

**Examining the Ocean and Coastal Governance
Framework in Trinidad and Tobago
Transitioning Towards Integrated Coastal Zone Management**

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Abstract

Activities and resources found in the ocean and coastal realm of Trinidad and Tobago contribute critically to the identity and well-being of the country's citizenry. In this two island nation, where the total land area is dwarfed by the extent of marine space under the State's jurisdiction, sustainably managing the aspects of the coastal zone is therefore imperative. However, the current governance framework and capacity to do so is proving to be inadequate, with resource mismanagement, degradation and depletion evident. This is compounded by the absence of a co-ordinating mechanism and collaborative process through which stakeholders can seek to cohesively manage the ocean and coastal sphere in order to minimise conflict and maintain its flows of ecosystem goods and services in the long term.

This paper seeks to comprehensively work towards more sustainable, equitable and feasible means to manage the ocean and coastal realm for which Trinidad and Tobago has claimed stewardship. It evaluates the current governance framework in the country for ocean and coastal space, resources and activities. Analysis of the prevailing legal, policy and institutional dimensions takes place especially through the use of a problem perspective which reveals procedural and operational shortcomings and gaps. With the strengths, weaknesses and functional efficacy of the country's ocean and coastal governance system defined and understood, steps are then identified towards improving the management regime. A more co-ordinated, cohesive and collaborative approach to governance is proposed that is participatory and co-operative in nature and underpinned by principles aligned to achieving sustainability in economic, social and ecological realms.

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List of Acronyms

ACS – Association of Caribbean States
AOSIS – Alliance of Small Island States
BRMP – Buccoo Reef Marine Park
CAPMD – Coastal Area Planning and Management Division
CARICOM – Caribbean Community and Common Market
CBO – Community Based Organization
CEC – Certificate of Environmental Clearance
COPE – Council of Presidents of the Environment
CZMC – Coastal Zone Management Council
EBM – Ecosystem Based Management
EEZ – Exclusive Economic Zone
EIA – Environmental Impact Assessment
EMA – Environmental Management Authority
ESA – Environmentally Sensitive Area
ESS – Environmentally Sensitive Species
FMSEU – Fisheries Monitoring, Surveillance and Enforcement Unit
GDP – Gross Domestic Product
ICZM – Integrated Coastal Zone Management
IMA – Institute of Marine Affairs
IMO – International Maritime Organization
LMD – Land Management Division
LNG – Liquefied Natural Gas
MEA – Multilateral Environmental Agreement
MEEA – Ministry of Energy and Energy Affairs
MOU – Memorandum of Understanding
MoW – Ministry of Works
MSD – Maritime Services Division
MSP – Marine Spatial Planning

NBSAP – National Biodiversity Strategy and Action Plan

NGO – Non-governmental Organization

NPDP – National Physical Development Plan

NSDS – National Spatial Development Strategy

PCA – Permanent Court of Arbitration

SDP – Spatial Development Plan

TCPD – Town and Country Planning Division

THA – Tobago House of Assembly UN – United Nations

TOR – Terms of Reference

TTCIC – Trinidad and Tobago Chamber of Industry and Commerce

UN – United Nations

UNCED – United Nations Conference on Environment and Development

UNCLOS – United Nations Convention on the Law of the Sea

UNESCO – United Nations Educational, Scientific and Cultural Organization

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1. Introduction

The two island nation state of Trinidad and Tobago is the southern-most country in the Caribbean archipelagic chain. The capital of the country, Port-of-Spain, is located on the west coast of Trinidad, which is the larger of the two islands and houses the majority of the country's roughly 1.32 million person population (Central Statistical Office, 2012). Trinidad is situated 11 km off the South American nation of Venezuela and has a surface area of 4828 km² (Figure 1). Tobago, which lies 32 km northeast of Trinidad, is substantially smaller with an area of 300 km² and is home to about 56,000 persons. Collectively the country has a coastline length of 704 km and a land to coastline ratio of 1:7, a reflection that a land-sea interface lies in close proximity to any given point from the interior of the islands (Heileman and Walling, 2005). Indeed the country's jurisdictional sovereignty and responsibility extends beyond the terrestrial into the marine through its archipelagic waters, territorial sea and exclusive economic zone (EEZ). The collective areal extent of these encompass 77,502 km² of waters surrounding the islands. Trinidad and Tobago therefore has a sea to land ratio of 1:15, which is an initial obvious indicator of the importance of the marine and coastal sphere to the country.

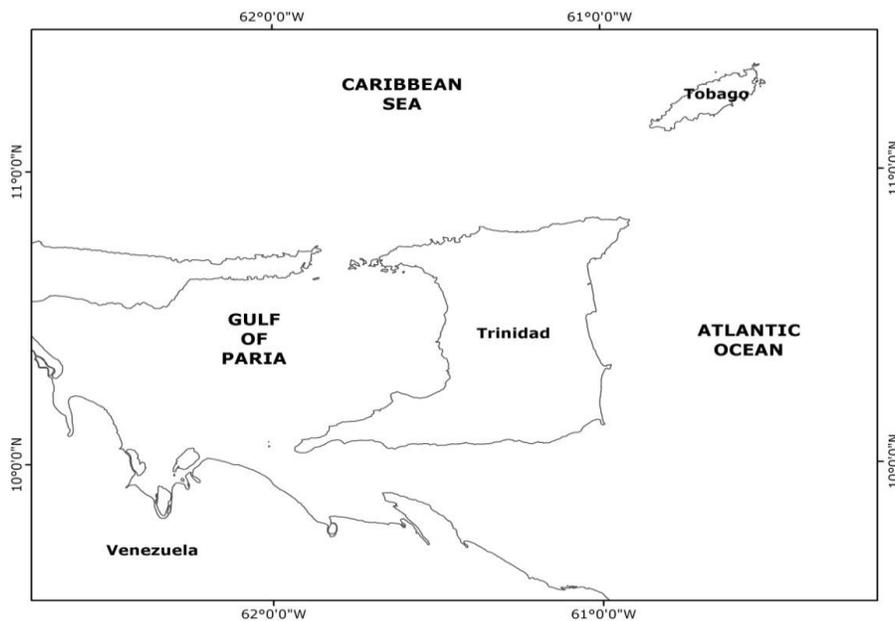


Figure 1: Location of Trinidad and Tobago

(Source: Hamish Asmath, Institute of Marine Affairs, Chaguaramas, Trinidad)

In Trinidad and Tobago the sea is an important element of identity for the population. Approximately 70% of the population and 80% of economic activities are concentrated along the coast (Central Statistical Office, 2007). The economy has always been supported by ocean and coastal associated resources and activities including offshore oil and gas and its attendant downstream industries, shipping, tourism and fisheries. In 2012, the energy sector contributed 41.6% to Gross Domestic Product (GDP) of the country, while the service sector (including shipping and tourism) contributed 51.3%¹. Agriculture (including fisheries), in comparison to other sectors, only contributed 0.6% to GDP but fisheries' importance as a source of livelihood, subsistence and nutrition, especially to some of the more vulnerable in society, cannot be overstated (Mohammed *et al.*, 2011). Tourism is especially important in Tobago where the island's marine and coastal characteristics are the main lure for visitors. In 2009 tourism accounted for about 37% of Tobago's estimated GDP (Baumgarten, 2009). Consequently no other industry is presently as important to the island's economy. Underscoring this point is the fact that just under 50% of employment – or 14,000 jobs - in Tobago are tourism related.

Given the absolute importance of the coastal and marine sphere to Trinidad and Tobago's economic, social and cultural well-being; the intimate association and dependence exhibited by some of the poorest in society on activities and resources found there; and the forecasted increases in demand and conflict that will arise in the future as the population grows, climate changes and scarcity and appetite for limited resources becomes more likely (Heileman and Walling, 2005), this thesis seeks to comprehensively work towards more sustainable, equitable and feasible means to manage the ocean and coastal realm for which the country has claimed stewardship.

It will do this by first evaluating the current governance framework in the country for ocean and coastal resources and activities. Here the thesis will delve into the international and regional commitments Trinidad and Tobago has made to engender better management. It will also identify to what extent these commitments are being fulfilled. Added to this, the actual modality

¹ GDP data sourced from the website of the Central Statistical Office of Trinidad and Tobago: <http://www.cso.gov.tt/content/gross-domestic-product-data-2009-2013>

and adequacy of the existing national governance structure will be assessed. Analysis of the prevailing legal, policy and institutional dimensions will take place especially through the use of a problem perspective which will reveal procedural and operational shortcomings and gaps.

With the strengths, weaknesses and functional efficacy of the country's ocean and coastal governance system defined and understood, the second part of the thesis will propose means towards a more co-ordinated, cohesive and collaborative approach to governance. Effective implementation of suggested strategies will represent a shift away from the pervasive culture of sectoral management and short term planning, which are both often driven, but stymied, by attempts to consolidate power and characterised by narrowly focused outcomes. In contrast, what will be proposed is participatory and co-operative in nature and underpinned by principles aligned to achieving sustainability in economic, social and ecological realms.

2. Legal considerations in Ocean and Coastal Governance in Trinidad and Tobago

2.1. International Law in aspects of Ocean and Coastal Governance and its Incorporation into the National Legislative Framework

In Trinidad and Tobago, as is the case with most small island states of the Caribbean, legislative and policy arrangements relating to prudent governance of coastal and marine resources and activities are often advanced through adoption of negotiated international legal instruments such as Multilateral Environmental Agreements (MEAs) and international conventions and treaties (Anderson, 2003). These binding and non-binding instruments can encourage countries' policy makers and legislators to create novel laws and/or amend what would otherwise be stagnant national legal and policy directives with respect to ocean and coastal resource use and activities. This is particularly the case when becoming Party to specific treaties allows for the realisation of benefits that are in line with the strategic political and developmental agenda of the government in power. In these cases, implementation of instruments that give effect to the respective conventions, is given high priority.

The United Nations Convention on the Law of the Sea (UNCLOS) provides a good example, in Trinidad and Tobago's context, where legislation was brought expeditiously in order to implement an international convention adopted by the country. Trinidad and Tobago became a State Party to UNCLOS on 25th April 1986 and later that year enacted legislation giving effect to the convention through the Archipelagic Waters and Exclusive Economic Zone Act, Chapter 57:06. This Act established Trinidad and Tobago as an archipelagic state; redefined baselines; outlined the extent of the surrounding marine environment over which the country exercises sovereignty and jurisdiction; and reaffirmed the nature of the rights and responsibilities afforded to the country by being Party to UNCLOS. It is likely that passing this legislation was given priority especially with a view to buttressing claims to known and undiscovered oil and gas reserves in waters off Trinidad and Tobago.

However, as Anderson (2001) points out, expedient implementation of international law in national contexts is not always the case in Caribbean countries, including Trinidad and Tobago.

Some MEAs and international conventions have been foisted upon the country as conditionality to loans and other agreements without the Nation having the adequate legislative, institutional, financial and human resource capacity to incorporate implementing arrangements locally. In other cases, bureaucracy and a lack of political will have impeded or prevented implementation of instruments to fulfil convention obligations. Consequently the coastal and marine governance framework in Trinidad and Tobago is inadequate. Commitments to treaties remain unfulfilled and optimality in sustainable management of sectors in the coastal and marine landscape is lacking, especially in light of the numerous MEAs and international conventions to which the country is Party.

A recent illustrative example in Trinidad and Tobago of the possible disconnect that can exist between the intent and eventual execution of international conventions i.e. not adequately implementing them locally, was seen in a case concerning the Convention on Wetlands of International Importance (Ramsar Convention). Juman and Hassanali (2013) highlighted that accession of Trinidad and Tobago to the Ramsar Convention on the 21st of April 1993, brought hope that more resources would be directed towards fulfilling commitments to wetland conservation. The country does now have three sites designated as Wetlands of International Importance, which comprise a collective surface area of 159.2 km². These designations did not prove to be the wetland conservation panacea though, and this is partly because legislation to give effect to fulfilling the obligations of the international convention was long in coming and, today, is still yet to be fully implemented.

Attempts at sustainable wetland management have been stymied as a result of the delay in legislatively grounding the Ramsar Convention. For example, in 2002, Trinidad and Tobago's Environmental Management Authority (EMA) refused the granting of a Certificate of Environmental Clearance (CEC)² that would allow an international oil exploration company, Talisman Petroleum Ltd., to carry out works in the coastal wetland of Nariva. The decision was

² In Trinidad and Tobago, for the purpose of determining and mitigating against environmental impact which may arise out a designated list of activities [outlined by law in the Certificate of Environmental Clearance (Designated Activities) Order] a CEC is required. According to **Section 35(2)** of the Environmental Management Act, no person shall proceed with a designated activity unless such person applies for and receives a CEC.

based on the fact that Nariva was a designated Ramsar site. However the EMA's ruling was reversed by the country's Environmental Commission. The Commission, which is an independent tribunal, with one function being to hear and adjudicate appeals to decisions and actions of the EMA, decided that there was no Act of Parliament applying provisions of the Ramsar Convention to Nariva Swamp specifically. Thus, the terms of Ramsar could not be enforced locally. As a result the CEC was eventually granted to Talisman Petroleum, albeit with the imposition of strict rules regarding the company's conduct in the wetland. Today the Environmentally Sensitive Area (ESA) Rules³, which became law and were applied to Nariva Swamp after this ruling, are now meant to give effect to the Ramsar Convention and other similar MEAs seeking to protect the environment⁴. However, despite the reality check provided through the "Nariva experience", to date, the Nariva Swamp is the only one out of the three Ramsar sites to be designated an ESA.

Several important MEAs and International Conventions, to which Trinidad and Tobago is Party and which address aspects of coastal and marine governance, are yet to have adequate instruments that will allow for them to be fully enabled locally (Table 1). For instance, the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) was ratified by Trinidad and Tobago in 1984. The Wild Life Section of the Forestry Division in Trinidad issues CITES Permits that regulate the import and export of species listed in Appendices I, II and III of CITES. This is a requirement of the Convention. However the Wild Life Section has no authority within the national legislative framework to do this. A CITES delegation who visited Trinidad and Tobago in 2013 threatened to sanction the country because of its lack of national legislation to properly enable the mandate of CITES⁵.

³ According to the ESA Rules, designation of portions of the environment in Trinidad and Tobago as ESAs are to meet one or more of three categories of general objectives:

- a. Conservation on natural resources and protection of the environment;
- b. Sustainable economic and human development;
- c. Logistic support such environmental education, and information sharing.

⁴ As outlined by **Section 3(1)(b)** of the ESA Rules.

⁵ It is true that under Section 18 of the Conservation of Wild Life Act, Chapter 67:01, animals are prohibited from export or coastwise carriage without the written permission of the Chief Game Warden. However, no mention of CITES is made in this Act and no conditions are set out as to when or why the Chief Game Warden may grant permission for export, leaving animal trade open to arbitrary approval. Apart from section 18 of the Conservation of Wild Life Act though, some other flora and fauna found in Trinidad and Tobago are afforded additional protection from trade by proxy. These are species that are protected from being collected, captured, hunted or

A number of International Maritime Organization (IMO) conventions to which the country has acceded - those conventions relating to marine pollution from ships and maritime installations and those dealing with compensation with respect to damage caused by pollution – also continue to have little to no standing in the national domain. For the IMO’s INTERVENTION Convention 69; the London Convention Protocol 1996; the MARPOL 73/78 Convention; the CLC Protocol 92; the FUND Protocol 92; and the BWM Convention 2004⁶, the relevant implementing legislation, the Shipping (Marine Pollution) Bill, has never made it through the Parliamentary approval procedure. The Bill was brought to the Trinidad and Tobago Parliament in both 2000 and 2001 but it lapsed on both occasions, upon the dissolution of the 5th and 6th Republican Parliaments in November of 2000 and October of 2001 respectively. It was brought back to Parliament in 2004 but lapsed again upon the prorogation of the 2nd Session of the 8th Parliament in September 2004. In February, 2011, a Minister in the Ministry of Works and Transport announced that the Ministry planned to re-introduce the Bill to Parliament⁷ but to date, this is yet to happen.

