THE ROLES OF ENVIRONMENTAL QUALITY ACT, DEPARTMENT OF ENVIRONMENT AND JUDGES IN THE PREVENTION OF ENVIRONMENTAL POLLUTION IN MALAYSIA

NAHZATUL AIN BINTI MOHD KHALID

A dissertation submitted in fulfillment of the requirements for the degree of Master in the University of Malaya

Faculty of Law
University of Malaya
2004
# TABLE OF CONTENTS

| DEDICATION | v |
| ACKNOWLEDGEMENTS | vi |
| LIST OF CASES | vii |
| LIST OF TABLES | viii |
| LIST OF FIGURES | ix |
| LIST OF APPENDICES | x |
| ABSTRACT | xi |

## CHAPTER

### 1. INTRODUCTION

1.0. Background of the study  
1.1. Statement of Problem  
1.2. Scope of study  
1.3. Objectives  
1.4. Significance of study  
1.5. Methodology  
1.6. Limitations  

### 2. SOURCES OF INTERNATIONAL ENVIRONMENTAL LAW AND PRINCIPLES

2.0 Introduction  
2.1. Definition  
   a. Environment  
   b. Pollution  
   c. Environmental Law  
2.2. International Environmental Law  
   a. Treaties  
2.3. Main Sources  
   2.3.1. United Nations Declaration on Human Environment (1972)  
      a. Stockholm Declaration  

---

PAGE

1  
2  
2  
5  
5  
6  
12  
13  
14  
15  
16  
16  
19
<table>
<thead>
<tr>
<th>Page</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>i. Proclamation</td>
</tr>
<tr>
<td>20</td>
<td>ii. Principles</td>
</tr>
<tr>
<td>22</td>
<td>iii. Action Plan</td>
</tr>
<tr>
<td>23</td>
<td>iv. Contribution</td>
</tr>
</tbody>
</table>
| 25   | 2.3.2 World Commission on Environment and Development (1983)  
a. Brundtland Report |
| 28   | 2.2.3 United Nations Declaration on Environment and Development (1992)  
a. Rio Declaration  
b. Agenda 21  
i. Local Agenda 21 |
| 36   | 2.4. Environmental concerned in ASEAN |
| 40   | 2.5. Conclusion |

3. CAUSES, SOURCES & EFFECT OF ENVIRONMENTAL POLLUTION

3.1. Causes and sources of environmental pollution
   a. Industries  
b. Population  
c. Intensive farming  
d. Urbanization  

3.2. Effects of Environmental pollution
   a. Malaysia  
i. Health  
ii. Economy  
b. Global  
i. Air Pollution  
ii. Green House Effect  
iii. Global warming
| iv. Depletion of ozone layer | 59 |
| v. Rise of Sea Level | 63 |
| vi. Famines | 65 |
| vii. Floods | 67 |

### 3.3. Conclusion

#### 4. ENVIRONMENTAL QUALITY ACT 1974 & DEPARTMENT OF ENVIRONMENT

| 4.0 Introduction | 70 |
| 4.1 EQA Mechanism | 71 |
| a. The Role of Minister, EQC and DG | 72 |

| 4.2. How Does EQA works | 77 |
| a. Licence to pollute | 81 |

| 4.3. The role of Department of Environment | 79 |
| a. Organization Structure | 80 |
| b. Enforcement Power | 80 |
| i. Power to Prosecute | 81 |
| ii. Power to issue Compounds | 81 |
| iii. Prohibition Orders | 81 |
| iv. Power to require EIA | 82 |

| 4.4. Conclusion | 82 |

### 5. ENFORCEMENT PROBLEMS

| 5.0. Introduction | 83 |
| 5.1. Lack of Human Resources | 84 |
| 5.2. Financial Allocation and expenditure for DOE | 84 |
| 5.3. Constitutional Issue | 90 |
| 5.4. Numerous law and agencies to safeguard Natural Resources | 91 |
| 5.5. Locus Standi | 95 |
| 5.6. Amendment to Federal Constitution | 96 |
| 5.7. Conclusion | 96 |
ACKNOWLEDGEMENTS

I owe a lot to my supervisor Dr. Azmi Sharom for his patient and guidance that help me through this dissertation. I would like to thank the Kuok Foundation for “Tun Hussien Memorial Scholarship” extended to me. I would like to thank the officers from the Department of Environment particularly En. Ishak Thani and Pn. Siti Zaleha for their time and practical answers to my questions and for all the Department of Environment staff who replied to my questionnaire. I also would like to thank Cik Rohaijan at the Department of Environment Library for her guidance on the various reports during my visit there. My dissertation is not complete without the data compiled by Sub Committee of Environmental Law of Kuala Lumpur Bar Committee and I owe Ms Janet Looi of Skrine and Company for allowing me to use the said data in my dissertation.
I like to dedicate this to my husband Hishamuddin and my two daughters Amira Afiqah and Aina Sofea. Three people that come into my life during the writing of this dissertation.
LIST OF CASES

Allen v The United States [1984] 588 F Supp 247

Ajoy Hasia v Khalid Mujib Shervardi AIR [1981] SC 487, 499


Minors Opasa et al V. Secreatry of the Environment and Natural Resources Fulgencio Factoran, G.R. No. 101083, 30 July [1993].

Public Prosecutor v Ta Hsin Enterprise Sdn Bhd [1998] 6 MLJ 748

Pendakwa Raya lwn NCK Aluminium Extrusion Sdn Bhd [2002] 6 MLJ 96

Quek Gin Hong v Public Prosecutor [1998] 4 MLJ xxv

Tenggara Gugusan Holidays Sdn Bhd v Public Prosecutor [2003] MLJ 508


Wan Tan Kong & 7 Ors v Asia Rare Earth Sdn Bhd [1992] 4 CLJ 2207. Supreme Court 23 Dec 1993
<table>
<thead>
<tr>
<th>TABLE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>List of Environmental Regulations.</td>
</tr>
<tr>
<td>3</td>
<td>List of Environmental Guidelines.</td>
</tr>
<tr>
<td>4</td>
<td>List of Other Environmental Regulations.</td>
</tr>
<tr>
<td>FIGURES</td>
<td>TITLE</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>2</td>
<td>Department of Environment: Number and types of pollution Complaints by states, 1999.</td>
</tr>
<tr>
<td>3</td>
<td>Department of Environment: Sources of Air Pollution Complaint, 1999.</td>
</tr>
<tr>
<td>4</td>
<td>Department of Environment: Types of pollution Complaints received, 1999.</td>
</tr>
<tr>
<td>7</td>
<td>Solid Wastes generated by selected local authorities areas (1991-1995)</td>
</tr>
<tr>
<td>8</td>
<td>Department Of Environment Organisation Structure.</td>
</tr>
<tr>
<td>10</td>
<td>Department of Environment: Cases Prosecuted and Fines imposed according to States, 1999.</td>
</tr>
<tr>
<td>11</td>
<td>Department of Environment: Number of cases prosecuted According to Offences, 1999.</td>
</tr>
<tr>
<td>12</td>
<td>Department of Environment: Distribution of Personnel 1999 &amp; 2000</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>TITLE</td>
</tr>
<tr>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>2</td>
<td>Sub Committee on Environmental Law of Kuala Lumpur Bar Committee Questionnaire on Environmental law and Practice.</td>
</tr>
<tr>
<td>3</td>
<td>Sub Committee on Environmental Law of Kuala Lumpur Bar Committee report based on the Questionnaire sent out on Environmental law and Practice</td>
</tr>
<tr>
<td>4</td>
<td>Lists of Treaties where Malaysia is a party.</td>
</tr>
<tr>
<td>8</td>
<td>Asean Strategic Plan of Action on Environment, 1994-1998</td>
</tr>
<tr>
<td>9</td>
<td>Langkawi Declaration on The Environment, 1989</td>
</tr>
<tr>
<td>11</td>
<td>List of Prescribed Activities under Environmental Impact Assessment Order</td>
</tr>
</tbody>
</table>
ABSTRACT

This dissertation attempts to examine the effectiveness of the roles played by the Environmental Quality Act, the Department of Environment and the Judiciary in the prevention of environmental pollution in Malaysia.

