

# MEETING THE CHALLENGES OF ENVIRONMENTAL IMPERATIVES: THE HYDROCARBON SECTOR IN TRINIDAD AND TOBAGO

*Rajendra Ramlogan, Ph.D\**

## I. INTRODUCTION

Trinidad and Tobago provides a prime example of a natural resource-based developing economy, illustrated by its dependence on sugar in an earlier era, and now on hydrocarbons. However, in the country's quest for development, it is interesting to note its stance on environmental protection as concerns its largest foreign exchange earning sector – the energy sector, as typified by oil and gas exploration and exploitation. Thus, the legal environmental regime is of much concern, both to proponents of sound environmental management and to the entities engaged in hydrocarbon exploration and exploitation.

Trinidad and Tobago, due to its position as a former British colony, has a common law legal system. In reviewing the legal environmental regime of Trinidad and Tobago, what has emerged is the domination of statutes in the regulation of activities that impact the environment. Indeed, there is very little by the way of judicial pronouncements to show a trend in the development of legal norms through this mechanism. The conservative judicial interventionist attitude of the courts minimizes the potential role of the common law. However, the position adopted by the courts of Trinidad and Tobago is to be expected. The extremely technical and scientific nature of environmental problems render it unlikely that courts would be able to develop case law as a tool for protection of the environment. The common law doctrines that have emerged through judicial activism are mainly manifested in the articulation of general principles for governing behavior. In dealing with environmental issues, the need for specific standards and codes of behavior, and the knowledge required to fulfill this need, makes it unlikely that courts would be able to satisfy this need.

In providing an overview of the legal environmental regime of Trinidad and Tobago, it is important to understand the law-making process. In Trinidad and Tobago, it is mainly the government that initiates laws, although there has been sponsorship of bills by the party officially in opposition in Par-

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\* Dr. Rajendra Ramlogan is a graduate of the New York University School of Law where he obtained his LL.M. and the University of Cambridge, where he pursued doctoral studies in international environmental law. Dr. Ramlogan completed his B.A. in English Literature and Social Sciences and his L.L.B at the University of the West Indies where he is currently lecturing. The author acknowledges the research assistance of Ms. Natalie Persadic as a major contribution to this paper.

liament. If the government is desirous of passing a law on a particular subject, the normal procedure is to take a cabinet decision and then refer the drafting to the government's drafting department with the appropriate parameters stipulated. The result is the preparation of a bill that is submitted to the House of Representatives and the Senate for debate. The next step is the return of the bill for further drafting if changes were agreed upon or if no changes were necessary, the bill would be passed as law. Importantly, after being debated and passed with the appropriate majority in Parliament, bills must be assented to by the President in order to be binding on the citizenry.<sup>1</sup> While this may appear to be routine, the President cannot unilaterally assent to a bill to make it law even if it is passed by Parliament. The bill must be referred to the President by the government for assent. Thus, laws can be passed, but not implemented, depending on the particular policy of a government. So in Trinidad and Tobago, the starting point for the making of laws, including those addressing environmental concerns, is effectively within the boundaries of the policy of the government in power and not derived from any higher legal norms such as the constitution.

Having reviewed the making of laws in Trinidad and Tobago and, as will be later demonstrated, the importance of the hydrocarbon sector, it is critical to understand the emerging legal norms for protecting the environment, particularly from the perspective of the impacts on hydrocarbon exploration and exploitation. It can be demonstrated that in the past, there was no shortage of legal norms for protection of the environment; yet, the enforcement rate was dismal. The enactment of the Environmental Management Act (EM Act) in 1995 and its subsequent re-enactment in 2000 was intended to usher in a new era of environmental management. It is therefore important at the first instance to discern the critical changes in the legal environmental regime that are expected as a result of the restructuring of the legal environmental regime, in particular, reference to the hydrocarbon sector.

## II. THE HYDROCARBON SECTOR

### A. *Historical Development*

Hydrocarbon development in Trinidad and Tobago dates back a long time. In 1867, the first oil deposits were discovered by the Paria Petroleum Company in Aripere in South Trinidad.<sup>2</sup> However, the first oil well was drilled by the Merimac Oil Company of the United States at La Brea in 1857. Commercial production on land did not commence until 1908; however, by 1914, the industry was firmly established with a production in that year of 1 million barrels and a workforce of some 1,200 employees.<sup>3</sup> By the

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1. NATIONAL GAS CO. OF T&T LTD, INVESTMENT OPPORTUNITIES IN T&T 1 (1994).

2. TRINIDAD AND TOBAGO, MINISTRY OF ENERGY AND ENERGY INDUSTRIES (MOEEI), A DRAFT ENERGY POLICY FOR TRINIDAD AND TOBAGO: A GREEN PAPER (VOL. I) 10 (1992). [hereinafter 1992 MOEEI GREEN PAPER]

3. PUBLIC RELATIONS DIVISION, OFFICE OF THE PRIME MINISTER, TRINIDAD AND TOBAGO, OIL AND ENERGY: TRINIDAD AND TOBAGO 3 (Port of Spain: Whitehall, n.d.).

1920's, some forty oil companies operated in Trinidad and Tobago. While the number of operating companies declined considerably in the following two decades, largely as a result of the depression of the early 1930's, the industry itself grew and attained production levels as high as 21 million barrels in 1950.<sup>4</sup> In 1998, total domestic oil production was 44.7 million barrels at an average rate of 122,627 barrels of oil per day (bopd), a decline of less than 1% from 1997. However, average daily oil production rose to over 130,000 bopd toward the end of the year.<sup>5</sup>

The two oil price increases between 1973 and 1974, and between 1979 and 1980, only reinforced the role of the hydrocarbon sector in the economy.<sup>6</sup> Trinidad and Tobago is one of the four countries in Latin America (Venezuela, Colombia and Mexico) and the Caribbean in which hydrocarbon production, particularly petroleum, is the main economic activity and petroleum exports are a major source of foreign currency earnings.<sup>7</sup>

The following statistics illustrate the hydrocarbon sector's continuing contribution to key economic indicators in 1997:

- Gross Domestic Product: \$1.6 Billion or 26.6% of the total GDP of \$5.9 Billion
- Government Revenues: \$0.33 Billion or 21.2% of total Government Revenue of \$1.6 Billion
- Foreign Exchange Earnings: \$1.8 Billion or 71% of foreign exchange earnings of \$2.5 Billion.<sup>8</sup>

For 1998, "excluding the petrochemical industries, the hydrocarbon sector was expected to contribute 23% to GDP and 76% to exports . . . ."<sup>10</sup>

The peak in petroleum production in 1978 encouraged exploration, which resulted in the discovery of significant gas reserves. Natural gas, which had been hitherto treated as a nuisance product and flared, began to assume an economic significance of its own.<sup>11</sup> Gas was also used as the petrochemical feed stock in the production of ammonia, methanol and urea and provided an energy source for non-energy products such as steel, iron carbide and other minor manufactured products.<sup>12</sup> Today, Trinidad and Tobago is a leading world producer of methanol and ammonia.

A major development of the natural gas industry was the liquefaction of natural gas for export. This is projected to be the fastest growing sub-sector of the national hydrocarbon industry. By the year 2000, natural gas

4. See generally National Gas Co. of T&T Ltd, 1994.

5. MOEEI, *Overview: T&T oil production*, TRINIDAD EXPRESS, May 28, 2000.

6. INTER-AMERICAN DEVELOPMENT BANK, SOCIO-ECONOMIC REPORT: TRINIDAD AND TOBAGO 95 (1988).

7. *Id.* at 94.

8. MOEEI, GREEN PAPER FOR PROPOSED ENERGY POLICY FOR THE REPUBLIC OF TRINIDAD AND TOBAGO 7 (1998). Converted at a rate of US \$1.00 to TT \$6.20.