The aforementioned examples are a few of many where implementation of international conventions was likely inhibited because of inefficiencies; lack of capacity; and/or lack of political will in enacting requisite enabling legislation. In Trinidad and Tobago, treaty making competence is a privilege reserved for the Executive branch of Government i.e. the President of the Republic and the Ministerial cabinet, headed by the Prime Minister. However, a convention does not have legal status locally until local law relating to it is enacted by an Act of Parliament. Anderson (2001) has argued that having Parliament more intimately involved before international agreements are accepted may improve the odds that enactment of implementing legislation will be done in a timely and effective manner. He highlighted that in another Caribbean state, Antigua and Barbuda, success rates in enactment of legislation to give effect to adopted conventions increased after it was decided that the entire Parliament, as opposed to just the Executive, had

killed through provisions in established local legislation, namely, the Conservation of Wild Life Act; the Environmentally Sensitive Species Rules; and the Protection of Turtles and Turtle Eggs Regulations made under section 4 of the Fisheries Act.

⁶ See Table 1 for the full titles of the respective IMO conventions mentioned

⁷ Article in Trinidad and Tobago Guardian Newspaper: <http://m.guardian.co.tt/news/2011/02/09/new-pollution-bill-protect-tt-waters-coming>

to approve the country's ratification of conventions. The Ratification of Treaties Act of 1987 enabled this procedural shift in international treaty acceptance for Antigua and Barbuda and provided a pressure point through which legislative proclamation could be lobbied. This approach, if applied to Trinidad and Tobago may potentially boost success in making international law compliant locally.

The number and scope of international treaties, conventions and environmental agreements, relating to activities and resources in the ocean and coastal realm, which Trinidad and Tobago has become a Party to, is a reasonable indicator that successive governments are cognisant of the importance of enabling the sphere's sustainable management. However, larger systemic issues relating to drafting and enacting of legislative provisions make it difficult for commitments to be met and undermine efforts in coastal and ocean governance. This research will now go on to further highlight existing impediments and will seek to propose innovative means to improve governance by alleviating shortcomings.

Table 1: Ocean and Coastal related Multilateral Environmental Agreements (MEAs)/International Conventions to which Trinidad and Tobago is State Party and their related implementing instruments

Multilateral Agreement/International Convention	Status	Date of Deposit of Instrument	Date of Accession or Entry into force	National Legislative Instruments	National Policy Instruments
United Nations Conventions					
United Nations Convention on the Law of the Sea (UNCLOS)	R	04/1986	11/1994	<ul style="list-style-type: none"> • Archipelagic Waters and Exclusive Economic Zone Act • Continental Shelf Act • Territorial Sea Act 	
Agreement for the implementation of the provisions of UNCLOS relating to the conservation and management of straddling fish stocks and highly migratory fish stocks (UN Fish Stocks Agreement)	R	09/2006	10/2006	<ul style="list-style-type: none"> • Fisheries Act • Archipelagic Waters and Exclusive Economic Zone Act 	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan (NBSAP), 2001 • National Environmental Policy (NEP), 2006
Convention on Biological Diversity (CBD)	R	06/1992	08/1996	<ul style="list-style-type: none"> • Conservation of Wild Life Act • Certificate of Environmental Clearance Rules, 2001 • Environmental Management Act, 2000 	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan (NBSAP), 2001 • National Environmental Policy (NEP), 2006 • National Protected Areas Policy, 2011 • Action Plan for Implementing the Convention on

				<ul style="list-style-type: none"> • Environmentally Sensitive Areas Rules, 2001 • Environmentally Sensitive Species Rules, 2001 • Forests Act • Fisheries Act • Marine Areas (Preservation and Enhancement) Act 	Biological Diversity's Programme of Work on Protected Areas – Trinidad and Tobago, 2012
UNESCO Convention on the Protection of Underwater Cultural Heritage	R	07/2010	10/2010	<ul style="list-style-type: none"> • Protection of Wrecks Act 	
United Nations Framework Convention on Climate Change (UNFCCC)	R	06/1992	06/1994		<ul style="list-style-type: none"> • National Climate Change Policy, 2011
Kyoto Protocol to the UNFCCC	R	01/1999	02/2005		<ul style="list-style-type: none"> • National Climate Change Policy, 2011
International Maritime Organization Conventions					
International Convention for the Safety of Life at Sea 1974 (SOLAS Convention 74)	A	02/1979	05/1980	<ul style="list-style-type: none"> • Shipping Act 	
Protocol of 1978 Relating to the SOLAS Convention 74 (SOLAS Protocol 78)	A	06/2012	11/2012	<ul style="list-style-type: none"> • Shipping Act 	
Protocol of 1988 Relating to the SOLAS Convention 74 (SOLAS Protocol 88)	A	06/2012	11/2012	<ul style="list-style-type: none"> • Shipping Act 	
International Convention on Load Lines 1966 (LOAD LINES Convention 66)	Ac	08/1966	07/1968	<ul style="list-style-type: none"> • Shipping Act 	
International Convention on Tonnage Measurement of Ships 1969 (TONNAGE Convention 69)	A	02/1979	07/1982	<ul style="list-style-type: none"> • Shipping Act 	
Convention on the International Regulations for Preventing Collisions at Sea 1972 (COLREG Convention 72)	A	02/1979	02/1979	<ul style="list-style-type: none"> • Shipping Act 	

International Convention on Standards of Training Certification and Watchkeeping for Seafarers 1978 (STCW Convention 78)	A	02/1989	05/1989	• Shipping Act	
International Convention on Maritime Search and Rescue 1979 (SAR Convention 1979)	A	05/1989	06/1989	• Shipping Act	
Convention on Facilitation of International Maritime Traffic 1965 (FACILITATION Convention 65)	Ac	03/1967	05/1967	• Shipping Act	
Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 ¹ , As amended (MARPOL 73/78 Convention)	A	03/2000	06/2000	• Oil Pollution in Territorial Waters Act	
Protocol of 1997 to amend the International Convention for the Prevention of the Pollution from Ships, 1973, As modified by the Protocol of 1978 relating thereto (MARPOL Protocol 97)	A	06/2012	09/2012	• Oil Pollution in Territorial Waters Act	
1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter 1972 (London Convention Protocol 96)	A	03/2000	03/2006	• Oil Pollution in Territorial Waters Act	
International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties 1969 (INTERVENTION Protocol)	A	03/2000	06/2000		
Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage 1969 (CLC Protocol 92)	A	03/2000	03/2001		
Protocol of 1992 to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971 (FUND Protocol 1992)	A	03/2000	03/2001		
Convention on Limitation of Liability for Maritime Claims 1976 (LLMC Convention 76)	A	03/2000	07/2000	• Shipping Act	

Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation 1988 (SUA Convention 88)	A	07/1989	03/1992	<ul style="list-style-type: none"> • Archipelagic Waters and Exclusive Economic Zone Act • Shipping Act • Territorial Sea Act 	
Protocol for the Suppression of Unlawful Acts against the Safety of fixed Platforms located on the Continental Shelf (SUA Protocol)	A	07/1989	03/1992	<ul style="list-style-type: none"> • Archipelagic Waters and Exclusive Economic Zone Act • Continental Shelf Act • Shipping Act • Territorial Sea Act 	
International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC Convention 1990)	A	03/2000	06/2000		<ul style="list-style-type: none"> • National Oil Spill Contingency Plan, 2013
International Convention on the Control of Harmful Antifouling Systems on Ships 2001 (AFS Convention 2001)	A	01/2012	04/2012		
International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004 (BWM Convention 2004)	A	01/2012		<ul style="list-style-type: none"> • Oil Pollution in Territorial Waters Act 	
Other Conventions					
Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES)	A	01/1984	04/1984	<ul style="list-style-type: none"> • Conservation of Wild Life Act • Environmental Management Act, 2000 • Environmentally Sensitive Species Rules, 2001 • Fisheries Act 	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan (NBSAP), 2001 • National Environmental Policy (NEP), 2006

Convention on Wetlands of International Importance (Ramsar Convention)	A	04/1993	08/1993	<ul style="list-style-type: none"> • Certificate of Environmental Clearance Rules, 2001 • Conservation of Wildlife Act • Environmental Management Act, 2000 • Environmentally Sensitive Areas Rules, 2001 • Forests Act • Marine Areas (Preservation and Enhancement) Act 	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan (NBSAP), 2001 • National Environmental Policy (NEP), 2006 • National Policy and Programmes on Wetland Conservation for Trinidad and Tobago, 2001 • National Protected Areas Policy, 2011
International Convention for the Conservation of Atlantic Tunas (ICCAT)	R	03/1999	03/1999	<ul style="list-style-type: none"> • Archipelagic Waters and Exclusive Economic Zone Act • Fisheries Act 	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan (NBSAP), 2001 • National Environmental Policy (NEP), 2006
Regional Conventions					
Convention for Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention)	A	01/1986	10/1986	<ul style="list-style-type: none"> • Certificate of Environmental Clearance Rules, 2001 • Conservation of Wild Life Act • Continental Shelf Act • Environmental Management Act, 2000 	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan (NBSAP), 2001 • National Environmental Policy (NEP), 2006 • National Oil Spill Contingency Plan (NOSCP), 2013 • National Protected Areas Policy, 2011

				<ul style="list-style-type: none"> • Environmentally Sensitive Areas Rules, 2001 • Environmentally Sensitive Species Rules, 2001 • Fisheries Act • Marine Areas (Preservation and Enhancement) Act • Water Pollution Rules, 2001 	<ul style="list-style-type: none"> • T&T National Programme of Action for Protection of the Marine Environment from Land Based Sources and Activities, 2008-2013
Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region	A	01/1986	10/1986	<ul style="list-style-type: none"> • Water Pollution Rules, 2001 	<ul style="list-style-type: none"> • National Oil Spill Contingency Plan (NOSCP), 2013
Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region (SPAW Protocol)	R	08/1999	06/2000	<ul style="list-style-type: none"> • Conservation of Wild Life Act • Certificate of Environmental Clearance Rules, 2001 • Environmental Management Act, 2000 • Environmentally Sensitive Areas Rules, 2001 • Environmentally Sensitive Species Rules, 2001 • Forests Act • Fisheries Act 	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan (NBSAP), 2001 • National Environmental Policy (NEP), 2006 • National Protected Areas Policy, 2011

				<ul style="list-style-type: none"> • Marine Areas (Preservation and Enhancement) Act 	
Protocol Concerning Pollution from Land Based Sources and Activities (LBS Protocol)	A	03/2003	08/2010	<ul style="list-style-type: none"> • Certificate of Environmental Clearance Rules, 2001 • Environmental Management Act, 2000 • Water Pollution Rules, 2001 	<ul style="list-style-type: none"> • National Environmental Policy (NEP), 2006 • T&T National Programme of Action for Protection of the Marine Environment from Land Based Sources and Activities, 2008-2013

A = Accession; Ac = Acceptance; R = Ratification

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¹ - The Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, incorporates with modifications the provisions of the International Convention for the Prevention of Pollution from Ships 1973. Accordingly, as of 2nd October 1983, the regime to be applied by the States Parties to it is the regime contained in the 1973 Convention as modified by the Protocol Of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (1973/78 MARPOL)

N.B. Agreements highlighted in **yellow** do not have local legislative and/or policy instruments in existence that will allow for fulfilment of all the obligations of the respective conventions. Those agreements not highlighted have local legislative and policy instruments that will allow for implementation of the respective conventions. However, it must be noted that *having the necessary instruments available to allow for implementation is no guarantee that convention obligations are being met.*

2.2. Shortcomings in the Existing National Ocean and Coastal Legal Framework

A complete lack of legislative provisioning in certain aspects of maritime governance is not the only barrier to the sustainable management of resources and activities in ocean and coastal areas of Trinidad and Tobago. Indeed, just as problematic are situations where laws exist but are outdated or poorly drafted. Consequently, loopholes are apparent which lend themselves to undesirable management practices that may go unpunished, are allowed to persist and/or which run counter to prescriptions in international law.

The most glaring examples of outdated legislation pertaining to the marine and coastal environment of Trinidad and Tobago are seen when certain Acts make reference only to the territorial and internal waters of the country. Trinidad and Tobago's territorial sea and internal waters were initially defined in the Territorial Sea Act, Chapter 1:51 (Act 38 of 1969). Baselines established then enclosed the internal waters and were the lines from which the twelve nautical mile (12NM) territorial sea was measured.

However, Territorial Sea Act was repealed and amended by the Archipelagic Waters and Exclusive Economic Zone Act, Chapter 51:06. As mentioned earlier, this Act gave effect to UNCLOS and, since Trinidad and Tobago was established as an archipelagic State, changed the baselines from which the territorial sea was measured. New baselines were drawn (archipelagic baselines), landward of which lay archipelagic waters, which included the internal waters of the country. Now, waters twelve nautical miles (at most points) seaward of the archipelagic baselines made up the territorial sea. The Act also allowed Trinidad and Tobago to claim its Exclusive Economic Zone (EEZ) which was defined by sections 14 and 15 of the Archipelagic Waters and Exclusive Economic Zone Act⁸ (Figure 2).

⁸ Archipelagic Waters and Exclusive Economic Zone Act of Trinidad and Tobago:

Section 14: The exclusive economic zone of Trinidad and Tobago (hereinafter referred to as “the exclusive economic zone”) comprises all areas of sea, having as their innermost limits the outermost limits of the territorial sea, and as their outermost limits a line drawn seaward from the baseline from which the territorial sea is measured every point of which is at a distance of two hundred nautical miles from the nearest point of the baselines from which the breadth of the territorial sea is measured.

Section 15: Where the distance between Trinidad and Tobago and opposite or adjacent States is less than four hundred nautical miles, the boundary of the exclusive economic zone shall be determined by agreement between

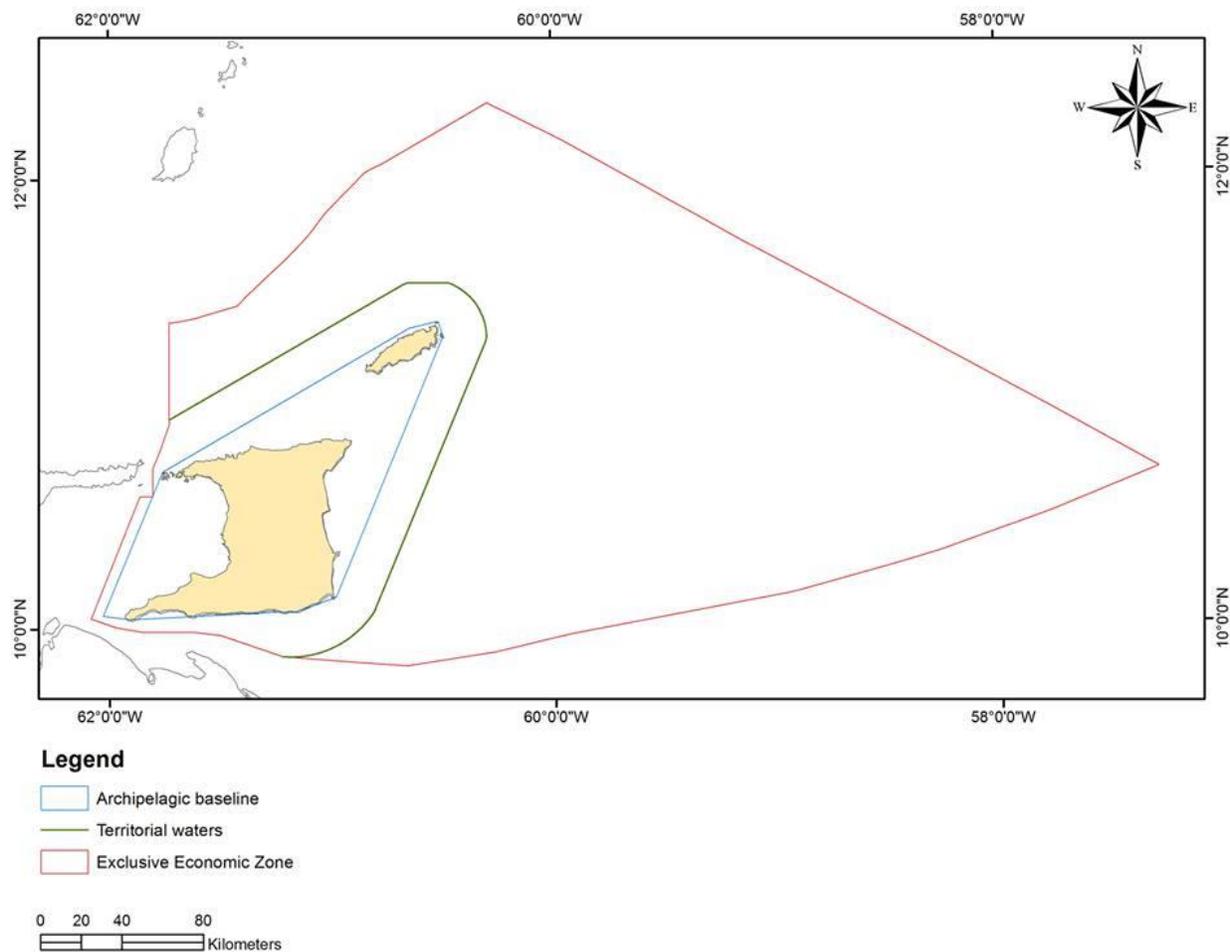


Figure 2: Delineation of the archipelagic baseline of Trinidad and Tobago and the limits of the territorial sea and exclusive economic zone

(Source: Hamish Asmath, Institute of Marine Affairs, Chaguaramas, Trinidad)

Trinidad and Tobago, as a party to UNCLOS, has sovereignty with regards to the waters, air space over, and bed and sub soil beneath its archipelagic waters and territorial sea, as well as sovereign rights over the waters, seabed and subsoil of the EEZ. The country also has certain responsibilities in these areas including ensuring protection and preservation of the marine environment and the prevention, reduction and control of pollution herein. In the ocean and coastal governance framework of Trinidad and Tobago however, many Acts, especially those that pre-date the

Trinidad and Tobago and the States concerned on the basis of international law in order to achieve and equitable solution.