It first outlines the concept of environment, environmental pollution, environmental law, sources and consequences of environmental pollution.

One of the main focus of this dissertation is to assess the Environmental Quality Act 1974 and to discuss it's implementation problems in the background of constitutional provisions.

Also discussed in this dissertation are the Department of Environment's functions in administering and enforcing the Environmental Quality Act, 1974 for curbing pollution.

The last chapter in this dissertation but not the least important is the role of the Malaysian Judiciary towards environment protection as shown in their judgments in comparison with the Indian and Philippine's Judiciary.
CHAPTER 1

1.0. Background of the study

Malaysia is one of the most bio-diverse regions on earth. However, agriculture and infrastructure development has caused massive deforestation while discharge from industrial and mining operations pollutes water resources. Air pollution, water toxicity and river silting are side effects of rapid and intense industrialization. The increase in Malaysia’s population has caused further strain on the sewage and waste management infrastructure.

The Environment Quality Act (EQA) was passed in 1974 to control pollution. The Department of Environment was established to administer and enforce the EQA (Amendments 1985, 1996).

1.1. Statement of Problem

The Environment Quality Act (EQA) was indeed passed in 1974 by the Federal Government and the Department of Environment was established at Federal level to supplement the administration and enforcement of the Act but the

---

1 From World Wide Web: http://www.jas.sains.my/jas/bg/profile.htm
management of basic resources such as land, forest, water, fisheries and agriculture are constitutionally under state responsibility.

The Bakun Dam case illustrates that the federal law and federal enforcement agency is powerless to protect the environment when there is a conflict between states and federal government. More than anything else, the decision reveals the attitude of the Malaysian Court of Appeal in dealing with an issue which our country, consonant with the entire world community, has identified as critical to the survival of this planet. Whilst courts of other countries strive to give legal sustenance to this concern, by translating concepts such as 'sustainable development' and 'precautionary principle' into legal rights, and by giving the right to the environment a constitutional status, our higher courts have, with respect, yet to consider, let alone comprehend, the right of the affected citizenry to even make representations on a matter as elementary as 'environmental impact assessment'.

1.2. Scope of the Study

This dissertation is focused on the roles played by Environmental Quality Act 1974 (Act 127), the Department of the Environment and the judiciary in the prevention of pollution. The reference made to the treaties and international

---

conventions is to justify that there is commonly agreed standard set at international level for environmental protection. Therefore protection of the environment is an international obligation. If there is non-compliance of such standards, what action can be taken?

The starting point in systematic international environmental management arguably is the United Nations Conference on Human Environment (UNCHE) known as the Stockholm conference in 1972⁵. There are two main sources of International Environmental law. First is the traditional source which includes international conventions, treaties, international accepted customs, United Nations General Assembly resolutions and declarations, General Principles of Law recognized by civilized Nation, judicial decisions and the teachings of the most highly qualified publicists. As referred to in Article 38 of Statute of the International Court of Justice Act.

The second source is the “non-traditional” source also known as the “soft law”. It includes code of practice, recommendations, guidelines, resolutions, declaration of principles, standards, and so-called ‘framework’ or ‘umbrella treaties which do not fit neatly to the categories of traditional legal sources.

However it is increasingly being resorted to and is of greater importance as problems with securing hard laws increase.\footnote{International Court of Justice World Wide Web: http://www.icj-cij.org/}

In chapter 2 the definition of important keywords such as "environment" and "pollution" is given to be used in the context of this dissertation.

What are the causes, sources and effects of environmental pollution to justify the need for drastic action to be taken at international as well as national level. The causes, sources and effects of environmental pollution is evidenced by relevant statistics and reports by United Nations Environment Programme (UNEP), Malaysia Department of Environment, NGO's and other relevant agencies.

Following the UNCHE, Malaysia had enacted the Environmental Quality Act in 1974 (EQA), two years after the Stockholm declaration. The Act has undergone several amendments for improvements. This dissertation intend to summarize the existing legislation from its framework, penalties imposed, powers available and methods of enforcement conferred to the Department of Environment. It also seeks to identify any areas for improvement.
This will be followed by the problems of implementation and enforcement of EQA with regards to constitutional provisions, *locus standi* and financial constraints. The final issue is the judicial attitudes on environmental pollution matter garnered from decided cases. This is followed by a set of recommendation to judges based on the action plan to strengthen the world’s environment in the World Summit on Sustainable Development at Johannesburg, Nairobi in August 2002.\(^7\)

The overall objective of the Symposium is to foster a better-informed and more active judiciary advancing the rule of law in the area of sustainable development. This includes improving capacity, training, funding and education of legal experts, boosting access of public to public information on environment and development, access to legal systems and court and the sharing of legal expertise.\(^8\)

1.3. Objectives

The main objective of this dissertation is to highlight the issue surrounding the enforcement of the Environmental Quality Act and based on the findings some recommendations are made as guidelines for enforcers and the judiciary.

1.4. Significance of the Study

This dissertation analyses the problems in implementing and enforcing the Environmental Quality Act and its regulations by the Department of Environment.


\(^8\) Global Judges Symposium on Sustainable Development and the Role of Law. From the World Wide Web: [http://www.unep.org/dpdl/symposium/Principles.htm](http://www.unep.org/dpdl/symposium/Principles.htm)
The analyses are based on available statistics, reliable reports and field work done from the Department of Environment, government and non governmental organizations.

1.5. Methodology
The data used in this dissertation are from primary and secondary legal sources of information. The library research includes understanding the following documents:-

1. International Declarations
   i. Stockholm Declaration (1972)
   iii. Rio Declaration 1992
   iv. Agenda 21 (1992)
   v. Langkawi declaration

2. Statutes
   i. Environmental Quality Act, 1974 and Regulations.

3. Malaysia Five Years Plan (environmental related matters only)
   ii. Seventh Malaysia Plan (1996-2000)
   iii. Eight Malaysia Plan (2001-2005)

The primary sources of data collection are based on the following research questions:-
1. What is meant by 'the environment'?

2. What is pollution?

3. What is environmental Law?

4. What are the principles of environmental pollution law at international level?

5. What are the causes of environmental pollution?

6. What are the consequences of environmental pollution?

7. What are the laws on environmental protection in Malaysia?

8. What are the content, basis, objectives and remedies provided by the Environmental Quality Act and its regulations? Is it adequate?

9. The power, duties and responsibilities of Department of Environment under the Environmental Quality Act?

10. What are the problems in relation to the enforcement of Environmental Quality Act by of the Department of Environment? Why the problems still persist?