10. National Gas Co. of T&T Ltd, *supra* note 1, at 4.

11. INTER-AMERICAN DEVELOPMENT BANK, *supra* note 6, at 4.

12. *Id.* at 5.

consumption was expected to reach 1,400 million cubic feet per day (MMcfd) from a level of 900 MMcfd in 1999.<sup>13</sup> Some 450 MMcfd of this additional gas will be Liquefied Natural Gas (LNG) exports, while additional supplies will be consumed as fuel for power generation, feed stock to new petrochemical plants, and fuel for additional metal furnace plants.<sup>14</sup>

### *B. The Hydrocarbon Sector and the Environment*

Given the extreme importance of the hydrocarbon sector to the economy, it is now interesting to examine the attitude of the (energy) policy makers to environmental protection. While both pre- and post-independent budget speeches were significantly shaped by the obvious dependence on the hydrocarbon industry, there was little attempt to formulate a policy concerning the hydrocarbon sector. Even despite the passing of the Petroleum Act of 1969, the first policy paper only appeared some twenty years afterwards. It was not until the change of government in 1986, when the National Alliance for Reconstruction (NAR) came into power, that the policy paper was written. As the 1986 Energy Policy states, "This [P]aper is a first step towards documenting a comprehensive Energy Policy for Trinidad and Tobago. It involves consolidation of previous and existing policies, updated and articulated into a more fully integrated energy policy document . . . ."<sup>15</sup>

Given the political party's concerns on environmental issues, the policy included a theoretical commitment to safeguard the environment. However, the policy stated no actual prescriptive measures on sustainability<sup>16</sup> or pollution prevention, nor did it set any deadlines for the implementation of any such measures. Nevertheless, it did acknowledge that "the disposal of wastes from energy will continue to degrade the environment . . . ."<sup>17</sup> The policy vaguely stated that its two main goals were to:

"Provide adequate energy for the country's needs. . . in the most efficient and economical way, while ensuring that. . . the long term quality of the environment is maintained at an acceptable level, and. . . [e]nable Trinidad and Tobago to fulfil its obligation to several UN organisations to which it has pledged to contribute to the solution of environmental problems. . . ."<sup>18</sup>

An "acceptable level" needs to be clearly defined. There need to be specific measures to ensure efficiency. There is also need for precision in terms of the country's ability to fulfill its international environmental obligations. This first policy left much to be desired for environmental concerns.

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13. Most recent figures available.

14. INTER-AMERICAN DEVELOPMENT BANK, *supra* note 6, at 21.

15. MOEEI, DRAFT: AN ENERGY POLICY FOR TRINIDAD AND TOBAGO 4 (1986) [hereinafter MOEEI DRAFT ENERGY POLICY].

16. Sustainability is interpreted to be the exploitation of the hydrocarbons in a manner that enhances both current and future potential to meet human needs and aspirations.

17. MOEEI DRAFT ENERGY POLICY, *supra* note 14, at 71.

18. *Id.*

The 1992 Energy Policy offered no more commitment than the first. This particular policy stated that, "the Government will place further emphasis on environmental considerations and the promotion of the use of environment-friendly energy substitutes as alternative transportation fuels."<sup>19</sup>

Again, this was imprecise and offered no suggestions as to how such environmental considerations would be achieved. In detailing the parameters for formulating an energy policy, of eleven concerns expressed, environmental concerns were the tenth mentioned. Although it was not expressly stated that the measures appeared in order of priority, it was assumed that the order in which the measures were presented reflected the importance attached to environmental policy in 1992. The situation remains largely unchanged for the 1994 Energy Policy.

The United National Congress that held power between 1995 and 2001 appeared also concerned with the phenomenon of environmental degradation and as such, has endeavored to include environmentally friendly practices in its policies. The most recent Energy Policy (1998) also made sweeping statements: "The national drive for efficiency, effective management, environmental preservation, sustainable development and a total quality nation must be reflected in the country's energy policy."<sup>20</sup> This policy took a slightly different outlook: it looked at environmentally cleaner fuels. Given the shift to natural gas utilization, it mentioned the use of compressed natural gas (CNG) as a vehicular fuel. While this has been introduced, there are very few stations which dispense CNG, and the number of vehicles equipped to use CNG is also minimal. This policy made mention of sustainable development, yet there were no practical measures in place to support this.

It is also interesting to note that the section on environmental matters which appeared in the 1998 policy was the last section of that policy, consistent with all previous policies where the environmental section has been the last. All the prior policies clearly illustrate the lack of commitment to environmental protection in the interest of development. This opinion is based not just on the position the environmental section occupied in successive energy policies, but also on the contents of such sections which, as noted before, lacked clarity, vision, and clearly-defined steps for achieving sustainability and pollution prevention.

Equally fascinating is the recent declaration made by the former Minister of Energy and Energy Industries Finbar Gangar. He claimed that "the ministry's policy was zero tolerance for environmental damage caused by energy sector companies," but in the same breath, however, he admitted that "while the sector was the major contributor to the nation's development and to the national economy, it was also the biggest contributor to environment degradation."<sup>21</sup> Implicit in the words of the Minister is that

19. 1992 MOEEI GREEN PAPER, *supra* note 2, at 27.

20. INTER-AMERICAN DEVELOPMENT BANK, *supra* note 6, at 1.

21. Alwyn De Coteau, Gangar: *Energy Sector to Blame for Pollution*, TRINIDAD EXPRESS

development must not be impaired and perhaps the country is prepared to accept some level of environmental degradation in pursuit of economic growth. This position makes a mockery of the statement that the policy of Ministry is zero tolerance to environmental damage in the hydrocarbon sector.

### III. BACKGROUND TO ENVIRONMENTAL PROTECTION IN TRINIDAD AND TOBAGO

#### A. *Legal Norms*

In a major study conducted in 1998, the Environmental Management Authority (EMA), the enforcement body created by the EM Act and charged with responsibility for implementation of the EM Act, indicated that there existed over 100 pieces of legislation (excluding the EM Act) capable of promoting sound environmental management.<sup>22</sup> As a means of illustration, Table 1 indicates the number of laws identified on a sector basis.

TABLE 1  
NUMBER OF LAWS DEALING WITH DIFFERENT ENVIRONMENTAL  
SECTORS<sup>23</sup>

Air	Noise	Biological Resources	Chemicals	Waste
10	8	49	6	15

Despite the presence of an extensive network of national legislation, the EMA noted that enforcement was poor (see section III(B) below for enforcement pattern) and this was partly due to deficiencies in the legislative framework itself.<sup>24</sup> The EMA noted the following factors as contributing to the deficiencies in the existing laws and these included:

- Failure to use regulatory powers
- Antiquated and outdated regulations
- Failure to assent to laws
- Inadequacy of legal language due to vagueness or absence of specific standards.<sup>26</sup>

#### B. *Enforcement Patterns*

Trinidad and Tobago's legal structure for the protection of the environment may appear somewhat chaotic. There are numerous government-

POLITICS, May 16, 2000, available at <http://209.94.197.2/may00/may16/politics.htm>.

22. TRINIDAD & TOBAGO ENVIRONMENTAL MGMT. AUTH., STATE OF THE ENVIRONMENT REPORT 1999 8 (1999) [hereinafter EMA].

23. *Id.* at 38-45.

24. EMA, *supra* note 21, at 29-33.

26. *Id.*

related agencies that are involved in activities, which in varying degrees, may impact on environmental aspects of the hydrocarbon sector. These agencies can be placed into several broad categories. First, there is control at the ministerial level. The Ministry of Energy and Energy Industries is directly responsible for some aspects of hydrocarbon operations. Second, the hydrocarbon sector is also subject to the jurisdiction of departments of government, such as the Factory Inspectorate, which examines issues such as working conditions. Third, the hydrocarbon sector is subject to certain statutory bodies (boards, tribunals, authorities and commissions). This would include the EMA and the Trinidad and Tobago Bureau of Standards. Finally, there are the municipal corporations made up of the elected local government officials which also perform certain environmental functions under several laws that impact on the hydrocarbon sector. The EMA noted the presence of multiple agencies, numbering around fifty, serving environmental functions.<sup>27</sup>

Despite the presence of multiple environmental agencies, the rate of enforcement was dismal as depicted in Table 2.

TABLE 2  
ENFORCEMENT PROCEEDINGS<sup>28</sup>

Environmental Sector	Specific Legislation	No. of Enforcement Proceedings		
		1997	1998	1999
Air	Motor Vehicle and Road Traffic Regulations	38	214	1199
Air	Public Health Ordinance (Emissions of Black Smoke and Nuisances)	0	0	na
Fauna	Conservation of Wildlife Act	187	651	na
	Animals (Diseases and Importation) Act	1	1	na
Flora	Forest Act and Sawmills Act	43	169	na
Ecosystems (ForestWetlands)	State Lands Act	0	0	na
Water	Fisheries Act	0	0	na

27. TRINIDAD & TOBAGO ENVTL MGMT. AUTH., STATE OF THE ENVIRONMENT REPORT 1999 32 (1999).

28. *Id.* at 31.

	Oil Pollution of Territorial Waters Act	0	0	na
	Water and Sewerage Authority Act (1980) WASA	0	0	na
Chemicals	Pesticides and Toxic Chemicals Act	0	0	na
Noise	Motor Vehicles and Road Traffic Act	40	28	na
Waste	Litter Act	0	0	250

The EMA has identified several factors that contributed to the poor enforcement practices, including:

- Regulatory weaknesses
- Absence of environmental policy
- Inadequate vision for environmental protection
- Limited public education programmes
- Inadequate resources (human, technical and financial)
- Multiple agencies (overlapping jurisdiction and inadequate coordination)
- Lack of punitive sanctions
- Delays in the justice system.<sup>30</sup>

It should be noted that the reason for the increase in enforcement of the Motor Vehicle and Road Traffic Act<sup>31</sup> is due to the fact that from 1998 onwards, the EMA has employed its environmental police to enforce this piece of legislation. This situation arose as a result of delays in the making of its own rules and regulations, and having the police available, a strategic decision was taken to utilize these police officers in the enforcement of non-EM Act legislation. Further, the increase in enforcement in 1998 in the Conservation of Wildlife Act<sup>32</sup> is also due to the efforts of the EMA to assist the relevant enforcement agency in improving its enforcement practices.