Archipelagic Waters and Exclusive Economic Zone Act, only make reference to the territorial sea and internal waters. In doing so, jurisdictionally, these Acts do not apply to the country's EEZ, which exists beyond the territorial waters. For many, it is also the case that they would not apply to large parts of the archipelagic waters. Therefore, because they have never been amended, the Acts are left largely jurisdictionally impotent.

The Fisheries Act, Chapter 67:51, is one such piece of legislation. This Act, along with its subsidiary legislation, is intended to regulate fishing activities in the waters of Trinidad and Tobago. Its importance as an ocean and coastal governance tool therefore cannot be overstated. However, as it stands, it only extends to "all rivers, whether tidal or otherwise, and to the Territorial Sea of Trinidad and Tobago"⁹. This would have been adequate, in terms of jurisdictional extent, before adoption of UNCLOS and the enactment of the Archipelagic Waters and Exclusive Economic Zone Act, but in the present day, it is woefully inadequate.

The Archipelagic Waters and Exclusive Economic Zone Act does contain sections that regulate the fishing activities of foreign vessels in the archipelagic waters, territorial sea and EEZ of Trinidad and Tobago. However, these sections of the Act are not applicable to locally owned fishing vessels and crew. This, coupled with the fact that the Fisheries Act has no provision requiring the licensing of local fishermen, creates a situation whereby, for nationals of Trinidad and Tobago, fisheries in the majority of country's waters are open access and unregulated. Only subsidiary legislation in the Fisheries Act provide restrictions in the internal waters and territorial sea on aspects of the marine fishery, such as that relating to permissible gear type; sizes and types of fish allowed to be captured; and areas where and/or time of year when certain types of fishing practices are prohibited.

Deficiencies in the Fisheries Act and its subsidiary legislation, contribute to many fisheries resources in Trinidad and Tobago's waters being subject to full or over exploitation (Mohammed *et al.*, 2011). This is especially true in the EEZ of the country, as there are no real means in place to control fishing effort there by citizens of the Nation. This is not only problematic for efforts towards preventing fishery collapse, achieving livelihood sustainability, alleviating poverty and

⁹ Excerpt from **Section 3** of the Fisheries Act of Trinidad and Tobago

enhancing national socio-economic wellbeing, it is also not in accordance with the country's wider international responsibility. Trinidad and Tobago has ratified the UN Agreement relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks and the International Convention for the Conservation of Atlantic Tunas (ICCAT), both of which have committed the country to promoting sustainable fisheries. In 2006 work began on the drafting of new and comprehensive fisheries management legislation – the Fisheries Management Bill – with a view to treating with the inadequacies of the Fisheries Act, including jurisdictional concerns, lack of management plans for the various fisheries and the open access nature of fisheries in Trinidad and Tobago. The Bill would repeal the Fisheries Act and relevant sections of the Archipelagic Waters and Exclusive Economic Zone Act. However, the drafting of this Bill is yet to be completed and it is uncertain when it will be brought to Parliament for review and proclamation.

Another Act that fails to fully apply over the full extent of Trinidad and Tobago's waters is the Protection of Wrecks Act, Chapter 37:04. Again, this Act only makes reference to the territorial waters and internal waters of the country. However, what is curious is that it was proclaimed in 1994, after the Archipelagic Waters and Exclusive Economic Zone Act came into effect. The drafters of the Protection of Wrecks Act however, did not subject sites within the country's EEZ to the provisions of the law. This has implications for fulfilling the obligations enshrined in the UNESCO Convention on the Protection of Underwater Cultural Heritage, where State Parties commit to preserving underwater cultural heritage within their waters using the practicable means at their disposal and in accordance with their capabilities. This Convention entered into force for Trinidad and Tobago in October 2010. Consequently, to provide local legislative backing for this Convention, the Protection of Wrecks Act needs to be amended to extend its jurisdictional scope into Trinidad and Tobago's EEZ and all its archipelagic waters.

A final example of an Act, intended for governance of the marine environment, but that does not apply to the full extent of Trinidad and Tobago's waters is the Oil Pollution of Territorial Waters Act, Chapter 37:03. This Act contains provisions against the discharge of oil, from any sea faring vessel, into the waters of Trinidad and Tobago and specifies penalties if provisions are breached. It is accepted that the Act is outdated and, along with the relatively lenient penalties (a feature

of many of the nation's older unamended Acts when considered in present day contexts), it does not apply to the EEZ. In fact, as it only applies to "the territorial waters of Trinidad and Tobago and the waters of the harbours therein", this Act, again, may not even apply to much of the country's archipelagic waters, which has a high volume of vessel traffic. The Shipping (Marine Pollution) Bill, which was discussed earlier, is intended to replace the Oil Pollution of Territorial Waters Act once enacted. However, in the interim, much of Trinidad and Tobago's waters remain legislatively unprotected from vessel pollution.

Indeed, when commenting on outdated and/or poorly drafted marine pollution legislation, it would be remiss not to highlight deficiencies in the marquee legislation designed to treat with pollution of Trinidad and Tobago's waters from a range of contaminants. The Water Pollution Rules of 2001, which is subsidiary legislation of the Environmental Management Act of 2000, is fairly comprehensive in terms of the pollutants to inland, coastal nearshore and marine offshore waters, which it is designed to regulate. However, part of the mechanism through which it seeks to do this has been deemed by the High Court of Trinidad and Tobago, to be in need of revision because it does not apply the "polluter pays principle" effectively¹⁰.

Under the country's Water Pollution Rules a polluter, in the form of a "registrable facility"¹¹, is allowed to pay for a license to pollute. However, this permit is obtained via paying an across-the-board, fixed annual fee, which does not discriminate between the size of respective polluters. The law therefore, does not abide by the sliding scale of the polluter pays principle where the amount a polluter pays is directly proportional to the level of pollutant emitted. In its 2012 ruling, the High Court of Trinidad and Tobago, in addition to querying on what basis the cost of a license was arrived at, quashed the authority of the EMA to use the fixed license fee in implementing the Water Pollution Rules. It also stopped any continued implementation of the Rules and compelled the EMA to bring the Water Pollution (Fees) Regulations more fully in line with ideologies embodied with managing pollution using the "polluter pays principle". As a result, while the EMA abides by and seeks to conform to the rulings of the High Court, a legislative gap

¹⁰ Article in Trinidad and Tobago Newsday Newspaper: <http://www.newsday.co.tt/business/0,167951.html>

¹¹ In the Water Pollution Rules of 2001 "registrable facilities" refer to industrial facilities; commercial facilities; agricultural facilities; institutions; and sewerage facilities

exists in a crucial feature of pollution management in the ocean and coastal sphere, with associated ramifications for environmental, social and economic sustainability.

Of course, laws will only ever be effective if they are drafted in a manner or accompanied by mechanisms that encourage compliance. Numerous legal instruments that regulate facets of Trinidad and Tobago's ocean and coastal zone seek compliance through very traditional means i.e. via the imposition of fines and penalties when entities are found to be acting in contravention of the law. However, these command and control mechanisms, although widely used, especially in environmental legislation, may not be the most practical means to treat with some ocean and coastal zone problems. In many cases, lack of capacity and other shortcomings and challenges that inhibit institutional functioning, including fulfilling roles as enforcers of laws, limit the degree to which regulations are adhered to (May, 2002). This will be discussed further later on in this thesis.

However, a poignant example that illustrates lack of compliance to the rule of law and consequent negative impact in the coastal environment is with regard to marine debris. Solid waste litter is treated with in the Water Pollution Rules, when it can be linked to "registrable facilities". But when this form of pollution emanates more so from the practices of individuals the Litter Act, Chapter 30:52, is the legal instrument designed to treat with the problem. Trinidad and Tobago faces particular challenges as it relates to pollution of the coastal environment from solid waste litter arising from "shoreline and recreational activities". "Shoreline and recreational activities" is defined in the Ocean Conservancy's International Coastal Cleanup¹² as "indiscriminate and intentional littering by beachgoers, picnickers, participants at waterside sports and festival events washing down creeks and rivers, and litter carried from streets, drains, gutters, and culverts". Coastal cleanup days conducted in September of 2008, 2009, 2010 and 2011 in a number of coastal areas around Trinidad and Tobago amassed 69997, 65869, 78634 and 105625 pounds of marine litter respectively, from shoreline and recreational activities. These figures made up a majority subset of the 76650, 73385, 86551 and 115421 pounds of total marine debris collected on the clean-up days in the respective years (International Ocean Cleanup, 2009;

¹² Data and more information available at <http://www.oceanconservancy.org/our-work/international-coastal-cleanup/>

2010; 2011). The inability to encourage compliance to the Litter Act, due mainly to littering being considered a low priority problem, especially when trade-offs with regard to resource allocation in enforcement decisions are to be made, fuels the growing marine debris problem¹³.

In instances where adherence to regulations is an ongoing problem, legislators and policy makers could seek to devise more creative regulatory instruments which draw on a growing body of sociological and psychological understandings into compliance (Sutinen and Kuperan, 1999; Winter and May, 2001). Aligned to this is exploring methods which can boost compliance while easing the need for enforcement from already burdened and under-resourced State agencies. Opting to employ more market based legislation (Huber *et al.*, 1998); legally and institutionally grounding genuine co-management approaches (Sandersen and Koester, 2000; Pomeroy *et al.*, 2004); and increasing environmental and legislative awareness through education (Rodrigues-Santos *et al.*, 2005) are among implementable approaches that can potentially increase effectiveness in certain realms of maritime governance.

¹³ In recognition of the ineffectiveness of the Litter Act and in partial attempts to tackle the growing problem of solid waste pollution to the environment, the Beverage Containers Bill 2012 was piloted in the Senate of Trinidad and Tobago in November 2012. The explanatory notes of the Bill state that it “seeks to provide for the establishment of the Beverage Containers Advisory Board, a deposit and refund system for prescribed sizes of beverage containers, a regime for the collection of beverage containers to reduce their disposal into the environment, thereby alleviating the pollution problem....”. This Bill, however, lapsed in July of 2013 and therefore is yet to be proclaimed.

3. Policy and Institutional considerations in Ocean and Coastal Governance in Trinidad and Tobago

3.1. Limitations in National Policy relating to Ocean and Coastal Management

At present, management of facets of the ocean and coastal environment is guided by a number of sectoral policies, which influence actions and decisions through principles and ideologies established within them (Table 2). While these various policies operate within the established legal framework of the country, they are also necessary to catalyse the creation of new legislative and institutional arrangements that accommodate novel policy prescriptions as policy is periodically revised.

Table 2: Ocean and coastal related plans and policies for Trinidad and Tobago

Sector	Related Plans and Policies
Energy	<ul style="list-style-type: none"> • National Oil Spill Contingency Plan 2013
Fisheries	<ul style="list-style-type: none"> • National Food Production Action Plan 2012-2015 • <i>Draft National Fisheries Policy</i>
Shipping and Maritime Transportation	<ul style="list-style-type: none"> • <i>Draft Yachting Policy of Trinidad and Tobago</i>
Nearshore and Coastal Development	<ul style="list-style-type: none"> • National Physical Development Plan 1984 • <i>Draft Land Reclamation Policy for Trinidad and Tobago</i> • <i>Draft National Spatial Development Strategy</i>
Environmental Protection/Conservation	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan 2001 • National Environmental Policy 2006 • National Integrated Water Resources Management Policy 2005 • National Oil Spill Contingency Plan 2013 • National Physical Development Plan 1984 • National Policy and Programmes on Wetland Conservation for Trinidad and Tobago 2001 • National Programme of Action for the Protection of the Coastal and Marine Environment from Pollution from Land Based Sources and Activities 2008-2013 • National Protected Areas Policy 2011 • National Forests Policy 2011

	<ul style="list-style-type: none"> • Action Plan for Implementing the Convention on Biological Diversity's Programme of Work on Protected Areas – Trinidad and Tobago 2012 • <i>Draft National Fisheries Policy</i> • <i>Draft National Wildlife Policy</i> • <i>Draft Land Reclamation Policy for Trinidad and Tobago</i> • <i>Draft National Spatial Development Strategy</i>
Tourism	<ul style="list-style-type: none"> • National Tourism Policy 2010

In the finite areal and resource realm of the ocean and coastal sphere, well thought out sectoral policies are intended to articulate apt, country specific pathways towards economic, socio-cultural and environmental sustainability. Therefore, the absence of specific national policy documents in several areas dependent upon or intimately associated with the ocean and coastal zone of Trinidad and Tobago, needs to be addressed. The fisheries sector is one such area where this shortcoming is being rectified through the drafting of the National Fisheries Policy. This policy has been long in coming after the prescriptive time period for the previous fisheries management guiding document, the 1994 Fisheries Policy Direction's for the 1990's, expired. Formulation of the new National Fisheries Policy began in 2011 and it now stands as an almost complete document although it is uncertain when it will be approved.

Other sectors however, lack comprehensive policies, draft or otherwise. For instance, no specific policy deals with maritime transport. Burgeoning trade relations with regional and international counterparts, due to industrial expansion and increased hydrocarbon production along with the heightened import/export of manufactured goods and food commodities, has been responsible for observed growth in this sector (Government of Trinidad and Tobago, 2008). Trinidad and Tobago is now the largest exporter of ammonia and the second largest exporter of methanol in the world, and the largest exporter of liquefied natural gas (LNG) to the United States of America. There are also plans to build more ports and deepen existing ones in the country with a view to capitalising upon initiatives to widen the Panama Canal (Taylor, 2012). In addition to this, Trinidad and Tobago, by virtue of its geographic location, lies just south of the hurricane belt and within the most popular cruise ship destination region in the world, the Caribbean. Therefore along with high volumes of commercial shipping it is an attractive destination for pleasure

vessels. The yachting and cruise ship industries however, partially due to a lack of focused policy, prove to be underdeveloped sectors, despite the country's strategic location and many marinas located around the north western peninsula of Trinidad (ECLAC, 2002; Jordan, 2013).

Creation of a policy document on maritime transport, on its own or as part of a wider National Transport Policy, can be used to better manage the lucrative sector. It can facilitate the firm establishment of Trinidad and Tobago as a regional transshipment hub; guide expansion in the country's regional and international trade regime and, in particular, encourage the export of goods; enable tourism development and diversification through better engagement of the cruise ship and yachting industry; improve and promote national and regional inter island ferry linkages; and ensure maritime safety and security along with protection of the marine environment; among other things.

A similar policy gap also exists in the energy sector, and in particular, that related to oil and gas. Trinidad and Tobago has a long established history in commercial oil and gas production (Auty and Gelb, 1986) with the industry being the main economic driver of the country. A large proportion of Trinidad and Tobago's most productive wells and identified hydrocarbon reserves are found offshore, primarily in shallow water environments. Oil production is concentrated off the southwest coast of Trinidad with additional fields located off the east coast. Natural Gas recovery also takes place on the east and north coasts in water depths of less than 500m. Additionally, while shallow water operations dominate at present, in 2012 the Government of Trinidad and Tobago invited bids from interested parties to earn the rights to operate in six deep water blocks located to the east and north east of the islands. Following on from this success in allocating rights, bid rounds in 2013 were also scheduled to take place to encourage further exploitation¹⁴.

