biodiversity strategies, national implementation of CBD will be supported by legislation, clear institutional mechanisms, and adequate resources.¹⁷⁵

In a number of the territories implementation exists only at a conceptual level since the substantive acts undertaken in pursuance of the treaty obligations is the formulation of plans and policies. Undoubtedly, there is urgent need in a number of instances for implementation to move beyond this stage to something tangible and concrete so that actual benefits can be realised.

¹⁷⁰ (Cap. 386) (1977-26), (Barbados).

¹⁷¹ (Chap. 51:06) (Act 24 of 1986), (Trinidad and Tobago).

¹⁷² (Chap. 1:52) (Act 42 of 1969), (Trinidad and Tobago). Though the long title indicates that the object of the Act is to give effect to certain provisions of the Convention on the High Seas, s. 2 of the Act expressly defines the "continental margin" using the UNCLOS, and impliedly defines the "continental shelf" using the UNCLOS as well.

¹⁷³ (Chap. 1:51) (Act 38 of 1969), (Trinidad and Tobago).

¹⁷⁴ United Nations Environment Programme, 'Desk Study On The Evaluation Of Terminal Phase-Out Management Plans' UNEP/OzL.Pro/ExComm/55/8 (Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol, Fifty-fifth Meeting, Bangkok, 18 June 2008) <<http://www.multilateralfund.org/files/55/5508.pdf>> accessed 25 March 2010.

¹⁷⁵ See UNEP, 'Final Outputs' (UNEP/OECS Model Harmonised Biodiversity Legislation Project 2006) <<http://www.unep.org/dec/docs/OECS%20UNEP%20harmonised%20Biodiversity%20Legislation%20project%20-%20combined%20outputs.pdf>> accessed 2 June 2010.

It must be accepted that proper environmental management requires a coordinated effort. Regrettably a number of the territories do not exhibit such a legislative framework. Belize, Jamaica, Guyana, St. Kitts and Nevis, and Trinidad and Tobago are the exceptions. Those territories have promulgated legislation which establishes a lead environmental agency as well as other institutional arrangements for the effective management of environmental matters.

In Belize the Environmental Protection Act¹⁷⁶ establishes its Department of Environment within the Ministry of Environment as the lead environmental agency. The basic scheme under the Act is for the Minister to make regulations under the Act after consulting with the Department. The Natural Resources Conservation Authority Act 1991 establishes the Natural Resources Conservation Authority as the lead environmental agency. In 1996 in St. Kitts and Nevis under the National Conservation and Environment Protection Act 1987¹⁷⁷ the Department of Environment was established as the lead environmental agency. The agency is expressly empowered to negotiate environmental treaties and to implement environmental policies, programmes and projects in order to achieve sustainable development. The Act also establishes the National Conservation Commission as a consultative body.

In Trinidad and Tobago the Environmental Management Act 2000¹⁷⁸ establishes the Environmental Management Authority as the lead environmental agency. Additionally the Environmental Management Act 2000 also establishes the Environmental Trust Fund which finances the activities of the Authority and the Environmental Commission. The Environmental Commission, in particular, is a superior court of record; the only one of its kind in the region.¹⁷⁹

2.3 Difficulties

One of the major problems which CARICOM states face in implementing provisions of MEAs by way of incorporation into their domestic legislation is the fact that the Caribbean knows nothing in effect about self-executing treaties. In order to effectively translate provisions from treaties and conventions into domestic legislation an Act of Parliament must be passed expressly stating so. This is evidenced by the case of *Natural Resources Conservation Authority v Seafood and Ting International Ltd.*; *Natural Resources Conservation Authority v DYC Fishing Ltd.*¹⁸⁰ Peter Murray has noted that another problem associated with enacting domestic legislation which incorporate treaty obligations is that changing old or existing legislation to replace with newer ones, changes the "power structure" and so public servants are loathe to encourage this. What happens is that aspects of a model will be added into the existing legislation.

There are a number of disabling issues with regard to MEA implementation in the Caribbean. For instance:

- A number of territories have formulated plans and policies, but they have often times failed to take the implementation of MEAs beyond the conceptual stage;
- There is limited financial, technical and human resources;
- National governments give little attention to environmental protection and sustainable development;

¹⁷⁶ (Act No.11 of 1996), (Guyana).

¹⁷⁷ (No. 5 of 1987), (St. Kitts and Nevis).

¹⁷⁸ (Chap. 35:05), (Act 3 of 2000), (Trinidad and Tobago).

¹⁷⁹ See Opening Remarks By Professor Winston Anderson, (immediate past) General Counsel, Caribbean Community Secretariat, at the Environmental Commission of Trinidad and Tobago Launch of Information Material (Port-of-Spain, 23 February 2005) where he stated that "the environmental court may be seen as part of the architecture of institutional management of environmental assets and that it in a sense it completes the institutional arrangements for such management."

¹⁸⁰ (1999) 58 WIR 269.

- There exists a lack of information relating to treaty benefits and costs, as well as, an understanding thereof;
- In most territories national focal points responsible for treaty acceptance is severely limited;
- International donor financial institutions tend to support projects rather than long term institutional capacity building; and
- The lack of comprehensive framework environmental legislation in a number of the territories results in a fragmented or disjointed approach to MEA implementation.

2.4 Recommendations

The development by each territory of a single comprehensive piece of legislation that coherently coordinates environmental management; and enhancement or implementation of public awareness plans to sensitize the public to environmental issues with a view to garnering public support for implementation.

The idea of clustering or grouping MEAs for the purpose of implementation is being considered as a strategy for improving implementation by reducing institutional fragmentation and promoting a synergistic effect among related MEAs.

2.5 Conclusion

If implementation of MEAs is narrowly regarded as acts of incorporation, the territories of the Caribbean should rightly be regarded as having failed to implement the MEAs that express EBMPs to which they are parties since incorporation has been sparse. However, implementation through incorporation is but an aspect of what implementation requires. Thus it cannot be said that territories of the Caribbean have failed in the implementation of their MEAs since these territories have utilised pre-MEA legislation to give effect to their obligations; have promulgated laws that even though they do not refer to the treaties have similar objects; and some of the territories have created institutional frameworks for effective implementation. Admittedly implementation is not at a desirable level. Nevertheless the countries have, to a large extent, made great strides in achieving the objects of the treaties within the context of very limited resources.

3 CARIBBEAN ENACTMENT OF ECOSYSTEM-BASED MANAGEMENT PRINCIPLES

A perusal of the legislation¹⁸¹ within most CARICOM states will reveal that there is hardly such a thing as “environmental legislation,” more particularly, environmental legislation that addresses ocean governance. A more accurate description of what actually exists is legislation which raises and considers environmental concerns. The distinction is important if one is to appreciate the present limitations emanating from this fact. Environmental legislation is the product of conscious, deliberate, strategic effort and action to protect the environment and promote sustainable development. It has at the centre of its focus the environment. There is therefore no ambiguity or confusion as to what is at stake and what is being pursued. On the other hand, legislation which simply happens to address some aspects of environmental protection and sustainable development is not nearly as effective. The environment is usually not

¹⁸¹ Note that while the focus of this report is confined to post-1992 legislation and regulations, reference has nonetheless been made to pre-1992 legislation and regulations for illustrative purposes where Ecosystem Based Management Principles are implemented under that legislation (i.e. pre-1992 legislation).

the centre of this type of legislation; rather, it is secondary to some other concern. This kind of legislation serves short-term interests sufficiently, but to a lesser extent, long-term goals.

The Bahamas, Belize, Guyana, Jamaica, and Trinidad and Tobago clearly have environmental legislation. Whether the other CARICOM states do is debatable. However, all CARICOM states have at least some piece of legislation which addresses environmental protection regardless of its shape or form.¹⁸²

3.1 Legislation and Regulations

In Belize it is the Environmental Protection Act¹⁸³ and it arrives at the closest from among all of its legislation relating to the environment to implementing all the ecosystem-based management principles. These principles are executed primarily through the Department of Environment which is established under the Environmental Protection Act.

In The Bahamas environmental protection can be found in specific Acts which concern different environmental sectors. In terms of ocean governance, the Acts which formerly sought to address these issues include the Coast Protection Act,¹⁸⁴ Continental Shelf Act,¹⁸⁵ Merchant Shipping (Oil Pollution) Act,¹⁸⁶ Fisheries Resources (Jurisdiction & Conservation) Act,¹⁸⁷ Agriculture and Fisheries Act,¹⁸⁸ and the Draft Bill for the Environmental Protection Act.

Only a selected few of the EBMPs can be found in The Bahamian Acts collectively. EBMP 2 is principally exemplified under the Agriculture and Fisheries Act by section 3 which establishes the Department of Agriculture and Fisheries and this Department operates to supervise activities. The Fisheries Resources (Jurisdiction & Conservation) Act of The Bahamas,¹⁸⁹ on the other hand, implements several other EBMPs. The Act establishes maritime boundaries and makes provision for the conservation and management of the fisheries resources. Section 10 of the Act empowers the Governor-General to determine the optimum yield of the fisheries resources while taking into consideration proper conservation and management measures. This section implements Principle 11 since all forms of information ought to be considered. Furthermore it implements EBMPs 6 and 9. Section 13 empowers the Minister to declare certain areas in the exclusive economic zone as protected areas. This implements Principle 1. Finally, section 19 empowers the Minister to make several regulations. This section implements several principles, namely EBMPs 1, 6, 8 and 11.

The Bahamas' Fisheries Resources (Jurisdiction & Conservation) Act¹⁹⁰ also makes mention of sustainability under section 10. Further, the Act exemplifies Principle 6 where it focuses on the optimum yield of the fisheries resources in an effort to manage them within their limits. Principle 7 is also present in that it allows the Minister to declare areas and protected marine reserves under section 13.

Section 3 of the Agriculture and Fisheries Act of The Bahamas¹⁹¹ makes provision for the establishment of a Department of Agriculture and Fisheries. This embodies Principle 2.

¹⁸² The suggestion is not being made that legislation which is not "environmental" in nature is wholly ineffective. The point that is being made is that it has its limitations in comparison to "environmental legislation".

¹⁸³ (Cap. 328) (22 of 1992), (Belize).

¹⁸⁴ (Ch. 204) (37 of 1968), (The Bahamas).

¹⁸⁵ (Ch. 5) (17 of 1970), (The Bahamas).

¹⁸⁶ (Ch. 275) (17 of 1976), (The Bahamas).

¹⁸⁷ (Ch. 244) (13 of 1977), (The Bahamas).

¹⁸⁸ (Ch. 242) (50 of 1963), (The Bahamas).

¹⁸⁹ (Ch. 244) (13 of 1977), (The Bahamas).

¹⁹⁰ *Id.*

¹⁹¹ (Ch. 242) (50 of 1963), (The Bahamas).

Both Belize and The Bahamas place, within their respective pieces of legislation, great emphasis on EBMP 4, and EBMP 6. There are strong penalties for breaches of the provisions of the Act as well as stringent limitations on practices affecting the environment. In Belize, for example a fine of \$5,000 or two years imprisonment is established for breaches of regulations on pollution. In The Bahamas a discharge of pollutants from a vessel could attract a fine of \$125,000 under the Merchant Shipping (Oil Pollution) Act.¹⁹²

Also, both territories carry stringent measures to ensure that environmental activities in relation to the ocean are well regulated. In Belize, for instance, there are prohibitions on the discharge of pollutants, and environmental codes of practice for the protection of coastal and marine resources. What is more, in some cases, laboratory tests are required. The Bahamas has equally strict guidelines regarding the discharge of oil in its territorial waters (section 7), and the disposal of oil residues (section 9). There is little focus, however, on the prevention of pollution on adjacent ecosystems or on the conservation of ecosystem structures and functioning in order to maintain ecosystem services which should be a priority target of the ecosystem approach (EBMP 6). The same is true for objectives that should be set for the long-term.¹⁹³ This is especially necessary since it is more important to preserve the ecosystem than simply establish strict penalties for damages already done and which may be irreversible. Yet, there is less focus on EBMP 8 which promotes the recognition of the varying temporal scales and lag-effects that characterize ecosystem processes with objectives for ecosystem management being set for the long-term. This principle is very important as it seeks to preserve the environment for the benefit of future generations.

With respect to the other EBMPs: (1) there are commendable considerations for the implementation of EBMP 3 which states that ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems; (2) EBMP 5, which promotes conservation requires more prioritisation in both countries; (3) Bahamian Acts like Belize's Environmental Protection Act¹⁹⁴ need to give more attention to the use of spatial and temporal scales in the ecosystem approach;¹⁹⁵ (4) there was very little accommodation made for EBMP 9 in both territories; (5) however, there was a marked attempt to establish a balance between the integration of conservation and use of biological diversity in their respective legislations;¹⁹⁶ (6) the use of information including scientific and indigenous and local knowledge, innovations and practices¹⁹⁷ was not as evident in The Bahamas as in Belize; and (7) there were attempts made by both countries to apply EBMP 12.

Arguably, the establishment of one composite Act to address all environmental issues as in Belize, is more preferable than several Acts for various sectors as in The Bahamas. Such a system is arguably more cohesive with the likelihood of addressing environmental issues in a holistic and comprehensive manner. Still, it can be also argued that having specific Acts, though several, can serve the purpose of addressing these issues in greater depth. The effects of negative environmental actions have received much attention in these Acts thereby establishing the vitality of ocean governance to the environment, present and future.

In Barbados, from among its Coastal Zone Management Act,¹⁹⁸ Marine Pollution Control Act,¹⁹⁹ and Fisheries Act²⁰⁰ all the EBMPs have been implemented. Their implementation has limited

¹⁹² (Ch. 275) (17 of 1976), (The Bahamas).

¹⁹³ See EBMP 8.

¹⁹⁴ (Cap. 328) (22 of 1992), (Belize).

¹⁹⁵ See EBMP 7.

¹⁹⁶ See EBMP 10.

¹⁹⁷ See EBMP 11.

¹⁹⁸ (Cap. 394) (1998-39), (Barbados).

any discontinuities, uncertainties or discrepancies in Barbados' management of the environment by ensuring that its management of land, water and living resources is integrated. To this approach the most appropriate scientific methodologies have been applied. It encompasses the essential structure, processes, functions and interactions among organisms and their environment. In terms of EBMP 1, it is important that the public's rights and interests are recognised as this is a major component of ecosystem-based management. Barbados' Coastal Zone Management Act²⁰¹ has acknowledged this point. Under section 5 of the Coastal Zone Management Act²⁰² provision is made for a Public Enquiry of the Coastal Management Plan.

Barbados, together with Antigua and Barbuda, has placed particular emphasis on the implementation of EBMPs 2, 5, and 10. Many efforts have been made to ensure public participation to ensure the support of the management systems. In both Barbados and Antigua and Barbuda, EBMP 4 which underscores the "polluter pays" principle, is seen throughout their legislation. It must be noted however, that Antigua and Barbuda seems to be unique in that it offers incentives for persons who bring forth information regarding the conviction of a "polluter" unlike Barbados which only offers sanctions if any of the relevant Acts is contravened.

From all appearances, Barbados and Antigua and Barbuda have not implemented EBMPs 6 and 8; but their legislation at least embodies EBMPs 11 and 12. They have incorporated the use of scientific research and ensure that all the relevant sectors of society are involved in the decision-making process. For instance, Antigua and Barbuda under its Fisheries Act 2006²⁰³ involves local fishermen in the management process. Of all Antigua and Barbuda's legislation on ocean governance, the EBMPs are primarily evident in its Fisheries Act 2006.²⁰⁴ The Antigua and Barbuda Fisheries Act 2006²⁰⁵ makes provision for the establishment of a body known as the Fisheries Advisory Committee which is controlled by the Chief Fisheries Officer.²⁰⁶ Under section 5 (4) of the Act the Chief Fisheries Officer is required to consult with local fishermen, local authorities and such other persons which appear to him to be affected. Thus, the opinions and knowledge of all relevant sectors of society are taken into account when formulating fishing and aquaculture plans.²⁰⁷ The Act espouses also sustainable development and responsible management, and seeks to strike a balance between conservation and use.

Generally, Antigua and Barbuda has very vibrant governmental environmental divisions which make an attempt to involve the public, private sector, and all stakeholders in the management of the environment. These divisions also ensure the control, monitoring and regulation of the ecosystem which certainly gives effect to EBMPs 5 and 10. Antigua and Barbuda and Barbados recognise, therefore, the importance of implementing the Ecosystem Management Approach even if actual implementation is to a limited degree.

¹⁹⁹ (Cap. 392A) (1998-40), (Barbados).

²⁰⁰ (Cap. 391) (1993-6), (Barbados).

²⁰¹ (Cap. 394) (1998-39), (Barbados).

²⁰² *Id.*

²⁰³ (No. 22 of 2006), (Antigua and Barbuda).

²⁰⁴ *Id.* Other legislation in Antigua and Barbuda which implement EBMPs include the Oil Pollution of Maritime Areas Act 1995 (No. 14 of 1995), and Dumping At Sea Act (Cap. 141) (29/1975). Both pieces of legislation govern the discharge of oil and other pollutants into the sea. The Oil Pollution of Maritime Areas Act 1995 endorses Principle 4 in that it makes the discharge of oil an offence whether it is from a ship or pipelines, and imposes a fine and a term of imprisonment if its provisions are violated. The Act also implements Principles 5 and 9. For example, by providing the place, time and conditions upon which the ballast water of ships may be dumped, Antigua and Barbuda attempts to preserve the Ecosystem structure. The fact as well that these conditions and times for dumping have not been predetermined recognises that change is inevitable.

²⁰⁵ (No. 22 of 2006), (Antigua and Barbuda).

²⁰⁶ Appointed pursuant to s. 4 (2) (a), Fisheries Act 2006 (No. 22 of 2006) (Antigua and Barbuda).

²⁰⁷ See EBMP 1 and 11.

In Jamaica, the Natural Resources Conservation Authority Act 1991²⁰⁸ is the main regulatory environmental instrument used to implement the EBMPs. The Natural Resources Conservation Authority Act 1991²⁰⁹ provides that where a proposed development will have an adverse impact on the environment, an Environmental Impact Assessment (EIA) will be required, in which, public participation must be a central aspect of the development process; therefore EBMP 1 is clearly evident. EBMP 1 is also evidenced in section 13 of the Beach Control Act²¹⁰ where it is the duty of the National Resources Conservation Authority to maintain the use of and development of the beaches in the public interest. In addition, sections 3 and 14 of the Water Resources Act 1995²¹¹ deal with the administration of water resources and the establishment of a water resources authority and an advisory committee respectively. Guyana like its aforementioned Caribbean counterpart implements this principle in the Environmental Protection Act 1996²¹² which provides for the establishment of the Agency and in section 4, the promotion of effective management of the environment and public participation in planning for the development on a sustainable basis.

Similarly, Grenada implements this principle in the Fisheries Act²¹³ where the Chief Fisheries Officer is mandated to prepare a fisheries plan to ensure sustainable use of the fishing resource and ensure sustainable fishing practices. In preparing the fisheries plan local fishermen and other relevant authorities must be consulted. Dominica likewise in section 3 of the Fisheries Act²¹⁴ vests the Minister with the power to promote the management and development of fisheries and to ensure optimum utilization of fisheries resources. In addition, in section 10 of the Water and Sewage Act²¹⁵ both the Ministry and the Ministers in Dominica and Grenada are responsible for conservation, redistribution and augmentation of water resources.

Common in the legislations of the four territories, is the principal objective of sustainable development and sustainable utilization of resources, balancing the needs of the human population. Further, the environmental planning processes take into account the needs and input of all relevant stakeholders and agencies are consulted.

In terms of EBMP 2, in Jamaica the Natural Resources Conservation Authority Act 1991,²¹⁶ with the approval of the Minister makes regulations to ensure clean beaches and foreshore conditions, adjoining parts of the sea and promoting preservation of marine life. Likewise, in Guyana, section 4 (1) of the Environmental Protection Act 1996 vests powers of environmental protection in the Environmental Agency. This approach is also adopted in section 11 of the Beach Control Act of Dominica,²¹⁷ where the Chief Technical Officer with the approval of the Minister appoints officers to perform specific duties. These regulations epitomize decentralization of power.

The agencies of Guyana and Jamaica must consult with other relevant authorities in the process of making regulations under the Acts. The Authorities may request that an EIA be done if the development is proposed to take place within a prescribed area; or of a particular category is to

²⁰⁸ (Act 9 of 1991), (Jamaica).

²⁰⁹ *Id.*

²¹⁰ (63 of 1955 *et seq.*), (Jamaica).

²¹¹ (Act 36 of 1995), (Jamaica).

²¹² *See* s. 3 of the Environmental Protection Act 1996 (Act No.11 of 1996), (Guyana).

²¹³ (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²¹⁴ (Chap. 61:60) (11 of 1987), (Dominica).

²¹⁵ (Chap. 43:40) (17 of 1989), (Dominica).

²¹⁶ (Act 9 of 1991), (Jamaica).

²¹⁷ (Chap. 42:04) (21 of 1966), (Dominica).

be carried out.²¹⁸ The EIA is an effective avenue where public participation can be integrated in the environmental development process.

Similarly, in Grenada the Fisheries Act²¹⁹ provides that in the preparation and review of the fisheries plan, the Chief Fisheries Officer must consult with local fishermen, local authorities and other potentially affected persons. The Waste Management Act 2001 of Grenada²²⁰ also requires that an EIA be done when designating waste disposal site and in the decision making of waste management.

The Revised Treaty of Chaguaramas Establishing the Caribbean Community (“CARICOM”) Including the CARICOM Single Market and Economy (“Revised Treaty”)²²¹ provides that CARICOM must promote measures to ensure the preservation, protection and improvement of the environment and also the adoption of initiatives at the community level to address regional environmental problems. Herein, the Act provides that Member States must employ a bottom up approach to environmental protection where public participation must form part of the initial stage of the planning and decision-making process.