#### IV. THE NEW DAWN – THE ENVIRONMENTAL MANAGEMENT ACT, NO. 3 OF 1995 (RE-ENACTED AS ACT NO. 3 OF 2000)

In the discussions contained in section III above, it was noted that numerous pieces of legislation capable of protecting the environment existed in Trinidad and Tobago. However, deficiencies in these pieces of

30. EMA, *supra* note 21.

31. Motor Vehicle and Road Traffic Act, Ch. 48:50 (Rev. Laws of Trinidad and Tobago 1980).

32. Conservation of Wildlife Act, Ch. 67:01 (Rev. Laws of Trinidad and Tobago 1980).



legislation and institutional weaknesses rendered enforcement impotent. The hydrocarbon sector benefited from this malaise and as a result was allowed to prosper in a legal framework that eschewed sound environmental management.

The situation has not been static, and the biggest challenge to the hydrocarbon sector, in terms of its attitude to the environment, occurred in the legislative revolution in 1995 when the EM Act<sup>33</sup> was passed. The EM Act was subsequently re-enacted in 2000 without modification so as to afford the EM Act a special majority. This special majority is necessary for legislation that may have an impact on constitutional guarantees. The EM Act established a new legal and institutional framework for the protection of the environment.

The EM Act was a revolutionary piece of legislation in that it established the EMA and made it the primary state agency responsible for enforcing environmental laws and standards. This represents a major departure from the historical position, which saw the Ministry of Energy and Energy Industries being the dominant party responsible for all hydrocarbon issues, including those dealing with the environment.

In terms of legal norms, the EMA was mandated by the EM Act to develop rules addressing certain key environmental sectors, namely, water pollution, air pollution, planning and development, noise pollution, sensitive areas, sensitive species, wastes, and hazardous substances. The EM Act also made provisions for enacting rules to promote proper record keeping and monitoring. In addition, the EMA was mandated to ensure spill contingency plans were part of the requirements of doing business in Trinidad and Tobago.

The EMA and its statutory mandate represent the biggest challenge to the hydrocarbon sector. Analyzing the environmental challenges to the hydrocarbon sector demonstrates how critical the emerging role of the EMA is proving to be.

## V. REVIEW OF ENVIRONMENTAL LEGISLATION IMPACTING ON THE HYDROCARBON SECTOR – PRE- EM ACT ERA

Having identified the key areas of concern in the EM Act for management of the environment of Trinidad and Tobago, a brief analysis of the laws existing prior to the passage of the EM Act is necessary. This is intended to illustrate the changes expected as the EM Act fully assumes its statutory responsibilities.

### A. *Planning and the Environmental Impact Assessment Process*

Prior to the initiation of hydrocarbon activities, it is important there be a clear assessment of the environmental impacts at the planning stage. The planning influence on the hydrocarbon sector was limited in the main

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33. Environmental Mgmt. Act, No. 3 of 1995 (Rev. Laws of Trinidad and Tobago 1995) (subsequently re-enacted as Environmental Management Act, No. 3 of 2000).

to two pieces of legislation. First and foremost, control over petroleum operations was vested in the Ministry of Energy and Energy Industries. The Petroleum Act,<sup>34</sup> section 6(1) states "no person shall engage in petroleum operations . . . unless he first obtains a license . . ." Section 9(1) states "where the Minister . . . decides to grant a license, he shall grant a license . . . upon such terms and conditions he consider appropriate." Section 2(1) states "Petroleum Operations means the operations related to the various phases of the petroleum industry . . . and manufacture of petrochemicals." The other piece of legislation having some limited impact was the Town and Country Planning Act.<sup>35</sup> The Town and Country Planning Division has some input in the establishment of industrial undertakings. What is important to note is that none of these pieces of legislation expressly provided for the environmental impact assessment process as a tool for ensuring that developments in the hydrocarbon sector posed no significant threat to the environment.

### *B. Air Pollution*

Currently, there is no existing legislation that identifies specific air pollutants. However, several pieces of legislation are in place that can in fact be used in varying degrees to deal with the problem of air pollution, either by facilitating enforcement measures, or the creation of regulatory provisions.

One mechanism that can be used to address air pollution is the law pertaining to nuisance. The essence of the tort of nuisance is that a plaintiff or claimant has had his use or enjoyment of property adversely affected by the conduct of another. Accordingly, smoke, odors, and fumes have been held to constitute an actionable nuisance when it interferes with the use and enjoyment of property. The Public Health Ordinance,<sup>36</sup> section 69 imposes a duty on the part of local authorities to initiate action to abate nuisances.

The next tool for addressing air pollution is through the use of industry or activity-specific legislation. Thus, section 29 (1)(j) of the Petroleum Act<sup>37</sup> provides for the issuance of regulations to prevent air pollution by those engaged in petroleum operations. Regulations in this area are quite scant, with only Regulation 43(s) of the Petroleum Regulations<sup>38</sup> making mention of the need for a person granted a license to conduct petroleum operations to be required to take all reasonable precautions and safety measures to prevent the liberation of gas causing pollution of surrounding air.

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34. Petroleum Act, Ch. 62:01 (Rev. Laws of Trinidad and Tobago 1980).

35. Town and Country Planning Act, Ch. 35:01 (Rev. Laws of Trinidad and Tobago 1980).

36. Public Health Ordinance, CAP. 12/4 (Rev. Laws of Trinidad and Tobago 1950).

37. Petroleum Act, Ch 62:01 (Rev. Laws of Trinidad & Tobago 1980).

38. Petroleum (Pollution Compensation) Regulations, Legal Notice 134 of 1997, made pursuant to section 29 of the Petroleum Act.

### C. Water Pollution

The regulation of water pollution operates on different levels. The first level deals with industry. Accordingly, section 29(1)(j) of the Petroleum Act<sup>39</sup> provides for the making of regulations to prevent water pollution and for compensation caused by any such pollution. The Petroleum (Pollution Compensation) Regulations<sup>40</sup> were passed in 1997 to address these issues.

The situation with respect to tidal rivers is separately covered by Regulation 42(2)(c) of the Petroleum Regulations.<sup>41</sup> This requires a licensee to take precautions to avoid pollution of tidal rivers.

Moving away from specific industries, there is a plethora of law that can be used to address the issue of water pollution. A useful starting point is the Litter Act.<sup>42</sup> This Act creates the principal offence of littering. As per section 3(1), littering occurs when a person disposes of any litter in a public place other than in an authorized collection point or receptacle. The definition of litter is very wide and includes almost every conceivable type of waste matter. The relevance of this to water pollution can be found in the definition of a public place, which is any area owned by the state, including any waters to which the public has access without payment of any fee for bathing or for other recreational purposes. This, of course, can include most rivers in the Republic of Trinidad and Tobago. Further, section 4 of the Litter Act creates liability on the part of any person who deposits litter onto any premises owned by another. As per section 2(1) of the Litter Act, premises include natural watercourses and drains.

It is also a criminal offence to commit certain acts of water pollution. The law is both specific and general. Section 73(1) of the Summary Offences Act<sup>43</sup> prohibits bathing, washing of clothes or depositing any dirt or filth or any noxious or fetid matter in any stream or pond. This section creates liability even for owners of land who cause water pollution affecting other lands.

By far, one of the pieces of legislation that provides extensively for water pollution is the Public Health Ordinance.<sup>44</sup> An example of the statutory powers of the Public Health Ordinance can be readily seen in section 57(1) which prohibits the disposal in any drain of any matter likely to injure the drain or to interfere with the free flow of its contents, or to affect prejudicially, disposal of its contents; any chemical refuse or waste stream, or any liquid of a temperature higher than 110 degrees Fahrenheit, being a liquid which when so heated is, either alone or in combination with the contents of the sewer or drain, dangerous, or the cause of a nuisance, or prejudicial to health; and any petroleum spirit, or carbide of calcium.

39. Petroleum Act, Ch 62:01.

40. Petroleum Regulation, *supra* note 35.

41. *Id.*

42. Litter Act, Ch. 30:52 (Rev. Laws of Trinidad and Tobago 1980) as amended by the Litter (Amendment) Act of 1981.

43. Summary Offences Act, Ch. 11:02, (Rev. Laws of Trinidad and Tobago 1980).

44. Environmental Mgmt. Act, No. 3 of 1995.

#### D. Noise Pollution

There are several pieces of domestic legislation which can be used to address the problem of noise pollution. One such piece of legislation is the general law of nuisance. Public Health Ordinance,<sup>45</sup> section 69, makes it incumbent on every local authority to ascertain nuisances and take steps to have them abated. Noise is a well-known nuisance in the common law; therefore, this provision can make some inroads in the problem of noise pollution. Similarly, the Municipal Corporations Act,<sup>46</sup> section 221(1), provides for the making of bylaws, rules and regulations for the prevention and suppression of nuisances. Accordingly, municipal corporations can provide specific rules to deal with noise pollution, but this has not taken place.