11. How to overcome this?

12. What is the judiciary's attitudes towards environmental protection?

13. How to improve this?

The field studies in form of questionnaire were answered by officers at the Department of Environment, Puan Siti Zaleha and En. Ishak Thani.9

In 2001, the Environmental Law Sub-Committee of the Bar Council has sent out a questionnaire to find out the current status of the environmental law and

9 See Appendix 1
practice in Malaysia. The purpose of the study is to make concrete proposals to the authority on how to have a better environment. I had the opportunity to speak to the chairperson of the sub-committee, Ms Janet Looi on the matter and she is kind enough to give me a copy of the said report.

On the theoretical aspects of this dissertation, the important source to gather information and data is from books, newspaper cutting, reports and articles. However my focus is more on Malaysia's references as it is the theme of this dissertation. The most authoritative and useful reference source for this dissertation is the compilation of selected papers presented at Consumer Association of Penang and Sahabat Alam Malaysia National Conference in 1996, titled *State of The Malaysian Environment*. The important aspect of these paper is that it gave an overview on the status of Environment in Malaysia. The proceeding confirm that the rapid economic growth has had an effect on the environment. Over 80 top Malaysian and International experts provided their findings, analysis and recommendation on themes of ecosystems and natural resources, activities that impact on the environment/ society, institutional arrangements and policy issues and alternative vision.

It can be drawn from these proceeding that environmental concerns in Malaysia have moved away from esoteric and theoretical to the very real and

---

10 See Appendix 2
11 See Appendix 3
Although the focus of this proceeding is on the problem of loss of forest due to development projects, it is still important to this dissertation as forest loss lead to soil erosion and is one of the causes of river pollution and floods in Malaysia.

Another important source is the compilation of seven seminar papers presented at the Seminar on Environmental Law at the Law Faculty of University Kebangsaan Malaysia in 1995, titled An Appraisal of Environmental Law In Malaysia.

One of the seminar papers dealt with problems faced by housing developers and factory operators on complying with the environmental law. The issues are the lack of knowledge with the provisions of the law relating to the environment and the costs involved. The writer pointed out that despite the fact that the EQA has been in existence for almost 20 years, the level of awareness of the regulatory requirements under this enabling act is still low. While the large companies would have taken action to meet regulatory compliance and keep abreast with the new developments, the small manufacturing industries would probably place environment aspects as low priority as they do not see any tangible values to the economic well being of the business. This means that, it may not be the lack of law or enforcement that caused non compliance with the law but the industries' inabilities itself.

The working paper titled "Environmental Law: Learning From The American Experience" highlight the measures that are taken by the United States to control environmental quality and to achieve environmental goals. However some of the said measures may not be appropriate to developing country like Malaysia, at least not now.

The most relevant chapter is on the implementation of S34A on Environmental Impact Assessment. According to the writer\textsuperscript{13}, ever since its implementation a number of issues and problems have been raised and measures have and are being taken to resolve them. Her assessment on whether the enforcement of EIA has lived up to the expectations of interested parties is very important. She pointed out that though it is too early to measure its effectiveness quantitatively, the success of its implementation require advance changes in legal and procedural provisions of the EQA and also advances in administrative system and process.

I must thank the Law Faculty of University Malaya for their collection of Current Legal Problems in Malaysia\textsuperscript{14}, it provide a good source of knowledge on a number of areas of law to law students. Chapter 1 of this collection titled "Understanding the Environmental Quality Act 1974" by Dr Azmi Sharom give me the general idea of the content of the Act, institutional mechanism and

\textsuperscript{13} Dr Hasmah Harun is the Director of Department of Environment Malaysia in 1995

\textsuperscript{14} Mimi Kamariah Majid (Eds.), (1996), Current Legal Problems in Malaysia. Kuala Lumpur: University of Malaya Press
enforcement provided by the Environmental Quality Act and its regulations. It highlights the problems which influence its efficacy which is the Department of Environment strength and the appeal for maximum sentence to the offender. It is this section that I have expended on in this dissertation, particularly in Chapter 5 on enforcement problems by the Department of Environment and Chapter 6 on the roles of judiciary.

Data on the number of complaints on pollution to the DOE, types and sources of pollution is from the Environmental Quality Report in the year 1998-2000. Statistics on the number of prosecution and fines imposed is also from the same source. In this dissertation I highlighted the statistics on allocation of budgets to the DOE and the number of personnel in DOE. The said statistics is from the Department of Environment Annual Report 1998-2000. Statistics from the year 2001-2004 is not yet available.

Other primary legal sources are the constitution, the Environmental Quality Act and related legislations. The case law is entirely based on judicial decision and are cited from CD-ROM databases of Malayan Law Journal (MLJ) (MLJ on CD), Malaysian Current Law Journal known as (CLJ Legal Network) at http://www.cljlaw.com, All Malaysia Report (AMR), Singapore Law Report (SLR), All India Law Report (AILR), All England Law Report (ALL ER) and other journals not specifically mentioned herein. Secondary legal sources of information are
from legal encyclopedias, case digests (Mallal's Digest), citators, annotators, legal dictionaries, textbooks as well as periodical articles. It also includes the books by "non-governmental organization such as "Sahabat Alam Malaysia" (SAM) and Consumers Associations of Penang (CAP).

1.6. Limitations

There is a very limited written material for Malaysia on environmental matters. The Director General of the DOE assigned two officers to assist me in my research on the role of the DOE. The interviews based on research questionnaire are limited to the views of these two personnel and may not reflect the views of the Department itself. Further, the analysis on the current status of the environmental litigation made by the Kuala Lumpur Bar Committee on Environment were limited to twenty seven feedback from legal practitioners since there are not many environmental lawyer in Malaysia. Despite these limitations, this dissertation is still useful because it's assesses the Environmental Quality Act mechanism and how it works, analyses the enforcements problems faced by DOE and attitudes of the judiciary on environmental pollution. Based on the findings, this dissertation seek to be another source of information on the status of environmental pollution protection in Malaysia.
CHAPTER 2

2.0. Introduction

This chapter gave an overview of what International Environmental Law is. It is important to understand the nature of International Environmental Law as it is the basis for most national environmental law including Malaysia. It provides for standards and guidelines for states development projects to be in line with the international obligation for sustainable development. Therefore, compliance of environmental law is not only domestic matter but an international moral and ethical obligation owed to the whole world.

2.1. Definition

Before we venture into the complex discussions on the role of environmental law, Department of Environment and judiciary, there is a need to define the meaning of some key words in this dissertation. The word will be used in the context here after mentioned unless otherwise stated.

a. Environment

Cambridge International Dictionary of English\(^1\) defined "environs" as the area surrounding a place and environment as the quality of the air, water and land in which people, animals and plants live.

The Declaration of the United Nations Stockholm Conference on the Human Environment (UNCHE) defines environment as that which gives man physical sustenance and affords him the opportunity for intellectual, spiritual, moral and social growth and adds that both the natural and man made environment, are essential for his well-being and enjoyment of basic human rights.\(^{16}\)

The environment in this dissertation follows the definition of Environment in the EQA (Act 127), Section 2 of EQA which defines environment as physical factors of the surroundings of human being including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics.

b. Pollution

The American Heritage Dictionary of the English Language\(^{17}\) defines pollution as "the act or process of polluting or the state of being polluted, especially the contamination of soil, water or the atmosphere by the discharge of harmful substance".