With respect to EBMP 3 the Beach Control Act of Jamaica²²² provides that any person who encroaches on the sea floor of the foreshore of the beach for commercial purposes without a license is guilty of an offence.²²³ The Natural Resources Conservation Authority Act 1991²²⁴ provides that no person shall discharge any harmful or poisonous substances or sewage effluents into the waters of Jamaica or cause such substances to be discharged in the ground or on the ground without a license. The Harbours Act²²⁵ also provides the Authority with power to inspect vessels to ensure that there is no leakage of waste contents. The control of the use of the foreshore mitigates the impact or effect on other ecosystems as all ecosystems are interconnected. The Territorial Sea and Maritime Borders Act of Grenada²²⁶ adopting a similar approach, makes provisions that prohibit development within an exclusive economic zone and continental shelf which encompasses the sea floor and regulates any activities thereon. A similar approach is also taken in the Petroleum and Natural Gas Deposits Act²²⁷ where it is provided that a person possessing a license to deal in petroleum must adopt all necessary precautions to avoid pollution of the offshore area and any land or water by petroleum, or any other substance that may cause harm or destruction of the marine life.²²⁸

While in Guyana, the Environmental Protection Act 1996²²⁹ ensures that development activity which may cause an adverse effect on the natural environment be assessed before the activity commences and keeping the effects on other ecosystems in mind when deciding whether

²¹⁸ S. 10 (1), Natural Resources Conservation Authority 1991 (Act 9 of 1991), (Jamaica).

²¹⁹ S. 4 (3), Fisheries Act (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²²⁰ (Act No. 16 of 2001), (Grenada).

²²¹ See Art. 65 (1), Revised Treaty of Chaguaramas Establishing the Caribbean Community (“CARICOM”) Including the CARICOM Single Market and Economy (adopted 5 July 2001, entered into force 1 January 2006) 2259 UNTS 293 (“Revised Treaty”). The Revised Treaty entered into force by virtue of the Agreement to Enable the Entry into force of the Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy (adopted 21 December 2005, entered into force 9 February 2006) <<http://www.caricomlaw.org/docs/Agreement%20to%20allow%20entry%20into%20Force%20of%20the%20Rev%20Treaty.pdf>> accessed 5 June 2010.

²²² (63 of 1955 *et seq.*), (Jamaica).

²²³ SS. 7 and 11, Beach Control Act (63 of 1955 *et seq.*), (Jamaica).

²²⁴ S.12 (1) (a) and (b), Natural Resources Conservation Authority Act 1991 (Act 9 of 1991), (Jamaica).

²²⁵ (Cap. 145) (Acts 1 of 1963 and 42 of 1969), (Jamaica).

²²⁶ (Cap. 318) (Act 25 of 1989), (Grenada).

²²⁷ (Cap. 240) (Act 22 of 1989), (Grenada).

²²⁸ *Id.*, s. 25(1).

²²⁹ (Act No. 11 of 1996), (Guyana).

approval is given. In Dominica, the Territorial Sea, Contiguous Zone, Exclusive Economic and Fishery Zones Act;²³⁰ also evidenced in Jamaica in its Exclusive Economic Zone Act 1991²³¹ and Maritime Areas Act 1996;²³² Guyana's Maritime Boundaries Act 1977;²³³ and Grenada's Territorial Sea and Maritime Boundaries Act,²³⁴ have incorporated the (UNCLOS) principle where it limits or sets territorial boundaries within which the states have the exclusive and sovereign right to protect and exploit their natural resources. The provision only allows exploitations within the boundaries of the country and in turn curtails them from exploiting other ecosystems.

The Revised Treaty²³⁵ provides that all Member States must collaborate in management of highly migratory fish stocks and safeguard marine environments from hazardous wastes. Due to the interconnectivity of the marine ecosystems of the Caribbean, the legislation therefore mandates that all the Member States should ensure marine protection, not only for the benefit of their own territorial marine areas but also for the protection of other Member States which may be in close vicinity or may interact due to migration of species. The harsh potential impacts associated with discharge of hazardous wastes in the territorial waters of one Member State is that depending on the nature and magnitude of the discharge, another state's marine ecosystem may be partly or wholly depleted thereby adversely impacting its economic productivity.

However, not only is EBMP 3 visible in Caribbean legislation; but also EBMP 4. Under Jamaica's Beach Control Act,²³⁶ beach property vested in the Government of Jamaica may be leased at an annual rent to provide income.²³⁷ The Act also states that the Authority has the duty to ensure the economic development of the beaches of Jamaica in accordance with the needs of the public.²³⁸ The Fisheries Act of Grenada²³⁹ provides that the government may lease land including areas of the foreshore and seabed for aquaculture if such lease will not substantially prejudice the rights of the members of the public. It should be noted that the Beach Protection Act of Grenada²⁴⁰ does not provide for leasing of beach property and does not indicate any private ownership of beaches. The Fisheries Act of Grenada further states that there shall be payable in respect of every fishing license such fees as may be prescribed and such royalties or charges as the Minister may require.²⁴¹ This provision is synonymous to section 29 of the Fishing Industry Act 1975 of Jamaica,²⁴² section 40 of Maritime Boundaries Act 1977 of Guyana²⁴³ and section 24 (1) of the Fisheries Act 2002 of Guyana which empowers the Minister to impose fines.²⁴⁴

Central to the environmental protection regime of Grenada and Dominica is that an informant of an environmental offence or hazard gets rewarded; this is not the case in Jamaica and Guyana. This regime in Grenada is evidenced by its Bathing Places Act²⁴⁵ where when a person is fined

²³⁰ (Chap. 1:11) (26 of 1981), (Dominica).

²³¹ (Act 33 of 1991), (Jamaica).

²³² (Act 25 of 1996), (Jamaica).

²³³ (Act No. 10 of 1977), (Guyana).

²³⁴ (Cap. 318) (Act 25 of 1989), (Grenada).

²³⁵ See Art. 60 (3) (a) and (d), Revised Treaty 2259 UNTS 293.

²³⁶ (63 of 1955 *et seq.*), (Jamaica).

²³⁷ S. 12 (3) Beach Control Act (63 of 1955 *et seq.*), (Jamaica).

²³⁸ *Id.*, s.12 (1).

²³⁹ S. 22, Fisheries Act (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁴⁰ (Cap. 29) (Act 67 of 1979), (Grenada).

²⁴¹ S. 14, Fisheries Act (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁴² (Act 17 of 1975), (Jamaica).

²⁴³ (Act No. 10 of 1977), (Guyana).

²⁴⁴ (Act No. 12 of 2002), (Guyana).

²⁴⁵ (Cap. 28) (Cap. 31-1958), (Grenada).

for bathing in an area not so designated, the informant of such offence is rewarded part of the fine.²⁴⁶ The Fisheries Act of Grenada²⁴⁷ again provides that the Minister may make regulations rewarding persons who provide information concerning the operation of foreign fishing vessels leading to a conviction or to the compounding of an offence against the Act.²⁴⁸ This is illustrated in the Beach Control Act of Dominica²⁴⁹ which provides that all fines and penalties imposed under the Act may be recovered in a summary manner before a Magistrate on complaints of any person and one half shall be paid to the informant.²⁵⁰

In conjunction with Principle 16 of the Rio Declaration,²⁵¹ section 16 (2) of the Natural Resources Conservation Authority Act 1991 of Jamaica²⁵² and section 19 (2) of the Beach Control Act of Jamaica²⁵³ adopts the “polluter pays” principle; where any amounts reasonably incurred by the Authority in mitigating against the damage caused from the discharge of the noxious substance into any water body is recoverable from the person or persons who caused it. The same principle is adopted by Grenada in its Oil in Navigable Waters Act²⁵⁴ where any person who is convicted of the offence of allowing escape of any oil into any waters, the court may order that the whole or any part of the fine imposed be paid to such persons for the purpose of meeting any expenses incurred or to be incurred in the removal of the oil discharged.²⁵⁵ This principle is also adopted in the Petroleum Act,²⁵⁶ the Petroleum and Natural Gas Deposits Act of Grenada²⁵⁷ and in section 145 of the International Maritime Act 2000 of Dominica.²⁵⁸ Unlike Grenada, Dominica and Jamaica, the “polluter pays” principle is expressly adopted in section 4 (4) of the Environmental Protection Act 1996 of Guyana.²⁵⁹

In relation to EBMP 5, the Minister under the Beach Control Act of Jamaica with the recommendation of the National Resources Conservation Authority may designate an area of the sea floor or the foreshore to be a protected area²⁶⁰ and section 19 provides that the Authority may apply to the Court for an order to protect the foreshore. While the Beach Control Act of Dominica²⁶¹ provides for control of beaches and section 12 specifically makes it an offence to remove sand from the beaches. Similar to those provisions in Jamaica, the Fisheries Act of Grenada²⁶² provides that the Minister may, by order, declare any areas of the fishery waters and any adjacent or surrounding land to be a marine reserve where he considers that special measures are necessary to afford protection to flora and fauna, and to preserve natural breeding grounds or habitats of aquatic life.²⁶³ Likewise the Fisheries Act of Dominica provides for the designation of fisheries management areas²⁶⁴ and marine reserves.²⁶⁵ In Guyana, there is mention of a protected area system which could be used to conserve and protect the ecosystem.²⁶⁶

²⁴⁶ S. 3, Bathing Places Act (Cap. 28) (Cap. 31-1958), (Grenada).

²⁴⁷ (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁴⁸ S. 40 (k), Fisheries Act (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁴⁹ (Chap. 42:04) (21 of 1966), (Dominica).

²⁵⁰ S. 14, Beach Control Act (Chap. 42:04) (21 of 1966), (Dominica).

²⁵¹ 31 ILM (1992).

²⁵² (Act 9 of 1991), (Jamaica).

²⁵³ (63 of 1955 *et seq.*), (Jamaica).

²⁵⁴ (Cap. 218) (Cap. 204-1958 and Act 64 of 1979), (Grenada).

²⁵⁵ S. 7, Oil in Navigable Waters Act (Cap. 218) (Cap. 204-1958 and Act 64 of 1979), (Grenada).

²⁵⁶ S. 5 (2), Petroleum Act (Cap. 239) (Cap. 217-1958), (Grenada).

²⁵⁷ S. 25 (4), Petroleum and Natural Gas Deposits Act (Cap. 240) (Act 22 of 1989), (Grenada).

²⁵⁸ (Act No. 9 of 2000), (Dominica).

²⁵⁹ (Act No. 11 of 1996), (Guyana).

²⁶⁰ S. 7, Beach Control Act (63 of 1955 *et seq.*), (Jamaica).

²⁶¹ (Chap. 42:04) (21 of 1966), (Dominica).

²⁶² (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁶³ S. 23, Fisheries Act (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁶⁴ S. 18, Fisheries Act (Chap. 61:60) (11 of 1987), (Dominica).

Section 21 (j) of the Exclusive Economic Zone Act 1991 of Jamaica²⁶⁷ provides that the Minister may make regulation for the preservation and protection of the marine environment and the prevention and control of marine pollution. The Territorial Sea and Maritime Boundaries Act of Grenada,²⁶⁸ the Maritime Boundaries Act 1977 of Guyana,²⁶⁹ and Territorial Sea, Contiguous Zone, Exclusive Economic and Fishery Zones Act 1990 of Dominica²⁷⁰ have provisions dealing with the protection and preservation of the marine environment of the designated zones.

The Revised Treaty provides that Member States shall collaborate in the development of maritime transportation services “protecting the marine environment from the effects of vessel source pollution and in combating the effects of pollution.”²⁷¹ Article 141 further provides for co-operation of Member States in achieving international recognition with regard to protection of the Caribbean Sea from the effects of pollution carried by sea.²⁷²

With regard to EBMP 6, the Natural Resources Conservation Authority Act 1991 of Jamaica in section 4 provides for the conservation and protection of natural resources, and under section 9 a person wishing to undertake a proposed development must apply for a permit.²⁷³ The combined effect of these two sections suggests that management of the ecosystem must be within limits. Similarly section 13 (1) of the Environmental Protection Act 1996²⁷⁴ stipulates that an environmental permit may be issued subject to conditions that are reasonably necessary to protect human life and the environment. The issuing of licenses may be limited with discretion of the Chief Agricultural Officer.²⁷⁵ The Act goes further to provide in section 11 (1) for the facilitation of an EIA before any development is undertaken. This limitation set by the relevant agencies ensures sustainable utilization and limits management which is outside of the natural functioning of that particular ecosystem.

Dominica mirrors its counterparts in this area but goes further and makes specific reference to the management of the ocean. In section 15 of the Fisheries Act,²⁷⁶ provision is made for the cancellation or suspension of licenses where necessary for proper management of fisheries via the Minister’s discretion. In addition section 22 provides for the designation of marine reserves where necessary to afford protection to flora and fauna in danger of extinction, and to preserve natural breeding grounds of aquatic habitats.

Finally, Grenada makes reference to this principle. The Fisheries Act of Grenada²⁷⁷ seeks to ensure that development activity, which may cause an adverse effect on the natural environment, is assessed before activity commences keeping in mind at the same time any effects which will determine whether approval will be given.²⁷⁸

In Dominica, Guyana, Grenada and Jamaica there is no explicit mention of EBMP 7. This Principle can be implied, however, in Dominica, Jamaica and Guyana by virtue of the requirement for EIAs. Grenada however gives no mention of the need for EIA and therefore

²⁶⁵ *Id.*, s. 22.

²⁶⁶ S. 4 (1) (i), Environmental Protection Act 1996 (Act No. 11 of 1996), (Guyana).
²⁶⁷ (Act 33 of 1991), (Jamaica).

²⁶⁸ (Cap. 318) (Act 25 of 1989), (Grenada).

²⁶⁹ SS. 12 (b) (3) and 18 (b) (4), Maritime Boundaries Act 1977 (Act No. 10 of 1977), (Guyana).

²⁷⁰ SS. 8 (8) (3) and 9, Territorial Sea, Contiguous Zone, Exclusive Economic and Fishery Zones Act (Chap. 1:11) (26 of 1981).

²⁷¹ *See* Art. 140 (1) (c), Revised Treaty 2259 UNTS 293.

²⁷² *Id.*

²⁷³ SS. 4 and 9, Natural Resources Conservation Authority Act 1991 (Act 9 of 1991), (Jamaica).

²⁷⁴ (Act No. 11 of 1996), (Guyana).

²⁷⁵ *Id.*, S. 19.

²⁷⁶ (Chap. 61:60) (11 of 1987), (Dominica).

²⁷⁷ (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁷⁸ S. 4, Fisheries Act (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

gives no credence to this principle. In Dominica section 11 of the Solid Waste Management Act 2002²⁷⁹ calls for a pre-EIA for new waste management facilities. More specifically, the legislation calls for a series of detailed sequential steps that should be taken to ensure the process is carried out efficiently.

The Environmental Management Authority²⁸⁰ of Guyana is empowered to provide general information to the public on the state of the environment by regular reports produced at least annually. Section 4 (1) stipulates that the Agency is to co-ordinate an integrated coastal zone management program and ensure that any developmental activities which may cause an adverse effect on the natural environment be assessed before the activity is commenced so as to decide whether or not to authorize the activity. The Natural Resources Conservation Authority Act 1991 stipulates the time period in which an EIA should be carried out, and that the Authority may, by notice in writing, require an applicant for a permit or the person responsible for undertaking in a prescribed area, any enterprise, construction or development of a prescribed description or category, that such a notice shall state the period within which the documents, information or assessment, as the case may be, will be submitted to the Authority.²⁸¹ Similar provisions can be found in the Environmental Protection Act 1996 of Guyana which states that an EIA shall contain information about the geographical area, the production process, and the length of the project.²⁸² Both Acts are somewhat similar but in some cases the Environmental Protection Act 1996 is more comprehensive than the Natural Resources Conservation Authority Act 1991 of Jamaica in its measures to be implemented and would therefore be more effective. The overall implementation of this principle is very poor and in these jurisdictions and can only be applied minimally.

EBMP 8 is well integrated into the legislation of Guyana and Jamaica. In Guyana's Environmental Protection Act 1996, section 4 (1) (h) mandates the Agency to maintain programmes for conservation, sustainable use and in (i) protected areas systems. Guyana also expressly states the precautionary principle in its Environmental Protection Act 1996²⁸³ via section 4 (4) (b). Jamaica also makes mention of this principle in section 4 (2) (f) where the Authority is mandated to promote studies and undertake research.²⁸⁴ Further evidence of long-term management is illustrated in section 12 where the Natural Resources Conservation Authority Act 1991 refers to licences for the discharge of effluents by prohibiting persons from discharging on, causing or permitting the entry into waters, on the ground or in the ground, of any sewage or trade effluent or any poisonous, noxious or polluting matter. Another measure is found in section 18 which deals with the enforcement of controls. If it appears that an undertaking in any area is such that as to pose a serious threat to the natural resources or to public health, the Authority may serve on that person an enforcement notice which has the effect of requiring the person to either find ways to ameliorate the effect of the activity and where appropriate restore the natural resources to the condition before the activity took place. These measures allow the Authority to keep a grip on the negative effects such activities may have on the environment and facilitate the long term management of it.

Principle 8 is evident in Grenada's Fisheries Act²⁸⁵ where section 4 refers to the Fisheries management and development plan. It stipulates that the Chief Fisheries Officer shall prepare

²⁷⁹ (Act No. 1 of 2002), (Dominica).

²⁸⁰ S. 4 (3) (d), Environmental Protection Act 1996 (Act No. 11 of 1996), (Guyana).

²⁸¹ S. 10 (2), Natural Resources Conservation Authority Act 1991 (Act 9 of 1991), (Jamaica).

²⁸² S. 11(5) (a) (i) (ii) (iv), Environmental Protection Act 1996 (Act No. 11 of 1996), (Guyana).

²⁸³ (Act No. 11 of 1996), (Guyana).

²⁸⁴ See Natural Resources Conservation Authority Act 1991 (Act 9 of 1991), (Jamaica).

²⁸⁵ (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

and keep under review a fisheries plan for the management and development of fisheries. This plan explicitly guarantees long term management by identifying each fishery, an assessment of the present state of its exploitation and specifying the management and development measures to be taken.

The best possible legislation that falls under comprehensible environmental management in Grenada is the Waste Management Act 2001.²⁸⁶ This Act provides for the management of waste in conformity with the best environmental practices and for related matters. In relation to long term management, section 3 refers the duty of the Minister to produce a National Waste Inventory of the waste generated in the country. Also the Minister, in accordance with section 4 (1), must produce a National Waste Management Strategy. These obligations place a duty on the Minister to formulate plans for the management of the environment with long term goals in mind. Preventative measures can be used in long term management which was utilized in section 33 where it stipulated that a person who knowingly deposits or causes to be deposited any litter or other waste in or on any national park or protected area, territorial waters, beach, foreshore, marine waters, river or river bank without lawful authority commits an offence. Therefore, this principle is adequately implemented in the environmental legislation of both countries.

The Fisheries Act of Dominica²⁸⁷ pays special attention to allowing for the regeneration of aquatic life in section 22 of the Act. Here consideration of a marine reserve is given when the aquatic life in the area seem to be depleting or face the possibility of extinction.

In terms of EBMP 9, section 4 (2) (f) of the Natural Resources Conservation Authority Act 1991²⁸⁸ states that the Authority may undertake studies in relation to the environment and encourage and promote research into the use of techniques for the management and conservation of natural resources. Similarly, section 4 (4) (e) of the Environmental Protection Act 1996²⁸⁹ states that the Agency shall make use of the “state of technology” principle, that is, measures protecting the environment are restricted by what is technologically feasible and as technology improves, the improved technology should be used to prevent and repair environmental damage. While the measures of the Environmental Protection Act 1996 are implicitly stated, in relation to the Natural Resources Conservation Authority Act 1991, it has to be implied. The better view is that Guyana’s implementation is more comprehensive than that of Jamaica’s.

Section 12 of the Territorial Sea, Contiguous Zone, Exclusive Economic and Fishery Zones Act of Dominica²⁹⁰ provides for future legislation to be passed on fishery matters. This is clearly an application of Principle 9 where the government reserves the right to pass future fisheries acts where the need arises. In an examination of the legislation in Guyana this principle is also well integrated into the Environmental Protection Act 1996.²⁹¹ The body of legislation of Dominica however has a lot less to say directly and about this principle. Guyana, like Dominica, has legislation which implements this principle. This is evidenced in section 4 (e) of the Environmental Protection Act 1996 which provides for the education of the public on potential and current alterations of the environment and ways in which it can best be preserved in its current or future state. EBMP 9 is similarly implemented in Grenada through its Fisheries Act²⁹² where section 4 gives the Minister the power to prepare and keep review of a fisheries plan for the development and management of fisheries in the country. The management in this regard

²⁸⁶ (Act No. 16 of 2001), (Grenada).

²⁸⁷ (Chap. 61:60) (11 of 1987), (Dominica).

²⁸⁸ (Act 9 of 1991), (Jamaica).

²⁸⁹ (Act No. 11 of 1996), (Guyana).

²⁹⁰ (Chap. 1:11) (26 of 1981), (Dominica).

²⁹¹ (Act No. 11 of 1996), (Guyana).

²⁹² (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

refers to conducting a review of the fisheries plan every five years. Review is required because it recognises that change is inevitable and alterations may be needed to meet these changes to effectively manage it.

Guyana implements EBMP 10 in section 4 (1) (h) which calls for the maintenance of biological diversity and sustainable use. Section 4 (1) (i) also gives the lead agency the mandate to create and maintain national parks, a protected area system and a wildlife protection program.