#### E. Waste

Although pieces of legislation exist, there is no real legal regime in the Republic of Trinidad and Tobago for dealing with hazardous waste. In dealing with specific industries, some legislative support can be found. For example, there are some controls in place for pesticides and toxic chemicals. According to section 12(1) of the Pesticides and Toxic Chemicals Act,<sup>47</sup> the Minister may make regulations with respect to the types of packages in which controlled products may be imported, transported or sold. In addition he can make regulations as to the disposal of such packages after use, and regarding the disposal of unwanted stocks of controlled products and of waste materials containing controlled products. No regulations have been made with respect to chemicals, but some were made with respect to pesticides in Regulation 4(1) of the Pesticides (Registration and Import Licensing) Regulations.<sup>48</sup> The regulation requires information on methods of safe disposal of waste pesticide and any containers in which pesticide was stored, while Regulation 16 (1) of the Pesticides (Licensing of Premises) Regulations<sup>49</sup> requires that facilities for the disposal of empty packages and containers for waste and spilled or waste pesticides and toxic chemicals shall be such as to avoid contamination of the environment. Further, according to Regulations 16(2), covered dustbins and other receptacles for waste and spillage shall be made of materials able to resist corrosion by pesticide waste and shall be made sufficiently secure to discourage the removal of waste material by unauthorized persons and to prevent spillage of pesticides.

In addition, section 26(2)(d) of the Petroleum Act<sup>50</sup> provides that where any facility right or privilege is required in order that petroleum operations

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45. *Id.*

46. Municipal Corps. Act, No. 21 of 1990.

47. Pesticides and Toxic Chemicals Act, No. 42 of 1979 as amended by the Pesticides and Toxic Chemicals Act, No. 11 of 1986.

48. Pesticides (Registration and Import Licensing) Regulations, Legal Notice No. 225 of 1987, made pursuant to Section 12 of the Pesticides and Toxic Chemicals Act, No. 11 of 1986.

49. Pesticides (Licensing of Premises) Regulations, Legal Notice No. 227 of 1987, made pursuant to Section 12 of the Pesticides and Toxic Chemicals Act, No. 11 of 1986.

50. Petroleum Act, Ch. 62:01 (Rev. Laws of Trinidad & Tobago 1980).

may be properly and conveniently carried out, such ancillary rights include a right to dispose of water or other liquid matter obtained from petroleum operations or any by-product works. Furthermore, Regulation 18(2) prohibits the waste of petroleum products. This principle is extended by Regulation 43(s) of the Petroleum Regulations,<sup>51</sup> which mandates the taking of all reasonable precautions and safety measures to prevent all waste.

There are several pieces of legislation dealing with non-hazardous waste. First and foremost is the Litter Act.<sup>52</sup> This Act creates the principal offence of littering. As per section 3(1), this offence occurs when a person who without reasonable excuse, deposits any litter in or on any public place other than in a receptacle placed for the purpose of collecting it; or in or at any approved site. Section 2(1) has a very broad definition of litter which includes any solid or liquid material or product or combination of solid or liquid materials or products including but not limited to any bottles, tins, logs, sawdust, derelict vehicles, cartons, packages, packing materials, paper, glass, food, animal remains, garbage, debris, sand, gravel, stone, aggregate, dirt, waste (including any human and animal waste) or any other refuse, or rubbish or waste material, and any other material or product that is designated as litter. Waste is further defined to include domestic waste, industrial waste or commercial waste.

Littering, to some extent, is also controlled by section 47(c) of the Highways Act,<sup>53</sup> which prohibits the deposit of anything whatsoever on a highway which may damage the highways. Further, according to section 54(1), it is an offence for any person to deposit anything whatsoever on a highway; or to allow any oil or corrosive matter or any filth, dirt, lime, or other offensive matter or thing to run or flow onto a highway from any adjoining premises.

#### *F. Hazardous Substances*

In Trinidad and Tobago the sparse legal regime for dealing with hazardous substances concentrated on the presence of chemicals and pesticides. The principal legislation for addressing the issue of chemicals is the Pesticides and Toxic Chemicals Act.<sup>54</sup> This Act was intended to establish a specific regime to deal with chemicals and pesticides. Section 4A(1) of the Act states that no person shall manufacture, import, sell, use, store in marketable quantities, or transport a controlled product unless the product is registered and that the person does so in the prescribed manner. Section 2 of the Act defines a 'controlled product' to mean any pesticide or toxic chemical.

This Act is more or less a framework piece of legislation and section

51. Petroleum (Pollution Compensation) Regulations, Legal Notice 134 of 1997, made pursuant to section 99 of the Petroleum Act.

52. Litter Act, Ch. 30:52 (Rev. Laws of Trinidad & Tobago 1980) as amended by the Litter (Amendments) Act of 1981.

53. Highways Act, Ch. 48:01, (Rev. Laws of Trinidad and Tobago 1980).

54. Pesticides and Toxic Chemicals Act, No. 42 of 1979 as amended by the Pesticides and Toxic Chemicals Act, No. 11 of 1986.

12(1) empowers the Minister to make regulations for carrying into effect the provisions of this Act. By Legal Notice 225 of 1987,<sup>55</sup> regulations were made to provide for the registration and import licensing requirements for pesticides. Further, Legal Notice 226 of 1987<sup>56</sup> provides specific pesticides importation regulations, and Legal Notice 227 of 1987<sup>57</sup> addresses licensing of premises requirements. It is worth noting that while a regime is being developed to deal with pesticides, nothing is being done with respect to chemicals.

It is entirely feasible for trade laws to be used to control the importation of chemicals. Section 44 of the Customs Act<sup>58</sup> provides the authority for the President to prohibit importation of any goods whatsoever. Authority is vested in the Trade Ordinance<sup>59</sup> for similar restrictions. Section 4 (2) of this Ordinance provides the authority for prohibiting the importation of any goods or class or description of goods.

### *G. Rules to Implement Record Keeping and Monitoring Requirements*

In Trinidad and Tobago, there existed no legislation to expressly compel record keeping and monitoring. However, this does not mean that record keeping and monitoring was of necessity not required. Due to the fact that petroleum operations were vested in the Ministry of Energy and Energy Industries, the Ministry insisted on record keeping and monitoring as part of its licensing regime. As noted above, the Petroleum Act,<sup>60</sup> section 6(1) provided that "no person shall engage in petroleum operations . . . unless he first obtains a license . . ." Section 9(1) provides "[W]here the Minister . . . decides to grant a license, he shall grant a license . . . upon such terms and conditions he consider appropriate." It was also possible that conditions of record keeping and monitoring be attached to approvals granted under the Town and Country Planning Act.<sup>61</sup>

### *H. Rules for Notification of Spills, Releases and Other Incidents*

As with record keeping and monitoring, there is no specific legislation to deal with spills, releases and other similar incidents other than the general environmental laws. In the hydrocarbon sector, the Ministry of Energy and Energy Industries has been quite pro-active in this area. Again, the situation is addressed through the granting of licenses, even though there existed no legislation to expressly compel notification of spills, releases and other incidents. The Petroleum Act,<sup>62</sup> section 6(1) provided that "no person shall engage in petroleum operations . . . unless he first obtains a

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55. Pesticides (Registration and Import Licensing) Regulations, Legal Notice No. 225 of 1987.

56. Pesticides (Importation) Regulations, Legal Notice 226 of 1987, made pursuant to section 12 of the Pesticides and Toxic Chemicals Act, No. 11 of 1986.

57. Pesticides (Licensing of Premises) Regulations, Legal Notice No. 227 of 1987.

58. Customs Act, Ch. 78:01, (Rev. Laws of Trinidad and Tobago 1980).

59. Trade Ordinance, Act No. 19 of 1958.

60. Petroleum Act, Ch. 62:01 (Rev. Laws of Trinidad & Tobago 1980).

61. Town and Country Planning Act, Ch. 30:01 (Rev. Laws of Trinidad & Tobago 1980).

62. Petroleum Act, Ch. 62:01.

license . . . .” It is normal for the Ministry of Energy and Energy Industries to use the licensing regime to stipulate a course of action to deal with spills, releases, and other such incidents.

### *I. Sensitive Species*

There are several pieces of legislation in Trinidad and Tobago that address sensitive species. Section 3(2) of the Conservation of Wildlife Act<sup>63</sup> provides for the establishment of game sanctuaries. Section 5(1) states that “Except as provided by section 10, no person shall hunt or shall be a member of a party engaged in hunting any protected animal . . . .” The Minister with responsibility for wild life can make regulations under the Conservation of Wildlife Act to add or delete from the schedule of protected animals. Section 7(1) states “no person shall hunt or be a member of a party engaged in hunting any animal during the close season.” Section 18(1) provides “No animal shall be exported or carried coastwise without the written permission of the Chief Game Warden.”