Articulating a National Energy Policy, or even more specifically a National Offshore Energy Policy will aid in energy sector management. It can be beneficial through, *inter alia*, guiding exploitation paths for finite hydrocarbon reserves; facilitating further exploration and foreign direct investment in the national sector; encouraging development of renewable energy potential;

¹⁴ Further information: http://energy.gov.tt/business_and_investing.php?mid=208

promoting energy security; ensuring transparency and accountability in use of resource rents and their appropriate re-investment towards alternative means of capital generation; executing joint development initiatives with neighbouring States; and treating with concerns surrounding the sector's fisheries and environmental impact. In the absence of established national policy however, both the energy and maritime transport sectors, along with other crucial ocean and coastal sectors, have been subject to whimsical changes in developmental pathways and actions and decisions taken have at times been incoherent and inconsistent.

Accompanying actual policy formulation, it is also necessary to have mechanisms that periodically ensure evaluation, review and reform of national policy. Unless the policy itself defines it, there is normally no set time period for policy review, but it is generally accepted that national policies should be revisited at least once every five to ten years. The National Physical Development Plan (NPDP) was therefore long overdue for update and to this end, the draft National Spatial Development Strategy (NSDS) is set to be approved in early 2014. Several other national plans and policies are also in need of revision including the National Programme of Action for the Protection of the Coastal and Marine Environment from Pollution from Land Based Sources and Activities, the National Policy and Programmes on Wetland Conservation and the National Biodiversity Strategy and Action Plan (NBSAP). Provided that government agenda has not changed drastically, policy review and reformation does not always need to be onerous or radical, especially if done regularly enough. However, it is prudent for the sake of collating more recently collected scientific data and statistics and employing more current language and approaches. For instance, more recently drafted national policies dealing with habitat and biodiversity conservation, such as the National Protected Areas Policy of 2011, touts ecosystem based approaches; co-management; participatory decision making; and the use of market based instruments in management more than older policies that treat with similar issues.

Apart from absent and outdated policy, the models that are predominantly employed in formulating ocean and coastal sectoral policy in Trinidad and Tobago, is also worth revisiting. Policy makers have tended to adopt approaches that apply a mixture of adversarialism and managerialism in policy creation (Williams and Matheny, 1995). In multiple use environments adversarialism is patterned towards "winner take all" prescriptions while managerialism

encourages agency experts to formulate policy unilaterally (Ansell and Gash, 2008). Both of these approaches differ from the collaborative mode of policy making, which is gaining agency globally, where all groups involved or impacted upon, jointly construct mutually acceptable policy guidelines to manage issues in question (Busenberg, 1999).

Drafters of sectoral national policies and plans need always to be mindful of the inefficiencies associated with compartmentalised management. Sectoral national policies should at the very least, identify and recognise inter-sectoral synergies and can go further by proposing guidelines for inter-sectoral collaboration (Tompkins *et al.*, 2002). Most, if not all of the national policies mentioned rightfully attempt to address environmental protection explicitly because the environment is one of the three critical dimensions of sustainable development¹⁵. Indeed, other examples can be found where inter-sectoral linkages are endorsed in national policy. For example, the National Tourism Policy of 2010 recognised the role of the maritime transport sector in expanding facets of cruise, yachting and local and regional inter-island tourism. Similarly, the National Protected Areas Policy of 2011 acknowledged the ecotourism potential of a system of national parks. However, both of these policies stopped short of outlining processes through which collaboration between relevant management bodies can take place and this has hampered successes in holistic sustainable management of the ocean and coastal sphere.

In a similar vein to the need for sectoral policy to better identify and accommodate synergistic inter-sectoral arrangements, conflicts between sectors and ways to treat with them should also be matters addressed in formulated policy. This is challenging in narrowly focused sectoral policies because most times, within a “framework of sustainability”, policy outcomes seek to maximise potential and performance in their particular sector. Addressing inter-sectoral conflict in sectoral policy would require committing to and undertaking compromises, which often involve difficult horse-trading and can run counter to the desires of some special interest groups who are battling for their own well-being and favoured resources. For this reason, in the activity filled ocean and coastal zone, sectoral policies often sidestep conflict management between their

¹⁵ The 2005 UN World Summit outcome reaffirmed that economic, social and environmental aspects are the key dimensions of sustainable development: GA resolution A/RES/60/1 (http://mdgs.un.org/unsd/mdg/Resources/Attach/Indicators/ares60_1_2005summit_eng.pdf)

respective sector and others. Rather a strategy of policy making is opted for where there are winners and aggrieved losers – often a reflection of power balances – and not one where mutual gains and consensus is sought.

In Trinidad and Tobago, national policies dealing with the ocean and coastal sectors also need to better take on board views of a wider cross-section of society through genuine consultation at all levels including the general public, coastal communities and local governments. This stakeholder involvement should take place early on in the formulation process, in order to more thoroughly consider the management ideas and opinions of as wide a constituency as possible in eventual final policy prescriptions. Very often, national policies have been generated solely by technocrats in branches of central Government with interests in particular sectors. This has regularly led to policy that is flawed, out of touch with on the ground needs and realities and which also does not treat with inter-sectoral synergies and conflicts. For instance, McLeod and Airey (2007) have highlighted that formulated and administered national tourism policies have exhibited disconnects with the culture, needs and circumstances in Tobago because of improper engagement with relevant local interests. Consequently, the sector has not achieved its fullest potential there.

It does appear, however, that notice is slowly being taken of the policy failures generated when proper stakeholder engagement has not taken place. A paradigm shift is taking place where the process of formulating some recent national policies e.g. the draft NSDS, has seen a greater emphasis being placed on stakeholder consultation and inclusion. Drafting the NSDS entailed eliciting ideas and feedback at different stages in the evolution of the policy through well publicised and co-ordinated, targeted and public consultation meetings at a variety of locations on the both islands. In most cases these were well attended with representation from a diverse range of stakeholder interest groups.

The Buccoo Reef Marine Park (BRMP), the only designated marine protected area in Trinidad and Tobago, provides an example where the shortcomings in sectoral policy formulation, in the absence of a collaborative framework discussed above, have come to light. There has been a failure by protected area policy to fully build upon synergies and address conflict with the tourism

sector and vice versa. In addition, in both sectors, policies show a lack of fit with the needs of the Park, a partial reflection of the fact that relevant publics were not properly engaged. This Park, established in 1973 to protect a contiguous coral–seagrass–mangrove ecosystem assemblage in Tobago, is also a major tourist attraction on the island. Since designation, the protected area policy prescriptions for the BRMP would have come from the “Policy for the Establishment and Management of a National Parks System in Trinidad and Tobago”, which was developed in 1984, and the current Protected Areas Policy. A formal management plan was developed specifically for the park by the Institute of Marine Affairs (IMA), a statutory national marine related research body, in 1995 but this was never fully implemented. Meanwhile, during that time, tourism sector actions and decisions in Tobago would have been largely guided by the Tourism Master Plan of 1995 and, more recently, by the 2010 National Tourism Policy.

Deficiencies in the administration of these tourism and protected area policies since the BRMP was gazetted, including lack of mechanisms for co-ordination and harmonization of the two sectors, has inhibited the efficacy of the park (Hassanali, 2013). The park’s decline is in turn impacting on tourism potential of the island. Indicators of ecosystem health show a declining trend, due in part to the tourism development model adopted on the island. At the same time, social capital and development in the communities surrounding the BRMP is weak, partly because policies adopted have limited their resource entitlement while marginalising them in management of the park and the sharing of the tourism benefit it has generated. Thus, stemming from policy failures, including the inability to successfully integrate sectors and stakeholders, national pathways to sustainable development have been jeopardised.

With a view to better co-ordinating, harmonizing and managing conflict between sectoral policy prescriptions in the ocean and coastal arena as well as engendering participatory and inclusionary management, an overarching Integrated Coastal Zone Management Policy is a proffered solution. Such a policy will not be meant to necessarily supersede sectoral policy but rather provide guidance in formulation and an enabling framework so that collaborative approaches can be better practiced. Intricacies associated with establishing such a policy for Trinidad and Tobago will be discussed in more detail later on in this thesis.

3.2. Challenges facing Institutions with Mandates for Ocean and Coastal Governance

In the marine and coastal environment of Trinidad and Tobago the numerous pieces of sectoral policy and enacted legislative instruments of governance are devised, administered and enforced by a wide range of formally established institutions. These bodies, which are mostly departments within central Government Ministries and the Tobago House of Assembly (THA)¹⁶, statutory authorities, or cabinet appointed multisectoral steering committees, have roles and responsibilities associated with managing single or multiple facets of the ocean and coastal sphere (Table 3).

Table 3: Institutional roles and responsibilities in the ocean and coastal zone of Trinidad and Tobago

Sector	Management Institutions Roles and Responsibilities
Energy	<p data-bbox="553 936 1032 968"><u>Ministry of Energy and Energy Affairs</u></p> <ul data-bbox="553 974 1414 1220" style="list-style-type: none"> <li data-bbox="553 974 1414 1041">• Grants licenses/leases and production sharing contracts for areas of petroleum exploration and production <li data-bbox="553 1047 1414 1182">• Regulates petroleum operators through audits, on a given frequency, via petroleum engineers, chemical engineers, mechanical engineers, geologists, geophysicists, petroleum inspectors, petroleum chemists, and financial auditors <li data-bbox="553 1188 1414 1220">• Lead agency in emergency incident and oil spill incident response <p data-bbox="553 1262 1057 1293"><u>Environmental Management Authority</u></p> <ul data-bbox="553 1299 1414 1545" style="list-style-type: none"> <li data-bbox="553 1299 1414 1434">• Grants CECs for a range of activities associated with offshore energy including oil and gas exploration, production, refining and storage; mining and processing; pipeline system laying; and renewable electricity generation <li data-bbox="553 1440 1414 1472">• Monitors for CEC and environmental rules compliance <li data-bbox="553 1478 1414 1545">• Provides technical and investigative support in emergency incidents and spill incidents response <p data-bbox="553 1587 906 1619"><u>Land Management Division</u></p> <ul data-bbox="553 1625 1154 1656" style="list-style-type: none"> <li data-bbox="553 1625 1154 1656">• Grants licenses to build on or alter the sea bed

¹⁶ The Tobago House of Assembly (THA) is body made up of a mixture of elected and appointed persons, guided by the Tobago House of Assembly Act, Chapter 25:03, and established in accordance with the Constitution of the Republic of Trinidad and Tobago with a view to making special provisions for the administration of the Tobago's affairs. It affords the island some measure of self-governance, devolved from the central Government of Trinidad and Tobago

	<p><u>Institute of Marine Affairs</u></p> <ul style="list-style-type: none"> • Assists in hydrocarbon research, sampling and analysis especially as it relates to oil finger printing • Provides technical and investigative support in oil spill incidents response <p><u>Trinidad and Tobago Coast Guard</u></p> <ul style="list-style-type: none"> • Assists with marine surveillance and monitoring of energy sector assets and on-scene management for environmental incidents
<p>Fisheries</p>	<p><u>Fisheries Division</u></p> <ul style="list-style-type: none"> • Serves in assessment, management and conservation of fisheries resources through development and implementation of policies and programmes • Provides information services on fisheries • Administers and enforces fisheries limits and regulations • Implements state obligations under regional and international conventions concerning fisheries or related matters • Licenses and regulates foreign fishing vessels <p><u>Marine Resources and Fisheries Department - THA</u></p> <ul style="list-style-type: none"> • Performs “Fisheries Division” functions in Tobago up to 6 nautical miles offshore <p><u>Environmental Management Authority</u></p> <ul style="list-style-type: none"> • Grants CECs for establishment and operation of mariculture/aquaculture facilities • Monitors for CEC and environmental rules compliance • Involved in fish kill incident investigation and response <p><u>Institute of Marine Affairs</u></p> <ul style="list-style-type: none"> • Undertakes fisheries related research • Involved in fish kill incident investigation and response <p><u>Trinidad and Tobago Coast Guard</u></p> <ul style="list-style-type: none"> • Conducts fisheries regulations enforcement
<p>Shipping and Maritime Transport</p>	<p><u>Maritime Services Division</u></p> <ul style="list-style-type: none"> • Administers provisions and implements the regulatory functions in maritime transport related legislation • Ensures that Trinidad and Tobago is compliant with adopted International Maritime Organization (IMO) conventions and standards <p><u>Division of Tourism and Transportation - THA</u></p> <ul style="list-style-type: none"> • Ensures there is an adequate supply of sea transport to satisfy the needs of residents and visitors to Tobago

	<p><u>Port Authority of Trinidad and Tobago</u></p> <ul style="list-style-type: none"> • Manages port and cargo handling activity at major ports • Manages the day to day activities of the Trinidad and Tobago inter-island ferry service • Manages vessel traffic and harbour surveillance • Manages towage, dredging and underwater operations in major harbours • Authorises and manages works if obstruction or danger to navigation is likely to result <p><u>Environmental Management Authority</u></p> <ul style="list-style-type: none"> • Grants CECs for the establishment of infrastructure associated with marine transportation • Monitors for CEC and environmental rules compliance <p><u>Trinidad and Tobago Coast Guard</u></p> <ul style="list-style-type: none"> • Involved in port surveillance and security • Ensures safety along shipping lanes
Nearshore and Coastal Development	<p><u>Town and Country Planning Division</u></p> <ul style="list-style-type: none"> • Develops and keeps under review a comprehensive policy framework, a national physical development planning framework, regional plans and local area plans to guide decision making on the use and development of land • Evaluates and determines applications for planning permission to develop land, in accordance with land use policies and plans • Enforces planning control • Provides an up-to-date database of land use planning data and information for decision making on land use and land development • Maintains the register of planning applications <p><u>Land Management Division</u></p> <ul style="list-style-type: none"> • Regulates land reclamation in coastal areas • Acquires private land for public purposes • Provides approvals to construct buildings on State lands • Grants licenses to build on or alter the sea bed <p><u>Ministry of Local Government</u></p> <ul style="list-style-type: none"> • Municipal Corporations have functions relating to construction and demolition exercises in the coastal zone including ensuring building codes are adhered to <p><u>Ministry of Works</u></p> <ul style="list-style-type: none"> • Undertakes land reclamation and works to prevent coastal erosion including construction and maintenance of coastal defences

	<p><u>Environmental Management Authority</u></p> <ul style="list-style-type: none"> Regulates development offshore, nearshore and on coastal lands through the administering of CECs for range of industrial, building and infrastructure development activities; dredging activities; and land reclamation activities Monitors for CEC and environmental rules compliance <p><u>Institute of Marine Affairs</u></p> <ul style="list-style-type: none"> Recommends to the Town and Country Planning Division (TCPD) set back distances in the coastal zone
<p>Environmental Protection/Conservation</p>	<p><u>Environmental Management Authority</u></p> <ul style="list-style-type: none"> Develops and implements policies and programmes for the effective management and sustainable use of the environment Co-ordinates environmental management functions performed by entities in Trinidad and Tobago Makes recommendations for the rationalization of all governmental entities performing environmental functions Designates and assists in management of Environmentally Sensitive Areas and Environmentally Sensitive Species Develops and establishes national environmental rules, standards and criteria Monitors compliance with the rules, standards criteria and programs relating to the environment Issues CECs for a range of activities that may impact the environment; in some cases an Environmental Impact Assessment (EIA) may be a requirement Promotes educational and public awareness programs on the environment <p><u>Department of Natural Resources and the Environment - THA</u></p> <ul style="list-style-type: none"> Arm of the “Environmental Management Authority” in Tobago <p><u>Town and Country Planning Division</u></p> <ul style="list-style-type: none"> Develops and keeps under review a comprehensive policy framework, a national physical development planning framework, regional plans and local area plans to guide decision making on the use and development of land <p><u>Land Management Division</u></p> <ul style="list-style-type: none"> Acquires private land for public purposes including the establishment of protected areas <p><u>Ministry of Local Government</u></p> <ul style="list-style-type: none"> Municipal Corporations function in the provision, maintenance and control of beaches and other public spaces in the coastal zone

	<p><u>Fisheries Division</u></p> <ul style="list-style-type: none"> • Serves in assessment, management and conservation of fisheries resources • Administers and enforces fisheries regulations • Declares prohibited areas for fisheries <p><u>Forestry Division</u></p> <ul style="list-style-type: none"> • Declares and manages prohibited areas and wildlife sanctuaries within the coastal zone including some wetlands, turtle nesting beaches and nearshore islands <p><u>Marine Resources and Fisheries Department - THA</u></p> <ul style="list-style-type: none"> • Enforces regulations in Tobago’s MPA <p><u>Department of Natural Resources and the Environment – THA</u></p> <ul style="list-style-type: none"> • Manages Tobago’s nearshore islands established as prohibited areas and game sanctuaries <p><u>National Wetlands Committee</u></p> <ul style="list-style-type: none"> • Formulates and guides implementation of national wetlands policy • Advises on management decisions concerning wetlands <p><u>Institute of Marine Affairs</u></p> <ul style="list-style-type: none"> • Undertakes environmental research and monitoring activities in several coastal and marine activities and ecosystems including fisheries, coral reefs, sea grass beds, mangrove forests, rocky benthic and sandy benthic environments, with a view to recommending approaches to and ensuring undertaking of sustainable management <p><u>Trinidad and Tobago Coast Guard</u></p> <ul style="list-style-type: none"> • Assists in marine surveillance and monitoring and involved in on-scene management of environmental incidents
Tourism	<p><u>Ministry of Tourism</u></p> <ul style="list-style-type: none"> • Formulates tourism policy and strategy • Guides, regulates, oversees and fosters the sustainable development and promotion of the tourism sector through effective public, private and community partnerships <p><u>Division of Tourism and Transportation - THA</u></p> <ul style="list-style-type: none"> • Performs “Ministry of Tourism” functions in Tobago <p><u>Tourism Development Company</u></p> <ul style="list-style-type: none"> • establishes and implements standards for the development and maintenance of tourism infrastructure and amenities, as well as standards for all identified tourist sites and attractions

	<p><u>Environmental Management Authority</u></p> <ul style="list-style-type: none"> • Grants CECs for establishment of hotels, guesthouses etc. • Monitors for CEC and environmental rules compliance <p><u>Ministry of Local Government</u></p> <ul style="list-style-type: none"> • Municipal Corporations function in the provision, maintenance and control of beaches and other public spaces in the coastal zone
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The institutional framework for sectoral management of the activities and resources in Trinidad and Tobago’s ocean and coastal sphere is comprehensive. Few gaps are apparent in regard to the scope of responsibilities and influence afforded to advisory, regulatory and enforcement agencies. However, despite this well-populated landscape, the functional reality is that the effectiveness of governance provided by some of these institutions, acting singularly or in tandem, is deficient as roles are not fully performed. In many cases, due to a lack of resources, management institutions find themselves operationally impaired, inhibited by financial, human, administrative and technical capacity constraints.