While in the EQA "pollutant" is described in Section 2 of the EQA as any substance whether liquid, solid or gaseous which directly or indirectly alters the quality of any segment or element to the receiving environment so as to affect

any beneficial use adversely or is hazardous or potentially hazardous to health and includes objectionable odours, radio-activity, noise, temperature change or physical, chemical or biological change to any segment or element of the environment.

Pollution is defined in Section 2 of the EQA as any direct or indirect alteration of the physical, thermal, chemical, biological, or radioactive properties of any part of the environment by discharging, emitting, or depositing wastes so as to effect any beneficial use adversely, to cause a condition which is hazardous or potentially hazardous to public health, safety, or welfare, or to animals, birds, wildlife, fish or aquatic life, or to plants or to cause a contravention of any condition, limitation, or restriction to which a license under this Act is subject.

The definition in this dissertation will follow the definition of environment, pollutant and pollution as defined in the EQA because it is the most relevant to the context of this dissertation.

c. Environmental law

Environmental law is an organized way of using the legal system to minimize, prevent, punish and remedy the consequences of human activities that damage and threaten public health and public safety.
2.2. International Environmental Law

At International level, there is no comprehensive and codified legislation on environmental law. However, the principle of laws generally applied by the International Court of Justice (ICJ) are international conventions, treaties, international custom, general principles of law, and as secondary resources judicial decisions and teachings of the most highly qualified publicist. It can be said that the above are the Sources of International Environmental Law\(^{18}\).

a. Treaties

Treaties are the most important source of International environmental law. The 1969 Vienna Convention defines a treaty as "an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation"\(^{19}\). Treaties are favoured by many states particularly because treaties are handled in cooperative spirits by all countries, big or small, on equal footing. In order to be binding on states, the following criteria must be fulfilled. First, the contracting states must have intended to create legal rights and duties. Second the instrument must be concluded by states or international organizations with treaty-making power that have full powers. Third, that it is governed by international law. Finally the engagement has to be in

---

\(^{18}\) Article 38(1) (a) of the Statute of International Court of Justice

writing. The word treaty is normally being interchanged with convention, protocol and pact. However, the effectiveness of a particular treaty is a subject to the acceptance by the states concerned. Acceptance by states can be in many forms such as adoption, acceptance or approval, accession, act of formal confirmation, declarations, definitive signature\(^{20}\) (Malaysia is a signatories to numerous treaties), exchange of letters/notes and ratification. Treaties therefore only bind states who have agreed to it. Any breached of the terms of the treaty will raise legal cause of action and the state which caused pollution will be responsible for it. This is easier said than done as the hurdle to take up action by reliance of treaty is that the acceptance by states can be subjected to reservation which purports to exclude or alter the legal effect of certain provisions of the treaty in their application to that state\(^{21}\).

International agreements not concluded as treaties and therefore not covered by the Vienna Convention on the Law of Treaties play an important role in International relations. Often states prefer non-treaty obligations as a simpler and more flexible foundation for their future relations. The difference lies mainly in the parties' wish to model their relationship in a way that excludes the application of treaty or customary law on the consequences of breach of obligations. This restriction does not justify discarding such agreements a being of a 'political' or 'moral' nature only. It would appear more appropriate to consider the extent to which the parties chose to bind themselves and what legal consequences they

\(^{20}\) See Appendix 4
Wanted to attached to their agreement, even though non-treaty agreements are not a source of law in the sense of Article 38 para. 1 of the Statute of the International Court of Justice. The relationship may best be described as a self-contained regime whose characteristics depend on the parties' intention in the specific case. The introduction of some of the rules of treaty law and general principles of law into that regime may be appropriate. Considerations of good faith may also help to integrate and supplement the parties' agreement. These documents are known as soft law.

The principles of environmental protection form pollution can be extracted from few important convention and declaration. The initial spark of environmental protection always goes back to the year 1972, with the United Nations Declaration on Human Environment 1972\textsuperscript{22}, followed by Brundlant Report in 1983\textsuperscript{23}, Rio Declaration in 1992\textsuperscript{24} and the Millennium Summit in the year 2000.

2.3. Main sources

2.3.1. United Nations Declaration on Human Environment (1972)

Malaysia is a member of The United Nations since 17\textsuperscript{th} September 1957. The United Nation convened the Environment Conference in Stockholm Sweden from

\textsuperscript{22} In the United Nations Conference on the Human Environment also known as Stockholm Conference 1972.

\textsuperscript{23} Report was Published in 1987. Report also known as "Our Common Future"

\textsuperscript{24} Also known as "Earth Summits"
from 5th – 16th of June 1972. The Conference produced four cornerstones of the first International framework for addressing environmental problems25:

1. The Stockholm Declaration;

2. The Action Plan for the human environment has three components26:-
   a) Global environment assessment program (EARTHWATCH) was to encompass not only a projected network of atmospheric monitoring stations, but also existing programs of international bodies for the detection of climate changes and of marine pollution
   b) The Environmental Management Activities.
   c) Supporting measures such as education, training, public information and finance.

3. The United Nations Environment Programme (UNEP)


a. Stockholm Declaration

i. Proclamation

In summary the Stockholm Declaration proclaims27 that: -

---

27 See Appendix 5 for full Proclamations of Stockholm Declaration, Source from United Nation Environmental Programme website. http://www.unep.org/
1. It is a basic human right to physical sustenance, intellectual, moral, social and spiritual growth.
2. It is important as it affects human well being and economic development.
3. Countries ought to practice rational use of the environment.
4. Developing countries are to direct efforts to development but bearing in mind the need to safeguard and improve the environment.
5. Countries are to recognise the effect of the growing population on the environment.
6. The imperative goal is to defend the environment for future generations.
7. To get participation from citizens, communities, international corporations, enterprises and institution at every level to protect the environment.

ii. Principles

According to the Declaration there are 26 principles altogether and principles no. 6, 7, 11, 13, 14, 15, 16, 17 and 22 are directly related to states responsibility on pollution matter. Principle 6 requires the States to support the struggle of people against pollution. Principle 7 stated that States have a duty to prevent pollution of the seas. Principle 11 requires environmental policies of states to be enhanced. Principle 13 requires the states to adopt an integrated and coordinated approach to development planning. Principle 14 and 15 requires states to have rational planning of development particularly on human settlements and urbanization. Principle 16 requires government to apply demographic policies and principle 17 requires States to have national
institutions to monitor the environment. Principle 22 requires the states to
develop law on liability and compensation for victims of pollution.

Generally the other principles\textsuperscript{29} can be summarise as follows:-

1. Principle 1 requires states responsibility to protect and improve the
environment for present and future generation.
2. Principle 2 requires states to have an effective management of natural
resources (air, water, land, flora and fauna).
3. Principle 3 requires states to maintain the earth's capacity for renewable
resources.
4. Principle 4 requires states to manage the heritage of wildlife.
5. Principle 5 requires states to use of non-renewable resources in a rational
manner.
6. Principle 20 requires states to use science and technology to identify, avoid
and control environmental risks and to find solutions to environmental
problems. To encourage scientific research.
7. Principle 19 requires states to promote education on environmental matters.
8. Principle 21 gives recognition to the sovereignty of states, however it should
not cause transboundary pollution or damage to the environment of other
states.
9. Principle 26 requires states to eliminate nuclear weapons.