It is also a criminal offence to kill, maim or wound species of fauna. Section (16) of the Summary Offences Act<sup>64</sup> mandates “Any person who unlawfully and maliciously kills, maims or wounds any dog, bird, beast or other animal is liable . . . .”

Turning to flora, there is limited statutory protection. The Forests Act<sup>65</sup> creates certain offences with respect to the protection of trees on state lands (this has now been extended to private lands).<sup>66</sup> Section 8 states:

Any person who- (a) pastures cattle or permits cattle to trespass; (b) fells, cuts, girdles, marks, lops, taps, bleeds any tree or injures by fire or otherwise any tree or timber; (c) causes any damage by negligence in felling any tree by cutting or dragging any timber; (c) kindles, keeps or carries any fire except at such seasons and in such manner as the Minister may from time to time notify; (e) subject to any manufacturing process or transports or removes any forest products; or (f) enters a prohibited area, is liable . . . .

There is also criminal liability pursuant to section 19 of the Summary Offences Act,<sup>67</sup> “Any person who steals, or unlawfully and maliciously roots up, destroys or damages the whole or part of any tree, sapling, shrub or underwood, wheresoever growing . . . shall be liable . . . .”

Town and Country Planning could also play a role in protecting flora as per section 20(1) of the Town and Country Planning Act,<sup>68</sup> where it is stated that:

If it appears to the Minister that it is expedient in the interests of amenity to make provision for the preservation of any tree, trees or woodlands in any area, he may for that purpose make an order . . . (a) prohibiting . . . the cut-

63. Conservation of Wildlife Act, Ch. 67:01 (Rev. Laws of Trinidad & Tobago 1980).

64. Summary Offences Act, Ch. 11:02.

65. Forests Act, Ch. 66:01 (Rev. Laws of Trinidad and Tobago 1980).

66. The Felling of Trees (Permits) (Private Lands) Rules, Legal Notice 309 of 2000, made pursuant to section 23 of the Forests Act.

67. Summary Offences Act, Ch. 11:02 (Rev. Laws of Trinidad & Tobago 1980).

68. Town & Country Planning Act, Ch. 35:01 (Rev. Laws of Trinidad & Tobago 1980).

ting down, topping, lopping or wilful destruction of trees . . . (b) for securing the replanting . . . of any part of a woodland area that is felled in the course of forestry operations . . . .

In providing development permission under Second Schedule, Part IV, section 5 of the Town and Country Planning Act, Town and Country Planning may make provisions for the “[p]reservation or protection of forests, woods, trees, shrubs, plants and flowers.”

These statutory provisions have had little effect on the hydrocarbon sector and therefore the awareness of the hydrocarbon sector to sensitive species is almost non-existent.

### *J. Sensitive Areas*

Because Trinidad & Tobago is an island republic, sensitive areas will of course include marine, wetlands, and land areas. This article does not propose to address these different sensitive areas, but merely to look at one such category, namely the inland ecosystem. There are many statutory provisions that impact land management. A few will be mentioned for illustrative purposes.

Section 17 (1) of the Agricultural Fires Act,<sup>69</sup> states “[t]he period commencing on the first day of December in any one year and ending on the thirtieth day of June in the next succeeding year shall be for the purpose of this Act be deemed to be the fire season.” Section 18(4) mandates “[n]o person except the holder of a permit issued under subsection (2) shall set fire during a fire season for any purpose except cooking.” The Forests Act<sup>70</sup> creates certain offences with respect to the protection of state lands which are deemed to be Forest Reserves. Section 2 of the Forests Act states, “[i]n this Act “prohibited area” means a specified area being part of a Forest Reserve or State lands declared by the Minister by Order to be a prohibited area.” Section 6(1) of the State Lands Act<sup>71</sup> states that:

The Commissioner shall have the management of all lands of the State, and shall be charged with the prevention of squatting and encroachment upon the same and of spoil and injury to the woods and forests on such lands. . . and shall superintend the settlement and allotment of State lands and the laying out of village lots . . . .

Section 5(2) of the Town and Country Planning Act<sup>72</sup> requires that:

Not later than seven years after the commencement of this Act . . . the Minister shall submit a development plan . . . indicating the manner in which he proposes that land in T&T may be used . . . . (3) A development plan . . . may in particular-(a) define the sites of proposed roads, public and other buildings and works, airfields, parks, pleasure grounds, nature reserves and open spaces; (b) allocate areas of land for agricultural, residential, industrial or other purposes . . . .

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69. Agricultural Fires Act, Ch. 63:02 (Rev. Laws of Trinidad and Tobago 1980).

70. Forest Act, Ch. 66:01.

71. State Lands Act, Ch. 57:01 (Rev. Laws of Trinidad and Tobago 1980).

72. Town & Country Planning Act, Ch. 35:01.



Section 20(1) of the Town and Country Planning Act states:

If it appears to the Minister that it is expedient in the interests of amenity to make provision for the preservation of any tree, trees or woodlands in any area, he may for that purpose make an order . . . (a) prohibiting . . . the cutting down, topping, lopping or wilful destruction of trees . . . (b) for securing the replanting . . . of any part of a woodland area that is felled in the course of forestry operations . . . .

In providing development permission under Second Schedule, Part IV, Section 5 of the Town and Country Planning Act, Town and Country Planning may make provisions for “[p]reservation or protection of forests, woods, trees, shrubs, plants and flowers.”

Section 16 of the Petroleum Act<sup>73</sup> provides that:

Within two months after the expiration or sooner determination of an Exploration and Production (Public Petroleum Rights) Licence, as provided for in the Regulations . . . the licensee shall . . . (c) to the like extent restore, as far as may be possible to their natural and original condition the surface of the licensed area . . . .

Section 29(1)(j) of the Petroleum Act, revised in 1980, states that “[t]he President may make any such regulations . . . for the prevention of pollution of land . . . and for compensation thereof . . . .” Petroleum (Pollution Compensation) Regulations,<sup>74</sup> Regulation 3 states that “[f]or the purposes of these Regulations, land is deemed to be polluted as the result of petroleum operations if it is polluted by-(a) the escape of oil or salt water or any solid or liquid matter, whether of a nature similar to oil or water or not . . . .” Drilling Regulations made pursuant to the Mines, Borings and Quarries Act,<sup>75</sup> Regulation 18(1) provides for approved precautions shall to be taken to prevent any uncontrolled flow of oil or gas during drilling. Regulation 20(4) states:

Whenever any well is found to be in such a condition that, in the opinion of the Engineer- . . . (b) seepage of oil, water, mud or pitch from either inside or outside any string or casing in the well may cause pollution to land . . . the Engineer may . . . such measures . . . to repair, partially plug or completely abandon the well . . . .

Again, despite the presence of many pieces of legislation that seek to protect land resources in Trinidad and Tobago, there has been little effect on the hydrocarbon sector.

## VI. THE IMPACT OF THE EM ACT ON THE HYDROCARBON SECTOR

It is proposed now to examine how the EM Act impacts on the activities of hydrocarbon sector in the key areas of environmental management identified within the legislation itself.

73. Petroleum Act, Ch. 62:01 (Rev. Laws of Trinidad & Tobago 1980).

74. Petroleum (Pollution Compensation) Regulations, Legal Notice 134 at 1997, made pursuant to section 29 of the Petroleum Act.

75. Drilling Regulations made pursuant to section 25 of the Mines, Borings and Quarries Act, Ch. 61:01 (Rev. Laws of Trinidad and Tobago 1980).

### A. *Planning and the Environmental Impact Assessment Process*

The EM Act has fundamentally changed planning control over the hydrocarbon sector and has introduced express provisions to deal with environmental concerns. Section 35 of the EM Act<sup>76</sup> allows the Minister to designate certain activities as requiring a Certificate of Environmental Clearance (Certificate), which compels anyone wishing to proceed with any such activity to apply to the Minister for clearance before beginning a project. The applicant must provide all necessary information requested. A Certificate may be issued without the need for a formal Environmental Impact Assessment, but when requested, it must be provided before the application for a Certificate can be considered.