Section 4 (1) of the Natural Resources Conservation Authority Act 1991²⁹³ states in relation to this same principle that the Authority shall take such steps as are necessary for the effective management of the physical environment so as to ensure the conservation, protection and proper use of its natural resources. The better view is that the agencies will implement measures that will allow its citizens to use their resources in a reasonable manner so that the resources will serve both present and future generations. Section 4 (1) (i) of the Environmental Protection Act 1996²⁹⁴ and section 4 (1) (c) of the Natural Resources Conservation Authority Act 1991 also gives the lead agency the mandate to create and maintain national parks, protected areas system and a wildlife/recreational protection program - this will allow citizens to use but at the same time protect the ecosystem.

Dominica like its Caribbean counterparts places emphasis on this principle. In its legislation many negative sanctions are placed in the Fisheries Act for those who fail to have a license as provided for in sections 11 to 12 which lays out conditions and procedures for obtaining and maintaining a license. The Fisheries Act of Grenada²⁹⁵ also affords for a balance between use and conservation. This principle is embodied in both section 8 and section 11 which deal with foreign fishing licenses and local fishing licenses respectively. A requirement of a license allows individuals to fish or partake in any related activities in those areas but also regulate such activity as to promote sustainable utilization and conserve the fisheries waters for future generations. Without such a license to limit the use of the fisheries areas, there would be environmental issues which could result in rapid depletion of that natural resource. The balancing of use and conservation is supported by section 21 dealing with fishing priority areas by stipulating that the Minister may, by Order, declare any area of the fishery waters to be a fishing priority area where he considers that special measures are necessary to ensure that authorized fishing within the area is not impeded or otherwise interfered with.

In Guyana in sections 4 (2) (b) and (c) of the Environmental Protection Act 1996,²⁹⁶ the importance of research and scientific knowledge is highlighted as the legislation provides for various investigations and surveys and research in relation to methods of pollution prevention. Further, in section (11) (9), the legislation stipulates that during the EIA the developer must “consult members of the public, interested bodies and organizations.” In both provisions, EBMP 11 is very apparent.

Similarly the Fisheries Act of Dominica in section 22 (1) (c) seeks to promote scientific study and research of marine areas.²⁹⁷

The Natural Resources Conservation Authority Act 1991²⁹⁸ in section 4 (2) (g) states that the Authority may conduct seminars and training programs and gather and disseminate information relating to environmental matters. Section 10 which is similar to that of section 11 of Guyana’s

²⁹³ (Act 9 of 1991), (Jamaica).

²⁹⁴ (Act No. 11 of 1996), (Guyana).

²⁹⁵ (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

²⁹⁶ (Act No. 11 of 1996), (Guyana).

²⁹⁷ (Chap. 61:60) (11 of 1987), (Dominica).

²⁹⁸ (Act 9 of 1991), (Jamaica).

Environmental Protection Act 1996,²⁹⁹ stipulates that the Authority may require an EIA, by notice in writing to an applicant for a permit or a person responsible for undertaking any enterprise, construction or development in a prescribed area, or of a prescribed description or category where it is of the opinion that the activities of such enterprise, construction or development are having or are likely to have an adverse effect on the environment. So even though development has to take place the measures put in place will ensure that all relevant information, whether given by the public or the developer or anyone who may be affected, is taken into consideration.

Grenada has implemented the EBMPs of consideration of all forms of relevant information and involving relevant sectors of society and scientific disciplines to a certain extent. The Fisheries Act³⁰⁰ has provision relating to access to administrative proceedings for redress or remedy. This is in accordance with section 17 concerning appeals where a person aggrieved by a decision of the Chief Fisheries Officer under section 15 may within twenty-one days of the receipt of notification of that decision appeal against it to the Minister whose decision shall be final. Also, section 19 attempts to embrace public participation. This Act has fallen short in making provisions to have appropriate access to information concerning the environment and the opportunity for the public to participate in the decision-making process. In addition, there is not any mention of a requirement for an EIA from persons who desire to use the fisheries waters for “fishing and related activities”.

In Grenada, the Waste Management Act 2001³⁰¹ implements these principles in many of its provisions. One such provision is section 4 (2) where the Minister in the exercise of his duty of formulating the waste management strategy, must ensure the broadest consultation in the preparation of the Strategy, and in particular, but without limiting the requirement, must consult with the scheduled agencies and the stakeholders to the extent that their interests are likely to be affected.

After the relevant considerations, section 6 stipulates that the strategy should be published for public review and comment by notice in the Gazette. Along with public participation there is evidence of consideration of all relevant information where, in accordance with section 4 (3), the minister must undertake an evaluation of the social, environmental and economic impacts of the Strategy.

In Dominica EBMP 12 is integrated in the Territorial Sea, Contiguous Zone, Exclusive Economic and Fishery Zones Act³⁰² which provides that marine scientists should conduct relevant studies and provide advice where necessary to the lead environmental agency. Grenada has implemented the EBMPs of consideration of all forms of relevant information and involving relevant sectors of society and scientific disciplines to a certain extent.

Section 4 of the Environmental Protection Act 1996³⁰³ pays close attention to this principle as the environmental agency is required to, “promote the participation of members of the public in the process of integrating environmental concerns in planning for development on a sustainable basis.” The better view is that public participation in the implementation of these measures is relevant in Guyana. Principle twelve is further implemented in section 4 (k) where it is stated that the lead agency should “establish and co-ordinate institutional linkages locally, nationally, regionally and internationally.” In Jamaica the Natural Resources Conservation Authority Act

²⁹⁹ (Act No. 11 of 1996), (Guyana).

³⁰⁰ (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

³⁰¹ (Act No. 16 of 2001), (Grenada).

³⁰² (Chap. 1:11) (26 of 1981), (Dominica).

³⁰³ (Act No. 11 of 1996), (Guyana).

1991³⁰⁴ has also implemented the principle to promote public awareness of the ecological systems of Jamaica and their importance to the social and economic life of the Island.

In Trinidad and Tobago the main piece of legislation is the Environmental Management Act 2000³⁰⁵ which creates the Environment Management Authority. The Environmental Management Act 2000 has been supported by the passage of subsidiary legislation.³⁰⁶ The societal focus of the management initiative is on the sustainable use, protection and conservation of the environment by the citizens.³⁰⁷ The government has sought to ensure that this be achieved by the use of a controlled form of decentralisation whereby one body controls and administers the management of the environment, with the aid of but not subject to government departments,³⁰⁸ non-governmental organizations,³⁰⁹ and innovative bodies such as the Environmental Commission and the Environmental Trust Fund to ensure independence and efficiency.

The Environment Management Authority is given statutory powers such as the ability to demand that EIAs be made;³¹⁰ the imposition of charges on the basis of the “polluter pays” principle; and the granting of incentives to institutions to ensure that their development be kept in line with environmental policy. However, not many incentives have been offered to the public. Conservation remains a key element as illustrated by the variety of legislation passed.

St. Vincent and the Grenadines, on the other hand, holds the same focus in terms of the management initiative, sustainability, protection and conservation.³¹¹ However it has been slower to adopt legislation which would implement these ideals. Strategies and plans³¹² which are being developed and implemented suggest that this will be changed in the near future. Management of the environment is done haphazardly with jurisdiction for different initiatives being given to different bodies, governmental³¹³ and non-governmental which causes conflicts when jurisdictions cross each other. Some might argue that this is a form of decentralisation of management but the fact remains that decentralisation cannot occur unless there is firstly a comprehensive management system in place which is presently lacking.

Although there is the need to take parallel ecosystems into consideration, there is not enough legislation which would compel the undertaking of EBMPs and ensure that these principles are abided with.³¹⁴ Again both countries have at the foundation the concept of sustainable use of the environment a consequence of which means that they both possess legislation,³¹⁵ plans and initiatives aimed at the attainment of sustainable development.

The implementation of EBMPs in Trinidad and Tobago has occurred within the last decade at a more rapid and comprehensive pace when compared to that of St. Vincent and the Grenadines;

³⁰⁴ Section 4 (1) (b), Natural Resources Conservation Authority Act 1991 (Act 9 of 1991), (Jamaica).

³⁰⁵ (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

³⁰⁶ Legislation such as the Certificate of Environmental Clearance Rules (LN 104/2001), Environmentally Sensitive Areas Rules (LN 64/2001), and the Environmentally Sensitive Species Rules (LN 63/2001).

³⁰⁷ See: Preamble and the Fourth Developmental Pillar of Trinidad and Tobago Vision 2020 Plan; See also, Preamble to the Environmental Management Authority Act 2000 (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

³⁰⁸ Departments such as the Ministry of Agriculture, Land and Marine Resources and a Ministry of Planning, Housing and the Environment.

³⁰⁹ For example, the Cropper Foundation.

³¹⁰ SS. 35 to 39, Environmental Management Act 2000 (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

³¹¹ See, Preamble, St. George’s Declaration of Principles of Environmental Sustainability in the OECS, April 2001.

³¹² See e.g., the National Biodiversity Strategy and Action Plan (“NBSAP”) 2008.

³¹³ See e.g., the Ministry of Health and the Environment, and Fisheries Department in the Ministry of Agriculture, Forestry and Fisheries.

³¹⁴ See Third National Biodiversity Report in relation to the implementation of certain aspects of CITES.

³¹⁵ See e.g., Fisheries Act (Chap. 67:51) (Act 39 of 1916), (Trinidad and Tobago).

but that is not to say that St. Vincent and the Grenadines has not taken steps in this regard. All indicators suggest that St. Vincent and the Grenadines will within the next few years make similar strides.

It is important to note that in Trinidad and Tobago, fishing is dwindling in part due to alterations to the environment.³¹⁶ The Nariva Swamp Restoration³¹⁷ initiative in Trinidad and Tobago highlights the notion of Principle 7.³¹⁸ Trinidad and Tobago must make regulations that target fisheries³¹⁹ through its environment³²⁰ hence integrating Principle 7. St. Vincent and the Grenadines also has various regional projects that promote coordinated approaches to biodiversity management at the ecosystem level³²¹ and at the species level.³²² Trinidad and Tobago also recognizes Principle 8. The government has formulated the ‘Vision 2020’.³²³ St. Vincent and the Grenadines³²⁴ conversely seems to have no plans in place for long-term goals rather it is focused on the short-term aspects of the environment.

The Fisheries Act³²⁵ as well as the Fisheries Regulations 1987³²⁶ of St. Vincent and the Grenadines implements EBMP 9.³²⁷ In comparison, the Environmental Management Act 2000 of Trinidad and Tobago³²⁸ established the Water Pollution Rules 2001,³²⁹ and allows for certain circumstances to be taken into consideration when granting permits. This shows the acceptance by the Authority that change is inevitable hence the acknowledgement of the need to take into account the best available practical technology at the time of relevance.

In Trinidad and Tobago, the Preamble to the Environmental Management Act 2000³³⁰ provides for the application of the principle of sustainability. The preamble specifically provides for a balancing exercise between economic growth and environmentally sound practices. This is reflective of EBMP 10.

In St. Vincent and the Grenadines, the fisheries division has a comprehensive data collection programme, takes inventories at the ecosystem level and established a resource centre in 2003, under the Ministry of Agriculture. The fisheries sector monitors and assesses migratory species through the Caribbean Regional Fisheries Mechanism (CRFM). Various institutions carry out research on the environment of Trinidad. The Ministry of Agriculture, Land and Marine Resources conducts research in the Fisheries Divisions. The Institute of Marine Affairs conducts

³¹⁶ For example, the swamp’s ecological and hydrological characteristics.

³¹⁷ The proposed Nariva Swamp Restoration Initiative (“NSPI”) has the potential to contribute significantly to improved fisheries habitats by aiding the resumption of fishing as a livelihood.

³¹⁸ According to Principle 7, the ecosystem approach should be undertaken at the appropriate spatial and temporal scales.

³¹⁹ See s. 3, Marine Areas (Preservation & Enhancement) Act (Chap. 37:02) (Act 1 of 1970), (Trinidad and Tobago).

³²⁰ According to Principle 7, legislation must recognize that there is a hierarchy when dealing with the environment. Thus, in order for there to be a sustained supply of fish, the legislation must focus on the environment of the fishes first, that is, the swamp and other ecosystems.

³²¹ For example, marine protected areas.

³²² For example, sea turtles.

³²³ See - -, ‘Vision 2020: Draft National Strategic Plan’ (National Strategy of the Government of the Republic of Trinidad and Tobago spearheaded by the Vision 2020 Multi-Sectoral Group) 302

<http://www.vision2020.info.tt/plans/National_Plan.pdf> accessed 3 June 2010 where it is stated: “[A]ll persons treasure the environment and voluntarily use its resources wisely to ensure its protection, conservation and restoration, so as to equitably meet the needs of present and future generations and enhance the quality of life.”

³²⁴ ‘Vision 2020’ is to be implemented in 2020 and leaves room for review each year to adjust to changes in the environment, thus incorporating both principles 8 and 9

³²⁵ (Cap. 52) (Act 8 of 1986), (St. Vincent and the Grenadines).

³²⁶ (S. R. & O. No. 1 of 1987), (St. Vincent and the Grenadines).

³²⁷ Meaning, both pieces of legislation give authority to those responsible for fisheries to create new fisheries management regulations when necessary.

³²⁸ (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

³²⁹ (LN 130/2001), (Trinidad and Tobago).

³³⁰ (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

research on the near shore and marine environments. The Department of Life Sciences of the University of the West Indies conducts research in biodiversity and ecosystem management of terrestrial, freshwater and marine environments. In Tobago, the House of Assembly is responsible for environmental matters. Thus, it is clear that both countries have implemented Principle 11.

Both Trinidad and Tobago and St. Vincent and the Grenadines have significant laws at the local, national, regional and international levels. With the focus being on ocean governance legislation, it is noteworthy that at the local level, in Trinidad and Tobago there has been a strong move in the direction of public participation.

Also, St. Vincent and the Grenadines has recently formed since 2003 a National Parks, Rivers and Beaches Authority, which operates under the Ministry of Tourism and Culture, as well as, The High Seas Fishing Act 2001.³³¹ There is also the Wildlife Protection Act,³³² Town and Country Planning Act 1992,³³³ the Marine Parks (Tobago Cays) Declaration Order 1997,³³⁴ the Marine Parks (Tobago Cays) Regulations 1998,³³⁵ and the National Parks Act 2002.³³⁶ In St. Lucia, responsibility was similarly solely in the hands of the government until the 1975 enactment of the Saint Lucia National Trust Act.³³⁷

Trinidad and Tobago and St. Lucia are parties to the CBD;³³⁸ however Trinidad and Tobago is a Party to a greater number of Conventions on environmental sustainability than St. Lucia.

Environmental Management Act 2000³³⁹ encompasses some similarities with the objectives of the Saint Lucia National Trust Act.³⁴⁰ The Preamble also provides for public participation as opposed to the Saint Lucia National Trust Act.³⁴¹ Both territories have Fishing Acts, which illustrate an adoption of Principle 9.

The establishment of the unique Employment Commission in Trinidad and Tobago, signals an acceptance of Principle 2 in Trinidad and Tobago, whereas in St. Lucia there is relatively less decentralization of management. Additionally, in St. Lucia emphasis is placed on areas of particular historical or architectural significance whereas in Trinidad and Tobago the Environmental Management Act 2000³⁴² provides for the designation of “environmentally sensitive areas”. The provisions in the Saint Lucia National Trust Act attempt to reflect EBMPs 1, 5 and 12, as opposed to Trinidad and Tobago where there are few provisions relating to indigenous or historical sites.

Apart from this, both territories have ministerial oversight and delegation in management. This is reflected through the various agencies responsible for environmental management in each territory.

In neither territory does there exist a piece of legislation dealing comprehensively and exclusively with ocean governance. However in Trinidad and Tobago, this may be achieved with the implementation of ‘Vision 20/20’ which is a long term plan for sustainable structural and

³³¹ (Act No. 26 of 2001), (St. Vincent and the Grenadines).

³³² (Cap. 55) (Act 16 of 1987, (St. Vincent and the Grenadines).

³³³ (Act No. 45 of 1992), (St. Vincent and the Grenadines).

³³⁴ (S. R. & O. No. 40 of 1997), (St. Vincent and the Grenadines).

³³⁵ (S. R. & O. No. 26 of 1998), (St. Vincent and the Grenadines).

³³⁶ (Act No. 33 of 2002), (St. Vincent and the Grenadines).

³³⁷ (Cap.6.02) (Act 16 of 1975), (St. Lucia).

³³⁸ 1760 UNTS 79, 31 ILM 818 (1992); *See also*, CITES.

³³⁹ (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

³⁴⁰ (Cap.6.02) (Act 16 of 1975), (St. Lucia).

³⁴¹ *Id.*

³⁴² (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

environmental development.³⁴³ This can be contrasted with the St. Lucian position where there seems to be no long-term solid initiatives.

Both territories extensively apply EBMP 2 in their various agencies and management entities;³⁴⁴ however Trinidad and Tobago has more agencies pertaining to ocean governance as opposed to land in St. Lucia.

In comparing St. Lucia and St. Kitts and Nevis, much of the legislation concerning environmental management and conservation is in need of updating in order to facilitate further implementation of EBMPs. The first step should be departmental reviews followed by consultations with other relevant sectors. Attention must also be given to the enactment and updating of regulations. Although St. Lucia has the beginnings of a system of protected areas "on paper," the weakness of existing environmental legislation means that very little environmental protection actually takes place.³⁴⁵ This weakness is exacerbated by the fact that a number of ministries are charged with protecting coastal environments, but little consultation or coordination between them takes place. Even though the principal resources legislation in St. Lucia lacks adequate environmental focus, St. Lucia goes further than St. Kitts and Nevis in implementing legislation to manage the marine environment. On the other hand, it can be argued that St. Kitts and Nevis have gone further in incorporating a number of environmental conventions into its municipal law than St. Lucia

St. Lucia and St. Kitts and Nevis depend heavily on the tourism industry for income and this can have a great impact on the ecosystem and in particular, the marine environment. Both countries have a Fisheries Act³⁴⁶ and Fisheries Regulations which incorporate a harmonized policy approach towards fisheries. In part, the Acts provide an institutional framework for the management, planning, development and conservation of fisheries resources. This is evidence of EBMPs 5 and 6 which are concerned with the conservation and management of the ecosystem within its limit of function. The Chief Fisheries Officer is mandated by the Act to prepare and keep under review a plan for the management and development of fisheries;³⁴⁷ but in the preparation and review of the fisheries plan he must consult with the local fisherman, local authorities, and other persons affected by the fisheries plan.³⁴⁸ Section 4 of the St. Lucia Fisheries Act³⁴⁹ reiterates the same, which is evidence of EBMP 12 involving all relevant sectors of society.

The fact that the Minister must consult these persons during his review of the fisheries plan clearly exemplifies EBMP 12 which states that the ecosystem approach should involve all relevant sectors of society.

There are notable similarities and differences between St. Lucia and St. Vincent and the Grenadines. Both islands have implemented a Biodiversity Plan in order to identify relevant problems and implement specific remedies. The notion of environmental legislation is indisputably in its infancy on both islands. St. Lucia, unlike St. Vincent and the Grenadines, does not have a Marine Parks Act,³⁵⁰ St. Lucia has established, however, a Maritime Areas Act³⁵¹ and

³⁴³ Note implementation of Principles 8 and 9 here.

³⁴⁴ Trinidad and Tobago's Ministry of Public Utility and the Environment, Institute of Marine Affairs, and Fisheries Division; and St. Lucia's Ministry of Agriculture, Department of Fisheries, and National Conservation Authority.

³⁴⁵ L. Hudson *et al*, 'A System of Protected Areas for St. Lucia' (Saint Lucia National Trust, Castries 1992) (Unpublished report).

³⁴⁶ See Fisheries Act 1984 (No. 4 of 1984), (St. Kitts and Nevis), and Fisheries Act (Cap.7.15) (Act 10 of 1984), (St. Lucia).

³⁴⁷ See s. 4, National Conservation and Environment Protection Act 1987 (No. 5 of 1987), (St. Kitts and Nevis).

³⁴⁸ See s. 6 (1), National Conservation and Environment Protection Act 1987 (No. 5 of 1987) amended by (No. 2 of 1992), (St. Kitts and Nevis).

³⁴⁹ (Cap.7.15) (Act 10 of 1984), (St. Lucia).

³⁵⁰ See Marine Parks Act 1997 (Act No. 9 of 1997), (St. Vincent and the Grenadines).

a Fisheries Act³⁵² which work in tandem in the protection of special fishery areas designated as marine reserves. These Acts contain the same provisions as that stipulated in the Marine Parks Act 1997 of St. Vincent and the Grenadines.³⁵³

With regards to existing regulations under the Water and Sewerage Act 2004,³⁵⁴ the Authority has a wide discretion to make regulations to ensure that the water quality does not become contaminated and that supply and demand is always met. Regulations under the Merchant Shipping (Oil Pollution) Act 1996 are applicable in St. Lucia under the enforcement of the United Kingdom's legislation. In the Fisheries Act,³⁵⁵ conservation and enforcement measures are in existence in the Act, but are compromised due to the absence of implementing regulations.

The main environmental conservation acts in St. Kitts and Nevis are the National Conservation and Environment Protection Act 1987;³⁵⁶ Fisheries Act 1984,³⁵⁷ and Maritime Areas Act 1984.³⁵⁸ St. Vincent and the Grenadines appears to have implemented much more legislation relating to ocean governance such as: The National Parks Act 2002;³⁵⁹ Marine Parks Act 1997;³⁶⁰ Marine Parks (Tobago Cays) Declaration Order 1997;³⁶¹ Marine Parks (Tobago Cays) Regulations 1998;³⁶² Fisheries Act;³⁶³ Maritime Areas Act;³⁶⁴ High Seas Fishing Act 2001;³⁶⁵ Beach Protection Act;³⁶⁶ Convention on Oil Pollution Damage Act 2002;³⁶⁷ Management of Ship-Generated Solid Waste Act 2002;³⁶⁸ and Dumping At Sea Act 2002.³⁶⁹

St. Kitts and Nevis and St. Vincent and the Grenadines both share similar features and common issues in attempting to manage their ecosystems. Recent studies conducted in both countries have also indentified several uncertainty gaps or conflicts in the legal coverage for protected areas management. However, the legislation in St. Vincent and the Grenadines appears to be more advanced and relevant than that of St. Kitts and Nevis.