The Fisheries Division is one such institution that is plagued by resource limitations. Mohammed *et al.* (2011) highlighted that the Fisheries Monitoring, Surveillance and Enforcement Unit (FMSEU) of the Division is not adequately staffed with trained and experienced personnel. The unit struggles to effectively ensure adherence to national fisheries law and accepted international codes of conduct, including that of Trinidad and Tobago’s roles and responsibilities as a port State¹⁷. Issues also exist with the Fisheries Division’s technical capability to assess the ecological, social and economic impacts of its fisheries management practices. In addition, poor linkages with other government agencies, as well as other stakeholders, majorly inhibit the Division’s attempts at sustainably governing fisheries. External aid from regional and international bodies do alleviate some of the financial and technical burdens on the Division but a more self-sufficient, stable, secure and sustainable solution to meeting capacity needs is required. Some policy makers see part of the solution lying in altering the institutional structure

¹⁷ Article 23 of the UN Fish Stocks Agreement outlines some of the roles of a port State

of the Fisheries Division, which has been largely unchanged for the past three decades. The Fisheries Management Bill, which was discussed earlier, seeks to establish new administrative and operational arrangements that are envisioned to increase the Division's capacity to fulfil roles and responsibilities in fisheries management.

Rationalising the institutional arrangement surrounding protected area administration is also seen as a necessary step in increasing the effectiveness in using this ocean and coastal management tool. Protected areas in the coastal zone of Trinidad and Tobago – which include some wetland areas, turtle nesting beaches, nearshore islands and the BRMP – are all negatively affected by the inadequate resources available to the different bodies tasked with their management and enforcement (Eckert, 1998; Hassanali, 2013; Juman and Hassanali, 2013). The 2011 National Protected Areas Policy has called on the Government of Trinidad and Tobago to undertake a process to establish a Forest and Protected Areas Management Authority for the country by 2014. This Authority is envisaged to be less bureaucratic and more politically and financially independent than the Forestry Division, which currently manages coastal protected areas in Trinidad, and the THA's Department of Marine Resources and Fisheries and Department of Natural Resources and the Environment, which does the same in Tobago. Transparency and accountability; conflict management; maintenance of an adequate, well trained and technically capable human resource pool; and development of better functioning partnerships including those that are horizontally and vertically oriented within government, public-private, and community-based in nature; are set to be among the primary tenants by which the Authority will operate. Again, increased management capacity is the expected outcome since there will be a contemporary framework designed to enable less wastage and better targeting of available resources.

Other important agencies that suffer from resource inadequacies are the EMA and Ministry of Energy and Energy Affairs. They both have responsibility, *inter alia*, for facility and operational oversight of several industries and practices located in, or that have impacts on, the coastal and marine environment of the Trinidad and Tobago. However, monitoring and enforcement to ensure legal compliance is not regularly performed by these agencies because of a lack of resources. As an example, this inadequacy manifests itself in the petro-chemical sector among

others. Alongside infrequent spot checks, the EMA and the Energy Ministry rely greatly on industries undertaking self-regulation and submitting reports to be vetted (Chandool, 2011; Ramlogan and Persadie, 2004). Shah and Rivera (2007) do suggest that because of stronger coercive institutional pressures and increased normative and mimetic pressures, industries operating within the eighteen State managed industrial parks better comply with regulations, when compared to those operating elsewhere throughout Trinidad and Tobago. However, there are forty-three industrial parks in total in the country. In addition, even effluents from State run industrial parks are known to be responsible for heavily polluting the marine environment (Siung Chang, 1997). A shortfall of technical, administrative, human and financial resources in pivotal regulatory agencies affects auditing processes of the energy, industrial and other key sectors in Trinidad and Tobago. Deficiencies in oversight by those mandated to do so results in reduced compliance to standards and laws (May, 2005). Rising hydrocarbon, industrial and sewage pollution levels in coastal waters of the country reflect this reality (Singh *et al.*, 1992; Siung Chang, 1997; Rojas de Astudillo *et al.*, 2002; Kishore *et al.*, 2003; Bullock and Monesar, 2005; Norville, 2005; Lapointe *et al.*, 2010).

The under-resourcing of many institutions that function to provide ocean and coastal governance in Trinidad and Tobago creates a situation which imperatively necessitates that when resources are available and utilized, they be deployed in an efficient manner. However, overlap in the respective mandates of institutions, coupled with poor communication and co-ordination amongst them, encourages instances of conflict, redundancy, waste and general disorganization in executing management functions in the ocean and coastal realm. This reality – a partial manifestation of the deficiencies in formulated sectoral policy discussed earlier, whereby the theoretical bases of management (or lack thereof) are transferred into practical outcomes – is further engrained when operational modalities become embedded in institutional memory and agencies see the need to maintain power and relevancy in a dynamic governance framework. Therefore due to lack of inter-agency communication and co-ordination (purposefully or otherwise), many bodies find themselves operating in parallel, with unnecessary duplication of effort. Alternatively, work that is carried out by one agency may be undone by another because they each have different views, outlooks or focuses in the oversight of the same or

interconnected resources and activities. Execution of modes of management that are not compatible is a common occurrence in ocean and coastal governance in Trinidad and Tobago.

A fairly recent, and most striking illustration of poor communication, co-ordination and collaboration among a number of ocean and coastal management institutions, was observed in Grande Riviere, Trinidad in July of 2012. Grande Riviere Beach is a world renowned nesting site for the endangered leather-back turtle, with some of the highest nesting densities for this species in the world (Eckert, 2001). The beach itself was declared a Prohibited Area in 1997 under the Forests Act. Permits and tour guides are required for the viewing of nesting turtles during the season, which runs from March to August annually. Leather-back turtles themselves are afforded year round protection in Trinidad and Tobago through the Protection of Turtle and Turtle Eggs Regulations which was made under section 4 of the Fisheries Act. The EMA is also in the process of having leather-back turtles declared environmentally sensitive species under the Environmentally Sensitive Species (ESS) rules¹⁸. In Grande Riviere, a vibrant, community-driven conservation scheme and eco-tourism product has developed around the seasonal leather-back turtle nesting phenomenon, with fishing and agriculture being additional important livelihood activities in the area (Harrison, 2007).

The Grande Riviere Beach is known for its dynamic shoreline with changing erosional and depositional influences at different times of the year (Lee Lum, 2005). Additionally, the Grande Riviere River, which flows into the sea at the eastern end of the beach, is known to follow an erratic course in the short term that changes with rainfall intensity and flood water levels. In late 2011 the river began to alter its course, swinging westward, running parallel to the coastline. This caused erosion in front of the Mt Plaisir Estate Restaurant and Hotel and other small businesses and residential dwellings located along the back shore of the beach. This change of course also made access to the sea difficult for fishermen, who moor their artisanal pirogue vessels in the more sheltered river.

¹⁸ Article in Trinidad Express Newspaper:
http://www.trinidadexpress.com/news/Singh_announces_sea_turtle_task_force-174872531.html

In light of its observed and increased potential impacts, the change in river course was reported by the affected community to the Sangre Grande Regional Corporation. The Sangre Grande Regional Corporation is the Local Government body for the area and has the responsibility, under the Municipal Corporations Act, to maintain watercourses and beaches in the region. However, management agencies were slow to acknowledge and react to the coastline threat, up until the point where the situation became untenable and a response was then triggered from the Ministry of Works (MoW) to attempt to divert the river in July of 2012. They did this through the use of heavy excavating equipment which they drove on to the beach in the height of the turtle nesting season.

Over 20,000 leather-back sea turtle eggs and hatchlings were crushed during the exercise much to the chagrin of many local community members and conservation enthusiasts. The IMA, which carries out long term beach profile and shoreline monitoring in Grande Riviere and which has also conducted turtle nesting studies there, were not consulted prior to the action taken by the MoW. Neither were the Forestry Division, which has responsibility for Grande Riviere Beach in its designation as a Prohibited Area, nor the Fisheries Division, who administers the Protection of Turtle and Turtle Eggs Regulations. The EMA, who is tasked with co-ordinating environmental management and conservation in Trinidad and Tobago, reportedly verbally gave the MoW the go ahead to perform the river diversion. But under the Environmental Management Act, proper procedure would have been for the MoW to apply for a Certificate of Environmental Clearance (CEC). A CEC would have brought to light the sensitivities and precautions needed to operate in the protected area and around endangered species so that the best conservation practices could have taken place. Even if the threat to property was considered an emergency situation, in the absence of a CEC, the EMA should have been on-site to plan, advise and manage when the actual works were being carried out.

The incident gained much international media attention and also severely affected tourism to the area in the subsequent months. Interestingly, while the Minister of Environment and Water Resources and the CEO of the EMA defended the actions taken, the Minister of Tourism and Minister of Planning and Sustainable Development admitted that the issue was not well handled and that better consultation, communication and collaboration was needed in the future. In

addition, it is noteworthy that no person or agency was prosecuted for the many laws that were broken including the Protection of Turtle and Turtle Eggs Regulations, the Forests (Prohibited Areas) Order and the CEC Rules.

This occurrence, and episodes like it, illustrate just how disjointed and inadequate the institutional response to ocean and coastal management is in Trinidad and Tobago. Already constrained by the under-resourcing of key agencies, the lack of a robust mechanism to compel effective networking and synergism between both institutions and governmental tiers, further frustrates the governance process. Ability or willingness to ensure enforcement of existing laws is also deficient. These confounding factors can produce inefficiency, incoherency and inaptitude in the planning and actions undertaken in management of ocean and coastal resources and activities. The implementation of integrated coastal zone management is seen as key to addressing these shortcomings and better achieving optimality and sustainability in the use of the space and resources found in the marine and coastal areas of Trinidad and Tobago.

4. Towards Integrated Coastal Zone Management in Trinidad and Tobago

In preceding sections Integrated Coastal Zone Management (ICZM) has been alluded to as a means through which Trinidad and Tobago can better govern ocean and coastal resources and activities. This approach became popularised globally after, coming out of the United Nations Conference on Environment and Development (UNCED) in 1992, programs which manage coastal and ocean resources in countries/regions were strongly recommended to undergo integration (Cicin-Sain, 1993). Recognised under different names worldwide including integrated coastal management; integrated coastal and ocean management; integrated management and sustainable development of coastal and marine areas including EEZs; and cross sectoral, integrated coastal area planning (Sorensen, 1997), the term ICZM was latched on to by proponents in Trinidad and Tobago and thus will be used throughout for simplicity and consistency.

Although terminology may be varied and ICZM is being practiced across a range of contextual circumstances – from developing to developed countries, small island nations to large coastal States on continental mainland – the sought outcome is generally recognised as one whereby:

“(R)ational decisions are made concerning the conservation and sustainable use of coastal and ocean resources and space. The process is designed to overcome the fragmentation inherent in single sector management approaches (fishing operations, oil and gas development etc.), in the splits in jurisdiction among different levels of government and in the land-water interface.” – Cicin-Sain and Knecht (1998; p. 1)

Further to this, according to Cicin-Sain and Belfiore (2005; p. 854) ICZM seeks to:

“[A]ttain sustainable development of coastal and marine areas; to reduce vulnerability of coastal areas and their inhabitants to natural hazards; and to maintain essential ecological processes, life support systems and biological diversity in coastal and marine areas.....[I]t analyzes and addresses implications of

development, conflicting uses, and interrelationships between physical processes and human activities and promotes linkages and harmonization among sectoral coastal and ocean activities.”

Calls for coastal zone management in Trinidad and Tobago were made since the mid-1970s with concrete moves to enable it taking place in the 1980s. The IMA established a division, the Coastal Area Planning and Management Division (CAPMD), whose objective was to undertake multi-disciplinary coastal area planning and management research to feed into development planning (McShine-Mutunhu, 1985). Development planning, then solely regulated by the Town and Country Planning Division (TCPD) under the Town and Country Planning Act, and following prescriptions of the NPDP, sought to tie in the government’s social and economic plans with spatial implications. The west coastal area of Trinidad was to be used as a pilot study with McShine-Mutunhu (1985; p. 2) describing the intent of coastal zone management being:

1. *“Accommodating growth and facilitating economic gains while protecting valuable and non-renewable natural resources as follows:*
 - I. *Managing the impact of human activity so as to maintain and enhance the environmental quality of the coastal area;*
 - II. *Managing the development of renewable resources to achieve optimum sustainable yield;*
 - III. *Managing non-renewable resources in the (sic) light of short and long term needs and interests.*
2. *Promoting public use and enjoyment of the shoreline as well as the submerged areas by:*
 - I. *Ensuring that diverse recreational opportunities are available and affordable;*
 - II. *Protecting and enhancing scenic quality and historical and cultural sites for the benefit of residents and tourists.”*

This CAMPD/TCPD arrangement however, did not address governance difficulties inherent in the jurisdictional amalgam of the coastal zone, which was already complex in 1980s and, as has been highlighted in this text, has become even more complicated since then. This is perhaps one reason why the relationship did not endure. Today, the CAMPD is no longer part of the divisional

make-up of the IMA after it was restructured in the late 80s/early 90s. The IMA does still conduct applied and theoretical environmental, social and economic marine related research in Trinidad and Tobago though, and also maintains its advisory role.

By definition, integration is the fundamental difference between these first national attempts at coastal zone management and what is being proposed in ICZM. While coastal zone management did indeed implicitly consider integration in a few aspects, ICZM necessitates that integration takes place explicitly in a number of different realms to be successful (Sorensen, 1997). These dimensions of integration, as relates to Trinidad and Tobago, include:

- **Inter-sectoral** – which is horizontal in nature, bringing together different agencies and groups to manage conflicts and work towards a unified goal. Some of the desired inter-sectoral linkages to be achieved through ICZM were referred to in previous sections. In Trinidad and Tobago it would involve a host of interests including fisheries; forestry; maritime transport; tourism; oil and gas; and the town and country planning agency among others. Early attempts at coastal zone management in the country did not adequately address this field of integration (McShine-Mutunhu, 1985).
- **Inter-governmental** – which is vertically oriented seeking enhanced co-ordination and communication between the several tiers of government and between the citizenry and the government. It will also entail more clearly delineating responsibilities at each governmental level and grounding these in suitable legal frameworks to encourage effective interaction between the community/village councils, local governments (Regional Corporations) and the central government of Trinidad and Tobago. This realm of integration is especially pertinent to Tobago where the Tobago House of Assembly Act, Chapter 25:03, offers the island some level of autonomy in the governance of its affairs. This includes with regard to formulation and implementation of policy dealing with the environment; tourism; fisheries; land and marine parks; town and country planning; maritime transportation infrastructure and other facets related to the ocean and coastal sphere.
- **Spatial** – this would entail efficiently utilizing limited coastal space and rationally managing the myriad of activities that competes for it. It will also involve connecting the

issues that perpetuate across the ocean-coastline-terrestrial continuum and, in doing so, adopting a more holistic and adequate modality, legally and institutionally, to deal with them. In small island states like Trinidad and Tobago, although the issues which are of greatest concern may vary regionally, virtually its entire land area will have to be taken into consideration in the spatial extent of an ICZM plan. Offshore, it is also not unusual for ICZM considerations to extend through to the limits of the EEZ.