The first stage is the designation of selected activities that require a Certificate. A review of the Certificate of Environmental Clearance (Designated Activities) Order<sup>77</sup> made pursuant to the EM Act reveals the presence of many hydrocarbon-related activities on the list of designated activities. These include the following:

- Coastal or offshore construction or modification and dredging activities
- Catchment, abstraction or treatment of potable process water
- Establishment of a facility for non-metallic mining and processing
- Establishment of a facility for petroleum products, petrochemicals or petrochemical products
- Exploration for crude oil or natural gas
- Establishment of a facility for primary or secondary production of crude oil, condensate or associated gas
- Establishment of a facility for natural gas or condensate production
- Establishment of infrastructure for pipeline systems
- Establishment of infrastructure for crude oil refining
- Establishment of infrastructure for the storage petroleum or liquid petroleum gas or their derivatives
- Establishment of infrastructure for marine transportation

The statutory requirement with respect to fees associated with the Certificate of Environmental Clearance provides for a standard application fee of U.S. \$81.00.<sup>78</sup> If an Environmental Impact Assessment is required, payment of charges ranges from U.S. \$807.00 to U.S. \$96,775.00. Most of the activities associated with the hydrocarbon sector can be found in the upper range – U.S. \$16,129.00 to U.S. \$96,775.00. It should be noted

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76. Environmental Mgmt. Act, No. 3 of 1995 (Rev. Laws of Trinidad & Tobago 1995), subsequently re-enacted as Environmental Act, No. 3 of 2000.

77. Certificate of Env'tl. Clearance (Designated Activities) Order, 2001, Legal Notice 103 of 2001, made pursuant to Section 35 of the EM Act.

78. Converted at a rate of US \$1 to TT \$6.20.

that the EMA is required to identify cost items resulting in charges exceeding U.S. \$16,129.00 and must deliver a statement of expenses to the party concerned.

The administration of the Certificate process is governed by the Certificate of Environmental Clearance Rules, 2001.<sup>79</sup> These rules establish the procedure for applying for, obtaining, or appealing decisions with respect to the grant of the Certificate. It is clear, therefore, that the law presently provides for significant environmental impacts of hydrocarbon activities to be addressed prior to the grant of planning permission to engage in such activities.

### *B. Air Pollution*

The role of the EMA in dealing with air pollution is of great significance. section 47 empowers the EMA to prescribe rules for monitoring and administering the release of air pollutants. Section 50(1) prescribes that the EMA may require a facility to apply for and grant permits to authorize any process releasing air pollutants subject to such terms and conditions as it considers appropriate. This section mandates the EMA to develop standards for emission of air pollutants by identifying the characteristics of air pollutants and permissible release limits. Rules for managing air pollution have been drafted and submitted for public comment pursuant to the requirement of the EM Act.<sup>80</sup> The draft rules have identified a specific number of air pollutants and the limits for stack emissions. The term "stack" is rather loosely defined and can be considered to be any point from which the defined air pollutants are emitted.

### *C. Water Pollution*

As is expected, the most prominent role for the control of water pollution is now vested in the EMA. The EMA has been given the widest possible mandate to deal with water pollution and based on its legislative-derived authority, it is possibly the agency with the single most responsibility for water pollution. According to the EM Act, section 52(1), the EMA shall investigate the environment generally and such premises and vehicles as it thinks necessary for the purposes of ascertaining the extent of water pollution and significant sources of water pollutants and characterizing or describing that pollution. This section goes on to require the EMA to maintain a register of water pollutants as prescribed by rule, which must contain data identifying the quantity, conditions, or concentrations relevant to the identification of each pollutant. Based on its research, the EMA is required to develop and implement a program for the management of such pollution, which shall include the registration, and further characterization of significant sources of any ongoing or intermittent releases of water pollutants into the environment.

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79. Certificate of Envtl. Clearance Rules, 2001, Legal Notice 104 of 2001, made pursuant to section 26 of the EM Act.

80. Environmental Mgmt. Act, No. 3 of 2000.

The EMA has already developed rules for the management of water pollution and laid them for negative resolution in the Parliament of Trinidad and Tobago on September 29, 2001. Unfortunately, due to the dissolution of Parliament, these rules will have to be re-laid. The Water Pollution Rules identify specific water pollutants and create a requirement that entities register with the EMA if their discharge of these water pollutants is above a certain limit. The Water Pollution Rules then create an upper limit, where a permit would be required if any person is desirous of discharging water pollutants above the maximum permissible discharge limit.

#### *D. Noise Pollution*

There is tremendous authority vested in the EMA to solve the problem of noise pollution. Noise is considered a pollutant under section 2 of the EM Act. The specific management of noise pollution is subsequently provided for in the Act. Section 49(1) of the EM Act stipulates that the Authority shall, as soon as practicable after the commencement of the Act, investigate the environment generally and such premises and vehicles as it thinks necessary for the purpose of ascertaining the extent of noise pollution and the significant sources of pollutants which by their release cause or contribute to such pollution. Further, the EMA is required to create a register of noise polluting sources and to implement a program to manage such pollution. The specific offence of noise pollution is covered by section 51(2) which states that no person shall emit or cause to be emitted any noise greater in volume or intensity than prescribed in rules made under section 26 or by any applicable standards, conditions or requirements under this Act. The Noise Pollution (Control) Rules<sup>81</sup> are now the law of Trinidad and Tobago, and a precise standard for industry of seventy-five decibels for non-impulse sounds have been stipulated. A variation, which functions like a permit, is required if a facility exceeds the prescribed standards due to its normal operations.

#### *E. Waste*

Parliament clearly contemplated that the EMA would be responsible for the development of a hazardous waste regulatory body in the Republic of Trinidad and Tobago. According to the EM Act, section 26, the Minister may make rules subject to negative resolution of Parliament, for the designation of hazardous substances or categories of hazardous substances and the performance standards, procedures, safeguards and licensing or permitting requirements in accordance with which such hazardous substances shall be handled; the definition of various categories of waste, the requirements with respect to the handling and disposal of such categories of waste, and the licensing of facilities at which such wastes are handled or disposed; and the design, construction, operation, maintenance and monitoring of facilities or processes for the control of pollution and the han-

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81. Noise Pollution (Control) Rules, Legal Notice 60 of 2001, made pursuant to section 26 of the EM Act.

dling of wastes.

The management of waste is provided for in section 55(1) which requires the EMA to investigate the environment generally and such premises and vehicles as it thinks necessary for the purposes of ascertaining the volume and nature of wastes which are handled and disposed of into the environment and identifying and characterizing the different categories and the significant sources of such wastes. Pursuant to this undertaking under section 55(2), the EMA is required to develop and implement a program for the management of such wastes, which may include the registration and further characterization of significant sources of wastes being disposed of into the environment.

As part of its management function, under section 56, the EMA is required to submit to the Minister of the Environment a program to define those wastes which should be deemed "hazardous wastes;" to establish requirements for the handling and disposal of hazardous wastes; to establish appropriate standards and design criteria for hazardous waste handling and disposal facilities; and to establish licensing and permitting requirements with respect to such wastes. In addition, by virtue of section 57(1), the EMA may require and grant permits to authorize any person's waste disposal activities, or licenses for the operation of any waste handling facility, subject to such terms and conditions as are suitable. The EMA, as of the date of this paper, has not instituted any program in this area of environmental management.

#### *F. Hazardous Substances*

Regarding hazardous substances, again we can see the difference the EMA makes. Section 26 of the EM Act provides the Minister with the power to make rules for procedures for the registration of sources from which pollutants may be released into the environment; characterization of such sources; and the quantity, condition, or concentration of pollutants or substances containing pollutants that may be released into the environment generally or by specific sources or categories of sources. Further, in section 59, the EMA is required to develop a program for the designation of specific hazardous substances and performance standards and procedures for the safe handling of such hazardous substances. To date, no rules have been made with respect to the management of hazardous substances.

#### *G. Rules to Implement Record keeping and Monitoring Requirements*

Section 47 of the EM Act authorizes the EMA to develop rules for operations such as the hydrocarbon sector to sample and analyze pollutants that are released or hazardous substances that are handled. The scope of these rules includes the installation of appropriate monitoring equipment and the keeping of appropriate records. No rules have yet been made in this area. It is expected that the hydrocarbon sector would be particularly affected by any rules that may be promulgated.

### *H. Rules for Notification of Spills, Releases and Other Incidents*

The EMA, pursuant to section 61 of the EM Act, is required to investigate and designate categories of circumstances involving accidental spills or other releases of pollutants, or other incidents with respect to hazardous substances, which may present a risk to human health or the environment. The EMA shall then develop appropriate rules to handle such spills, releases and other incidents, if and when they occur. No rules have yet been promulgated in this area; however, it is anticipated that rules will appear in the near future and that the hydrocarbon sector will be a prime target due to the fact that most spills are hydrocarbon related.

### *I. Sensitive Areas*

Section 41 of the EM Act provides for the designation of environmentally sensitive areas. The Environmentally Sensitive Areas Rules<sup>82</sup> are now the law of Trinidad and Tobago.

There are two major concerns for the hydrocarbon sector with respect to these rules. First, Rule 4(1)(c) provides for limitation on the use of designated areas and secondly, Rule 4(1)(d) provides for the taking of appropriate mitigation measures. If hydrocarbon activities are being conducted in an area that is deemed designated or is subsequently designated, the operators may find themselves having to operate against a different criteria than non-designated areas, especially with regard to potential environmental threats to the area. Further, stricter standards are emerging for sensitive areas and these are reflected in the water pollution standards and noise standards.