With regard to institutional arrangements, in St. Kitts and Nevis, public and civil society organizations have been actively engaged in advocating the development of protected areas. In St. Vincent and the Grenadines this spirit does not seem as strong as Public and Civil society seem to play a minor role. Both countries have also participated in a number of regional projects/initiatives that aim at sustainable development and utilization of marine areas. They have also have facilitated various country reports and strategy plans in order to develop institutional capacity.

In terms of protected areas, St. Vincent and the Grenadines has made efforts to establish these areas with the passage of recent legislation. In St. Kitts and Nevis however, protected areas are

³⁵¹ (Cap.1.16) (Act 6 of 1984), (St. Lucia).

³⁵² (Cap.7.15) (Act 10 of 1984), (St. Lucia).

³⁵³ (Act No. 9 of 1997), (St. Vincent and the Grenadines).

³⁵⁴ (No. 14 of 2005), (St. Lucia).

³⁵⁵ (Cap.7.15) (Act 10 of 1984), (St. Lucia).

³⁵⁶ (No. 5 of 1987), (St. Kitts and Nevis).

³⁵⁷ (No. 4 of 1984), (St. Kitts and Nevis).

³⁵⁸ (No. 3 of 1984), (St. Kitts and Nevis).

³⁵⁹ (Act No. 33 of 2002), (St. Vincent and the Grenadines).

³⁶⁰ (Act No. 9 of 1997), (St. Vincent and the Grenadines).

³⁶¹ (S. R. & O. No. 40 of 1997), (St. Vincent and the Grenadines).

³⁶² (S. R. & O. No. 26 of 1998), (St. Vincent and the Grenadines).

³⁶³ (Cap. 52) (Act 8 of 1986), (St. Vincent and the Grenadines).

³⁶⁴ (Cap. 333) (Act 15 of 1983), (St. Vincent and the Grenadines).

³⁶⁵ (Act No. 26 of 2001), (St. Vincent and the Grenadines).

³⁶⁶ (Cap. 331) (Act 10 of 1981), (St. Vincent and the Grenadines).

³⁶⁷ (Act No. 6 of 2002), (Act 10 of 1981), (St. Vincent and the Grenadines).

³⁶⁸ (Act No. 16 of 2002), (St. Vincent and the Grenadines).

³⁶⁹ (Act No. 53 of 2002), (St. Vincent and the Grenadines).

not well established. Notably, in conducting this study it was difficult to acquire information about the marine protected areas of St. Kitts and Nevis as studies up to 2006 have indicated that there is no definitive list of proposed protected areas.

Both countries have implemented legislation which has incorporated the ecosystem-based management approach. St. Kitts and Nevis' National Conservation and Environment Protection Act 1987³⁷⁰ covers a broad range of environmental issues thus providing guidance for ocean governance. St. Vincent and the Grenadines has enacted a number of separate Acts in comparison. Both countries have also implemented a Fisheries Act,³⁷¹ and St. Vincent and the Grenadines also has passed a Marine Parks Act 1997³⁷² which seeks to deal with a wider range of uses and protection regimes for its marine resources.

The EBMPs have been implemented in St. Kitts and Nevis and Trinidad and Tobago with varying intensity. The Federation of St. Kitts and Nevis was the pioneer in making moves towards integrative environmental management³⁷³ with its National Conservation and Environment Protection Act 1987,³⁷⁴ but Trinidad and Tobago has appeared to have taken the lead in the race between the two, with the enactment of its integrative Environmental Management Act 2000.³⁷⁵

There are notable commonalities and differences between the two territories in regards to the implementation of ecosystem-based management principles, which undoubtedly have affected the comprehensiveness of the countries' ecosystem management. The National Conservation and Environment Protection Act 1987 of St. Kitts and Nevis³⁷⁶ reflects some principles of ecosystem-based management, but admittedly there are institutional gaps such as inadequate enforcement and support systems and lack of an institutional coordinating mechanism, which needs to be addressed to effect improvement in the institutional framework.³⁷⁷ However, the Trinidad and Tobago Environmental Management Act 2000³⁷⁸ appears more advanced and comprehensive in its ideologies of ecosystem-based management. This is evidenced by its extensive preamble which explicitly promulgates for the application of a national strategy of sustainable development, and the provision of an Environmental Management Authority with extensive functions and a unique Environmental Commission which has the jurisdiction to entertain appeals from decisions of the Environmental Management Authority.³⁷⁹

In terms of institutional arrangements, St. Kitts and Nevis has employed the usage of both governmental and non-governmental organizations to promote the development of protected areas. There is the Department of Fisheries and the Department of Physical Planning and Environment, both of which deal with biodiversity; St. Kitts and Nevis Solid Waste Management Corporation which deals with Waste Management and the Fisheries Management Unit; and the

³⁷⁰ (No. 5 of 1987), (St. Kitts and Nevis).

³⁷¹ See Fisheries Act 1984 (No. 4 of 1984), (St. Kitts and Nevis), and Fisheries Act (Cap. 52) (Act 8 of 1986), (St. Vincent and the Grenadines).

³⁷² (Act No. 9 of 1997), (St. Vincent and the Grenadines).

³⁷³ Winston Anderson, 'Caribbean Environmental Law Development and Application: Environmental legislative and judicial developments in the English-Speaking Caribbean countries in the context of compliance with Agenda 21 and the Rio Agreements' (2002)

<<http://www.pnuma.org/deramb/publicaciones/CaribbeanEnvLaw.pdf>> accessed 3 June 2010.

³⁷⁴ (No. 5 of 1987), (St. Kitts and Nevis).

³⁷⁵ (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

³⁷⁶ (No. 5 of 1987), (St. Kitts and Nevis).

³⁷⁷ National Conservation and Environment Protection Act 1987 (No. 5 of 1987), (St. Kitts and Nevis).

³⁷⁸ (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago).

³⁷⁹ *Id.*

Nevis Island Assembly which deals with Fisheries Management.³⁸⁰ In similar fashion, Trinidad and Tobago has employed agencies and divisions such as the Institute of Marine Affairs³⁸¹ and the Fisheries Division in promoting marine biodiversity.³⁸²

Both territories have been working towards the development of marine biodiversity and sustainable development with their participation in a number of regional and sub-regional environmental programmes, including the CRFM.³⁸³

The incorporation of EBMPs is evident in St. Kitts and Nevis' National Biodiversity Strategies and Action Plan 2005-2009 which includes a number of strategies and actions focused on protected areas.³⁸⁴ Additionally, protected areas policy is supported by policy directions in the Medium Term Economic Strategy Paper 2005-2007, which identifies protected areas as a supporting strand for tourism and fisheries sector development.³⁸⁵ Not to be outdone, Trinidad and Tobago has taken the initiative and undertaken its own extensive National Biodiversity Action Plan. Since ratifying the CBD in 1996, Trinidad and Tobago has engaged in a widespread national and planning project for the conservation and sustainable use of the country's biodiversity resources.³⁸⁶

Needless to the say, St. Kitts and Nevis has made some strides in the attainment of comprehensive environmental management, but there is still need for explicit legislation which will encompass all the principles of ecosystem-based management. Trinidad and Tobago has presented integrative legislation on environmental management and an ambitious National Biodiversity Action Plan, which is hoped to contribute to conservation and sustainable use of biodiversity on a global scale.³⁸⁷

3.2 Conclusion

The importance of the ecosystem approach rests in its multi-faceted approach to conserving the environment. It seeks to not only involve all relevant stakeholders but create a template of how to attain best practices and relevant information for future reference and present protection of every ecosystem. The twelve principles give a dynamic and detailed method of attaining preservation, conservation and sustainable use of the environment and their implementation and is an effective method to safeguard most ecosystems.

4 THE REGULATORY REGIME OF OCEAN GOVERNANCE IN THE CARIBBEAN

³⁸⁰ Lloyd Garner, 'Review of the Policy, Legal and Institutional Frameworks for Protected Areas Management in St. Kitts and Nevis' (OECS Protected Areas and Associated Livelihoods Project 2006) <<http://www.ess-caribbean.com/publications/Review%20of%20Protected%20Areas%20Management%20Framework%20in%20St.%20Kitts%20and%20Nevis%202006.pdf>> accessed 3 June 2010.

³⁸¹ One Fish, 'Institute of Marine Affairs, Trinidad' (Marine Scientific Research) <<http://www.onefish.org/servlet/CDSServlet?status=ND00MjluMjMyNzAmNj11biYzMz13ZWItc2l0ZXMmMzc9aW5mbw~~~>> accessed 3 June 2010.

³⁸² Food and Agriculture Organisation of the United Nations, 'Fishery and Aquaculture Country Profiles: Trinidad and Tobago' (2010) <http://www.fao.org/fishery/countrysector/FI-CP_TT/en> accessed 3 June 2010.

³⁸³ Lloyd Garner, 'Review of the Policy, Legal and Institutional Frameworks for Protected Areas Management in St. Kitts and Nevis' (OECS Protected Areas and Associated Livelihoods Project 2006) <<http://www.ess-caribbean.com/publications/Review%20of%20Protected%20Areas%20Management%20Framework%20in%20St.%20Kitts%20and%20Nevis%202006.pdf>> accessed 3 June 2010.

³⁸⁴ *Id.*

³⁸⁵ *Id.*

³⁸⁶ Environmental Management Authority, 'Biodiversity Strategy and Action Plan for Trinidad and Tobago' (National Biodiversity Strategy and Action Plan) <<http://www.cbd.int/doc/world/tt/tt-nbsap-01-p1-en.pdf>> accessed 3 June 2010.

³⁸⁷ *Id.*

Animals living in the waters, especially the sea waters...are protected from the destruction of their species by man. Their multiplication is so rapid and their means of evading pursuit or traps is so great, that there is no likelihood of his being able to destroy the entire species of any of these animals.

Jean Baptiste Lamarck, 1809³⁸⁸

Once upon a time, one might have been able to convince another that the environment, its ecosystems and myriad species were immune from man's pursuit for development and a modern world; that man could not seriously harm the environment, particularly ocean wildlife. Now we know better, or least we should. Lamarck's world no longer exists if it ever did. According to a more recent opinion on the plight of ocean life by Dr. Ransom Myers and Dr. Boris Worm the "large predatory fish biomass today is only about 10 percent of pre-industrial levels...declines of large predators in coastal regions have extended throughout the global ocean, with potentially serious consequences for ecosystems." Our oceans and ocean wildlife are presently under threat. So too is man whose existence is tied very much to the ocean. Ocean governance, therefore forms, an integral part of overall environmental protection.

In this Chapter the regulatory or institutional regimes found throughout the Caribbean in relation to ocean governance at the national, regional and sub-regional levels will be assessed. First, a brief overview of the national institutional regimes present within the Caribbean will be conducted. Second, reference will be made to the relationship between the sub-regional and regional regimes within the Caribbean, and third, to conclude, an overall assessment of these regimes will be made.

³⁸⁸ Claudia E. Mills, 'Man's Changing Views of the Oceans' (2008) <<http://faculty.washington.edu/cemills/Oceanquotes.html>> accessed 3 June 2010.

4.1.1 Antigua and Barbuda

Antigua and Barbuda does not necessarily have its own domestic scope of ocean governance, but pays homage to it under the ambit of the Organisation of Eastern Caribbean States (OECS).³⁸⁹ The OECS is a party to the United Nations Convention on the Law of the Sea,³⁹⁰ and the Caribbean Environment Programme (CEP), which is in turn administered by the United Nations Environment Programme (UNEP).³⁹¹ Even where Antigua and Barbuda may have attempted on its own to accede to various regional and international agreements, implementation would prove to be difficult as the state does not have specified agencies or institutions to effect implementation. As such, it falls back on governmental ministries and divisions whose sole focus may not be the speedy execution of the obligations established by these policies. This was evident when Antigua and Barbuda had to repay the CEP for stonewalling the implementation of the Sea Turtle Recovery Action Plan recommended by the UNEP and the CEP.³⁹² Thus, if Antigua and Barbuda is to become more integrated into the concept of ocean governance, it is critical that: (1) it creates and introduces legislation that speaks specifically to the protection of its industries which would benefit from ocean conservation; and (2) it establish particular agencies to deal with specifically environmental conservation, such as the Environmental Management Authority of Trinidad and the National Environmental Planning Agency of Jamaica.

4.1.2 The Commonwealth of The Bahamas

In The Bahamas, there is The Bahamas National Trust (BNT), The Bahamas Sport Fishing & Conservation Association (BSCA), and The Bahamas Reef Educational Foundation (BREEF).

The BNT established by The Bahamas National Trust Act, 1959 is charged with the responsibility of conserving and preserving places of historic interest and natural beauty in The Bahamas.³⁹³ This is an extraordinary institution as it is the only self-funded, legislated, non-governmental organisation in the world which is in charge of managing a National Park system. One of the BNT projects and contributions include making recommendations on fisheries regulations. This led to a successful campaign to stop long-line fishing in The Bahamas territorial waters.³⁹⁴ The BNT has the support of The Bahamas Defence force to ensure that their protected parks are securely maintained. Three officers are stationed at the Park headquarters and are, *inter alia*, the enforcement arm for fisheries in The Bahamas.³⁹⁵

The BSCA is yet another non-governmental organization established as a non-profit organisation in The Bahamas that has significant importance in the protection of The Bahamas marine life. This association is incorporated under the Companies Act 1992³⁹⁶ with one of its primary

³⁸⁹ See Treaty Establishing the Organisation of Eastern Caribbean States (adopted 18 June 1981, entered into force 2 July 1981) 1338 UNTS 97, 20 ILM 1166 (1981) (“OECS Treaty”).

³⁹⁰ 1833 UNTS 3.

³⁹¹ See, Institutional and Financial Arrangements for International Environmental Co-operation UNGA Res. 2997 of 1972.

³⁹² See -, ‘Antigua and Barbuda clears arrears to regional programme’ (UNEP News and Events) <<http://www.cep.unep.org/news-and-events/antigua-barbuda-clears-arrears-to-regional-programme>> accessed 3 June 2010.

³⁹³ See The Bahamas National Trust, ‘Historical Overview’ (2009) <http://www.bnt.bs/historical_overview.php> accessed 3 June 2010.

³⁹⁴ See United Nations, ‘Johannesburg Summit 2002: Bahamas Country Profile’ <<http://www.un.org/esa/agenda21/natinfo/wssd/bahamas.pdf>> accessed 3 June 2010.

³⁹⁵ See Exuma Cays Land & Sea Park, ‘Royal Bahamas Defence Force’ (2010) <<http://www.exumapark.info/BahamasDefenceForce/tabid/95/Default.aspx>> accessed 3 June 2010.

³⁹⁶ (Ch. 308) (18 of 1992), (The Bahamas).

objectives being to develop and manage a National Marine Conservation Programme.³⁹⁷ Its mission is to ‘‘promote conservation of habitats, marine life as well as a sustainable fishery in The Bahamas.’’³⁹⁸ The BSCA however faces the usual financial problem that plagues these types of institutions. These resources are sometimes insufficient to develop the needed conservation actions/initiatives.³⁹⁹

Another institution that has added its contribution to ocean governance is BREEF. This NGO which started off initially as a facility for educating Bahamians about the marine environment has now developed to become a watchdog for the marine environment, and advocates for political change and public educators.⁴⁰⁰ This organisation is funded by donations and foundation grants.

4.1.3 Barbados

The Environmental Protection Department (EPD) of the Government of Barbados, and the Ministry of the Environment, Water Resources and Drainage aim to protect the island’s marine resources from pollution in its mandate towards environmental and public health protection. In recent times, the (EPD) has acknowledged the necessity for greater focus on matters related to marine pollution control. Hence, the Marine Pollution Section was developed within the Department to deal with all issues related to marine pollution and specifically to implement the Marine Pollution Control Act.⁴⁰¹ The principal responsibility of the EPD and the Coastal Zone Management Unit (CZMU) is to protect the island’s marine resources.⁴⁰² Hence there is a close collaborative effort between the Marine Pollution Section of the EPD along with the CZMU in an effort to regulate activities and development which may have a negative impact on the marine environment. These departments use the Marine Pollution Control Act⁴⁰³ and the Coastal Zone Management Act⁴⁰⁴ as the main legal instruments to assist in the conservation and regulation of marine environment quality, and coastal marine resources.

4.1.4 Belize

Belize being a coastal state on mainland Central America has a rather simple approach to ocean governance in comparison to other jurisdictions like Jamaica. The UNEP posits that the territory’s increasing usage of its marine areas, such as the 260 km long barrier reef, as tourist attractions has the potential to occasion significant injury to the marine environment. Historically, prior to the country’s independence, Belize adopted a fragmented approach to environmental legislation.⁴⁰⁵ However post-independence has seen the formulation of the

³⁹⁷ See Bahamas Sportsfishing & Conservation Association, ‘About Us: Who We Are’ (2010) <http://bahamasconservation.org/who_we_are.php> accessed 3 June 2010.

³⁹⁸ *Id.*

³⁹⁹ Colleen Pitrone, ‘Bone Fishing 101: Two bonefishing guides help bring success to their sport’ <<http://www.internationaljournalism.com/2007/bonefishing.html>> accessed 3 June 2010.

⁴⁰⁰ BREEF, ‘A BREEF History of the Organisation’ <<http://www.breef.org/AboutUs/tabid/53/Default.aspx>> accessed 3 June 2010.

⁴⁰¹ (Cap. 392A) (1998-40), (Barbados).

⁴⁰² University of the West Indies *et al.*, ‘An overview of the Marine Pollution Control Act, Coastal Zone Management Act and the Protocol on Land-Based Sources of Pollution’ University of The West Indies (Public Consultation 2004) <<http://www.epd.gov.bb/UserFiles/File/Publications/Marine%20Pollution%20Control/An%20Overview%20Of%20MPCA,%20CZMA%20And%20LBS%20Protocol%20-%20Printable%20Version.pdf>> accessed 3 June 2010.

⁴⁰³ (Cap. 392A) (1998-40), (Barbados).

⁴⁰⁴ (Cap. 394) (1998-39), (Barbados).

⁴⁰⁵ For example:

1. Under the Maritime Areas Act (Cap. 11) (1 of 1992), (Belize) an act of wilful and serious pollution robs the vessel of the right of innocent passage through territorial waters;
2. The Belize Port Authority Act (Cap. 233) (2 of 1976), (Belize) contains regulatory powers that enable the restriction, regulation and control of the depositing of any substance, solid matter, article or thing capable of polluting a port;

primary agency responsible for environmental protection, in particular ocean governance, within the territory. The Environmental Protection Act⁴⁰⁶ established the Department of the Environment (DOE) charged with ensuring the protection and rational use of all the country's resources.

The DOE combines executive and advisory roles with twenty-seven specific functional areas. It achieves the greatest specifications of functions in this way. It has the overall task of administering the EP Act and regulations made thereunder and of taking the necessary actions to enforce the legislative provisions. The DOE is headed by a public official, the Chief Environmental Officer, appointed by the Governor-General and comprises such other environmental officers, inspectors and staff as are appointed by the Public Services Commission. The DOE at once enhances the profile and standing of the Ministry or requires the establishment of such a Ministry where none existed before. Also, it is often easier to integrate into the existing administrative structure where environmental management is in the hands of other government departments. Often there may even be an overlap of personnel. Far less violence is therefore likely to be engendered than with the creation of a separate statutory body with executive-type functions as in the case of the National Resources Conservation Authority or National Environmental Planning Agency in Jamaica, the Environmental Management Authority in Trinidad and Tobago, or the Environmental Protection Agency in Guyana.

4.1.5 The Commonwealth of Dominica

In the island of Dominica, the institutional regimes of the Fisheries Division of the Government of The Commonwealth of Dominica and the Local Area Management Authority have both been established to maintain the Scotts Head, Soufriere, and Pointe Michel marine areas in Dominica. The Soufriere and Scotts Head Marine Reserve (SSMR), situated on the south-western coast of Dominica, consists of communities built on a tradition of fisheries. The SSMR was established under the Fisheries Act⁴⁰⁷ and by the Fisheries (Soufriere/Scotts Head Fisheries Management Area) Notice 1998.⁴⁰⁸ Due to the increasing demand placed on limited resources by the rapidly growing tourism sector which causes the diversified and limited resources to be exploited and possibly threatened by other uses, a protection and management plan was implemented. The goal of the project is to minimize user conflicts, preserve traditional fishing cultures, cater to the trends in development and conserve a resource that is unique to the area.

4.1.6 The Co-operative Republic of Guyana

The Environmental Protection Act 1996 established the Environmental Protection Agency (EPA), the major environmental protection organisation in Guyana. The EPA has worked alongside the Guyana Marine Turtle Conservation Society (GMTCS) to preserve and restore four species of marine turtles in Guyana.⁴⁰⁹ This project can be seen as successful because of the insistence on public participation by the EPA and more particularly, the GMTCS. Community

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3. Provisions under the Fisheries Act (Cap. 210) (1948), (Belize) allowed for the establishment marine reserves. The Minister may designate Reserves where extraordinary measures are necessary within any area within the fishing limits of Belize. Reserves may be undesignated by him where circumstances warrant;
 4. The Hol Chan Marine Reserve (Amendment) Regulations 1989 (S.I. No. 113 of 1989), (Belize) provide for prohibitions against the depositing of materials in the reserve without a licence; and
 5. The Dumping at Sea Act 1974 (UK), which was UK legislation implementing the London Convention, was applied to Belize before independence by the Dumping at Sea Act 1974 (Overseas Territories) Order 1975.