- Bridging the **science-management** divide which, in essence, will emphasise informing management practices with sound science; the carrying out of applied scientific investigation; and continuous monitoring and evaluation to enable adaptive management. It would also entail adherence to the precautionary principle. As was attempted in early coastal zone management efforts in Trinidad and Tobago, there is need for an active role within ICZM for the IMA - the organization tasked with researching and recommending avenues for management of the marine, coastal and associated environmental resources of Trinidad and Tobago - as well as other academic institutions.
- **International** – where discourse between nation States is needed to placate trans-boundary issues affecting coastal area management. This sphere of integration is especially pertinent to Trinidad and Tobago given its proximity to the South American continent, association with numerous other countries in the West Indies archipelagic chain and location within the Caribbean Sea – a large marine ecosystem with recognised governance challenges (Fanning *et al.*, 2009).

These dimensions of integration are all lacking to varying degrees in Trinidad and Tobago. Enhancing them would be a major focus of a national ICZM program. A program with country-wide considerations, while challenging to implement, may have the benefit of being more sustainable (Christie, 2005). It would extend beyond project type initiatives, which can be limited in time horizon, spatial influence, resource availability, political support and/or wider contextual fit and relevance (Olsen and Christie, 2000; Christie *et al.* 2005; Shipman and Stojanovic, 2007). This thesis will next explore process tools for, and legal and institutional pathways to integration that already exist or that would be needed within a national ICZM plan for Trinidad and Tobago.

5. Grounding the Dimensions of Integration for Ocean and Coastal Management in Trinidad and Tobago

5.1. Sectoral Integration

It has been continuously highlighted throughout this text that sectoral management dominates governance in the ocean and coastal sphere in Trinidad and Tobago. Few formal mechanisms exist that mandate inter-sectoral modes of management. This, in turn, negatively affects efficiency and sustainability of coastal zone activities and resource use.

In Trinidad and Tobago, the Environmental Management Act of 2000 (EM Act) does provide the EMA some scope to enable sectoral integration as it relates to environmental management. Among the functions of the Authority, defined in the Act, which are of relevance to sectoral integration are:

Section 16(1)(c): Co-ordinate environmental management functions performed by persons in Trinidad and Tobago

Section 16(1)(d): Make recommendations for the rationalisation of all governmental entities performing environmental functions

Section 16(1)(i): Establish and co-ordinate institutional linkages locally, regionally and internationally

In addition, Section 16(2) of the EM Act states that:

“In performing its functions, the Authority shall ***facilitate cooperation among persons*** and manage the environment in a manner which ***fosters participation and promotes consensus***, including the encouragement and use of appropriate means to avoid or expeditiously resolve disputes through mechanism for alternative dispute resolution.” [Emphasis added]

These functions inherently speak to the desire to achieve integration in environmental management. Further to this, in order to execute these functions, Section 20(1) of the EM Act broadly prescribes that the EMA has the “power to do things necessary or convenient to be done

for or in connection with the performance of its functions”. However, it could be argued that the lack of specificity of Section 20(1) of the Act coupled with the resource constraints of the Authority itself, which were alluded to earlier, limits wielding of power fully and/or effectively, thus inhibiting the integrative function of the EMA.

One mechanism through which the EMA partially performs its integrative role is through the CEC Rules. The Rules outline the CEC process, which allows the Authority to control the environmental impact associated with a host of developmental activities¹⁹(Ramlogan, 2010). In administering the CEC Rules the EMA has the option of circulating supporting documents associated with CEC applications to relevant regulatory and advisory bodies for review, comment and critique, before CECs are granted or denied (Mycoo, 2002). However, besides this and drafted Memoranda of Understanding which can detail avenues of collaboration with select agencies²⁰, there is an absence of other obvious formal integrative mechanisms spearheaded by the EMA. It is very possible that the EMA performs a great degree of its integrative functions through informal channels of consultation, coercion and networking with and between relevant agencies. However, for the purpose of transparency in management and decision making (Anker *et al.*, 2004), steps should be taken by the EMA to, as far as possible, formalise integrative mechanisms where they do take place via uncodified means.

Environmental considerations are paramount in many sectors that operate within the ocean and coastal zone. Thus, the functions and roles performed by the EMA are essential. Following from this, given its importance to achieving environmental conservation and sustainability in Trinidad and Tobago, participation of the EMA would be imperative in any approach to cross-sectoral collaboration that is necessitated by and arises out of putting ICZM into practice. To fulfil this horizontal mode of integration, engagement of other important agencies that perform regulatory

¹⁹ The Certificate of Environmental Clearance (Designated Activities) Order delineate what activities fall under the CEC Rules

²⁰ Section 32(1) of the EM Act states that “The Authority shall, not later than three months into the commencement of this Act, initiate consultation with other governmental entities performing various environmental management functions, with the objective of forming Memoranda of Understanding or other arrangements between the Authority and such other governmental entities, which shall establish the mechanisms for co-ordination across jurisdictional lines and provide for the implementation of integrated environmental management programmes.”

and/or advisory functions in various sectors that operate in the ocean and coastal realm is also crucial.

Born and Miller (1988) analysed this “networking” approach to coastal zone management which is utilized in various State programs throughout the USA. They assessed its effectiveness and compared this model to the alternate approach i.e. that of establishing a new monolithic body with powers to plan and regulate all aspects of coastal and ocean management. They concluded that networking of existing agencies has proven to be not only viable in efforts to achieve management objectives, but “may be a more politically acceptable way.....(and) often the only realistic opportunity for undertaking such (coastal zone) management challenges through public institutions.” (p. 241).

The means being proposed here to enable the “networking” approach in Trinidad and Tobago is the formation of a national Coastal Zone Management Council (CZMC). In this present conceptualization of a national CZMC, sitting with pertinent regulatory agencies would be major umbrella organizations that represent interests of member groups with a stake in coastal zone affairs. The THA is also seen to be a necessary constituent of this national Council in order to bring Tobagonian perspectives in matters of coastal and ocean management. The envisaged fourteen member Trinidad and Tobago CZMC would therefore be comprised of high level, influential representatives of the following organizations:

1. Institute of Marine Affairs (IMA)
2. Environmental Management Authority (EMA)
3. Fisheries Division
4. Maritime Services Division (MSD)
5. Town and Country Planning Division (TCPD)
6. Forestry Division
7. Ministry of Energy and Energy Affairs (MEEA)
8. Ministry of Tourism
9. Ministry of Environment and Water Resources
10. Ministry of Works

11. Ministry of Foreign Affairs
12. Tobago House of Assembly (THA)
13. Council of Presidents of the Environment (COPE)²¹
14. Trinidad and Tobago Chamber of Industry and Commerce (TTCIC)²²

It is proposed this Council would be responsible for three main activities. Firstly, the CZMC would periodically review, update and improve upon the National ICZM Policy for Trinidad and Tobago. An ICZM Policy Framework, Strategies and Action Plan is currently being developed for the country by a Cabinet appointed, multi-sectoral Steering Committee and is scheduled to be completed in 2014. Through this policy the CZMC could, *inter alia*, outline the vision for ocean and coastal sustainability and prescribe guidelines to be used in the development of ocean and coastal sectoral policy. This includes mandating public engagement in the policy formulation process, which has been marginalised in the crafting of some past policy documents.

The second proposed function of the CZMC would be for it to vet prospective and current national plans, policies and legislation affecting the coastal zone and its management. They would make recommendations throughout the drafting phase and collectively ensure that edicts are in-keeping with the national vision. Any inconsistencies, conflicts and lack of synergy, which regimes of segregated management can lend themselves to, will be effectively redressed by the CZMC in these documents before final approval by Cabinet. The Council should seek to ensure robust mechanisms are included in policies, plans and legislation so that conflict is minimised and co-action maximised. The formal consensus building forum provided by the CZMC would enable achieving this objective.

The final recommended task of the CZMC would be to encourage a co-ordinated response when unforeseen situations in the ocean and coastal sphere may arise, such as the Grande Riviere Beach turtle crushing incident mentioned earlier. This function of the Council would be performed more on a discretionary/as needed basis. Conventional agencies would still maintain

²¹ COPE is a group of autonomous, not-for-profit, non-governmental organizations (NGOs) and community based organizations (CBOs) representing specialist interests in sustainable development concerns

²² TTCIC defines its mission: "To be the voice of business in the development of a strong sustainable national economy"

their roles as regular day to day managers of resources and activities in the coastal sphere, but the CZMC would be required to assist when called upon or when the need is identified in exceptional circumstances. The existence of the CZMC would provide the assurance that, should a co-ordinated response to a problem in the coastal zone be compelled, a framework from which one can be generated is already apparent, thus aiding in efficiency and effectiveness of the charted reaction.

It would be useful, if not absolutely necessary, for the CZMC to be statutorily grounded. Legislatively backing the CZMC will move it beyond the realm of being merely a political gesture to tangibly reflecting support and commitment of the Government of Trinidad and Tobago to its cause. The CZMC's purpose, functions and powers should be outlined in law to ensure that organizations making up and/or influenced by the Council recognise its authority and are induced to cooperate towards the goal of sustainability and sectoral integration in ocean and coastal management. The CZMC legislation could also define a lead agency for the Council. The IMA is suggested as an appropriate lead agency as it has a multi-disciplinary scientific research mandate and therefore may be recognised as being the least partisan of the proffered Council members. In addition, funding flows for the CZMC will have to be determined to ensure that appointees are adequately compensated for their time and expertise and that administrative and operational functions of the Council can be effectively carried out. Special funding, for the purposes of enhancing coastal zone management, can also be made available through the Government to the bodies actively participating on the CZMC as a stimulus to them making the proposed system work.

Of course, many details regarding what the CZMC will ultimately represent i.e. the processes, procedures and rules of operation and the reforms such a construct will entail, would have to be worked out through properly structured and genuine consultation with coastal zone stakeholders and affected publics. The initial ideas presented here are just a crude, malleable vision which can be developed upon and moulded to be accommodated into the ocean and coastal governance framework in Trinidad and Tobago.

5.2. Integration among Governmental Tiers

Trinidad and Tobago is a two island nation state. Examining the modalities through which coastal zone management is carried out at present in the country presents an interesting dichotomy. Proper integration among governmental tiers is essential for effective ocean and coastal governance in Tobago, but it is not as important an ICZM dimension when considering Trinidad's context alone.

5.2.1. Inter-governmental ICZM considerations in Trinidad

The land area in Trinidad is divided into fourteen municipalities. These municipalities represent local government districts where elected and appointed officials are tasked with ensuring that specific functions and responsibilities, assigned to Municipal Corporations through the Municipal Corporations Act, Chapter 25:04, are carried out effectively. The administrative boundaries of the fourteen municipalities in Trinidad are defined such that thirteen have direct land-sea coastal interfaces.

Coastal zone governance in Trinidad differs from several other countries such as the United States (Hershman *et al.*, 1999), the People's Republic of China (Lau, 2005), the Philippines (Eisma *et al.*, 2005) and Indonesia (Patlis, 2005). In these countries regional governmental bodies have scope to enact laws and establish institutions relating to sectoral governance or overall management of resources and activities in the coastal zone. Where devolution away from central Government control does occur in aspects of coastal zone management, this is when integration between governmental levels is seen as being highly necessary (Clark, 1997). This, however, is not a feature of the local government framework in Trinidad, as law making responsibility and statutory authority is reserved for actors within the central Government.

The extent of Trinidad's devolution of powers to local government authorities as relates to coastal zone management is very limited. From the reading of the Municipal Corporations Act the two functions that directly relate to marine and coastal management which are exercisable by Municipal Corporations are:

Section 232(f): the provision, maintenance and control of such parks, recreation grounds, *beaches* and other public spaces as the President may from time to time by Order prescribe. [Emphasis Added]

Section 232(g): the promotion of development within the municipality in accordance with plans approved by the Minister with responsibility for physical planning.

Proposals have been made to enhance the power and responsibility of Local Governments (Municipal Corporations) in Trinidad as it relates to the latter function of coastal zone management. Corporation's responsibilities have, in the past, just been expressed through preparation of Municipal Development Plans. These Municipal Development Plans aligned themselves to prescriptions in the National Physical Development Plan and also fed into the creation of the draft NSDS. However, newly drafted legislation – the Planning and Facilitation of Development (PAFD) Bill, which is meant to be introduced in conjunction with the draft NSDS - will introduce significant changes to the way Trinidad and Tobago's planning system works by shifting some development control directly to Municipal Corporations. In this re-engineered system, responsibility for evaluating and approving more simple planning applications, such as home construction²³, will be transferred away from the TCPD to Local Government bodies.

Apart from this decision, driven out of the desire to improve efficiency within the planning sector, this author has no knowledge of other proposals made to increase Local Government responsibility in aspects of coastal zone management. Indeed, given Trinidad's relatively small population size and land area; the fact that Local Governments face constraints in human and financial resource availability; and the existence in the country of a limited pool of qualified practitioners in management of coastal resources and activities, it is debatable whether there is great benefit to be derived at this point in time from full, or even further, devolution of other coastal zone management related functions to Local Government bodies (Manor, 1997). A few

²³ Simple planning applications make up about 80% of the total planning applications processed by the central Government agency, the TCPD. See: http://www.trinidadexpress.com/news/Tewarie_Local_Govt_to_handle_approval_of_house_plans-159143755.html

possibilities do exist however where increased engagement of Municipal Corporations may prove useful.

The concept of decentralisation through local government systems and its perceived benefit of bringing governance closer to the people (Gaventa and Valderrama, 1999) does leave scope for enhanced roles of Municipal Corporations in bolstering monitoring and enforcement capacity for some regulations related to ocean and coastal management (Scholz and Wang, 2006). This of course, is contingent upon requisite amendments being made to the relevant pieces of legislation (Pomeroy *et al.*, 2004) to give power of enforcement to Local Government officials. Along with this, the possibility of increasing application of concepts related to co-management (Carlsson and Berkes, 2005) through local government systems can also be given consideration (Brown, 1998; Shackleton *et al.*, 2002; Berkes, 2010). Indeed, parts of this thesis have highlighted that public participation is definitely a feature of the vertical integration in ICZM that needs to be enhanced in Trinidad and Tobago. A mechanism to facilitate improved public interaction through the use of Municipal Corporations will be discussed in further detail later on in this section.

5.2.2. Inter-governmental ICZM considerations for Tobago

In Trinidad and Tobago the impetus and necessity for governmental integration in ICZM really comes to the fore when the governance arrangements for Tobago are expressly considered. Tobago exercises some degree of self-determination, devolved from the central Government of Trinidad and Tobago. Execution of this arrangement takes place through the Tobago House of Assembly (THA), which was established in accordance with the Constitution of the Republic of Trinidad and Tobago, with a view to making special provisions for the administration Tobago's affairs. The THA, made up of a mixture of elected and appointed persons, is guided by the Tobago House of Assembly Act, Chapter 25:03.

Section 25 of the THA Act prescribes that the THA has been allowed authority over a number of matters²⁴ and shall be responsible for the formation and implementation of policy in respect to them. In addition, under section 29 of the Act, the THA is granted power to propose Bills in

²⁴ The matters over which the THA has authority are outlined in the fifth schedule of the THA Act

relation to these matters. These Bills, if adopted, are then known as Assembly Laws. THA authority and the jurisdiction of proclaimed Assembly Laws extends throughout the island of Tobago and the waters surrounding it, up to a distance of six nautical miles.

Areas of responsibility of the Assembly, as set out in the fifth schedule of the THA Act, which directly relate to matters of ocean and coastal management include:

- State lands;
- Land and marine parks;
- Tourism;
- Fisheries;
- Town and country planning;
- Infrastructure, including air and sea transportation, wharves and airports and public utilities;
- Industrial development; and
- The environment.