### *J. Sensitive Species*

Section 41 of the EM Act also provides for the designation of environmentally sensitive species. The Environmentally Sensitive Species Rules<sup>83</sup> govern such designations in Trinidad and Tobago.

Just as there are concerns with sensitive areas, there are two major concerns with these rules insofar as hydrocarbon activities and sensitive species are concerned. First, Rule 4(1)(d) provides the basis for prohibiting activities for the protection of environmentally sensitive species. Thus, if a specie is designated as environmentally sensitive and it is discovered in the vicinity of existing or proposed hydrocarbon operations, it may be that those operations may be significantly restricted or even prohibited. Second, Rule 4(1)(f) provides for the taking of appropriate mitigation measures and this may translate into higher costs of operations.

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82. Environmentally Sensitive Areas Rules, 2001, Legal Notice 64 of 2001, made pursuant to section 26 of the EM Act 2000.

83. Environmentally Sensitive Species Rules, 2001, Legal Notice 63 of 2001, made pursuant to section 26 of the EM Act 2000.

## VII. LIABILITY FOR PAST ENVIRONMENTAL EVENTS

A major question in environmental law concerns the passing of affected property or the contaminating source through the hands of a succession of innocent owners - where is liability to be now placed? To quote the eminent environmental law scholar John D. Leeson, "The simplistic approach is doubtless to say, as the law does, that a prospective purchaser has the responsibility to make any necessary inquiries and investigations to satisfy himself of the condition of the property he is buying, and is not therefore, at least in law innocent."<sup>84</sup> This position was reviewed in Singapore, a country with a similar legal tradition as Trinidad and Tobago, and it is instructive to note the perception of a leading expert.

Where the environmental legislation imposes liability for the present consequences of past activities, the current owner may be held liable for all civil and potentially criminal consequences of the past activity. Since the person or company that undertook such past actions is frequently no longer around, the liability scheme established was intentionally cast very broadly. The position is simple. The owner or occupier of the premises is deemed responsible for the clean up of any waste generated at the premises, whether the waste was discharged prior to the party entering into occupation of the premises or after such entry. In other words, the owner of a facility today can thus be held liable for the cost of cleaning up hazardous substances buried there, even if they were buried long before that owner acquired the property, simply by virtue of having the status of owner. The actual party causing the discharge would always remain liable if he were locatable. For instance, a company (or its corporate successor) that disposed of manufacturing wastes at a facility decades ago and then sold it may be liable for the cleanup that the present owner undertakes. In either case, the acquirer of a business today can find itself paying for the consequences of actions taken long ago, and for which it received no direct benefit.<sup>85</sup>

A review of the judgments from the courts of Trinidad and Tobago does not reveal the use of common law devices such as nuisance, negligence, the rule in *Rylands v. Fletcher*,<sup>86</sup> and trespass, in claims for harm due to environmental events with the exception of one occasion where an interesting decision was rendered. One of the major pollution problems in Trinidad is contamination of land and water by oil. This matter has been of some concern to farmers as oil companies traditionally opt to compensate farmers voluntarily rather than improving their operations. This is largely attributable to the relatively low levels of compensation paid and the adverse media reaction to court proceedings with multinationals. At the end of the oil boom in Trinidad and Tobago in the early 1980s, the state oil companies were handling the bulk of oil production on land. These companies were reluctant to pay compensation at the levels previously paid by the multinationals. This led to confrontation with farmers, and in 1988 a High Court action was filed alleging

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84. John Leeson, ENVIRONMENTAL LAW 36 (Pitman Publishing 1995).

85. Kala Anandarajah, *Focus: The Hidden Importance of Environmental Law in Commercial Transactions*, L. GAZETTE, available at <http://www.lawgazette.com.sg/2001-3/Mac01-focus.htm> (last visited Jan. 21, 2002).

86. *Rylands v. Fletcher*, L.R. 3 H.L. 330 (1868).

that one of the state oil companies had engaged in acts of negligence and nuisance resulting in pollution of agricultural lands. The case of *Ramcharan Mongru v. Trintoc*<sup>87</sup> was dismissed in 1991 on a preliminary objection that jurisdiction for oil pollution cases was properly vested in the Oil and Water Board. Although such a board had not been appointed for over thirty years, the court held that it had no jurisdiction. The Oil and Water Board should have been appointed under the Oil and Water Board Ordinance.<sup>89</sup> This would have provided a forum for private party action to be taken against parties causing pollution by the discharge of oil. However, this right of recourse is non-existent due to the failure to appoint a board and this failure manages to bar the pursuit of common remedies in oil pollution matters.

This Oil and Water Board Ordinance has since been repealed and replaced by regulations made under the Petroleum Act (*see generally*, Petroleum (Pollution Compensation) Regulations).<sup>90</sup> These regulations preserve the common law remedies; however, they can only be pursued after exhaustion of the dispute resolution procedures outlined in the regulations.

An important point to note pertains to the operation of the "time" limitations for the taking of action in tort in Trinidad and Tobago. Section 2(1) of the Limitation of Certain Actions Act,<sup>91</sup> stipulates that "the following action shall not be brought after the expiry of four years from the date on which the cause of action accrued, that is to say-(a) actions founded . . . in tort . . ." With respect to personal injuries, section 5(2) states that "subject to subsection (3), an action to which this section applies shall not be brought after the expiry of four years from-(a) the date on which the cause of an action accrued; or (b) the date on which the person injured first acquired knowledge of the accrual of the cause of action."

#### A. *Liability for Personal or Property Harm*

Remedies in statutory law for personal or property harms suffered by a person as a result of the occurrence of an environmental event arising from past activities conducted by parties other than the current occupier are somewhat limited. The first area of interest is that created under the Petroleum Act.<sup>92</sup> By virtue of the Petroleum (Pollution Compensation) Regulations,<sup>93</sup> Regulation 4 creates a right of complaint for pollution caused by petroleum operations, and the regulations go on to establish an alternative dispute resolution procedure for having the claim settled.

The regulations are not explicit on the matter of claims for personal or

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87. *Ramcharan Mongru v. Trintoc*, H.C.A. 3499 of 1988.

89. Oil and Water Board Ordinance, Ch. 26:06 (Laws of Trinidad and Tobago 1950).

90. Petroleum Act, Ch. 62:01 (Rev. Laws of Trinidad & Tobago 1980); Petroleum (Pollution Compensation) Regulations, Legal Notice 134 of 1997, made pursuant to section 29 of the Petroleum Act.

91. Limitation of Certain Actions Act, No. 36 of 1997.

92. Petroleum Act, Ch. 62:01.

93. Petroleum (Pollution Compensation) Regs., Legal Notice 134 of 1997.



property harms suffered by a person as a result of the occurrence of an environmental event arising from past activities conducted by parties other than the current occupier. However, having a license to conduct petroleum operations over the area where the pollution originates may lead to the argument that liability will be imputed on the current occupier.

The second main avenue of statutory action for private harms is captured in the EM Act, which represents a landmark departure in traditional environmental legislation, in that, it provides for direct private party action. Section 69 of the EM Act stipulates that "(1)[a]ny private party may institute a civil action in the Commission against any other person for a claimed violation of any of the specified environmental requirements identified in section 62 . . . ." This is an important provision as it provides for an aggrieved private party to have a matter brought before the Environmental Commission, where there is a perception that the EMA is not living up to its statutory responsibility under the EM Act.

Section 62 of the EM Act defines environmental requirements including:

the requirement upon a person to - (a) comply with the procedures for the registration of sources from which pollutants may be released into the environment; (b) comply with the procedures and standards with respect to permits or licences required for any person to install or operate any process or source from which pollutants will be or may continue to be released into the environment; (c) comply with the performance standards, procedures, licensing or permitting requirements established for the handling of hazardous substances; (d) apply for and obtain a Certificate of Environmental Clearance; (e) comply with the conditions and mitigation measures in any such certificate; (f) comply with the procedures and standards with respect to the periodic or continual monitoring of pollution or releases of pollutants or conditions required under a permit or licence; (g) provide timely and accurate notification with respect to an accidental or unauthorised release of a pollutant, or other incident with respect to a hazardous substance; (h) control the release of pollutants in such a manner as to comply with any permit or licence granted under section 50(1), 53(1), 57(1) or 60(1); (i) submit timely payment of required fees or charges payable to the Authority.

The sections that are omitted are those where no direct private party action can be taken. What is clear is that a current operator can only be liable in direct private party action under the EM Act where there is a pre-established relationship with the EMA through permits, licenses, or orders. Thus, the opportunity to seek redress for a private party under the direct private party action section in the EM Act is somewhat limited and is even more so for past environmental activities by predecessors in title.