⁴⁰⁶ (Cap. 328) (22 of 1992), (Belize).

⁴⁰⁷ (No. 11 of 1987) (Dominica).

⁴⁰⁸ (S.R. & O. No. 18 of 1998), (Dominica).

⁴⁰⁹ Wisser Earth, 'Guyana Marine Turtle Conservation Society GMTS Non Governmental Organization' (Project of the Natural Capital Institute 2005-2010) <<http://www.wiserearth.org/organization/view/70053dac9a0f2d0ebf0f711930e87f42>> accessed 3 June 2010.

involvement is an important aspect of species conservation. The Cartagena Convention⁴¹⁰ is seen as a positive to the preservation of the marine landscape in Guyana. It has led to the development of policies and legislative initiatives to manage all types of waste in Guyana. However, the attempts to deal with marine waste are still deficient. The pieces of legislation targeting this area are few and in piecemeal form. There still remains much to be learned and to be desired in terms of marine litter in Guyana and its full impact on the marine ecology.

4.1.7 Grenada

On a national level as well as in association with regional organisations, Grenada has adopted policies and set up institutions aimed at protecting its marine environment. These institutions have been established in response to the environmental issues plaguing the Caribbean Sea, in particular Grenada's waters, such as rampant overfishing, marine litter, and the destruction of coral habitats. Grenada's Fisheries Act⁴¹¹ places a duty on the Minister to adopt measures and policies aimed at managing and developing the fisheries sector. Through this Act attempts were made to establish a Fisheries Advisory Committee but owing to insufficient enthusiasm generated for this committee (particularly from among Grenada's fisheries arena), it could not be successfully established. Any benefits from such a committee could not be realised.⁴¹²

Grenada has also an NGO responsible for hosting numerous national projects intended to preserve Grenada's marine and coastal ecosystems, namely, Friends of the Earth (Grenada).⁴¹³ These activities include coastal cleanups, and campaigns against shipment of nuclear and other toxic waste in the Caribbean Sea. The group allows for public participation in its endeavours as it realises that public participation is integral in the preservation of any ecosystem, in particular, the sensitive marine and coastal ecosystems of the Caribbean.

Another major project spearheaded by Grenada, but especially in relation to Carriacou is the Carriacou Environmental Committee (CEC). It was established to manage eco-tourism, and waste issues as well as to run the Save Sandy Island Campaign. Over time, the membership of the Committee dwindled dramatically. In 2008, there were approximately only four active members on the CEC.⁴¹⁴ However, in 2009 after some changes were made to the Committee, it collaborated with the Sustainable Grenadines Project (SusGren) to establish the Sandy Island Oyster Bed Marine Protected Area (SIOBMPA)⁴¹⁵. These efforts were an attempt to have Sandy Island declared a marine protected area, and were still in the works with the relevant documents lodged in Parliament awaiting approval. SusGren was responsible for hosting workshops, exchanges, and mini projects to control unplanned development and unregulated use of marine resources and habitats. The main problem of this programme was the absence of funding which is needed to carry out its third and final phase. It is a noteworthy project as it attempts to help the islands of the Grenadines in their efforts to protect their marine ecology.

4.1.8 Jamaica

⁴¹⁰ 22 ILM 221 (1983). Grenada has ratified this Convention, but not Guyana.

⁴¹¹ (Cap. 108) (Acts 15 of 1986 and 25 of 1989), (Grenada).

⁴¹² Rosemarie Kishore *et al*, 'Political Organisation & Socio-economics of Fishing Communities in Trinidad and Tobago, Grenada and Belize' in Yvan Breto *et al* (eds), *Coastal Resource Management in the Wider Caribbean: Resilience, Adaptation, and Community Diversity* (2006).

⁴¹³ See Augustus Thomas, 'Grenada, Carriacou & Petit Martinique' (National Report on the Implementation of the United Nations Convention to Combat Desertification and/or Drought ("UNCCD") for the Forestry Department, Ministry of Agriculture, Lands, Forestry, and Fisheries, St. George's 2000) 26 <<http://unccd.int/cop/reports/lac/national/2000/grenada-eng.pdf>> accessed 5 June 2010.

⁴¹⁴ Tara Sawatsky, 'Building capacity in a community-level environment' (Tara Sawatsky's CIDA International Youth Internship in Carriacou, Grenada 2008) <www.marineaffairsprogram.dal.ca/Files/Tara_Sawatsky_write_up_final.pdf> accessed 3 June 2010.

⁴¹⁵ Note that at time of publication the SIOBMPA

Ocean governance in the island of Jamaica has arguably developed substantially in comparison with other Caribbean territories. Though the enforcement of environmental protection has been largely diversified among various regional and national institutions,⁴¹⁶ this has been due to the enactment of effective legislation stemming from the Maritime Areas Act 1996⁴¹⁷ to the Natural Resources Conservation Authority Act 1991⁴¹⁸ as augmented by regulations and policies. Further this has been due to the various international conventions and treaties to which the country has signed and ratified.⁴¹⁹ On 29 April 1991 the Natural Resources Conservation Authority (NRCA) was legally constituted under the Natural Resources Conservation Authority Act 1991 to provide for the management, conservation and protection of the natural resources of Jamaica. The NRCA exercises wide powers in the discharge of its functions as it carries out appropriate operations to prevent polluting matter from entering or further polluting any water sources. It promotes also other environmentally helpful activities. The NRCA Act 1991 has spawned the National Environmental Planning Agency (NEPA) which works in conjunction with the NRCA to manage the environment of Jamaica. These agencies deal with several institutional or regulatory entities created by different pieces of legislation within the territory. Further to this, the agencies are responsible for project implementation; regulation and enforcement of environmental laws; coastal conservation; advising the relevant government departments; educating the public; and ensuring the efficient operation of beach and park facilities.

There are numerous other institutions responsible for ocean governance within Jamaica including the National Council on Oceans and Coastal Zone Management (NCOCZM) stemming from the Ministry of Foreign Affairs and Foreign Trade,⁴²⁰ the Maritime Authority,⁴²¹ the Port Authority,⁴²² the Fisheries Division of the Ministry of Agriculture,⁴²³ and various private NGOs⁴²⁴ to which the NRCA and the NEPA have delegated responsibility for management of specific protected areas.

The NCOCZM is one of the main institutional regimes responsible for environmental protection in Jamaica. The Council lacks, however, a legislative base and this could raise public law issues where directions are given to bodies discharging statutory functions. In this regard, its existence might simply mean an additional level of bureaucracy. The Marine and Aviation Affairs Department, originating from the Ministry of Foreign Affairs and Foreign Trade, has prime policy making functions with specific focus on the coordination of the development of an integrated marine policy covering the island's coastal and maritime zones, including the territorial sea and exclusive economic zone. The department has widespread authority with specific reference to ocean governance. It is responsible for negotiating and implementing maritime delimitation and fishing agreements; monitoring implementation of the Maritime Cooperation Agreements for Interdiction of Drug Trafficking; and the establishment and operation of the International Seabed Authority in its capital, Kingston.

⁴¹⁶ See e.g., Natural Resources Conservation Authority, National Environmental Planning Agency; National Council on Oceans and Coastal Zone Management, Maritime Authority, and the Port Authority.

⁴¹⁷ (Act 25 of 1996), (Jamaica).

⁴¹⁸ (Act 9 of 1991), (Jamaica).

⁴¹⁹ The Natural Resources Conservation Authority/National Environmental Planning Agency form the implementing agency for several international conventions. See *Natural Resources Conservation Authority v Seafood and Ting International Ltd.*; *Natural Resources Conservation Authority v DYC Fishing Ltd.* (1999) 58 WIR 269.

⁴²⁰ The Ministry of Foreign Affairs and Foreign Trade is primarily responsible for implementing environmental policy and research.

⁴²¹ The Maritime Authority is responsible for the regulation of shipping.

⁴²² The Port Authority is responsible for the operation of harbors, ports, and marinas, in addition to, the safety and pollution in territorial waters.

⁴²³ The Fisheries Division of the Ministry of Agriculture is responsible for Fisheries Management.

⁴²⁴ See e.g., the Montego Bay Marine Park Trust and the Caribbean Coastal Area Management Foundation.

The Maritime Authority of Jamaica⁴²⁵ also plays an important role in contributing to the development of policy for ocean and coastal zone management. It operates in relation to the entire marine areas of Jamaica and proposes an integrated approach to pollution prevention for inland waters. The main objective of the Maritime Authority is the timely and effective implementation of maritime conventions.⁴²⁶ The Maritime Authority functions both in relation to the safety of shipping and navigation route, marine pollution, and civil liability for pollution damage.

4.1.9 St. Kitts and Nevis

In St. Kitts and Nevis under the National Conservation and Environment Protection Act 1987,⁴²⁷ the Government through the appropriate Minister is empowered to declare certain areas as protected areas, for instance beaches. In addition, there are NGOs at the national level whose objectives include marine protection. One such organization is St. Christopher Heritage Society. This society undertakes regular turtle monitoring on selected beaches and ensures that these sites are protected during nesting season. A second very important organisation at the national level is the Nevis Historical and Conservation Society. The Environmental Action Committee directs the actions of both organisations which not only include coastal cleanups, but which also extend to the safety and preservation of marine life.

4.1.10 Saint Lucia

Here, the Saint Lucia National Trust proposed the idea of a system of protected areas for the island. The result was Soufriere Marine Management Area (SMMA) and the Canaries-Anse la Raye Marine Management Area (CAMMA). It finally dawned that the St. Lucian coastal and marine reserves not only remained unprotected and suffered from the degradation of coastal water quality; but also that there was a depletion of fisheries reserves, destruction of coral reefs, and the exploitation of the environment in close proximity to beaches. The SMMA and the CAMMA were given the authority to monitor coral reefs, water quality and other environmental factors. They are also entitled to carry out scientific research, and control the number of fishers through a system of registration and license. Part of their efforts involves also beach and under-water clean-ups.

Enforcement of fisheries legislation is carried out by the Department of Fisheries in collaboration with the Marine Police Unit and the District Police of the Royal St. Lucia Police Force. Three very important pieces of legislation at the national level worth mentioning are: Oil in Navigable Waters Act,⁴²⁸ The Maritime Areas Act,⁴²⁹ and The Fisheries Act.⁴³⁰ These Acts assist in ensuring that coastal and marine areas are adequately provided for.

⁴²⁵ The Maritime Authority of Jamaica was founded in 1998 under the Shipping Act 1998 (Act 8 of 1998), (Jamaica).

⁴²⁶ Relevant conventions include the UNCLOS, International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (adopted 7 July 1978, entered into force 28 April 1984) 1361 UNTS 2 (“STCW 78/95”); MARPOL 73/78; London Convention; International Convention Relating to Intervention on the High Seas in Case of Oil Pollution Casualties (adopted 29 November 1969, entered into force 6 May 1975) 9 ILM 25 (1969) (“Intervention Convention”); International Convention on Civil Liability for Oil Pollution Damage (adopted 29 November 1969, entered into force 19 June 1975) 973 UNTS 3, 9 ILM 45 (1970) (“CLC”); and International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (adopted 18 December 1971, entered into force 16 October 1978) 11 ILM 284 (1972), 1110 UNTS 57, as amended by the Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (adopted 19 November 1976, entered into force 22 November 1994) 16 ILM 621 (1977), as amended by the Protocol of 1992 to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (adopted 27 November 1992, entered into force 30 May 1996) 1953 UNTS 330 (“Fund Conventions”).

⁴²⁷ (No. 5 of 1987), (St. Kitts and Nevis).

⁴²⁸ (Cap.6.07) (Acts 8 of 1929, 7 of 1972 and 6 of 1984), (St. Lucia).

⁴²⁹ (Cap.1.16) (Act 6 of 1984), (St. Lucia).

4.1.11 St. Vincent and the Grenadines

As mentioned earlier about Antigua and Barbuda, St. Vincent and the Grenadines also do not have any actual organisations which deal with ocean governance, but rather have passed various pieces of fisheries legislation in accordance with regional guidelines. The focus of most of this legislation is to promote stock recovery, which is necessary to alleviate destructive fishing practices.

4.1.12 The Republic of Trinidad and Tobago

Trinidad and Tobago, like Jamaica, has a rather extensive regime which deals with ocean governance. Its institutional regime includes the Environmental Management Authority (EMA), the Environmental Commission (EC), the Institute of Marine Affairs (IMA), the Buccoo Reef Trust (BRT), the Department of Marine Resources and Fisheries, and the Tobago House of Assembly (THA). The EMA is established under the Environmental Management Act 2000⁴³¹ and is given the authority under section 16 (1) (b) of the Act to develop and implement policies and programmes for the effective management and wise use of the environment. It has the authority to also, *inter alia*, co-ordinate environmental management functions performed by persons in Trinidad and Tobago;⁴³² make recommendations for the rationalisation of all governmental entities performing environmental functions;⁴³³ promote educational and public awareness programmes on the environment;⁴³⁴ develop and establish national environmental standards and criteria;⁴³⁵ monitor compliance with the standards criteria and programmes relating to the environment;⁴³⁶ take all appropriate action for the prevention and control of pollution and conservation of the environment;⁴³⁷ and establish and co-ordinate institutional linkages locally, regionally and internationally.⁴³⁸

The IMA was established by the Institute of Marine Affairs Act⁴³⁹ to deal with coastal zone management. Some of the functions of the IMA include conducting research and development on the marine and related resources of Trinidad and Tobago, the Caribbean, and adjacent regions.⁴⁴⁰ It is also responsible for furnishing information and advice to the Government to assist in the formulation of policies relating to marine life and other aspects of the environment.⁴⁴¹ Further, it is to advise on the development and optimum utilisation of the marine and coastal resource potential of Trinidad and Tobago.⁴⁴²

In terms of the BRT, this is a NGO established to assist with any problems associated with the marine environment in Tobago. It also deals with sustainable development of marine tourism, fishing, and aquaculture in the Caribbean region.⁴⁴³ Some projects of the organisation include coral bleaching surveys, Integrated Watershed and Coastal Area Management (IWCAM), and sea moss cultivation. Additionally, the BRT collaborates with the THA.

⁴³⁰ (Cap.7:15) (Act 10 of 1984), (St. Lucia).

⁴³¹ See s. 6, Environmental Management Act 2000 (Chap. 35:05) (Act. 3 of 2000), (Trinidad and Tobago).

⁴³² *Id.*, s. 16 (1) (c).

⁴³³ *Id.*, s. 16 (1) (d).

⁴³⁴ *Id.*, s. 16 (1) (e).

⁴³⁵ *Id.*, s. 16 (1) (f).

⁴³⁶ *Id.*, s. 16 (1) (g).

⁴³⁷ *Id.*, s. 16 (1) (h).

⁴³⁸ *Id.*, s. 16 (1) (i).

⁴³⁹ See, s. 3, Institute of Marine Affairs Act (Chap. 37:01) (Act 15 of 1976), (Trinidad and Tobago).

⁴⁴⁰ *Id.*, s. 5 (a), Institute of Marine Affairs Act, 2003 (Chap. 37) (Trinidad and Tobago).

⁴⁴¹ *Id.*, s. 5 (e).

⁴⁴² *Id.*, s. 5 (h).

⁴⁴³ Buccoo Reef Trust, 'About Us' <<http://www.buccooreef.org/about.html>> accessed 3 June 2010.

The THA has been given the authority to implement policy related measures to ensure the “conservation and improvement of the environment” under the Tobago House of Assembly Act 1980.⁴⁴⁴ The Marine Resources and Fisheries Unit, under the Tobago House of Assembly Act 1980, is responsible for the management of Tobago’s marine resources. One problem identified is the poorly defined roles and responsibilities for managers of natural resources.⁴⁴⁵

As was clearly shown, certain jurisdictions, such as Trinidad and Tobago, Jamaica, and The Bahamas, have very well established institutional regimes relating to ocean governance on a national level. Other territories such as Antigua and Barbuda and St. Vincent and the Grenadines do not have such stringent measures on a national level. These countries – Antigua and Barbuda and St. Vincent and the Grenadines – do show, however, that they are aware of the importance of environmental protection even if it is by virtue of their regional efforts and initiatives. Given the smaller territorial size of these CARICOM states, they have a limited voice as it relates to the wider ocean governance of the Caribbean. Naturally, more focus is given to larger territories which have developed/emerging oil, gas, and shipping industries (for example, Trinidad, Jamaica, and Belize) as these activities are the major perpetrators of ocean pollution and degradation. Yet it should be noted that if proper ocean governance is to be secured, implementation can not only occur at the national level – in isolation from the other sub-regional and regional initiatives – the efforts of every CARICOM state, united, is needed.

The CEP is a conglomerate of legislative, programmatic and institutional frameworks and entities working together in assisting the nations and territories of the Wider Caribbean Region to protect their marine and coastal environment as well as promote sustainable development. States such as Antigua and Barbuda, Guyana, St. Kitts and Nevis, and St. Vincent and the Grenadines, rely on this regional programme for most of their ocean governance. The CEP has three main sub-programmes: (1) Assessment and Management of Environment Pollution (AMEP); (2) Specially Protected Areas and Wildlife (SPAW); and (3) Communication, Education, Training and Awareness (CETA).

The Eastern Caribbean Coalition for Environmental Awareness (ECCEA) is another regional effort and it is an independent NGO whose priority action is to coordinate and implement regional conservation programmes and the development and preparation of project proposals for national environmental initiatives.⁴⁴⁶ Projects are designed to integrate an environmental dimension into the sustainable development process of each island and contribute positively to their economic growth individually and collectively. The Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)⁴⁴⁷ and its Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region (1990 SPAW Protocol)⁴⁴⁸ are seen as the most appropriate conservation instruments for implementation of the ECCEA’s mandate. Several organizations which aim to protect environmental factors in St. Vincent and the Grenadines include the Union Island Ecotourism Movement, Union Island Association for Ecological Preservation, Mayreau Environmental Development Organisation, and the Sea Breeze Whale & Dolphin Watchers.

Some CARICOM states, such as Guyana and St. Kitts and Nevis, are involved in the CFRM. This sub-regional inter-governmental fisheries organisation attempts to manage the regional

⁴⁴⁴ (Chap. 25:03) (Act 40 of 1996), (Trinidad and Tobago).

⁴⁴⁵ Emma Tompkis *et al* ‘Institutional networks for inclusive Coastal Management in Trinidad and Tobago’ Environment and Planning A 2002, Vol. 34, 1095 <<http://www.uea.ac.uk/env/people/adgerwn/envplanA.pdf>> accessed 3 June 2010.

⁴⁴⁶ -, ‘Information on Fisheries Management in St. Vincent and the Grenadines’ (2004)

<<http://www.fao.org/fi/oldsite/FCP/en/vct/BODY.HTM>> accessed 20 March 2010.

⁴⁴⁷ 22 ILM 221 (1983).

⁴⁴⁸ 2180 UNTS 101.

fisheries resource. It is a huge task since 95 per cent of the Caribbean states are dependent upon their fishing industries. No one organization is entirely responsible for marine management in the Caribbean, therefore CARICOM is really in the best position to develop marine governance policies for the wider Caribbean since it is most likely to have the support of most CARICOM states.

While the CRFM caters solely to the region's fisheries resource, the CEP takes a holistic approach to preserving the marine and coastal environment in the Caribbean. The CEP is empowered through the Cartagena Convention to adopt programmes to improve marine mammal conservation, such as what is currently being done through the 1990 SPAW Protocol mentioned earlier. In addition, the Regional Action Plan for the Management of Marine Litter (RAPMALI) falls under the CEP's Assessment and Management of Environmental Pollution (AMEP) programme. CEP has been involved in training and education through its Communication, Education and Training Awareness programme. The CEP has been very active in the region through its varied attempts to conserve the marine integrity of the Caribbean Sea. Its contributions are laudable.

St. Kitts and Nevis is yet to ratify the 1990 SPAW Protocol. Until it does so, as well as, incorporate the Convention into its domestic law, the mandates of the CEP are not enforceable in the island. Notwithstanding, an important proposal was made to St. Kitts and Nevis as part of the action plan for CEP - the Wider Caribbean Sea Turtle Recovery Team and Conservation Network (WIDECAST). This network aims to assist local governments in achieving their obligations under the 1990 SPAW Protocol. WIDECAST has worked in collaboration with the Nevis Historical and Conservation Society to implement a program to promote the survival of the remaining sea turtle stocks on the island. Some of the proposals were implemented despite the fact that the Convention has not been ratified.

St. Kitts and Nevis is also a member of the OECS, which is a sub-regional body operating in the Caribbean. Recently, the OECS implemented a Solid Waste Management Project of which St. Kitts and Nevis was a participant. This also fell in line with the "Special Area" designation of the Caribbean Sea for MARPOL 73/78. The project sought to provide ship waste reception facilities at major ports and marinas.

In terms of St. Lucia, it has signed and ratified the Cartagena Convention. At the centre of this agreement is a Caribbean plan which seeks to promote regional cooperation in oil spill planning, prevention, control, and cleanup. This plan is known as the Caribbean Island Oil Pollution Preparedness Response and Co-operation Plan (OPRC). St. Lucia has made great strides in fulfilling their obligations under this convention. They have implemented their own plan, namely, the St. Lucia National Oil Spill Contingency Plan (OSP). The purpose behind this Caribbean plan is to enhance a territory's ability to respond to oil spills and to encourage friendly assistance by other territories. The Oil Pollution Action Committee (OPAC) is the body that is activated at the national level when there is a threat to the island. It is coordinated at the national level by National Emergency Management Office (NEMO), the St. Lucia Marine Police Unit, and the St. Lucia Fire Service.