\textsuperscript{29}See Appendix 6 for full Principles of Stockholm Declaration. Source from United Nation Environmental Programme World Wide Web: http://www.unep.org/
iii. Action Plan

The action plan is divided into two aspects. One is the framework for environmental action and the other one is recommendations. There are three types of actions that make up the Plan.

1. The global environmental assessment programme (Earthwatch). It includes the process of evaluation and review, research, monitoring and exchange of information between states. The objectives are:

   a) To identify problems of international environmental pollution and the effect of transboundary pollution.

   b) To warn or caution states on international environmental pollution.

   c) To improve understanding of environmental problem.

   d) To find the cause of environmental pollution and to make appropriate recommendations to state.

2. Environmental management activities. It includes goal setting and planning, international consultation and agreements. To apply the recommendation of Earthwatch and to ensure cooperation from states.

3. International measures to support the national and international actions of assessment and management of environment. It includes education and training, public information, organization and financing.

---

30 International Legal Material documents no 11:1421
There are 106 recommendations in the action plan. What is highlighted here are recommendations 70 to 85 which directly discuss pollution in general under the title identification and control of pollutants.

1. Recommendation 70 recommended that each government be mindful of activities which can cause climate change. Recommendation 71 recommended that Governments minimise the release of toxic and dangerous substances. Recommendation 72 recommended that the Government take into account standards proposed by competent international organization in establishing standards for pollutants. Recommendation 73 recommended that Government should support international programmes to acquire knowledge for assessment of pollutant sources, pathways, exposure and risks. Recommendation No 75 recommended that Governments should develop a registry of releases of radioactive materials to the biosphere. Recommendation No 85 recommended that the Government make available information on their pollution research and pollution control activities, including legislative and administrative arrangements.

iv. Contribution/ Value of Stockholm Conference

The Stockholm declaration provides the basis for an international developmental framework and legal principles on environmental protection\(^31\). It provides an

international platform for future action by states towards environment. Among the participating states, it is an inspirational document as it highlights the consequences of environmental pollution and it provides an environmental ethical code for States.

The declarations represent the first major step at international level for the protection of the environment and convinced states that there is the need for environmental principles to be observed. It highlights the need for educational efforts towards the international environment. It identifies the link between environment and development. Every development project causes some danger to environment and therefore it is important to strike a balance between the two. It identified the areas where law on the environment can be developed and denoted international prescribed norms to be observed by state even if they are not binding by the state. The document created a kind of International regulation mechanism and provides for institutional and financial arrangements for environment protection.

The need to check on the achievement of Stockholm move the United Nations to establish the World Commission on Environment and Environment (1983). It is important as it was the first forum to discuss new ideas about environmental survival under the concept of sustainable development.

32 International Legal Material 11:1466, Nov 72
2.2.2 World Commission on Environment and Development (1983-1987)

a. Brundtland Report

The World Commission on Environment and Development was created as a consequence of General Assembly Resolution 38/161 adopted at the 38th Session of the United Nations in the fall of 1983. Mrs. Gro Harlem Brundtland of Norway, then leader of the Norwegian Labour Party, was appointed as Chairman.

The Commission recommendations for achieving global sustainable development took its first step in defining sustainable development. Paragraph 8 of it's recommendation is the key statement on sustainable development. It defined sustainable development as meeting "the human needs of the present without compromising the ability of future generations to meet their own needs". This concept implies that there are limits on environmental resources and the ability of the biosphere to absorb human activities. These limits are seen to have roots in technological inadequacies and inequitable social organization. According to Paragraph 9 of its recommendation, sustainable development must entail the process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs.33

Poverty is seen as a major cause and effect of environmental degradation. The resource gap between industrial and developing nations is widening, rule-making on the global scale is dominated by industrial nations, and much of the earth's ecological capital has already been used in industrial development. The Commission views these inequalities as the crux of both the planet's environmental and development problems. The solution lies in economic growth that is equitable, and environmentally sustainable. This change will rely upon informed public participation and the political will to change.

Issues of concern briefly outlined are developing and managing (1) population and human resources; (2) food production, distribution and terms of trade; (3) species and ecosystem preservation; (4) sustainable energy paths and consumption patterns; (5) industrial production and (6) rapid urbanization. The Commission calls for institutional reform in terms of: (1) balancing the terms of trade in the international economy to "produce an international economic system geared to growth and the elimination of world poverty"; (2) providing more comprehensive management of the global commons; (3) incorporating environmental concerns and investments into issues of national security; (4) changing the nature of institutions and laws to reflect the interconnectedness of environmental and economic problems.
The Brundtland Report was primarily concerned with securing a global equity, redistributing resources towards poorer nations whilst encouraging their economic growth. The report also suggested that equity, growth and environmental maintenance are simultaneously possible and that each country is capable of achieving its full economic potential whilst at the same time enhancing its resource base. The report also recognised that achieving this equity and sustainable growth would require technological and social change.

The report highlighted three fundamental components to sustainable development:

i) environmental protection

ii) economic growth and

iii) social equity.

The environment should be conserved and our resource base enhanced, by gradually changing the ways in which we develop and use technologies. Developing nations must be allowed to meet their basic needs of employment, food, energy, water and sanitation. If this is to be done in a sustainable manner, then there is a definite need for a sustainable level of population. Economic growth should be revived and developing nations should be allowed a growth of equal quality to the developed nations.
2.3.3 United Nation Declaration on Environment and Development (1992)

Five years after the Brundtland Report, the UN General Assembly asked for a report on progress made towards sustainable development and held the Rio Earth Summit\(^{37}\). Taking place over 12 days in June 1992 in Rio de Janeiro, Brazil, the Earth Summit was the largest environmental conference ever held, attracting over 30,000 people including more than 100 heads of states. The objectives of the conference were to build upon the hopes and achievements of the Brundtland Report, in order to respond to pressing global environmental problems and to agree major treaties on biodiversity, climate change and forest management.

According to United Nation Environmental Programme (UNEP), the biggest challenges faced at Rio Earth Summit involved finance, consumption rates and population growth. The developed nations demanded environmental sustainability while the developing nations argued that they should be given the chance to catch up socially and economically with the developed world. Therefore the rhetoric of universality and unity for our common future has not been matched with concrete action because of powerful business interest of the developing country\(^{38}\).

---


Five separate agreements were made at the Rio Earth Summit. These included:

(i) The Convention on Biological Diversity;
(ii) The Framework Convention on Climate change;
(iii) Principles of Forest Management;
(iv) The Rio Declaration on Environment and Development; and
(v) Agenda 21 (a "blueprint" for sustainable development).