### *B. Liability to Remediate*

There is no discernible common law right that can compel remediation of land, whether the land became contaminated or polluted by the present or previous owner. This right is generally derived from statute. It is unlikely that the common law would extend to compel remediation of land as a remedy where no specific cause of action accrues. In the *Cam-*

*bridge Water* case,<sup>94</sup> it is instructive to note the words of Lord Goff on the role of the common law in dealing with environmental matters. As per Lord Goff:

It is of particular relevance that the present case is concerned with environmental pollution. The protection and preservation of the environment is now perceived as being of crucial importance to the future of mankind. . .but it does not follow from these developments that a common law principle. . .should be developed or rendered more strict to provide for liability in respect of such pollution. On the contrary, given that so much well-informed and carefully structured legislation is now being put in place for this purpose, there is less need for the courts to develop a common law principle to achieve the same end, and indeed it may well be undesirable that they should do so.<sup>95</sup>

It should be noted however, that if the environmental event causes a nuisance, the remedy might include abatement, which could have the same effect as remediation. However, the ability of the court to order some form of remediation is rooted in a specific cause of action such as nuisance.

In the area of statutory law, there are two main areas of attack for remediation. First, there is statutory nuisance, which can require abatement, and second there is the role of the EM Act. If, for example, there is the release of an air pollutant or a water pollutant, then based on the draft Air Pollution and Water Pollution Rules<sup>96</sup> being proposed by the EMA, it is likely that a current operator would be required to submit an application for a permit. This will bring certain conditions to bear and if there is any breach, then the current party will be responsible for remediating any environmental damage according to the EM Act.

The EM Act also contains the power for the EMA to intervene and remedy any environmental problem. Section 25 states:

Whenever the Authority reasonably believes that a release or threat of release of a pollutant or hazardous substance, or any other environmental condition, presents a threat to human health or the environment, the Authority may, after consultation with the Minister and in co-ordination with other appropriate governmental entities, undertake such emergency response activities as are required to protect human health or the environment, including- (a) the remediation or restoration of environmentally degraded sites; (b) the containment of any wastes, hazardous substances or environmentally dangerous conditions; and (c) such other appropriate measures as may be necessary to prevent or mitigate adverse effects on human health or the environment.

The EM Act is silent as to recovery of cost for the actions of the EMA from the person causing the environmental problem or the occupier of the land from which the problem emanates. The EM Act does in fact provide for use of money from an environmental trust fund to pay for remediation works. Section 72 states that:

[t]here is hereby established an Environmental Trust Fund which shall be

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94. *Cambridge Water Co. v. Eastern Countics Leather*, 1 All E.R. 53 (1994).

91. *Id.* at 76.

96. Water Pollution Rules, gazetted as Legal Notice 130 of 2001. The draft rules were laid in Parliament for negative resolution in September 2001, but due to the proroguing of Parliament for the general elections of 2001, the rules lapsed and would have to be resubmitted to Parliament.

used to fund the operations of the Authority and for other purposes authorised under this Act, including- . . .(c) emergency response activities to address actual or potential threats to human health or the environment, including remediation or restoration of environmentally degraded sites, containment of any wastes, hazardous substances or other environmentally dangerous conditions, or other appropriate precautionary measures to prevent significant adverse effects on human health or the environment . . . .

As a result of the reluctance of the common law to intervene directly in a situation like this, it may not be likely that the EMA could sustain a common law attack to recover remediation costs. Thus, while the EM Act is silent on recovery of costs from the private party, it is expected that this situation will not remain static. One can anticipate that regulations may be introduced to provide for the recovery of such costs, given that, to date, the environmental trust fund has not proved to be viable.

### VIII. SANCTIONS UNDER THE EM ACT

Before concluding this paper, it is necessary to briefly look at the new enforcement regime for protection of the environment as the EM Act contains an entirely new regime for punishing environmental infractions, both in civil and criminal law. This new regime is certainly more punitive and can ensure that environmental management is given greater significance.

As noted before, section 62 of the EM Act creates the notion of environmental requirements, the breach of which will trigger the various sections dealing with compliance and enforcement.

Upon committing a breach of an environmental requirement, a person may, according to section 63 of the EM Act, be issued notice of a violation. This notice may require a person to make necessary rectification or to make representation to the EMA with respect to the stipulations of the EMA. If the matter is satisfactorily resolved, the notice may be cancelled or the matters specified in the notice dismissed. In addition, the agreed resolution may be reduced in writing into a Consent Agreement.

Failing agreement, the next stage is the issuance of an administrative order as per sections 64 and 65 of the EM Act. This administrative order can carry several sanctions including a directive to stop the conduct complained about; a directive to remedy any environmental damage; a directive to conduct an investigation; a directive to perform monitoring and record keeping activities; and civil assessment. According to section 66(1) of the EM Act, a civil assessment can involve:

- (a) compensation for actual costs incurred by the Authority to respond to environmental conditions or other circumstances arising out of the violation referenced in the Administrative Order; (b) compensation for damages to the environment associated with public lands or holdings which arise out of the violation referenced in the Administrative Order; (c) damages for any economic benefit or amount saved by a person through failure to comply with applicable environmental requirements; and (d) damages for the failure of a person to comply with applicable environmental requirements, in an amount determined pursuant to subsections (2) and (3).

According to section 66(3) of the EM Act:

The total amount of any damages under subsection (1)(d) shall not exceed- (a) for an individual, five thousand dollars for each violation and, in the case of continuing or recurrent violation, one thousand dollars per day for each such instance until the violation is remedied or abated; or (b) for a person other than an individual, ten thousand dollars for each violation and, in the case of continuing or recurrent violations, five thousand dollars per day for each such instance until the violation is remedied or abated.

In addition to the civil remedies outlined above, section 68 of the EM Act provides additional remedies to the EMA as it stipulates that:

[w]henver the Authority reasonably believes that any person is currently in violation of any environmental requirement, or is engaged in any activity which is likely to result in a violation of any environmental requirement, the Authority may in addition to, or in lieu of, other actions authorised under this Act- (a) seek a restraining order or other injunctive or equitable relief, to prohibit the continued violation or prevent the activity which will likely lead to a violation; (b) seek an order for the closure of any facility or a prohibition against the continued operation of any processes or equipment at such facility in order to halt or prevent any violation; or (c) pursue any other remedy which may be provided by law.

The EM Act creates the criminal offence of knowingly and recklessly endangering human health and the environment or any sensitive specie or sensitive area by virtue of section 70. This section carries a fine of one hundred thousand dollars and imprisonment for two years.

The EM Act also creates personal liability for company officials for violations, creating civil liability through the use of the responsible corporate officer doctrine. Section 71 states that:

[w]here a violation of any environmental requirement has been committed by a person (other than an individual), any individual who at the time of the violation was a director, manager, supervisor, partner or other similar officer or responsible individual, or who was purporting to act in such capacity, may be found individually liable for that violation if, having regard to the nature of his functions in that capacity, the resources within his control or discretion, and his reasonable ability to prevent the violation- (a) the violation was committed with his direct consent or connivance; or (b) he, with knowledge, did not exercise reasonable diligence to prevent the commission of the violation.

## IX. CONCLUSION

It would appear that, although historically there were a plethora of environmental laws in Trinidad and Tobago, enforcement was quite limited. Within such a scenario, the laws dealing with protection of the environment in Trinidad and Tobago had little impact on hydrocarbon operations. This situation would appear to have changed dramatically with the introduction of the EM Act. The EM Act has introduced specific management regimes for dealing with areas such as planning, noise pollution, sensitive areas and sensitive species. Additionally, the EM Act contemplates the development of specific management regimes to address water pollution, air pollution, waste management, hazardous substance, information gathering and spills. It is expected that in the very near future, these proposed regimes would be actual-

ized.

The EM Act follows typical legislation in developed countries such as the United States of America and Canada, in that, there is an attempt to deal with environmental problems in the hydrocarbon sector at two levels. At the first level, the EM Act has introduced a planning requirement, at the discretion of the EMA, to require an environmental impact assessment with respect to hydrocarbon activities, so as to address significant environmental impacts prior to project execution. At the second level, the EM Act introduces a permitting and variation regime to control pollution in the hydrocarbon sector. What is important to note, is that specific standards for the release of various types of pollutants are being promoted.

The significance of developments through the EMA and the EM Act cannot be understated in the context of the hydrocarbon sector. It is expected that current and future developments would pose significant challenges to this sector leading to a revolution in corporate behavior that could engender a more proactive and responsible approach to environmental management. It is early yet and the EMA is now acquiring its regulatory personality and it is therefore difficult to gauge its success. It is indeed a worthy model to be emulated by other developing countries possessing a hydrocarbon sector; however, the history of enforcement of other environmental laws strikes a cautionary note. It is heartening to note that enforcement of non-EM Act legislation improved due to the efforts of the EMA and now that the EMA is acquiring its own regulations it is hoped that the enthusiasm for enforcement would continue and grow from strength to strength. It is a reality that if Trinidad and Tobago follows the enforcement precedent of the past, the country may very well bestow on future generations the legacy of an environment scarred by exploits in the hydrocarbon sector.

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