The Convention Establishing the Association of Caribbean States (ACS Convention)⁴⁴⁹ was signed on 24 July 1994 in Cartagena de Indias, Colombia, with the aim of promoting consultation, cooperation and concerted action among all the countries of the Caribbean comprising 25 Member States (including Barbados and St. Vincent and the Grenadines) and three Associate Members. The Convention outlines the objectives of the ACS with the key

⁴⁴⁹ (Adopted 24 July 1994, entered into force 4 August 1995) 1895 UNTS 3 ("ACS Convention").

aim of preserving and protecting the environmental integrity of the Caribbean Sea and promoting the sustainable development of the Greater Caribbean.

4.2 Conclusion

In the Caribbean region, there have been numerous attempts to effectively manage the region's marine resources on national, sub-regional and regional levels. However, the lack of qualified personnel and financial assets has rendered some of these endeavors futile. Training has to be priority on the national and regional environmental agendas. Despite these setbacks, governments of the region have shown a serious commitment to battling the very real threat facing the Caribbean Sea, as evidenced by the numerous environmental Acts that can be found in every jurisdiction; the many regional conventions that have been joined; and the various environmental organizations operating on a national, regional and sub-regional level. It is observed that there is a pattern of interdependence among the CARICOM states; a common goal can be seen between the institutional regimes relating to ocean governance at the national, sub-regional, and regional levels. The economies of these Caribbean states rely heavily, if not solely, on the ocean for tourism, fishing, and oil. As a result, the protection of the ocean is of utmost importance. Indeed, certain jurisdictions are not as nearly organised and well funded as others; however, it is a fair assessment to state that improvements to the overall state of regulations applicable to ocean governance in the region will become a reality in the future as the Caribbean develops and its economies grow to facilitate further expansion.

5 THE ADOPTION OF ECOSYSTEM-BASED MANAGEMENT PRINCIPLES IN CARIBBEAN CASE LAW

At a meeting of the parties to the Convention of Biological Diversity (CBD) in 1998, the Ecosystems-Based Management Principles (EBMPs) were consolidated into what is now known as the "Malawi Principles". While some of these principles may not have been unknown prior to their pronouncement by virtue of the CBD, these concepts in the form that they have recently taken are now of major significance in the sphere of environmental management, particularly because they have provided a holistic approach to the protection and preservation of the environment. Essentially, this holistic approach entails a process that integrates biological, social, and economic factors into a comprehensive strategy aimed at protecting and enhancing sustainability, diversity and productivity of natural resources.⁴⁵⁰ In other words, EBMPs bring coherence to environmental management, creating a reasonable balance between human and environmental needs.

Given that all CARICOM states are parties to the CBD and are expected to model their environmental management on these principles, it is necessary to assess the extent to which this has been actually done. Generally, Caribbean judges do not directly refer to the CBD. This can be partially attributed to what appears to be a lax in the incorporation of the EBMPs into domestic legislation. They do however utilise the principles in indirect ways in their judgments using common law arguments to ground their reasoning, and where legislation does exist, judges have been known to take advantage of the existence of EBMPs.

Many of the cases which have indirectly adopted EBMPs are cases concerning judicial review or other areas in administrative law. They center, in particular, on the judicial review of decisions which granted environmental permits or certificates of environmental clearance CEC for projects

⁴⁵⁰ Michigan Department of Natural Resources and Environment, 'Principles of Ecosystem-Based Management' <http://www.michigan.gov/dnr/0,1607,7-153-10366_11865-31314--,00.html> accessed 3 June 2010.

that were deemed to be potentially detrimental to certain ecosystems. The judges often held that the relevant public authority failed to take into account proper considerations when making decisions which were of crucial environmental importance. This was particularly evinced in the cases which dealt with faulty or incomplete EIAs,⁴⁵¹ where the judges applied the EBMPs and held that the public authorities had a duty to drive the environmental protection campaign.⁴⁵² In cases that were in the realm of private law, such as those related to nuisance,⁴⁵³ the application of the principles were much more tenuous and in some cases virtually non-existent.

The cases that were found to be relevant to environmental law, more particularly EBMPs include:

- Belize Institute for Environmental Law v Chief Environmental Officer et al;⁴⁵⁴
- Benjamin v Attorney General et al;⁴⁵⁵
- Delapenha Funeral Home Ltd. v The Minister of Local Government and Environment;⁴⁵⁶
- Fishermen and Friends of the Sea v (1) The Environmental Management Authority and (2) BP Trinidad and Tobago LLC;⁴⁵⁷
- National Trust for the Cayman Islands et al v The Planning Appeals Tribunal et al;⁴⁵⁸
- Northern Jamaica Conservation Association et al v Natural Resources Conservation Authority & National Environmental and Planning Agency (No. 1) (“Pear Tree Bottom No. 1”);⁴⁵⁹
- Northern Jamaica Conservation Association et al v Natural Resources Conservation Authority & National Environmental and Planning Agency (No. 2) (“Pear Tree Bottom No. 2”);⁴⁶⁰
- People United Respecting the Environment (“PURE”) and Rights Action Group (“RAG”) v Environmental *Management Authority and Alutrint Limited*;⁴⁶¹
- People United Respecting the Environment (“PURE”) v The Environmental Management Authority (“EMA”);⁴⁶²
- R et al v ex parte Belize Alliance of Conservation Non Governmental Organisations (“BACONGO”);⁴⁶³
- R v Coffee Industry Board, ex parte Supreme Coffee Corporation Limited;⁴⁶⁴

⁴⁵¹ See e.g., *Northern Jamaica Conservation Association et al v Natural Resources Conservation Authority & National Environmental and Planning Agency (No. 1) (“Pear Tree Bottom No. 1”)* JM 2006 SC 49; *Benjamin v Attorney General et al* AG 2007 HC 54; *Save Guana Cay Reef Association Limited and Clarke, ex parte The Queen v Major et al* BS 2008 CA 9; and *R et al v ex parte Belize Alliance of Conservation Non Governmental Organisations (“BACONGO”)* BZ 2002 SC 14.

⁴⁵² See e.g., *Northern Jamaica Conservation Association et al v Natural Resources Conservation Authority & National Environmental and Planning Agency (No. 1) (“Pear Tree Bottom No. 1”)* JM 2006 SC 49; *Belize Institute for Environmental Law v Chief Environmental Officer et al* BZ 2008 SC 1; *People United Respecting the Environment (“PURE”) v The Environmental Management Authority (“EMA”)* No. 60 of 2000; *Delapenha Funeral Home Ltd. v The Minister of Local Government and Environment* JM 2008 SC 72; *National Trust for the Cayman Islands et al v The Planning Appeals Tribunal et al* KY 2000 GC 75; *Fishermen and Friends of the Sea v (1) The Environment Management Authority and (2) BP Trinidad and Tobago LLC* TT 2005 PC 15, [2005] UKPC 32; *Talisman (Trinidad) Petroleum Ltd. v The Environmental Management Authority*, Decision of Environmental Commission, No. EA3 of 2002, (Trinidad and Tobago).

⁴⁵³ See e.g., *Alcoa Minerals of Jamaica Inc. v Herbert Broderick (Jamaica)* [2000] UKPC 11.

⁴⁵⁴ BZ 2008 SC 13.

⁴⁵⁵ AG 2007 HC 54.

⁴⁵⁶ JM 2008 SC 72.

⁴⁵⁷ TT 2005 PC 15, [2005] UKPC 32.

⁴⁵⁸ KY 2000 GC 75.

⁴⁵⁹ JM 2006 SC 49.

⁴⁶⁰ JM 2006 SC 65.

⁴⁶¹ (CV 2007-02263).

⁴⁶² No. 60 of 2000.

⁴⁶³ BZ 2002 SC 14.

- Save Guana Cay Reef Association Limited and Clarke, ex parte The Queen v Major et al;⁴⁶⁵
- Talisman (Trinidad) Petroleum Ltd. v The Environmental Management Authority;⁴⁶⁶ and
- Virgin Islands Environmental Council v Attorney General and Another (“Beef Case”).⁴⁶⁷

These cases will be used in this report to illustrate in a more detailed manner the rationale behind EBMPs and their relevance to the Caribbean. Their interpretation and how they have been applied within the Caribbean will also be provided.

5.1 Principle One – The objectives of management of land, water and living resources are a matter of societal choice

This can essentially be equated to "governmental choice" as manifested in Acts and regulations geared towards ecosystem management. In the cases, it was seen that judges tried to enforce this principle by holding public authorities to the standard of ecological management set out in certain Environmental Acts. In the Jamaican case of *Northern Jamaica Conservation Association et al v Natural Resources Conservation Authority & National Environmental and Planning Agency (No. 1)* (“*Pear Tree Bottom No.1*”), the major issue evaluated was the extent to which the National Resources Conservation Authority fulfilled its statutory duty and acted according to its regulatory framework in granting the environmental permit. Further in *Delapenha Funeral Home Ltd. v The Minister of Local Government and Environment*, the legislature of Jamaica vested in the Minister wide powers to ensure that the environment is protected and managed in a sustainable way. The case centered on how the Minister exercised this power. In other Caribbean countries, including Trinidad and Tobago,⁴⁶⁸ Antigua and Barbuda,⁴⁶⁹ and the Cayman Islands,⁴⁷⁰ the judges seemed to also emphasize the need to conform to the statutory mandates of environmental management, thus indirectly utilizing the principle that such considerations are a matter of societal choice.

5.2 Principle Two – Management should be decentralized to the lowest appropriate level

There are two possible ways of interpreting this principle. Firstly decentralization relates to getting public participation. It also relates to the involvement of various bodies in the decision-making process of managing ecosystems. It is recognized that having a multiplicity of people or organizations involved creates checks and balances in the decision-making process. This was perfectly illustrated in National Trust for the Cayman Islands. For example, the case involved documentation of decisions made by the Director of Planning, the Director of the Department of Environment, as well as the Chief Fire Officer, the Director of Water Authority and the Director of Mosquito Research and Control, just to name a few. In *Fishermen and Friends of the Sea v (1) The Environmental Management Authority and (2) BP Trinidad and Tobago LLC*, management was also decentralised to the lowest appropriate level as British Petroleum (Trinidad and Tobago) was required to apply to the Minister of Energy for the Kapok project and to the Town

⁴⁶⁴ JM 1998 SC 60.

⁴⁶⁵ BS 2008 CA 9.

⁴⁶⁶ Decision of Environmental Commission, No. EA3 of 2002, (Trinidad and Tobago).

⁴⁶⁷ *Claim No. BVIHCV2007/0185 (Unreported)*.

⁴⁶⁸ See e.g., *Talisman (Trinidad) Petroleum Ltd. v The Environmental Management Authority*, Decision of Environmental Commission, No. EA3 of 2002, (Trinidad and Tobago), where s. 16 (2) of the Environmental Management Act 2000 (Chap. 35:05) (Act 3 of 2000), (Trinidad and Tobago) was quoted with approval.

⁴⁶⁹ See *Benjamin v AG et al* AG 2007 HC 54 and its application of the Physical Planning Act 2003 (No. 6 of 2003), (Antigua and Barbuda).

⁴⁷⁰ See *National Trust for the Cayman Islands et al v The Planning Appeals Tribunal et al* KY 2000 GC 75.

and Country Planning Department (TCPD), for their approval for the Bombax project. Again, Save Guana Cay Reef Association Limited and Clarke, ex parte The Queen v Major et al involved The Bahamas Environmental Science and Technology (BEST) Commission, which was created to act as a watchdog in the public interest, advising the Government on the environmental impact of the development proposal.

5.3 Principle Three – Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems

It is to be noted that a broad approach to the meaning of "ecosystems" is adopted here and it includes plant life, neighbourhoods, and water sources among many other things. Thus any impact to neighbouring communities may suffice to fall within this principle. In *Benjamin v Attorney General et al* it can be deduced throughout the judgment that the court was concerned about the likely impact that the construction would have on other ecosystems. The court noted the existence of the underground waterway which passed through the city that would have been affected by the car park that was to be constructed.

In *Belize Institute for Environmental Law v Chief Environmental Officer et al* the documentation signed by the parties and the EIA all stressed that managers of the ecosystem must take cognizance of the impact of their actions (that is the construction of the Chalillo Dam in the river) on the adjacent ecosystems and environment as a whole. The judge in the case reinforced the need to adhere to these stipulations and stressed that they failed to take into account the impact on the river itself and the nearby land space.

An extreme example presents itself in *Virgin Islands Environmental Council v Attorney General and Another* ("Beef Case") where the construction of a Five-Star hotel on Hans Creek would be damaging to the entire fisheries industry in The British Virgin Islands. The court therefore quashed the environmental permit granted for the development.

5.4 Principle Four – Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context

Here, the central question is: to what extent is damage to the environment justifiable in terms of economic gains. Essentially there must be a balance between ecosystem and economic considerations. In other words managers must weigh the benefits of the development *vis-à-vis* the costs to the environment.

There are two key ways in which this principle is elucidated in Caribbean jurisprudence. Firstly, judges take into account the amount of financial investment and the possible returns in assessing whether the decision to embark on a project that is ecologically damaging should be overturned. In *Northern Jamaica Conservation Association et al v Natural Resources Conservation Authority & National Environmental and Planning Agency (No. 2)* ("Pear Tree Bottom No. 2"), the need for preserving Pear Tree Bottom as an ecologically important area had to be understood in the context of the financial investment already made by HOJAPI Ltd. in the hotel development project. On the evidence given, HOJAPI Ltd. stood to suffer much economic detriment since it had already done phase one of the project in reliance on the environmental permit. On this basis, Sykes J varied his previous order which quashed the environmental permit given to HOJAPI Ltd.

Also in *Fishermen and Friends of the Sea*, when the matter reached before the Judicial Committee of the Privy Council (JCPC), both the Bombax and Kapok projects were completed, tallying US \$167.5 million and US \$256 million respectively. BP Trinidad and Tobago LLC (BPTT) thus heavily invested financially in these given projects. The JCPC took Principle 4 into

consideration in recognising the potential gains in managing the ecosystem in an economic context. To rule otherwise was thought to be substantially prejudicial to BPTT.

Another pertinent example is found in *Save Guana* where the massive economic advantages including increased jobs and a great boost in the tourist industry outweighed ecological concerns, and therefore the appeal to quash the environmental permit was denied.

Secondly this principle comes into play whereby the judges recognize that if there is damage to the ecosystem, developers should be made to pay the costs of such damage (i.e. the “polluter pays” principle). Therefore, costs for damage to the environment are viewed as part of the overall investment costs that a developer would incur. This concept was explored in *Delapenha Funeral Home Ltd*. The judge highlighted that in assessing the worthiness of the cemetery project, the already exorbitant costs are to be understood concomitant with additional costs that would be incurred by the developer in restoring the ecosystem should damage occur.

5.5 Principle Five – Conservation of ecosystem structure and functioning in order to maintain ecosystem services should be a priority target of the ecosystem approach

This principle indicates a preference for preserving the ecosystem. Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintenance of biological diversity than simply protection of species. This rationale was evident in *Save Guana* when the developers proposed that the project will feature modern infrastructure and utility systems designed for the preservation of the island's ecological system. Land would be allocated both for conservation of natural areas as well as for island-wide logistical support for solid waste processing and transfer. The judge noted with favour these steps taken by the developers.

Note that it appears that judges have a broad interpretation of the meaning of conservation. The term conservation seems to be used not only in the context of preservation but also as it relates to the replenishing of the ecosystem. The facts of *National Trust for the Cayman Islands* reveal that the appellants were concerned with the replacement of the mangrove buffer and the inclusion of suitable containment of fertilizers. The court found that these were relevant factors that the Central Planning Authority (CPA) should have taken into account.

5.6 Principle Six – Ecosystems must be managed within the limits of their functioning

This indicates the limitations on the extent to which ecosystems may be exploited. In short, this principle recognizes that the ecosystem can take so much and no more. Therefore the size of the project or the extent of the development is constrained by the limits of the ecosystem.

This principle is buttressed by the judgment in *Benjamin v Attorney General et al* where it was evident that the court appreciated the physical geographical constraints on the proposed development by noting the nature of the soil structure as outlined by the Draft Plan. As shown in the Draft Plan, “the geological structure of the area is not well suited to the type of sewage disposal facilities proposed to be used. Consequently, septic tanks fail to function effectively and often overflow into surrounding drains and streets of the city, creating unpleasant smells and a threat to public health.” In *Save Guana* it was recognized that the bigger the hotel, the greater the expected damage to the ecosystem. The hoteliers were therefore ordered to downscale the hotel size which they proposed to minimize the potential damage.

5.7 Principle Seven – The ecosystem approach should be undertaken at the appropriate spatial and temporal scales

Governments must decide on how management is to be divided and in doing so, decide on the scope and time period for ecosystem management. In relation to this principle, the facts of *National Trust for the Cayman Islands* revealed that the Department of Environment posited that the project should be looked at as a whole. Examining the project's impact on only a small area would prove futile, and instead it is more apt to assess it in a broader scope. This demonstrates that if management objectives are to be successful, then it must be approached at the right spatial scale. With regard to the appropriate temporal scale, managers are expected to adopt a certain time frame for the management of ecosystems. In this regard, cases which deal with continuous monitoring over a period of time fall within the purview of this principle. Thus in *R v Coffee Industry Board, ex parte Supreme Coffee Corporation Limited*, it is highlighted that section 4 of the 1953 Coffee Regulation Act requires manufacturers or exporters of Blue Mountain Coffee to record the source of supply for inspection purposes. For there to be preservation of the quality and the brand itself, there must be continuous assessment, as has been regulated through the statute.

5.8 Principle Eight – Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term

One can readily appreciate that for management of the ecosystem to be effective, long term goals need to be set. Thus in *Benjamin*, the court's appreciation of the effects of the proposed car park development shows that it is looking at the long term impact of future health and sewage disposal problems caused by potential septic systems failures. Also in *Belize Institute for Environmental Law* it was recognized that the dam would be in operation for the long term and as such the measures implemented must also be conducted for an extensive period, if not continuously. The point was also made in *Delapenha Funeral Home Ltd.*, where the facts revealed that a major consideration at all times was whether or not over a protracted period chemicals from the cemetery would find their way into the ground water of the district. To curtail these long term effects, the developers were required to place special concrete slabs in the earth to prevent the leakage of embalming fluids.

5.9 Principle Nine – Management must recognize that change is inevitable

Here there is recognition that ecosystems are in flux and do not remain stagnant. Therefore managers need to make plans that are flexible and may be adjusted to reflect any of the changes in the ecosystem. In application of this principle the cases indicate three main trends. Firstly, it has been affirmed in some cases that since change in the ecosystem is expected, there is a need to have updated information that is in keeping with the change, so that proper management decisions can be made. Sykes J in both *Pear Tree Bottom Nos. 1 and 2* vehemently criticized the EIA on the basis that it was rife with outdated information and therefore would have been of limited use for the purpose of deciding to grant an environmental permit.

Another way that the courts have applied this principle is by recognizing that as the environment evolves so too should the law. The court therefore noted with satisfaction the passing of the Environmental Management Act 2000 in *Fishermen and Friends of the Sea*.

The third means by which the courts have utilized this principle is by acknowledging that even in making a long term plan one cannot predict with absolute certainty all the possible shifts in the ecosystem and thus the environmental bodies do reserve the right to intervene at the appropriate

intervals. An example of this is where the body is able to issue stop orders or to vary or revoke an environmental permit at any stage of the development, as was the case with the Natural Resources Conservation Authority in *Delapenha Funeral Home Ltd.*

5.10 Principle Ten – The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity

This principle essentially speaks to sustainable utilization of the environment. Cases applying this principle show that judges favour a balance between use and replenishing of the various ecosystems. In *Talisman*, this principle was reflected when the respondent stated in its rejection letter that according to the National Wetland Policy, the wetlands of Trinidad and Tobago will be protected, managed and restored in order to sustain and enhance their ecological and socio-economic values and function for current and future generations.

The balance was also struck in *National Trust for the Cayman Islands*, where the developers were allowed to go ahead and use the area for the construction of the Ritz Carlton, but had to conserve the wetlands and parts of the natural foliage.

5.11 Principle Eleven – The ecosystem approach should consider all forms of relevant information including scientific, indigenous and local knowledge, innovations and practices

By way of example, cases which deal with the merits of an EIA would fall within this category. In *People United Respecting the Environment (PURE) and Rights Action Group (RAG) v Environmental Management Authority and Alutrint Limited (PURE)*, there was judicial review for granting of a CEC to Alutrint because they did not include relevant information related to pollution in the EIA. For instance, the EIA did not specify how the Spent Pot Liner, a kind of toxic waste generated during production, would be transported over land to the port to be shipped. In its defence, Alutrint claimed they had 8 years to specify how best to dispose of the toxic waste because it was not expected to have any immediate effects. However, PURE rebutted, stating that if this essential information is missing then the CEC should not have been granted. Judge Mirdean-Armorer accepted the view of PURE.

This is similar to *Pear Tree Bottom No. 1* where the judge emphasized how critical or inimical a faulty EIA was in the context of the high ecological importance of the decision that was to be made by the National Resources Conservation Authority/National Environmental Planning Agency. According to Sykes J, “the EIA has significant empirical shortcomings that might not have mattered but in the context of an ecologically important area these shortcomings loom unimpressively large.” Further in *Pear Tree Bottom No. 2* the shoddy nature of the EIA conducted for Pear Tree Bottom was contrasted with a more detailed and thorough EIA in *R et al v ex parte Belize Alliance of Conservation Non Governmental Organisations (“BACONGO”)*. It was emphasized that in the latter case, the EIA focused on current information and was very thorough, stating for instance a list of animals or species that were rare or nearing extinction in the area. It was noted that such thoroughness and currency is important in the context of the biologically diverse area which the EIA related to. Essentially, the extent of work needed to be put into the EIA in terms of detail is dependent on the ecological importance of the area. What information is relevant is therefore determined by the ecosystem at hand.