Together these agreements covered every aspect of sustainable development deemed to be relevant. These agreements committed countries, including the UK, to be more sustainable whilst creating guidelines for a more sustainable future. These agreements and their guidelines are still adhered to today and are influencing many political and business decisions.39

a. Rio Declaration

The Rio Declaration40 on Environment and Development is the Conference's counterpart to the Stockholm Declaration on the Human Environment. It was finalized at the preparatory committee meeting in March and not reopened during the Rio Conference. The declaration set forth twenty-seven principles, the second principle41 of which is an updated version to the famous principle 21 of

---

41 Principle 2 states that, States have, in accordance with the Charter of the United Nations and the principles of International Law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies and the responsibility to ensure that activities...
the Stockholm Declaration. The Declaration contains many new elements, including a statement of the precautionary approach, reference to a right to development, assertion of an obligation to undertake environmental impact assessments, affirmation of the desirability of a "supportive and open economic system", and a statement that "each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making process." 42

b. Agenda 21

Agenda 21, established at the 1992 United Nations Conference on Environment and Development, or "Earth Summit", is the blueprint for sustainable development in the 21st century. Malaysia played an active role in the process leading up to UNCED which was held in Rio de Janeiro, Brazil in June 1992. This action plan is a commitment to sustainable development by integrated strategies and detailed programmes to halt and reverse the effect of environmental degradation and to promote environmentally sound and sustainable development 43. Nations that have pledged to take part in Agenda 21 are monitored by the International Commission on Sustainable Development (CSD) which Malaysia was elected the first Chairman, and are encouraged to

within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.  
promote Agenda 21 at the local and regional levels within their own countries. Malaysia was also the first country to host a national seminar as a follow up to the Rio meeting.

Agenda 21 is a blueprint on how to make development socially, economically and environmentally sustainable in the 21st century. Governments, non-governmental organisations (NGOs), industry and the general public are all encouraged to become involved. Agenda 21 provides a framework for tackling today’s social and environmental problems, including air pollution, deforestation, biodiversity loss, health, overpopulation, poverty, energy consumption, waste production and transport issues.

i. Local Agenda 21

Agenda 21 is the blueprint for sustainable development adopted by the United Nations Conference on Environment and Development (UNCED), also known as the 1992 Earth Summit in Rio de Janeiro. It defines sustainable development as follows:

"Something which must improve the quality of life, improve the living and working environment of all people, provide adequate shelter for all, create sustainable energy, transport and construction development and capacity building required to achieve these goals".
Malaysia, which is a signatory to the Rio Declaration on Environment and Development, has taken appropriate actions to ensure that the environment and conservation consideration is increasingly integrated with development planning. One such action is forming a national committee to make new rules and formulate appropriate responses with regards to environmental issues in international trade. Under the Seventh Malaysian Plan (1996-2000), the five-yearly developments plan for the country, the thrust of sustainable development is to achieve a quality and harmonious life through a comprehensive and progressive development while striking a balance between environmental conservation and economic development. High priority is placed on human resource development as well as equal access to adequate, affordable basic services such as low-cost housing, infrastructure and open spaces, particularly to the low-income and disadvantaged groups.

The Agenda 21 Document comprises 40 chapters covering different areas and each describing in great detail the required actions for countries to make the transition to sustainability from now into the 21st century. While each Ministry/Department in Malaysia develops and implements projects and programs under the relevant chapter(s) within its jurisdiction, the Economic Planning Unit in the Prime Minister's Department is responsible for coordinating the overall implementation of Agenda 21 in Malaysia.

---

On the other hand, the United Nations Habitat Agenda on Human Settlements (Istanbul 1996), also known as Habitat Agenda, of which Malaysia is also a signatory, elaborates on sustainable development in the context of human settlement and the urban environment i.e. provision of adequate shelter for all and sustainable human settlements in an urbanizing world. It basically relates to Chapter 7 of Agenda 21 i.e. sustainable human settlements. The Ministry of Housing and Local Government Malaysia, being the national local point for Habitat Agenda, is responsible for coordinating the implementation of Habitat programs.

Local Agenda 21 (LA 21) refers to the process of implementation of Agenda 21 at the level of local authorities. It is the process where local authorities work in partnership with all sectors of the local community to draw up action plans to implement sustainability at the local level. It can be considered as an umbrella for existing and new initiatives to promote sustainable development.

As the level of government closest to the people, local authorities play an important role in educating, mobilizing and responding to the public, to promote sustainable development. LA 21 is first mentioned in Chapter 28 of Agenda 21 which calls upon all local authorities world-wide to undertake a consultative process with their citizens, local organizations and private enterprises and achieve a consensus on a 'local agenda 21" for the community.
There are no fixed ways of implementing LA 21 but some key components to be taken into account in the process of implementation of LA 21 in respect of local community participation are to create awareness, education and consultation involving the general public partnership action to produce a local sustainability strategy or action plan measuring, monitoring, reporting and reviewing progress.

There exist various kinds of LA 21 activities. Three major kinds of LA 21 activity surveyed by The International Council for Local Environmental Initiatives (ICLEI) in 1998 are:

(i) The first kind of LA 21 activity is broadly defined as "a consultative process undertaken by a local government with its constituents and stakeholders which leads to the preparation of a 'local agenda 21' or similar Action Plan for sustainable development for their community".

(ii) The second kind of LA 21 activity is the establishment of an extensive ongoing and perhaps more formalized process to institute sustainable development planning which involves more extensive institutional reform and public participation.

(iii) The third kind of LA 21 activity is national or regional campaigns or programs that provide information, training and technical support to local communities.

---

governments that are working on LA 21 or similar sustainable development action plans for their communities.

Although many Agenda 21 activities under the Seventh Malaysia Plan are being implemented as part of the government's efforts to achieve sustainable development, so far there is no comprehensive action plan or integrated approach towards the implementation of LA 21 in any of the local planning areas. According to Policy Planning and Development Division, Ministry of Housing and Local Government Malaysia dated 18 March 1999, various initiatives towards sustainable development at the local level have been or are being implemented with the support or efforts of Federal/State Governments or NGOs/international agencies.

In Malaysia, in the absence of mandatory requirements to disclose environmental information to the public, such reporting is voluntary in Malaysia. However, the current status of environmental reporting in Malaysia is quite interesting. The number of reporting companies grew from 25 in 1999 to 35 in 2000 and reaching 40 by 2001. This represents 5.3 per cent, 7.0 per cent and 7.7 percent of the KLSE Main Board-listed companies in 1999, 2000 and 2001 respectively. Although the number is growing, there is still ample room for improvement in environmental reporting in Malaysia.

48 Room For Improvement In Reporting Environment Information To Public. New Straits Times, October 27, 2002
2.4. Environmental Concerned in ASEAN

In the light of the worldwide concern on protection of environment, since the nineteen seventies, there has been a growing concern within ASEAN with regard to environmental matters. The general principals of ASEAN’s environmental policies are laid out by the various declarations, resolution and accords that have been adopted over the years. Some important declarations are the Manila Declaration of 1981, the Bangkok Declaration of 1984, the Jakarta Resolution of 1987, the Manila Summit Declaration of 1987 and Langkawi Declaration of 1989. The Kuala Lumpur Accord on Environment and Development 1990 and the Singapore Resolution on Environment and Development 1992.

Malaysia particularly had played a significant role in the formulation of the Langkawi Declaration on the Environment at the Commonwealth Heads of Government Meeting, Kuala Lumpur, Malaysia. (18-24 October 1989) where Asean Ministers for the Environment agreed to 1) initiate efforts pertaining to environmental management; 2) natural resources management; 3) initiate inclusion of environmental factors into economic calculations; 4) develop and formulate a common ASEAN position on Environment for ASEAN and later to the United Nations Conference on Environment and development.