Assembly Laws give the THA the ability to tailor a legal regime more appropriately suited to Tobago's context. With respect to matters of interest, this legislative freedom and authority is intended to increase efficiency in management and sustainability in utilization (Work, 2002). Importantly though, section 29(4) of the THA Act prescribes that:

“A Bill adopted by the Assembly shall not seek to abrogate, suspend, repeal, alter, override or be contrary to any written law of the Republic of Trinidad and Tobago or impose any direct or indirect taxation whatsoever.”

Where ICZM is concerned this provision is essential because it is meant to prevent the THA from developing laws and institutions that misfit or that do not merge seamlessly with dictates in the national governance framework. However, as Patlis (2005) has highlighted through examples from Indonesia, even when declarations exist similar to that of section 29(4) of THA Act, inconsistencies between national and regional laws can surface.

For this reason affording the THA a space on the proposed national CZMC is imperative. Having the CZMC review Bills and policies, emanating out of the THA, which are related to aspects of coastal zone management, will be crucial for harmonising the regional and national governance frameworks. Similarly, the THA, by virtue of its involvement in the CZMC, can mitigate against the passing of national policy and legislation instruments that are not suited to the sustainable management of Tobago's coastal and ocean resources, activities and interests. In addition, the THA representative on the national CZMC can be an avenue to establish institutional linkages in order to better facilitate and engender collaboration between bodies tasked with ocean and coastal management functions in Trinidad and those with similar mandates in Tobago.

Lastly, in light of the THA Act granting Tobago some autonomy in the management of its coastal and marine affairs, and the pervasiveness of sectoral management on this island as well, it may also be useful for a Tobagonian version of the CZMC to be operationalized. Alternatively, Tobago can devise its own ICZM model that may be considered more able to suit its particular circumstances. What is important however, is the realisation that it may be necessary for a regional integrative coastal zone management mechanism to be established in Tobago alongside a national ICZM program for the country as a whole.

5.2.3. Enabling Participation through reconsidering the Role of Local Government

Public engagement and participation in management is recognised as one of the fundamental tenets of ICZM programs worldwide (Cicin-Sain, 1993). However, as highlighted previously, many institutions that guided or informed formulation of public policy, plans and legislation in Trinidad and Tobago's ocean and coastal affairs did not always acknowledge public participation as being important or necessary. Therefore numerous governance instruments in effect today have been formulated with minimal input from the general public and lack avenues for their continuous participation. Although perceptible changes in ideologies are slowly giving credence to public inclusion and engagement in the processes through which governance mechanisms are formulated and implemented, stipulations making public consultation obligatory practice in Trinidad and Tobago are still rare in most sectors of the ocean and coastal sphere.

The legislation providing the framework for environmental governance in Trinidad and Tobago, the Environmental Management (EM) Act of 2000, has been more progressive than most as it relates to explicitly considering public participation in management. Part IV of the EM Act deals specifically with “Rules and Public Participation”. Through the Act, the Minister with responsibility for the environment can make rules that govern a number of aspects of environmental management. These rules, established as subsidiary legislation to the Act, have a public participation component as part of their formulation process. This is described in Section 27(1) of the EM Act which states:

“In the course of developing rules, the Minister shall –

- a) Submit draft rules for public comment in accordance with Section 28²⁵;
- b) Consider the public comments received and revise the rules as he thinks fit;
- c) Cause the rules to be published in the Gazette and laid thereafter in Parliament.”

One of the rules made under the EM Act, the CEC Rules, also contains provisions that facilitate public participation in decision making. Some activities regulated through CECs require environmental impact assessments (EIAs) to be conducted before CECs are granted. While it is not clear on what basis the distinction between those activities that do and do not require EIAs to be conducted is made²⁶, in terms of public participation, Section 35(5) of the EM Act states:

“Any (CEC) application which requires the preparation of an environmental impact assessment shall be submitted for public comment in accordance with Section 28 before any Certificate is issued by the Authority.”

In addition to this, depending on the terms of reference (TOR) issued for an EIA, public consultations may be necessary as part of the EIA process, thereby heightening the degree of public engagement. The EM Act also provides a final avenue for public opinion to be voiced through Section 28(3). This Section permits the EMA to hold a public hearing on any proposed

²⁵ Section 28 of the EM Act outlines the public comment procedure

²⁶ This is a shortcoming of the CEC Rules that needs to be addressed

issue affecting the environment providing it holds “sufficient public interest”. It goes further to outline that the purpose of the hearings are to “discuss proposed action and receive verbal comments”.

Although some opportunities are presented through the EM Act for public participation in environmental management, Ramlogan (2010) identifies a number of factors – procedural, systemic and societal – that hinder meaningful public participation in Trinidad and Tobago’s environmental management decision making process. These include an insufficiency and/or imbalance of information available to the public for them to make reasoned assessments, a lack of capacity and resources available to civil society to self-organise and purposefully contribute in the process, and a scepticism with respect to how candidly viewpoints are considered by decision makers. These existing shortcomings to engendering effective participation are indeed important to be cognisant of when seeking to enhance public input into ocean and coastal management. However, at this juncture, fully examining potential solutions to these problems in order to further empower stakeholders is not entirely within the scope of this work. Advanced here would be a mechanism to open spaces and widen public participation as it relates to ICZM through building upon the point raised earlier that Local Governments can play an important role in doing so.

A fertile area where Municipal Corporations can be utilised for the benefit of coastal zone management is with regard to public outreach. A regularly cited problem with consultative processes is that several stakeholder groups who wish to participate are not afforded opportunities to do so (Cornwall, 2002). This could be for a number of reasons which include their existence not being known, which is especially pertinent to many small community based organisations (CBOs) and non-governmental organisations (NGOs), and that communications informing that consultations are underway do not reach as wide a target audience as intended. The administrative boundaries of municipalities provide apt divisional units from which detailed contact lists can be compiled of civic groups/interests that would like to participate in public education, outreach and consultation exercises e.g. village councils; local NGOs, CBOs, cooperatives and user groups; and sectoral membership associations. Within the ICZM process

Municipal Corporations can adopt the integral role of co-ordinating and facilitating public consultations related to coastal zone management issues (Cuthill, 2001).

The proposed system for enhancing public participation in coastal and ocean management affairs is envisaged to operate as follows. The onus would be placed on all stakeholder groups who would wish to participate in consultative/outreach exercises pertaining to coastal zone governance to register with their respective Municipal Corporations (based on locational base of the respective organizations). Point of contact details as well as any particular interests would be provided as a necessity in this registration process. When consultations on ocean and coastal issues are to take place in various regions around the country, applicable Municipal Corporations will be apprised of the details by the consultation organisers. The Municipal Corporations will, in turn, be responsible for communicating the information regarding the consultations to the appropriate stakeholder groups populating their contact lists. The possibility exists for communication to flow in the opposite direction as well. Ideas and issues identified by civic groups, that may or may not be known to coastal zone managers, can be passed through the established channels to the Municipal Corporations. The Municipal Corporations will then periodically report to the CZMC to ensure the loop of dialogue is closed and suggestions and concerns of civil society are heard even outside of official consultation fora.

This communication system, through the use of decentralised databases, has a number of potential benefits. Firstly, it allows for area specific issues to be better targeted and addressed on a regional basis while still being flexible enough for use in matters of national interest. It also reduces the need for sectoral management bodies with responsibilities in the coastal zone to dedicate scarce time and resources to compiling their own country-wide lists of stakeholder groups that should be accommodated in participatory processes. Very often stakeholder organizations involved in consultations overlap sectoral divides and as such, duplication of effort is also minimised in this proposed modality of interaction. Lastly, the system alleviates marginalisation of concerned parties as it is designed such that once interested constituent groups register with their Municipal Corporations they will be informed and invited to participate in consultations and also given a straightforward way to interface with the CZMC.

This proposed mechanism to provide feedback has the potential to critically enhance public inclusion in ocean and coastal management. Enabling communication through employing the novel approach described, when coupled with the aforementioned desire to have policies, plans and legislation addressing ocean and coastal issues be subject to public scrutiny before approval, will build upon and add to existing approaches to participatory management practiced in the country. It will aid in amassing social capital and strengthening the bonds, norms and networks necessary to encourage compliance and enable collective action and adaptive practices in coastal zone management (Berkes, 2010).

5.3. Spatial Integration

In Trinidad and Tobago, holistic and adequate spatial management, which connects issues that perpetuate across the ocean-coastline-terrestrial continuum and which addresses competition that arises for prime coastal zone space, remains elusive in many respects. When coastal zone management ideologies began to take root in the country in the 1970s and 80s, proper coordination of development and use of space within the coastal zone had been identified as a major problem (McShine-Mutunhu, 1985). Since then, grappling with synchronisation of spatial planning and management across the entire land-sea divide has proven a challenging endeavour.

The establishment in the 1980s of the now defunct CAPMD within the IMA could be considered the first attempt at spatial integration in coastal zone management. As highlighted earlier, the CAMPD was a unit created to carry out multidisciplinary coastal area planning and management study. Its findings were to feed into providing criteria, guidelines and policies for planning and development affecting especially the marine and littoral areas of the country. Recognising that Town and Country Planners had little interest, knowledge and expertise in the specialized disciplines, processes and issues related to the marine environment, the CAMPD was meant to complement and work in collaboration with the TCPD. The intent was that better consideration would be given to impacts on, and sustainable and optimal utilization of, the marine and coastal sphere in land use planning (McShine-Mutunhu, 1985). Although the CAMPD is no longer operational the IMA still informs planning decisions of the TCPD indirectly through its research. The direct influence the IMA has in planning is fairly limited however, lying mainly in the recommendation of appropriate coastal set back distances for proposed development bordering the nearshore environment.

In Trinidad and Tobago, the need to consider the interconnectivity between land and sea was never really explicitly brought to the fore in the Town and Country Planning Act, Chapter 35:01. This Act provided guidance as to what should be taken into account when creating Development Plans for the country. Consequently, land-sea interconnectivity was also not expressly considered in the NPDP. The NPDP stemmed from provisions in the Town and Country Planning Act, and sought to provide a framework for the preparation of regional and local plans and for the

integration of spatial planning with socio-economic policy making. The marginalisation, in these instruments, of the need to carefully examine terrestrial-marine spatial relationships and connectivity in the governance of land use, has perpetuated management in silos and a lack of attention being paid to the marine environment by Planners. The NSDS, which when approved will replace the now dated NPDP, addresses this oversight in conjunction with new accompanying legislation²⁷. Policy item 16 of the NSDS is dedicated to “Coastal and Marine Resource Considerations”. It states:

“When formulating Spatial Development Plans (SDPs) for areas that border or impact on coastal and marine resources, Planning Authorities (working with other public agencies as necessary) should:

- Ensure that decisions are informed by up-to-date information on the natural quality, physical processes and development impacts in the coastal zone;*
- Include policies that conserve the environmental quality and productivity of coastal ecosystems;*
- Define those parts of the coast where opportunities exist for development or for increased levels of recreation and other coastal related activities;*
- Define those parts of the coast where physical constraints and risks either make development inappropriate or require mitigating interventions to make development acceptable, taking full account of the expected impacts of climate change;*
- Define those parts of the coast which need enhancement or regeneration, particularly areas damaged by past development; and,*
- Ensure that there is consistency with SDPs for adjacent coastlines.”*

It also mandates that, *inter alia*, implementation of the policy should take place through collaboration and co-ordination between Planning Authorities, an ICZM committee (which can

²⁷ The accompanying legislation is in the form of the Planning and Facilitation of Development Bill, which was mentioned earlier. When enacted it is meant to repeal parts of the Town and Country Planning Act.

take the form of the CZMC) and the IMA. If these policy prescriptions are followed, the spatial integration dimension of ICZM would be greatly improved in Trinidad and Tobago.

Apart from seeking to practice land use management and planning in a manner which is more cognisant of marine impacts, another facet of spatial integration in ICZM lies in finding means to better co-ordinate use of physical space in the marine environment itself. Some processes are in place to regulate development in terrestrial and marine areas of Trinidad and Tobago. For marine areas CECs, administered by the EMA, are required to undertake many proposed activities. In addition, licenses granted from the Land Management Division (LMD) are required to build on or alter the sea bed that fall within the country's jurisdiction. Terrestrial development is similarly regulated through the CEC process along with an approval system overseen by the TCPD. On land however, the TCPD has the additional role of spatially co-ordinating use. The opportunity exists for the concepts and techniques undertaken by the TCPD on land, to be put into practice to better spatially manage the seas around Trinidad and Tobago. This is especially in light of increasing intensification of sea uses (Smith *et al.* 2011).

Employing a planning process that lays out a vision for the future development, growth and use of areas is largely standard practice in governing terrestrial land use and management in countries around the world. In Trinidad and Tobago, creation of the NPDP, the NSDS and a series of local and regional plans came about through this approach. The TCPD, in granting approvals for development and land use alteration, is guided by what land uses are prescribed or considered appropriate in the plans created for particular areas. Unfortunately however, no similar plan based approach to management, which articulates spatial usage and vision for the marine sphere, has been fully adopted for Trinidad and Tobago's waters.

The approach being alluded to here, which examines and seeks to apply spatial and temporal dimensions to human activities in maritime areas, is known as marine spatial planning (MSP). MSP has long been used in aiding management of Australia's Great Barrier Reef (Day, 2002) and the practice has more recently gained agency in several other areas worldwide, including Belgium (Douvere *et al.* 2007), parts of the United States of America (Halpern *et al.* 2012), and China (Li, 2006). MSP's application is still in the early stages in many localities around the globe and

therefore little quantitative evidence of its success exists. This fact however, does not preclude Ehler (2008) from outlining a number of benefits – economic, ecologic and administrative – that are anticipated to flow from its utilization. MSP is also seen by Douvere (2008) as a tool that can be used to enhance implementation of ICZM and ecosystem based management (EBM)²⁸ approaches and certainly incorporates many of their tenets.

Trinidad and Tobago, as part of a nine country pilot project in the Caribbean, has started to lay some ground work that can be applied to advancing MSP use in ICZM for the country. This regional initiative, aptly labelled the Caribbean Marine Atlas, is geared towards identifying, collecting and organising available geo-spatial datasets into a digital atlas of key themes relevant to the marine and coastal environment of the Caribbean. The intention is to spatially represent, on both a regional and national scale, parameters describing key topics of interest such as coastal habitats, fisheries, environmental quality, climate change and sea level rise, oceanography and socio-economic aspects. The ultimate goal is to use it as a support tool for sustainable and integrated management of marine and coastal areas in the region²⁹.

This Caribbean Marine Atlas is a good platform to lead into comprehensive MSP. As Douvere (2008) points out, MSP entails much more than identifying/collecting datasets and spatially representing them. It goes further as an iterative and adaptive process that analyses spatial data to identify trends and formulate plans and patterns of zonation. It then involves the implementation of recommendations and the monitoring and evaluation of outcomes in a continuous, cyclical process. The CZMC should make it a policy prescription to seek advancement of MSP in the recognition that ICZM would positively benefit from it. A substantial portion of technical knowledge and expertise required to develop marine spatial plans would reside in the TCPD and IMA. However, similar to the on shore process, collaboration would be necessary with Municipal Corporations, all bodies tasked with aspects of ocean and coastal management, as well as user groups that will be affected in strategically planning use of marine space.

²⁸ EBM, like ICZM, is a holistic strategy that can be applied to marine and coastal regions, geared towards achieving collective management of species, natural resources and humans as components of the larger ecosystem (Arkema *et al.* 2006)

²⁹ More information about the Caribbean Marine Atlas including some outputs thus far from can be found at <http://www.caribbeanmarineatlas.net/>

A few other important issues relevant to Trinidad and Tobago's coastal zone can be better addressed by ensuring that spatial perspectives are adequately considered in ICZM. Disaster risk reduction and alleviating impacts due to climate change and sea level rise have spatial planning dimensions. Despite forecasted increases in occurrence of extreme weather events and inundation and erosion of coastal land under future climate change scenarios (IPCC, 2007), coastal land continues to be reclaimed for development in vulnerable areas around the country without approval (Mycoo, 2002). Special attention should be paid to addressing the inefficiencies in the system governing land reclamation and also further mainstreaming climate considerations into spatial planning and development of the coastal zone. With regard to the latter point, creation of clearly defined rules formalizing setback distances for infrastructural development along shorelines and the edges of coastal ecosystems e.g. mangroves, can be contemplated. It would allow for further buffering against climate change impacts and provide leeway for natural ecosystem adaptation/migration to occur (Juman and Hassanali, 2013).