5.12 Principle Twelve – The ecosystem approach should involve all relevant sectors of society and scientific disciplines

In essence, those with a stake in the area which categorizes the ecosystem in question should be involved in the process. Cases which speak about consultation with the appropriate bodies are

apt under this principle. Sykes J in *Pear Tree Bottom No.1* found against the respondents because the consultation with the public was based on incomplete information and therefore could not be seen as consultation at all. Further the recommendations of the Water Resources Authority were not considered. The respondents therefore did not involve all relevant sectors in coming to its decision to grant the environmental permit. In the *Beef Case*, the decision-making body held consultations with the developers, Dr. Grigg and Dr. Nurse who are environmental experts, and the Environmental Review Committee (ERC). But just like the National Resources Conservation Authority in *Pear Tree Bottom No. 1*, the decision-making body failed to provide all the relevant information so that consultations were not as fruitful.

This can be contrasted with *Fishermen and Friends of the Sea*. In the latter case, BPTT held some preliminary public consultations to allow the public to voice any concerns and to make recommendations to BPTT about their projects. This included non-governmental environmental organisations, including *Fishermen and Friends of the Sea*. Both offshore and onshore EIAs were made available to the public. The Environmental Management Authority further published BPTT's application for a CEC in the Gazette, and administrative records were made available for public comment. Indisputably, within all these facets, the ecosystem approach involved all relevant sectors of society. Similarly, in *Delapenha Funeral Home Ltd.*, the court involved members from the scientific disciplines including inter alia hydrologist, geologists, environmentalists and botanists.

5.13 Conclusion

For the most part the judges have used the EBMPs, albeit largely in indirect ways. It can be seen that in jurisdictions which have environmental Acts such as Trinidad and Tobago and Jamaica, the analysis is enhanced to the extent that the judges have tried to take into account environmental considerations, and have often given greater weight to such considerations, even above and beyond economic factors. The judges have shown sensitivity to ecosystem preservation, especially where a statute mandates certain bodies to take care of the environment. In essence, the judges have utilized the common law tool of judicial review to hone their arguments in the environmental cases, and therefore the existence of a statutory framework to which the public body can be held accountable makes a difference in the extent to which the judges are able to apply ecosystem-based management principles. Where the judges have not exercised this strong sense of ecosystem awareness, it may be attributable to a lack of an adequate domestic source upon which to base its application of the principles. If judges are expected to display a greater adherence to the ecosystem-based management principles, perhaps greater vigilance on the part of Parliament to make the necessary legislation and regulations would be useful. Even further, the judges may make use of the notion that where there is ambiguity or a gap in the law, then international conventions like the Convention on Biological Diversity can be utilized to fill such a gap. This may be a creative way for judges to implement the EBMPs, albeit at the risk of being accused of engaging in judicial law-making.

6 CARIBBEAN CONSTITUTIONAL PROVISIONS GERMANE TO OCEAN GOVERNANCE IN THE CARIBBEAN

This Chapter explores the various constitutional provisions, though in many cases few and far between, which may be used to vindicate environmental rights and could be ultimately essential to the development of a comprehensive ocean governance policy. The investigation progresses with an examination of both new and old model constitutions.

6.1 Old Model Constitutions

These four constitutions, drafted primarily between 1962 and the beginning of the 1970s were operational before the conclusion of the United Nations Convention on the Law of the Sea (UNCLOS) in 1982.⁴⁷¹ As such, it is noteworthy that constitutions such as Guyana's, drafted in 1962, still contained provisions which spoke to environmental protection. However, it will be found that the majority of these documents are void of any provisions germane to either environmental protection or ocean governance.

6.1.1 Jamaica

The Constitution of Jamaica 1962⁴⁷² is one of the older constitutions of the Commonwealth Caribbean, being drafted and coming into force along with the Jamaican Independence Act in 1962. After much reading of this Constitution, it can be seen that the drafters did not explicitly take into account the governance of oceans, nor the ecosystem for that matter, unlike other countries like Guyana and Belize who have incorporated conventions and added environmental protection provisions respectively to their constitutions. Due to the lack of substantive allusions to the environment, this analysis will be undertaken in two ways; first by looking at any constitutional provisions that may promote EBMPs, and secondly by looking at international law's inclusion in this area.

The ecosystem-based management approach is an integrated perspective that considers the entire ecosystem, including humans as ecosystem components, and the role of humans in achieving sustainable management goals. Its objective is to maintain a healthy and resilient ecosystem in order to provide services.⁴⁷³ In the Antiguan case of *Spencer v Attorney General of Antigua and Barbuda and Asian Village Antigua Ltd.*⁴⁷⁴ an act to establish a resort was challenged on the ground of unconstitutionality, because of the likely environmental harm from the development. The court rejected this argument, mainly on the grounds that nothing in the constitution prohibited government from permitting development that may cause environmental harm. Similar to the Constitution of Antigua and Barbuda 1981,⁴⁷⁵ the Constitution of Jamaica 1962 as was mentioned earlier does not contain any substantive provisions on the environment. However under Part II, Chapter V of the Constitution of Jamaica 1962 Parliament is given the power to make laws for the peace, order and good government of Jamaica.⁴⁷⁶ This gives Parliament the widest law-making powers appropriate to a sovereign.⁴⁷⁷ In *Attorney-General of Trinidad and Tobago v Ramesh Dipraj Kumar Mootoo*⁴⁷⁸ it was held that tax was inherent in any sovereign legislature, under the power of the constitution to make laws for peace and good governance.

⁴⁷¹ 1833 UNTS 3.

⁴⁷² See Jamaica (Constitution) Order in Council 1962 (S. I. No. 1550 of 1962), (Jamaica).

⁴⁷³ The Nature Conservancy *et al*, 'What is E-BM?' (Global Marine Initiative: Advancing Ecosystem-Based Management a decision support toolkit for marine managers) <<http://marineplanning.org/13.htm>> accessed 6 June 2010.

⁴⁷⁴ AG 1998 CA 3.

⁴⁷⁵ See Antigua and Barbuda Constitutional Order 1981.

⁴⁷⁶ See Jamaica (Constitution) Order in Council 1962 (S. I. No. 1550 of 1962), (Jamaica).

⁴⁷⁷ *Ibrelebbe v The Queen* [1964] AC 900.

⁴⁷⁸ (1976) 28 WIR 304.

The connection can be made between taxes and the environment, thus it can be implied that this constitutional provision protects the environment by empowering the legislature to make laws to give effect to it. Such laws like the National Resource Conservation Authority Act 1991,⁴⁷⁹ which established the Natural Resources Conservation Authority which through merger; later established the National Environment and Planning Agency. The National Environment and Planning Agency's mission is to promote sustainable development by ensuring protection of the environment and orderly development in Jamaica.⁴⁸⁰ As such, this constitutional provision can be used to promote certain EBMPs, namely Principles 5 to 10, which relate to the sustainable utilization of the environment. A general law principle, under the Rio Declaration⁴⁸¹ sums up the gist of these aforementioned EBMPs. It states: "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."⁴⁸² One surely can infer that the making of laws which seek to ensure that the environment is sustainably utilized, is akin to the good government of Jamaica.

The Constitution of Jamaica 1962⁴⁸³ under section 48 entitles persons in Jamaica to rights and freedoms; however it notes that these rights are limited and must be balanced so that they do not prejudice other individuals or the public interest.⁴⁸⁴ Under some constitutions there is a right against deprivation of property. In Jamaica there is a right against compulsory acquisition of your property. In *Grape Bay Ltd. v Attorney General of Bermuda*⁴⁸⁵ it was noted that, "The give and take of civil society frequently requires that the exercise of private rights should be restricted in the general public interest..."⁴⁸⁶

In the case franchise business was deemed to be regulated in the interests of the public, and thus the property of the applicant (though not deprived on the facts of the case) could be deprived. The Constitution of Jamaica 1962⁴⁸⁷ notes as one of the limitations under compulsory acquisition of property, that property maybe compulsory acquired if it is in a dangerous state or injurious to health of human beings, animals or plants,⁴⁸⁸ in addition it also provides that property also be acquired for so long as necessary for the purposes of inquiry, examination or investigation for the carrying out of soil conservation or the conservation of other natural resources.⁴⁸⁹ These constitutional provisions can be deemed to encompass the environment. They promote the EBMP which states that ecosystems should consider the effects of their activities on adjacent and other ecosystems,⁴⁹⁰ these sentiments are echoed in the Rio Declaration⁴⁹¹ where it states that states have a sovereign right to exploit its own resources pursuant to their developmental policies, however they should ensure that their activities do not cause damage to other states or areas beyond the limits of its national jurisdiction.⁴⁹²

⁴⁷⁹ (Act 9 of 1991), (Jamaica).

⁴⁸⁰ *Id.*; See also, National Environment and Planning Agency, 'Company Profile' <<http://www.nepa.gov.jm/about/aboutnepa.asp#overview>> accessed 3 June 2010.

⁴⁸¹ UNGA Res. 47/190 (1992), 31 ILM (1992).

⁴⁸² See EBMP 3.

⁴⁸³ See Jamaica (Constitution) Order in Council 1962 (S. I. No. 1550 of 1962), (Jamaica).

⁴⁸⁴ *Id.*, s. 13.

⁴⁸⁵ [2000] 1 WLR 574.

⁴⁸⁶ *Id.*, 583.

⁴⁸⁷ See Jamaica (Constitution) Order in Council 1962 (S. I. No. 1550 of 1962), (Jamaica).

⁴⁸⁸ *Id.*, s. 18 (2) (i).

⁴⁸⁹ *Id.*, s. 18 (2) (k) (i).

⁴⁹⁰ See EBMP 3.

⁴⁹¹ UNGA Res. 47/190 (1992), 31 ILM (1992).

⁴⁹² *Id.*

Similarly there is a provision under the Constitution of Jamaica 1962⁴⁹³ which protects the right to life, it basically states that no person shall intentionally be deprived of his life, save in the execution of the sentence of a court, in respect of a criminal offence of which he has been convicted.⁴⁹⁴ Destruction or pollution of the environment may lead to the deprivation of a person's life, whether it is by greenhouse gases which affect the ozone layer, and may lead to skin cancers, second hand smoke which may lead to cancer, or the destruction of habitats which may lead to the endangerment of species. Thus, factors must be put in place to ensure that life is protected from environmental damage.

Although one might not be able to locate any provisions germane to ocean governance in this Constitution. The provisions can be used to promote certain EBMPs, which are in essence, in themselves germane to the said ocean governance.

6.1.2 Barbados

The Constitution of Barbados 1966⁴⁹⁵ does not speak directly to environmental management or more similar to specifically ocean governance. It is however a blueprint designed with the intention of providing the power to make laws necessary for the management of more specific issues pertinent to society, including those which govern the use and protection of the ocean and marine resources.

The Preamble to the Constitution of Barbados 1966⁴⁹⁶ states that there should be equitable distribution of the community's resources. Among the most valuable resources are the country's coastal and marine assets. They are an invaluable source of nutrition through the provision of fish and seafood. They provide nursery grounds and habitat for juvenile fish stock and the coral reefs provide protection for the coasts from wave energy.⁴⁹⁷ Oceans are also the basis of the tourism industry (beaches, scuba diving, snorkeling, sunbathing). As tourism is the main foreign exchange earner of Barbados, the protection and management of these resources is of massive importance. *Northern Jamaica Conservation Association et al v Natural Resources Conservation Authority & National Environmental and Planning Agency (No. 1)* ("Pear Tree Bottom No. 1"),⁴⁹⁸ though not directly related to constitutional issues, illustrates the growing interest in environmental protection throughout the Caribbean. In this case a Jamaican High Court Judge quashed the environmental permit granted to Hotels which would allow them to build in a sensitive coastal area. The Constitution has through this section encouraged the protection and proper governance of the ocean and through this was born several legislative tools more specifically related to ocean governance.⁴⁹⁹

Where fundamental rights and freedoms are concerned, section 11 of the Constitution of Barbados 1966⁵⁰⁰ states that no person shall be deprived of the right to life. This right to life should also encompass the right to a healthy environment which is essential to the preservation

⁴⁹³ See Jamaica (Constitution) Order in Council 1962 (S. I. No. 1550 of 1962), (Jamaica).

⁴⁹⁴ *Id.*, s. 14.

⁴⁹⁵ See Barbados Independence Order 1966.

⁴⁹⁶ *Id.*

⁴⁹⁷ John R. Clark, *Coastal Zone Management Handbook Mote* (1995) 362.

⁴⁹⁸ JM 2006 SC 49.

⁴⁹⁹ The existing legislation which relates directly to ocean governance could not have been enacted without the power conferred upon certain public officials by the constitution. Some of the legislation include: the Marine Pollution Control Act (Cap. 392A) (1998-40); Fisheries Act (Cap. 391) (1993-6); Coastal Zone Management Act (Cap. 394) (1998-39); Wild Birds Protection Act (Cap. 398) (1907-9 *et seq.*); Soil Conservation (Scotland District) Act (Cap. 396) (1958-37 *et seq.*); Pesticides Control Act (Cap. 395) (1973-36 *et seq.*); and the National Conservation Commission Act (Cap. 393) (1982-8) (responsible for beach clean ups and governs the Folkstone Marine Reserve) to name a few.

⁵⁰⁰ See Barbados Independence Order 1966.

of life. Within the context of Barbados with its heavily depleting fish stocks and coral reef ecosystems,⁵⁰¹ this individual right should include the right to preservation and sustainable use of the ocean's resources.

Chapter VI of the Constitution of Barbados 1966⁵⁰² deals with executive power. It appoints cabinet as the principle instrument of policy and charges it with the general discretion, control and collective responsibility for Parliament. In addition, Barbados' Constitution makes provision for law enforcement including sanctions and penalties generally, through the judiciary, majesty, and police which all make up part of the law enforcement mechanism. The Royal Barbados Police Force, Coast Guard, Barbados Marine Police and Marine Pollution inspectors⁵⁰³ are among the bodies responsible for enforcing marine and coastal protection. The Constitution therefore makes provision for the appointment of public officers to assist in the carrying out of good governance as relates to the use of the ocean. These appointed officials will also ensure that the safety of the public and peace is kept whilst the ocean is being used. This promotion of peaceful use of the ocean is one of the primary aims of ocean governance and it is being met through the appointment of officials to police the coastal areas.

The appointment of a Director of Public Prosecutions relates to ocean governance in that one of the functions of the director is to appoint an officer⁵⁰⁴ under the Constitution that will take on the responsibility of managing the country's resources, and this of course would include marine resources. It can be said then, that although the Constitution of Barbados 1966 does not specifically refer to ocean governance, it makes provisions for the enactment of laws and orders and therefore the provision for any mechanism relating to ocean governance.

6.1.3 The Co-operative Republic of Guyana

Unlike most Caribbean territories, Guyana has well-established in its constitution, the preservation and enhancement of the environment and the human right to an environment which is not harmful to its citizens.⁵⁰⁴

There are two broad principles in the constitution relevant to the environment. Section 25 provides that "every citizen has a duty to participate in activities designed to improve the environment and protect the health of the nation."⁵⁰⁵ Also section 36 states that "the well-being for the nation depends upon preserving clean air fertile soils, pure water and the rich diversity of plants, animals and eco-systems."⁵⁰⁶ It is noteworthy that section 36 was implemented in 2003, the same year as the specific principle.⁵⁰⁷

Perhaps these principles were insufficient to govern the ecosystem in Guyana, not to mention the daunting task in determining whether the general constitutional principles were enforceable and as such, section 149J germinated.

Going a crucial step further, entrenched in the Guyana's Constitution by Constitutional (Amendment) (No. 2) 2003, section 149J provides:

⁵⁰¹ The coral reef ecosystems are a source of nutrition and shelter for all marine organisms and their depletion or destruction will lead to the subsequent breakdown of the beach ecosystem as well as the decline in ocean health. It is necessary, therefore, to acknowledge the importance of this interconnectedness.

⁵⁰² See Barbados Independence Order 1966.

⁵⁰³ See Marine Pollution Control Act (Cap. 392A) (1998-40), (Barbados).

⁵⁰⁴ See s. 149J, Constitution of the Co-operative Republic of Guyana 1980 (Constitutional (Amendment) (No.2) 2003).

⁵⁰⁵ See s. 25 (A duty to improve the environment), Constitution of the Co-operative Republic of Guyana 1980.

⁵⁰⁶ See s. 36 (Lands and the environment), Constitution of the Co-operative Republic of Guyana 1980 (Constitutional (Amendment) (No.2) 2003).

⁵⁰⁷ See s. 149J, Constitution of the Co-operative Republic of Guyana 1980 (Constitutional (Amendment) (No.2) 2003).

- 1) Everyone has the right to an environment that is not harmful to his or her health or wellbeing.
- 2) The State shall protect the environment, for the benefit of present and future generations, through reasonable legislative and other measures designed to
 - a. prevent pollution and ecological degradation;
 - b. promote conservation; and
 - c. secure sustainable development and use of natural resources while promoting justifiable economic and social development
- 3) It shall not be an infringement of a person's rights under paragraph (1) if, by reason only of an allergic condition or other peculiarity the environment is harmful to that person's health or wellbeing.⁵⁰⁸

The above provision consists of the human right to an environment that does not compromise the “health and wellbeing” of its citizens. It also speaks of environmental protection in the long term.⁵⁰⁹ The clause stipulates that it is the state’s duty to implement laws⁵¹⁰ aimed at the management of the environment to avoid dilapidation and the prevention of pollution,⁵¹¹ the promotion of conservation⁵¹² and with a view to sustainable development through reasonably “social” and “economic” development.⁵¹³ This right is not without bounds however, as it excludes persons who may be affected by the environment because of his own “allergic conditions or other peculiarities.” Most importantly, this right is enforceable in the court of law.⁵¹⁴

Thus far Guyana has recognized that this constitutional provision needs to be effective and must contribute to ocean governance. As such the government has implemented mechanisms to ensure the prevention of pollution and other unlawful activities; encourage the conservation and protection of marine life; and to encourage reasonable and responsible use of the ocean.⁵¹⁵ Noteworthy is the fact that the government has delegated different authorities through legislation to achieve these goals.

⁵⁰⁸ *Id.*

⁵⁰⁹ See EMBP 8.

⁵¹⁰ This suggests that the provision is not self-executing and it is necessary for other laws to be implemented in order to achieve the objectives of s. 149J (2), Constitution of the Co-operative Republic of Guyana 1980 (Constitutional (Amendment) (No.2) 2003).

⁵¹¹ See EBMPs 6 and 10.

⁵¹² See EBMP 5.

⁵¹³ See EBMPs 1, 3, 4, 6, 7, 8, 10, 11 and 12. All of these principles address the issue of sustainable development.

⁵¹⁴ See s. 153, Constitution of the Co-operative Republic of Guyana 1980 (Constitutional (Amendment) (No. 6) 2001).

⁵¹⁵ Some examples of principled ocean governance include the Fisheries Act 2002 (Act No. 12 of 2002); Maritime Boundaries Act 1977 (Act No. 10 of 1977); Environmental Protection Act 1996 (Act No. 11 of 1996); Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf (adopted 10 March 1988, entered into force 1 March 1992) 1678 UNTS 304, 27 ILM 685 (1988) (“SUA Protocol”); Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region 1506 UNTS 157 (“Cartagena Convention”); International Convention for the Prevention of the Pollution from Ships 1340 UNTS 184, 12 ILM 1319 (1973) (“MARPOL 73/78”); and International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 11 ILM 284 (1972), 1110 UNTS 57, as amended by the Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 16 ILM 621 (1977), as amended by the Protocol of 1992 to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1953 UNTS 330 (“Fund Conventions”).

6.1.4 The Commonwealth of The Bahamas

The Constitution of The Commonwealth of The Bahamas 1973⁵¹⁶ does not contain any express provisions on the protection of the environment. This is because when the older Constitutions of states like The Bahamas such as those of Barbados, Jamaica and Guyana, the main focus of the drafters was providing an efficient government and on first generation and second generation human rights which in the immediate post-independence atmosphere did not include the environment and its protections.

What the Constitution of The Commonwealth of The Bahamas 1973⁵¹⁷ does provide for under the fundamental right of protection from deprivation of property is “the orderly marketing or production or growth or extraction of any agricultural or fish product or mineral or water or any article or thing prepared for market or manufactured.”⁵¹⁸ Taking a broad interpretation of the aforementioned provision, it is possible to consider that this speaks to the use of the country’s natural resources, especially where it speaks of fish products and water, the requirement of orderly extraction, producing etc., can be considered as requiring the proper governance of natural resources (including its water, that is, the ocean).

The right to life⁵¹⁹ should also be considered broadly and expanded to include a person’s right to life in a healthy environment. Further, one could look at the right to protection of deprivation of property and the right to life in conjunction with consideration of the traditional English common law principles of trust, it could be argued that the Government of The Bahamas, that is to say the State, are trustees of the public or common property for example the ocean, and thus hold it for the benefit of the people of the country. Using this perspective this extends the right to ensure that there is proper governance of the country’s natural resources so as to not infringe on the fundamental rights of the people of The Bahamas by preventing their being deprived from a healthy and sustainable environment and also to ensure their right to life. Taking this route would allow for a path around the fact that, like the Constitutions of Jamaica and Barbados, the Constitution of the Commonwealth of The Bahamas 1973⁵²⁰ does not include third generation rights which are collective or community since at the time of it being drafted in the post-colonial era, the preservation of the environment was not on the forefront of the drafters minds. Instead focus was placed on first and second generation rights.