---

49 The Associate of South East Asian Nations was formally established in 1967. The main objectives of this organization is to promote regional cooperation in the economic, cultural, social and technical fields


52 See Appendix 9

53 See Appendix 10
Despite the strong rhetoric, these Statements are in reality nothing more than just that. Ultimately they are “soft law” and their total lack of enforceability and legal weight means its power and authority totally dependent on political will.\textsuperscript{54}

They do however provide the necessary impetus and justification for further action, like the ASEAN Action Plan.\textsuperscript{55} It is the basis for the regional and domestic environmental programmes in ASEAN. It has five objectives which are meant to be implemented in the period of 1994-1998:\textsuperscript{56}

\begin{enumerate}
\item to respond to the specific recommendations of Agenda 21 requiring priority action in ASEAN;
\item to introduce policy measures and promote institutional development that encourage the integration of environmental factors in all developmental processes both at national and regional levels;
\item to establish long term goals on environmental quality and work towards harmonized environmental quality standards for ASEAN region;
\item to harmonize policy directions and enhance operational and technical cooperation on environmental matters, and undertake joint actions to address common environmental problems; and
\item to study the implications of AFTA\textsuperscript{57} on the environment and take steps to integrate sound trade policies.
\end{enumerate}

\textsuperscript{54} See Note 37 at page 104
\textsuperscript{55} Also known as the ASEAN Strategic Plan of Action. See Appendix 8
\textsuperscript{56} See Note 37 at page 105-106
\textsuperscript{57} The ASEAN Free Trade Area, the purpose is to lower tariffs via a Common Effective Preferential Tariff, to a level of 0.5% by the year 2008.
To achieve this, a ten strategy plan was devised. This strategy plan has general ambitions of improving inter-governmental and public/private sector cooperation; establishing greater institutional and legal capacities to implement international agreements; encouraging better environmental databases and technology; and providing a coordinative mechanism for better regional environmental management.

In Malaysia, the National Environmental Policy objectives appears for the first time in the Third of Malaysia's five-year development plans, shows the government’s concern for the environment alongside the efforts to develop the nation’s economy. The policy aims at promoting economic, social and cultural progress through environmentally sound and sustainable development. The policy is based on eight principles. These are:

i. Stewardship of the Environment; where respect of the environment is to be exercise in accordance with the highest moral and ethical standards.

ii. Conservation of Nature's Vitality and Diversity; which is in effect the protection of ecosystems to be maintain biological diversity.

iii. Continuous Improvement in the Quality of the Environment; where these improvements are to be ensured whilst pursuing economic growth and human development.

iv. Sustainable Use of Natural Resources

58 National Policy on the Environment was approved by Malaysian Cabinet on 2nd October 2002.
v. Integrated Decision-Making: where the environment is to be integrated into the decision making of all sectors.

vi. Role of the Private Sector: where the role of the private sector in environmental protection and management is to be strengthened.

vii. Commitment and Accountability: which in effect means transparency in government in their decision making.

viii. Active participation in the International Community.

There are seven "green strategies" to realized the above principles directed on the following key areas:

i. Education and awareness

ii. Effective management of natural resources and the environment.

iii. Integrated development planning and implementation

iv. Prevention and control of pollution and environmental degradation.

v. Strengthening administrative and institutional mechanisms

vi. Proactive approach to regional and global environmental issues

vii. Formulation and implementation of Action Plans.

It is encouraging to see a policy document attempting to face some of the more serious problems of environmental protection in Malaysia. Amongst the "green strategies" are specific statements on the incorporation of environmental matters into governmental decision making; wise use of

---

resources and greater efficiency in the government machinery, especially enforcement.

However, as heartening and hopeful as this policy document is, in many aspects it still maintains the status quo. The Environment is seen as second to development. Furthermore, perhaps more importantly Malaysian placed almost all responsibilities regarding to the environment to the government and less on its citizens. An important aspects of environmentalism, and that is the democratization of environmental decision making, is left unexplored\textsuperscript{60}.

2.5. Conclusion

In conclusion, the Stockholm Declaration 1972 and Rio Declaration has been the focal point for the integration of development and environment issues. Malaysia has taken a moral and ethical obligation to live up to these principles. Primarily to take measures to ensure that the environment is protected for the present and future generations. The enactment of the Environment Quality Act and its regulation, the setting up of the Department of Environment and its regulation, and inclusion of environmental concerns in Malaysia plans can be seen as proof of our undertaking to protect the environment.

CHAPTER 3
MALAYSIA CAUSES, SOURCES AND EFFECT OF ENVIRONMENTAL POLLUTION

3.0. Introduction

In the previous chapter, it was argued that despite many flaws, international law and obligations are seen as one of the reasons for environmental protection measure taken by states including Malaysia. The basic question that has to be asked here is why do we have to protect the environment from pollution?. There are of course many possible answers to this question but for the purpose of this dissertation; the effect of pollution to the current state of the environment and for future generations is the answer. Despite the limited data on the matter, it is another effective and workable type of argument to justify and promote environmental law besides international obligation.

3.1 Causes and sources of environmental pollution

a. Industries

The Industrial Revolution, which began in England and brought about the most fundamental changes to society since the development of agriculture thousands of years earlier. Accompanying the Industrial Revolution was a massive growth in energy consumption, largely through the burning of coal, a fossil fuel. The Industrial Revolution marked the beginning of the period during which mankind began substantially altering the composition of the atmosphere.
In Malaysia the extent and nature of pollution problems are closely tied to its industrial development. In order to achieve Vision 2020's main objective, which is to become an industrial country by 2020, manufacturing has become one of Malaysia's main sources of income. In the Sixth Malaysia Plan period (1990-1995), the manufacturing sector grew at 12.3% per year. The number of pollution complaints has been steadily increasing year after year and most complaints are on emission of smoke and noise by motor vehicles.

Three main potential air pollution sources are the production section which includes food, metal, paper products, chemicals, minerals, fertilizers and petroleum industries. The other two sources of pollution are vehicle and solid waste disposal. These sources cause large quantities of pollutants to be discharged into the air.

The Department of Environment received 2,284 environmental pollution complaints in the year 2000, a decrease of 167 complaints (6.8%) compared to the previous year. Of this total, 1,916 complaints were handled by the State DOE Offices, while the remaining 368 which were outside the jurisdiction of DOE were referred to other relevant agencies.

---

62 Malaysia Sixth Year Plan period (1986-1990)
63 See Figure 1. (Figure 5.29) DOE: Complaint Cases, 1988-1999. DOE Annual Report 1999.
64 See Table 1. (Table 6.5) Malaysia: Potential Significant Air Pollution Sources, 1988-1995. Malaysia Environment Year Book 1998
In 1999, Selangor received the highest number of complaints, followed by Perak, Wilayah Persekutuan and Melaka\(^6\). The most common complaints were open burning at illegal waste disposal sites, dust pollution from wood-based industries as well as non-industrial based complaints\(^6\). In the same year, of the total number of complaints, 73% were for air pollution (for which 30% were open burning at waste disposal sites), 10% water pollution, and 4% noise pollution\(^7\).

Three main sources of air pollution are Mobile Sources (vehicles), Stationary Sources (Power Stations, Industrial Fuel Burning Processes and Domestic Fuel Burning and Burning of Wastes (burning of municipal and industrial wastes). Analysis has shown that the number of tonnes of emissions of pollutants to the atmosphere is steadily increasing in the period 1987-1995\(^8\). The main source of air pollution is industries with 41% from total of sources complained of. (Palm oil factories, cement, concrete and quarry, paddy factories, wood based industries and other industries).