Lastly, there is a need in Trinidad and Tobago to guard against development that inhibits physical and visual access to the shoreline of the public. This has been a problem in other Caribbean islands including Barbados and Jamaica (Mycoo, 2006). In Tobago, an 1865 law, the Three Chains (Tobago) Act, Chapter 57:04, reserves to the public the right of thoroughfare along the coastline, for a strip of land three chains³⁰ in breadth from the high water mark extending inland. This author is not aware of any similar law that applies to Trinidad. However, Pogue and Lee (1999) have identified that zoning and planning are among a suite of processes and tools that can be used to secure public access to shorelines. This salient issue should therefore be kept in mind when undertaking spatial planning in the coastal zone.

³⁰ A chain is a unit of length measuring about 66ft or 20m

5.4. Bridging the Science-Management Divide

Encouraging the crafting of more evidence aware policy and making more evidence informed decisions is continuously strived for in management of ocean and coastal resources and activities globally. In Trinidad and Tobago, the need for this approach has long been recognised, with the IMA being conceptualised in the 1970s as a vehicle through which achievement of this endeavour could be sought³¹. Conducting applied and theoretical, interdisciplinary research into the use and development of the marine and coastal resources of the country, the Caribbean and adjacent regions is one of the primary purposes of the IMA. Additionally however, Section 5 of the Institute of Marine Affairs Act, Chapter 37:01, mandates that the IMA functions to, *inter alia*:

- Provide information and advice to the Government in its formulation of policies relating to the marine and other related aspects of the environment;
- Respond to technical enquiries and questions made by policy making organs of the Government, private sector organizations and individuals;
- Advise on the development and optimum utilisation of the marine and coastal resource potential of Trinidad and Tobago

Therefore the IMA has been statutorily positioned as the agency responsible for integrating science into management of the marine and coastal realm of Trinidad and Tobago. Part of the reason the Institute was recommended in this thesis to be the lead agency of the proposed CZMC was because of this. This positioning will bring mutual benefit, allowing the IMA to better carry out its functions while enabling ICZM shaped by consideration of evidence and research.

The degree to which research findings and scientific understanding are taken on board by policy and decision makers can depend on the ability of researchers to be relevant and communicate findings in a useful form. This has traditionally been a problem in many fields of scientific research including that of natural resource use and environmental planning and management (Lubchenco, 1998; Norton, 1998; Gregrich, 2003; Brownson *et al.*, 2006; Gibbons *et al.*, 2008). In Trinidad and

³¹ More historical insight into the IMA including its ideological evolution can be found at <http://www.ima.gov.tt/home/about-ima/history.html>

Tobago, the IMA in particular, as well as other marine and coastal research institutions, are not immune to challenges regarding getting research to be heeded by ocean and coastal managers.

Gibbons *et al.* (2008) highlight that the reward structures and motivations existing to the scientific community sometimes perpetuate disconnects that can exist between science and its influencing of policy formation. Researchers are often driven to publish in academic journals in order to gain recognition and credibility in their respective areas of expertise as well as to garner funding to initiate or carry out further research. Narrowly focused, technical and detailed papers published in peer reviewed journals are often not written in language easily comprehensible to the lay-person. For the decision makers, they may also not clearly allude to the policy implications of the research. This is in contrast to grey literature, which can offer the option of both “plain language” summaries and more detailed technical reports. The contents of this type of literature tend to be more amenable to uptake by policy makers. IMA researchers have historically produced a mixture of both grey literature and academic publications. In more recent times however, there has been a push towards encouraging more peer reviewed articles as outputs to research, in order to boost the Institute’s reputation as an ocean and coastal research organization (IMA, pers. comm.). Management needs to fully consider the implications of this change in strategic direction as it relates to the IMA functioning in its policy advisory role.

The use of “interpreters” is seen as means to easing communication challenges that can be apparent between scientists and decision makers and bridging the inconsistencies that arise in the science-policy interface. Interpreters are seen as distinct from “pure” scientists, acting instead as science arbiters and, as described by Pielke (2007), “honest brokers” of policy alternatives. It is a specialised field where persons have a good grasp of the science, including opposing arguments and uncertainties, along with an understanding of wider issues, so that synthesis and analysis can be made of policy options. Holmes and Clark (2008) have outlined the skills and characteristics that should be possessed by good interpreters, which include:

- *A background, as appropriate, in natural and/or social sciences* – in order to understand the information being interpreted and the processes through which it was derived. This establishes credibility and allows for more assured communication to take place.

- *Proficient communication skills* – both written and oral, and in a manner which can allow clear and coherent interaction with a variety of target audiences.
- *Good interpersonal skills* – to allow relation with a wide cross section of people and appreciation and recognition of different viewpoints.
- *Experience in policy work* – to understand and consider the other intricacies involved in policy formulation.
- *Aware of the bigger picture* – a wide knowledge base allows for the framing of alternatives and the elucidation of linkages between issues.
- *Adept at exercising judgement* – so that conclusions and recommendations can be drawn even in the face of incomplete information while in line with the precautionary principle.

Indeed, some scientists do possess the abilities to act as good interpreters. However it is important for research organizations with advisory functions, like the IMA, to realise when such capacities are lacking. They can then work towards strengthening these capabilities by developing skills in personnel and/or promoting interpretation as an attractive career path.

Researchers more efficiently and appropriately communicating their messages to decision makers is essential to better integrate science into coastal zone management in Trinidad and Tobago. However the onus need not only be on researchers to get policies and decisions better informed by science. Ocean and coastal managers also have a part to play. They can act as more ardent “customers” through defining areas of interest, concern and/or uncertainty, where the potential exists for scientific research to bring clarity and provide guidance. By proposing research questions and contributing to crafting of research programs, policy and decision makers can proactively seek to fill knowledge gaps and make research more relevant to national priorities. In 2012, with just this intention, the IMA hosted a consultation with decision makers and stakeholders from a number of sectors in the marine and coastal realm. The aim was to create dialogue, exchange information and cross fertilize and integrate ideas. This was with a view to understanding the research needs of coastal zone managers and allowing that feed into the Institute’s future research agenda. A host of novel potential study questions were generated through this exercise which was a testament to its usefulness. Participants even called on similar

consultations to be held on a periodic basis suggesting that policy and decision makers are eager to engage more in efforts to have science conducted that can be useful in policy formulation.

A final point to note with regard to bridging the science-management divide in Trinidad and Tobago's coastal zone governance is that the IMA does not hold a monopoly over ocean and coastal research that can be used to inform policy and decisions. Many other organizations, be them public, private, not-for-profit, tertiary-level, community-based, non-governmental, statutory and/or possessing a combination of these characteristics, are undertaking useful scientific research in the marine and coastal sphere. There is often a problem of knowing exactly what data and research exists, getting access to it and/or attesting to its veracity. This is so even despite the fact that one of the functions of the IMA is the "collection and dissemination of information relating to economic, social, technological, scientific, environmental and legal developments in the marine and coastal zones of the Caribbean and adjacent regions." (Institute of Marine Affairs Act, Section 5d.). With the proliferation of bodies carrying out scientific study in the coastal and marine environment of Trinidad and Tobago, it is difficult for the IMA to adequately perform this function, largely relying on specific research findings being voluntarily sent to the Institute's Information Centre to be catalogued. Establishing an ICZM framework for the country however, will aid in information exchange thereby revealing where quality data and studies exist and pathways to their access. This, coupled with application of the approaches mentioned above, will enable science to better inform long, medium and short term policy decisions and day to day operational rules.

5.5. Integration across National Borders

Trinidad and Tobago is the southern-most country in the Caribbean archipelagic chain. Its proximity to neighbouring countries is such that it has had to negotiate with Grenada, Barbados³², Saint Vincent and the Grenadines and Venezuela in order to delimit particular sections of its EEZ. Given the country's geographical location, the dynamic and fluid nature of the marine environment, and ever increasing globalisation and interconnectedness of the regional and world economy in which it is nestled, it is not surprising that activities of and decisions made by other Nations can have significant bearing on managing the coastal and marine resources that fall within the jurisdiction of Trinidad and Tobago. Establishing and signing on to bilateral and multilateral agreements has been the method used to deal with trans-boundary and/or wider scaled issues regarding ocean and coastal management and has also been a means of capitalising on economies of scale.

Trinidad and Tobago has recognised the importance of bilateral negotiation. In the past the country has not been averse or uncommitted to undertaking it with neighbouring States to seek resolutions to issues pertinent to coastal and marine resource management. For example, in September 2013 it concluded a formal process with Venezuela that set out the functional and governance structure to oversee development of the largest of three cross border gas fields that straddle the Trinidad and Tobago-Venezuela maritime boundary. This agreement came ten years after an MOU was signed by both countries to develop cross border reserves and was historic in that it was the first of its kind in the Americas.

Instances have arisen when diplomacy did not resolve specific issues and negotiations required alternative dispute settlement mechanisms involving external arbitrators. This was most recently seen with Barbados' long standing claim to traditional fishing rights of flying fish (*Hirundichthys affinis*) off Tobago's leeward coast. It had been an issue of underlying tension since Trinidad and Tobago became a state Party to UNCLOS (Blake and Campbell, 2007). When negotiations

³² Arbitration proceedings were needed to settle the EEZ and continental shelf delimitation dispute between Barbados and Trinidad and Tobago. More information can be found at: http://www.pca-cpa.org/showpage.asp?pag_id=1152

regarding access to the fishery became intractable it was the catalyst for the two countries abandoning bilateral negotiations and going to the Permanent Court of Arbitration (PCA) in 2004 to settle contentions surrounding maritime delineation (Kwiatkowska, 2007). While the PCA did adjudicate on the maritime delimitation issue, it determined that it did not have the right to grant access to Barbadian fishers to Trinidad and Tobago's EEZ. It however referred both parties to Article 63(1) of UNCLOS which requires them to agree on measures to conserve shared fish stocks. As a result, negotiations are ongoing in attempts to seek resolution to the dilemma of sustainable management of the flying fish fishery (Fanning *et al.*, 2013).

The fact that Trinidad and Tobago recognises some international forums as legitimate avenues to dispute resolution and is willing to submit to their decisions when diplomacy fails, also augurs well for aspects of the country's international dimension of integration in coastal zone management. In 2007 the official Government position was declared whereby it was stated that:

"[I]n the absence of or failing any other peaceful means, The Republic of Trinidad and Tobago chooses the following means in order of priority for the settlement of disputes concerning the interpretation or application of the United Nations Convention on the Law of the Sea:

- a. The International Tribunal for the Law of the Sea established in accordance with Annex VI;*
- b. The International Court of Justice."*³³

Along with bilateral collaboration in matters of ocean and coastal governance, Trinidad and Tobago has also shown keenness to engage with organizations, processes and agreements that seek multilateral cooperation. The country is a member of the UN which, among other things, deals with a range of issues that have implications for ocean and coastal management. It is also associated with the IMO, which is a specialized UN agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships. The nation is an active

³³ Declaration excerpt source:
http://www.un.org/depts/los/convention_agreements/convention_declarations.htm#Trinidad%20and%20Tobago

member of the Alliance of Small Island States (AOSIS) which pays special attention to the peculiar developmental challenges faced by small, low lying coastal countries, and at the moment, particularly climate change. Trinidad and Tobago also sits on and is the site of the Secretariat headquarters of the Association of Caribbean States (ACS). This organization is chiefly concerned with addressing, at the wider regional level, interest and concerns related to preservation and conservation of the Caribbean Sea, sustainable tourism, trade and economic integration, vulnerability to natural disasters and transport. Lastly, the country is an integral part of the Caribbean Community and Common Market (CARICOM) which seeks cooperation among member States on economic and trade related matters, movement of labour and capital and co-ordination of agricultural, industrial and foreign policies.

In addition to participation in these multi-nation collaborative bodies, the high number and scope of international and regional agreements ratified by the Trinidad and Tobago, which have bearing on matters relating to coastal zone management, is a reflection of its willingness to commit to collective governance initiatives (Table 1). However, it has been highlighted that there are difficulties associated with enacting and operationalizing international and regional law nationally. Institutional arrangements arising out of ICZM, which would include the Ministry of Foreign Affairs being represented on the CZMC, could serve as a mechanism through which legislative enactment can be lobbied for and propelled. Coupled with this, an efficient ICZM process also provides the means to better identify where it is necessary for Trinidad and Tobago to cooperate regionally and/or internationally and how best capitalise on these opportunities with a view to sustainable development and management of the resources and activities in the coastal zone.

6. Conclusions

Activities and resources found in the ocean and coastal realm of Trinidad and Tobago contribute critically to the identity and well-being of the country's citizenry. In this two island nation, where the total land area is dwarfed by the extent of marine space under the State's jurisdiction, sustainably managing the aspects of the coastal zone is therefore imperative. However, the current governance framework and capacity to do so is proving to be inadequate, with resource mismanagement, degradation and depletion evident. This is compounded by the absence of a co-ordinating mechanism and collaborative process through which stakeholders can seek to cohesively manage the ocean and coastal sphere, in order to minimise conflict and maintain its flows of ecosystem goods and services in the long term.

Trinidad and Tobago has signalled its desire and willingness to more sustainably manage the facets, activities and resources of its oceans and coasts through ratification of a number of international and regional conventions that seek this. However, inability to fully implement and operationalize these multilateral instruments nationally, especially as relates to promptly enacting relevant enabling legislation, continues to be an impediment to successfully fulfilling commitments made. At the same time, several pieces of legislation that are in place to regulate elements of the coastal zone, are outdated. The Fisheries Act and Oil Pollution in Territorial Waters Act are prime examples of such. They are among many important laws that need to be amended or replaced by legislation more aptly suited for enabling better coastal and ocean governance in Trinidad and Tobago's modern day contexts. Using creative and flexible means to encourage increased compliance to legal statutes is also an issue that needs to be given more consideration when drafting and/or implementing laws.

The manner in which national policy, which acts in concert with legal instruments to guide the management of the various sectors of the ocean and coastal sphere, is formulated and implemented also needs to be reconsidered. In Trinidad and Tobago policy makers have tended to adopt adversarial, top-down and compartmentalised approaches to policy creation. In many cases, this has resulted in singular policies that are less than effective in fully understanding and

addressing the issues they are intended to deal with. Formulated policy may also conflict with prescriptions stated in separate policy targeting other aspects of ocean and coastal governance. The dominant policy formulation paradigms also lend themselves to creation of policies that are prescriptive rather than functional, where required outcomes are specified, but inattention is paid to the partnerships needed to achieve them. Therefore, a more collaborative mode of policy making needs to be employed in Trinidad and Tobago when seeking to update and reform existing policy as well as when endeavouring to fill identified policy gaps.

For collaborative policy making, more institutional co-operation is both a means and an end. Several identified agencies play various integral roles in the administration of coastal and ocean governance in Trinidad and Tobago. However many are under resourced, lacking the technical, human and financial capacity to wholly fulfil their mandates. Increased synergistic interaction among bodies tasked with ocean and coastal governance roles may not only be an avenue to boosting capacity, thus enhancing ability to perform functions, but could also allow for better directing and utilization of scarce resources.

ICZM has been identified as a measure that could be applied to overcome some of the impediments highlighted. Thus, it is a means to more sustainably manage Trinidad and Tobago's coastal and ocean space, resources and activities. As a participatory process requiring discourse, co-ordination and harmonization among government agencies and other stakeholders, including communities, it would endeavour to improve governance so that, *inter alia*, conflict is alleviated, a balance is struck between conservation and development considerations, sustainable livelihoods are promoted and the vulnerability of coastal populations is reduced.

In Trinidad and Tobago's context, several recommendations have been put forward through which ICZM can be given effect. These include:

- Establishing, legally grounding and adequately resourcing a Coastal Zone Management Council;

- Increasing opportunities for genuine stakeholder participation in ocean and coastal governance by implementing a system that better utilizes the reach and access of Local Governments to the general population;
- Adopting and expanding the application of marine spatial planning approaches nationwide; and
- Boosting the research, “interpretive” and outreach capacity of the IMA.

Enacting these and other changes to the coastal zone management landscape would essentially require political will. Also needed would be a departure from the engrained dogmas that tend to shy away from co-operative interactions and which seek to maintain power imbalances. The existing, less than effective, status quo for coastal zone management practice in Trinidad and Tobago has endured partly because leadership has been laissez-faire as it relates to championing change in the governance process. Coupled with this, the general public may not recognise the importance of, or have not been empowered to take ownership and drive change. Therefore, as much as anything, an ideological and attitudinal shift needs to take place in order to enable the creation/strengthening of the necessary legal and institutional pathways through which integrated and sustainable ocean and coastal governance can be realised.

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