Broadly interpreting these provisions allows for the expansion and development of the constitution, as a living instrument, to develop so as to reflect the modern day concerns and rights of the people of the country. As the supreme law of the land, this compels the Government of The Bahamas to take an active role in the preservation of the country’s environment by properly governing its use and taking steps to ensure its sustainability.

As there are no explicit references to the environment in the Constitution of the Commonwealth of The Bahamas 1973⁵²¹ it is difficult to see the promotion of any EBMPs by its provisions. It should be noted that The Bahamas has its own environmental legislation and institutions and is also party to several international agreements, protocols and conventions. On top of this, recommendations could be made that amendments be made to the constitution using EBMPs as a catalyst for a modern reflection on the worldwide concerns as to the conservation of the environment.

⁵¹⁶ See The Bahamas Independence Order 1973.

⁵¹⁷ *Id.*

⁵¹⁸ *Id.*, s. 27(3).

⁵¹⁹ *Id.*, s. 15(a).

⁵²⁰ See The Bahamas Independence Order 1973.

⁵²¹ *Id.*

6.2 New Model Constitutions

This group of constitutions, drafted between 1974 and 1983, though still generally pre-dating the UNCLOS, one would have thought should show a more progressive attitude towards environmental protection, especially given the Guyanese example. However, one realises that this is not necessarily the case.

6.2.1 Saint Lucia

Like most Commonwealth Caribbean constitutions, the rights and freedoms enumerated in the 1978 St. Lucia Constitution⁵²² do not include any specific reference to environmental rights. Consequently in order to ensure the constitutional protection of the environment it may be necessary to indirectly link specific environmental rights to the fundamental rights already set out in the constitution.

Section 2 of the Constitution of Saint Lucia 1978⁵²³ guarantees the right to life. This section mandates that “a person shall not be deprived of his life intentionally...”⁵²⁴ While this right is directed at protecting life itself, it is contended that the right to life may be infringed when the environment is endangered. This stems from the fact that an inter-relationship exists between fundamental rights and environmental rights⁵²⁵ where a healthy environment is vital for human existence.⁵²⁶

This notion was clearly exemplified in *Aurelio Cal and Others v Attorney General of Belize and Another*⁵²⁷ where failure by the Government to protect Mayan interest right in land necessary for their existence, violated the security of their being. The claimants relied on agriculture, hunting and fishing for their physical survival and the State’s disregard for their customary property rights was a constitutional violation which compromised their right to life.

*Soodeen v Attorney-General of Trinidad and Tobago*⁵²⁸ was another case where the court was cognizant of the fact that a healthy environment is paramount to the enjoyment of the right to life. In light of these decisions section 2 of St. Lucia’s Constitution 1978 can be effective in preserving the environment and more specifically germane to ocean governance where the exploitation of the ocean would infringe the individual’s right to life.

Protection from deprivation of property is secured in section 6 of the Constitution. This provision may be germane to ocean governance as it compels the State to take positive action to safeguard the property rights of individuals. This right was also examined in *Aurelio Cal and Others v Attorney General of Belize and Another*⁵²⁹ where it was established that the rights and interests of the claimants according to Maya customary land tenure constituted “property” under the Constitution and was therefore deserving of its protection. The Supreme Court further decided that the actions of the Belize Government in granting concessions to third parties to utilize the Mayan property violated the claimants’ right to property under the Constitution. It was thought that customary use of a particular piece of property for hunting and fishing gave the Mayans a right to that property, a right of which they could not be deprived. The point is therefore that one

⁵²² See Saint Lucia Constitution Order 1978 (No. 1901 of 1978).

⁵²³ See Saint Lucia Constitution Order 1978 (No. 1901 of 1978).

⁵²⁴ *Id.*, s. 2 (1).

⁵²⁵ Maurice Suskin *et al*, *Sourcebook on Environmental Law* (2nd edn Cavendish Publishing, London 2002).

⁵²⁶ Tim Hayward, *Constitutional Environmental Rights* (Oxford University Press, New York 2005).

⁵²⁷ (2007) 71 WIR 110.

⁵²⁸ High Court of Trinidad and Tobago, No S-839 of 1996 (Unreported). In this case the Court established that failure to safeguard the applicants from contamination of their environment by lead poisoning was unconstitutional and illegal as this infringed the Applicants’ fundamental human rights to life, security of the person and enjoyment of property.

⁵²⁹ (2007) 71 WIR 110.

may have a right to the protection of one's environment, including perhaps the ocean, if one has traditionally intensively made use of it in the same fashion that the Mayans made use of their property.

In accordance with previous precedent,⁵³⁰ the Supreme Court also emphasized that the Constitution should be given a generous and purposive interpretation in order to ensure that the full measure of fundamental rights are awarded to individuals. Accordingly the adoption of an expansive interpretation of section 6 means that protection from deprivation of property may be broadened to include protection of the environment and can therefore be germane to ocean governance particularly where the property in issue relates to coastal areas or river basins.

Section 40 grants Parliament the power to make laws for the peace, order and good government of the island. This provision may undoubtedly be germane to ocean governance since it enables the enactment of legislation which may be critical to the protection of oceans. Evidence of such legislation presently exists in the form of the Fisheries Act⁵³¹ which aims at protecting St. Lucia's marine environment and promoting the conservation and proper utilization of the of the island's marine life.⁵³²

6.2.2 The Republic of Trinidad and Tobago & Belize

Neither Trinidad and Tobago nor Belize has expressed provisions in their respective constitutions that are directly related to ocean governance. Nonetheless, there are basic human rights enshrined in the Constitution that can be said are indirectly linked to ocean governance. In addition, the provisions for the power to make laws are also germane to ocean governance as they allow for the making of laws that can directly affect it.

Section 1 of the Trinidad and Tobago Constitution 1976 includes the seabed and subsoil situated beneath the territorial sea and continental shelf⁵³³ as forming part of Trinidad and Tobago's territory.⁵³⁴ Similarly, Belize has defined its land in Schedule 1 of its Constitution as comprising associated islands, cays, all associated islets and reefs, and their adjacent waters as far as the outer limit of the territorial sea appertaining to them. On a preliminary basis, these initial provisions are relevant, as they point out exactly what each state claims as its own and therefore covers its sovereignty over its territory which includes its territorial waters and all contained in it.

The Preamble to Trinidad and Tobago's Constitution 1976 states that the people must respect the principles of social justice and the operation of the economic system should result in the material resources of the community being so distributed as to serve the common good, that there should be adequate means of livelihood for all and so on. Although what is stated in a preamble of a constitution is not an expressed provision, it is still germane to ocean governance, however indirectly, as the Preamble breathes life into the Constitution, expressing what each state wishes to accomplish through its governance. The ocean provides Trinidad and Tobago with ways to acquire food, minerals and oil, which are industries that provide jobs that enhance the health and wellbeing of its people. This is undoubtedly relevant to ocean governance. In contrast, Belize

⁵³⁰ *The Queen v Reyes* [2002] 2 AC 235; See also *Minister of Home Affairs v Fisher* [1980] AC 319, 328 where Lord Wilberforce observed that "Chapter 1 itself called for a generous interpretation avoiding what has been called 'the austerity of tabulated legalism', suitable to give to individuals the full measure of the fundamental rights and freedoms referred to."

⁵³¹ (Cap.7.15) (Act 10 of 1984), (St. Lucia).

⁵³² Section 3 (1) of the Fisheries Act (Cap.7.15) (Act 10 of 1984), (St. Lucia) mandates the Minister to take such measures to promote the management and development of fisheries, so as to ensure the optimum utilization of fisheries resources for the benefit of St. Lucia. See also s. 22 (1) which empowers the Minister to declare any area of the fishery waters to be a marine reserve.

⁵³³ "Continental shelf" and "territory" are defined according to Trinidad and Tobago's Continental Shelf Act (Chap. 1:52) (Act 43 of 1969), and its Territorial Sea Act (Chap. 1:51) (Act 38 of 1969) respectively.

⁵³⁴ See s. 1 (2), Constitution of the Republic of Trinidad and Tobago 1976.

offers a more specific Preamble, where it states that the people of Belize require policies of state which protect and safeguard the unity, freedom, sovereignty and territorial integrity of Belize. This is clearly related to ocean governance because it directly states that there must be policies that protect the integrity of the territory.⁵³⁵ As previously stated in Schedule 1, Belize's territory comprises not only the water, but the reefs and islands as well. It also goes on to say that the policies of the state must protect (among other things) the rights of the individual to life, basic health, the right to work, pursuit of happiness, the dignity, identity, social and cultural values of Belizeans, including the indigenous peoples; and the preservation to the right of the individual to the ownership of private property. This is very important as these were highlighted particularly in the case of *Aurelio Cal and Others v Attorney General of Belize and Another*.⁵³⁶ Further, Belize's Preamble is more specific as it makes direct mention of the requirement to have policies "which protect the environment."⁵³⁷ Further, there is also a requirement for policies that promote international peace, security, and co-operation among nations, as well as the establishment of a just and equitable international economic and social order in the world with respect for international law and treaty obligations in the dealings among nations. This is of particular importance because indeed ocean governance is an international issue that must be addressed judiciously in order to attain economic and social order in the world.

Section 4 (a) of the Trinidad and Tobago Constitution 1976 outlines the right of the individual to life, liberty, security of the person and enjoyment of property and the right not to be deprived of such rights. Section 17 (1) of the Belize Constitution states that no property of any description shall be compulsorily taken possession of and no interest in or right over property of any description shall be compulsorily acquired except by or under a law. The Constitution, however, does present the limitations to these rights, however; it provides for the taking possession of any property or the acquisition of any interest in or right over property where by reason of its being in a dangerous state or injurious to the health of human beings, animals or plants; for so long only as may be necessary for the purpose of an examination, investigation, trial or enquiry or, in the case of land, the carrying out on the land of work of soil conservation or the conservation of other natural resources.⁵³⁸ These are all germane to ocean governance as both the right and limitation are directed to the preservation and protection of the environment through its people and their livelihood. Trinidad, however, does not have any provision that is this specific.

Finally, the powers and procedure are important because they allow for Parliament to make laws and allow policies that directly address issues that have relevance to ocean governance. Sections 68 and 53 of Trinidad and Tobago's Constitution address this.. They both make provisions for the making of laws "for the peace, order and good government" of their countries. Indeed these include laws that affect ocean governance for the enhancement of its people's rights and welfare.

6.2.3 Antigua and Barbuda & St. Kitts and Nevis

The Constitutions of Antigua and Barbuda, and St. Kitts and Nevis are all modeled after the Westminster system and differ only slightly. Both constitutions note that every person has a "right to life".⁵³⁹ In *Aurelio Cal and Others v Attorney General of Belize and Another*⁵⁴⁰ where Mayan land was being explored for natural resources but compromised the day to day life of the people, the court ruled that a lack of protection of natural resources would have serious

⁵³⁵ See Preamble, Constitution of Belize 1981 (Belize Constitution Act (Chap. 4)).

⁵³⁶ (2007) 71 WIR 110.

⁵³⁷ See Preamble, Constitution of Belize 1981 (Belize Constitution Act (Chap. 4)).

⁵³⁸ *Id.*, s. 17 (2) (m) (i).

⁵³⁹ See s. 3 (a), Constitution of Antigua and Barbuda 1981 (Antigua and Barbuda Constitutional Order 1981), and s. 3 (a), Constitution of St. Kitts and Nevis 1983 (Saint Christopher and Nevis Constitution Order 1983, No. 881 of 1983)).

⁵⁴⁰ (2007) 71 WIR 110.

implications on the lives of the people. The court also found that the right to security of the person section 3 and protection of the law, section 10 was threatened.

In *Soodeen v Attorney General of Trinidad and Tobago*⁵⁴¹ where lead waste caused injury to residents, the court held that “failure” or “omission” by the government to safeguard citizens would be an infringement of their right to life.

Although the decision in *Fishermen and Friends of the Sea v (1) The Environment Management Authority and (2) BP Trinidad and Tobago LLC*⁵⁴² shows a reluctance to recognize environmental rights through constitutional provisions it should be noted that this was with regard to the granting of permits, therefore differing from *Aurelio Cal and Others v Attorney General of Belize and Another* and *Soodeen v Attorney-General of Trinidad and Tobago* which focused on omissions or failures to safeguard citizens.

In *Aurelio Cal and Others v Attorney General of Belize and Another*,⁵⁴³ the courts having found that the Mayans rights had been infringed where the government granted a third party the authority to utilize natural resources. This is applicable to ocean governance where the utilization of natural resources has adverse effects on the population. Therefore the court was able to find an infringement by taking into consideration the heavy dependence the Mayan had on natural resources socially, historically and religiously.

A unique situation in the Constitution of St. Kitts and Nevis 1983 is where the administration is specifically granted the responsibility under section 106 (1) (c) for the extraction and processing of minerals, (d) fisheries and (e) health and welfare.⁵⁴⁴ This provision places a positive pressure on the government to build a sustainable environment. It is unique because it is expressed that the government of St. Kitts and Nevis has parallel duties.

The case law suggests that constitutional provisions may be applicable to ocean governance. An assessment of the constitutional provisions reveals a link between them and EBMPs in terms of the assessment of risks, hazards and impacts and the goal of sustainable development. Section 106 of the Constitution of St. Kitts and Nevis 1983⁵⁴⁵ relates to environmental stewardship and sustainable development.

6.2.4 Grenada & The Commonwealth of Dominica

Grenada and Dominica are both sovereign and independent states of the Commonwealth Caribbean. As such, they both have written Constitutions which are of the Westminster model. These Constitutions declare that they are the supreme laws of both states and that any other law inconsistent with the Constitutions is void to the extent of the inconsistency. Additionally, these Constitutions provide a chapter which guarantees to the citizen a number of fundamental rights and freedoms including the right to life, liberty, protection of the law etc. However, these constitutions fail to make explicit mention of rights relating to protection of the environment despite the fact that the environment is indispensable to man’s existence. It is submitted in this discourse that as a consequence of the inextricable connection between human rights and the environment, particularly ocean governance, that the Constitutions of Dominica and Grenada, notwithstanding failure to mention environmental rights, can be interpreted to give way to such rights.

⁵⁴¹ *Soodeen v Attorney General of Trinidad and Tobago*, High Court of Trinidad and Tobago, No S-839 of 1996 (Unreported).

⁵⁴² TT 2005 PC 15, [2005] UKPC 32.

⁵⁴³ *Aurelio Cal and Others v Attorney General of Belize and Another* (2007) 71 WIR 110.

⁵⁴⁴ See Constitution of St. Kitts and Nevis 1983 (Saint Christopher and Nevis Constitution Order 1983, No.881 of 1983).

⁵⁴⁵ See Saint Christopher and Nevis Constitution Order 1983, No.881 of 1983.

Margaret Demerix has argued with reference to the European Court of Human Rights⁵⁴⁶ that it is unnecessary to “add” specific environmental human rights to the Convention, and that there can be derived from a Convention that contemplated neither protection of the environment nor of the individual against harm to the environment, substantial legal protection under the Convention against environmental harms.⁵⁴⁷ This is because a number of cases dealing with environmental degradation were found to violate rights under the Convention, particularly the right to family life.⁵⁴⁸ Be that as it may, this right is not particularly made reference to in the Grenada and Dominica Constitutions.

Notwithstanding this, the Inter American Commission on Human Rights has also recognized the link between environmental and human rights. In *Yanomami v Brazil* the commission made a link between environmental quality and the right to life in response to a petition brought by the Yanomami Indians.⁵⁴⁹

Section 2 of the Constitutions of Grenada as well as Dominica guarantees the right to life.⁵⁵⁰ Section 5 of the respective Constitutions goes on to guarantee protection from inhuman treatment.⁵⁵¹ The court, which is the entity with the responsibility of interpreting the Constitution, has stated that the Constitutions of the Commonwealth Caribbean ought to be interpreted generously so as to give the citizens the full measure of their rights.⁵⁵² In light of this and the fact the quality of the environment has implications for the enjoyment of our right to life and other rights incidental thereto, we can seek to locate protection for environmental rights in the Constitutions of Grenada and Dominica.

6.3 Conclusion

The Constitutions of the vast majority of CARICOM states lack any substantive provisions governing the protection of the environment and it would be near risible to suggest that they can serve as the basis for any comprehensive ocean governance policy. Though the shining example of Guyana lays testament to the possibility of having extensive environmental protections within the Constitution, the majority of new model constitutions and even recent constitutional amendments have failed to follow this example. They do little to espouse any truly effective environmental principles.

Though many may suggest that legislative protections fill this void, actuated by the government’s ability to “make laws for the peace order and good governance” of the country, this traditional approach has failed miserably in the past to deal adequately with the environmental problems facing the Caribbean region and moving into an era of globalisation and increased cross border trade, it is poised to continue in this vein.

⁵⁴⁶ All Commonwealth Caribbean constitutions derive their bill of rights from the Convention for the Protection of Human Rights and Fundamental Freedoms (adopted 4 November 1950, entered into force 3 September 1953) 213 UNTS 221 (“European Convention on Human Rights”).

⁵⁴⁷ Margaret DeMerieux, ‘Deriving Environmental Rights from the European Convention for the Protection of Human Rights and Fundamental Freedoms’ (2001) 21 (3) Oxford Journal of Legal Studies 521.

⁵⁴⁸ See *Lopez-Ostra v Spain* 16798/90 [1994] ECHR 46 where the applicant suffered serious health problems caused by gas fumes from a waste government subsidized treatment plant which the state had authorized a mere 12 meters from her home

⁵⁴⁹ It was found that the construction of a highway violated the American Declaration of the Rights and Duties of Man 43 AJIL Supp.133 (1949) (“American Declaration”).

⁵⁵⁰ S. 2 states: “No person shall be deprived of his life intentionally save in execution of the sentence of a court in respect of a Criminal offence under the law of Grenada of which he has been convicted.” : s. 2, Constitution of Grenada 1973 (Grenada Constitution Order 1973, No. 2155 of 1973), and s. 2, Constitution of Dominica 1978 (Dominica Constitution Order 1978, Chap. 1:01).

⁵⁵¹ S. 5 states: “No person shall be subject to torture or to inhuman or degrading punishment or other treatment.”: s. 5, Constitution of Grenada 1973 (Grenada Constitution Order 1973, No. 2155 of 1973), and s. 5, Constitution of Dominica 1978 (Dominica Constitution Order 1978, Chap. 1:01).

⁵⁵² See *Minister of Home Affairs v Fisher* [1980] AC 319.

7 CONCLUSION

The continual degradation of coastal and marine ecosystems has prompted many scientists, policymakers, international organizations, managers and citizens to find different ways to manage human activities that affect the marine environment, which if not properly managed, conserved or maintained will destroy the planet as we know it.

Decades of conservation initiatives used to maintain coastal and marine ecosystems are insufficient. “Evidence abounds, from unfettered coastal development to widespread pollution in our near-shore waters to chronic overfishing of species that are vital ecologically and commercially. A growing number of scientists, practitioners, politicians, and environmentalists are calling for a new management approach that focuses on entire ecosystems, including the people and communities that live there. The continued development of this new approach will be essential in achieving the overarching goal of fostering sustainability in coastal systems.”⁵⁵³

The general goal for implementing ecosystem-based management principles is, “for maintaining ecological integrity, which is discussed along with five specific goals: maintaining viable populations, ecosystem representation, maintaining ecological process (i.e., natural disturbance regimes), protecting evolutionary potential of species and ecosystems, and accommodating human use in light of the above. Ecosystem management is not just about science nor is it simply an extension of traditional resource management; it offers a fundamental reframing of how humans may *live, work, manage and sustain coastal systems*.”⁵⁵⁴

Ecosystem-based management is designed to restore and sustain the health, productivity, resilience, and biological diversity of coastal and marine systems, and promote the quality of life for humans who depend on them. It calls for engaging multiple stakeholders in a collaborative process to define problems and find solutions, and uses an adaptive management approach to address uncertainty.

Despite general agreement on the key principles that underpin ecosystem-based management, it has yet to live up to its potential to restore and protect coastal and marine systems. Some of the barriers are structural and political; the government institutions responsible for managing coastal and marine systems are fragmented and tend to be organized along political, rather than ecological, boundaries and broad public support for conservation often loses out to other economic interests. Implementing ecosystem-based management will require reforms to management institutions and the inculcation of new political ideologies.”⁵⁵⁵

The implementation of EBMPs has been a major problem facing English-speaking Caribbean societies. A survey of the environmental laws of the Commonwealth Caribbean was commissioned in 1992 by the Caribbean Law Institute, the report concluded that: “Much of the resource legislation in the Commonwealth Caribbean region lacks adequate environmental and institutional focus. Such environmental-related legislation as it exists, is, more often than not, inherited from the British, and is often dispersed over several enactments. Responsibility for administering or implementing statutes or applicable legislation is likewise distributed among several government departments, unsupported by appropriate institutional arrangements to coordinate and direct relevant initiatives. Effectual resource legislation must provide adequate

⁵⁵³ The David and Lucile Packard Foundation, ‘Ecosystem-Based Management (EBM) for Sustainable Coastal and Marine Systems – Grantmaking Strategy 2004-2009 (2007) <http://www.packard.org/assets/files/conservation%20and%20science/EBM_strategy_041007_Web_site.pdf> accessed 3 June 2010.

⁵⁵⁴ R. Edward Grumbine, ‘What is Ecosystem Management?’ (1994) 8 (1) Conservation Biology 27-38.

⁵⁵⁵ *Id.*, 1.

environmental/institutional focus and must be both determinative of, and responsive to, its operational environment. Such legislation/statute should establish the parameters of sound environmental management because such is crucial to sustainable development.”⁵⁵⁶

⁵⁵⁶ Caribbean Law Institute, *The Environmental Laws of the Commonwealth Caribbean* (1992) 1.