The same report also shows that the main source of water pollution complained of is industries, with 56% (food and drinks industries, textile, rubber, palm oil, electric and electronics and other industries). It is also found that in

\(^6\) See Figure 2. (Figure 5.30) DOE: Number and types of pollution Complaints by state, 1999. DOE Annual Report 1999
\(^6\) See Figure 3. (Figure 5.31).DOE: Sources of Air Pollution Complaint, 1999. DOE Annual Report 1999
\(^7\) See Figure 4. (Figure 5.31).DOE: Types of Pollution Complaint, 1999. DOE Annual Report 1999
\(^8\) See Figure 5. (Chart 19-1) Emission of Pollutants to the Atmosphere by Source, 1987-1995. Seventh Year Plan period (1991-1995)
1995, from 119 rivers monitored, 52 were found unclean, 53 slightly polluted and 14 highly polluted. Based on the Water Quality Index (WQI), it was found that river water quality has declined slightly\textsuperscript{69}.

Another source of pollution from industrial activities are the production of wastes. The nine major industrial sources of pollution were metal finishing, electrical and electronics, textiles, food processing, chemicals, palm oil, rubber, wood and iron and steel manufacturing. However many of these factories owner did not have proper treatment for these pollutant. Number of reasons given, among others are the perception that waste problem is not a serious matter, that it is not viable economically to treat wastes and there is lack of legal requirement on these areas and if there is, lack of enforcement\textsuperscript{70}.

b. Population

Currently, the world’s population is 6 billion (6,000,000,000). It has been predicted that by 2025 it could exceed 8 billion. This would be double the population in 1975. Most of this increase is due to occur in the developing world. Such a large population can be sustained only as long as food resources are


Why are scientists concerned about population growth? Scientists worry that rapid population growth will overstretch the Earth's natural resources and crowd out undomesticated plant and animal species. All people want to be fed, clothed, housed, and have access to clean water. To meet these desires, water, land, forests, and other natural resources must be exploited to some degree. As population increases, more resources are needed to meet basic desires. More forest must be chopped down to provide wood for housing and fuel. More cleared land is needed for agriculture and development. All of these resources are finite. At the same time as people consume these resources, they produce waste that is put back into the air, land, and water. The greater amount of waste from larger populations puts more stress on ecosystems. Even if markets function with perfect efficiency, and the best technology is always used, it will take more resources to support a larger population than a smaller one, and the environmental costs of doing so will be probably be higher as well.

b. Urbanization

In 2002, around 59 per cent of Malaysians live in urban areas. With increasing employment and income opportunities in the expanding industrial and services sectors, and increased educational levels, further out-migration from rural areas is expected. This has caused environmental deterioration in form of

73 Source from Unicef World Wide Web: http://www.unicef.org/infobycountry/malaysia_statistics.html
traffic congestion, housing shortage, slum and squatter problems, air and noise pollution and the poor system of sewage and garbage disposal\textsuperscript{74}.

Besides housing, additional urban facilities and amenities will have to be provided and existing ones improved so that dangers of pollution due to inadequate urban sanitation and unorganized disposal of domestic sewage, solid wastes and wastewater are minimized. This is to ensure that water supply for domestic, industrial and recreational uses is not endangered. With increased income and an expanding urban population, there is also increased number of vehicles each year. In 1998 alone there are 8.9 million vehicles registered\textsuperscript{75}. Despite the reduction of the lead content of petrol, urban air quality is adversely affected by increased vehicle density. In this regard, the government has implemented the light trail transit (LRT) system to give alternatives transportation.

The urban population generated about 5.2 million tonnes of solid wastes 0.34-0.85 kilogram's/capita/day\textsuperscript{76}. Due to this, problems of unsafe solid waste landfills and illegal dumping of wastes are increasing. In an effort towards the improvements of solid waste disposal sites, 27 sites were upgraded and 13 sanitary landfills built. Further, in 1993, the government invited proposal for

\textsuperscript{74} Mohamed Idris, S M., (1986). Save the Malaysian Environment Before it's Too Late. \textit{Malaysian Consumers and Development}. Consumers' Association of Penang. Penang: Sun Printers. Pg 34

\textsuperscript{75} Source Road Transport Department Statistic.

\textsuperscript{76} See Figure 7, Chart 19-3: Solid Wastes generated by selected local authorities areas, Seventh Year Plan period (1991-1995)
land clearing to provide land for agriculture which have caused loss of topsoil, biological diversity and the widespread extinction of plant and animal species.\(^{80}\)

The use of certain types of agricultural mechanization damages the soil structure and makes it more prone to water erosion. Intensive use of pesticides may result in serious groundwater pollution which requires expensive biological and mechanical filtering facilities before water can be consumed.\(^{81}\)

Intensive farming, like pig farming requires effective waste treatment and disposal system to minimize the danger of water contamination, pollution of beaches, coastal and marine ecology. Not only that, it could cause disease such as Nipah virus outbreak in Bukit Pelanduk in 1999.

Therefore there is a need to consider the problems posed by agriculture and intensive farming and come up with practical and effective solutions on one hand and promoting economic benefit on the other hand. In short growers need to be educated and trained to develop awareness on sustainable agriculture practices. That is why the Department of Agriculture under the Ministry of Agriculture is providing consultation services to farmers by using DRIS (Diagnosis and Recommendation Integrated System) for fertiliser formulation and recommendation. DRIS determines nutrients status in the crop and indicates

---

\(^{80}\) State of Environment in Malaysia: Compilation of selected papers presented at Consumer Association of Penang and Sahabat Alam Malaysia Conference (1996)

\(^{81}\) See note 70 at page 241
Changes in climate as a result of greenhouse gas pollution may increase heat-related stress and cardio-vascular problems. In addition, the spread of vector-borne diseases such as malaria in a warmer world will probably increase. Ozone depletion at higher altitudes in the atmosphere will increase the incidence of skin cancers and eye disorders. In Malaysia, cancer has been identified as the second most causes for medically certified death. Research in other countries has shown that environmental pollution like cadmium can result in hypertension and kidney diseases, arsenic in cancers and liver diseases, benzene in leukemia, and DDT and parathion in liver diseases.

Intensive use of pesticides has result in acute and chronic poisoning. One in a mishap involving rice farmers in Tanjung Karang where 17 people were hospitalized after inhaling carbofuran dust. In a survey, 28.1 of 153 vegetables growers suffered poisoning symptoms, including headache, dizziness, nausea and general fatigue after spraying operations.

Economy

The environment does have a major impact on economy. Our economy depends very much on our resources. Their depletion, degradation and pollution would lead to economic damage and costs. For example, energy resources such

as coal or petroleum will run out, and many metals and minerals will also deplete within decades\textsuperscript{88}. Depletion will rise costs and have adverse impact on living standards.

Pollution of rivers has poisoned sources of drinking water and protein. The clearing of forest for building of dams has caused loss of forest products such as food plants, wildlife, medicinal plant that have great economic value.

In Malaysia the tourism industry generated a lot of income as well as employment. The hotel sector alone generated more than 80,000 jobs. During “the haze” in 1997, the tourism industry was badly affected. There was a big fall in the number of tourist, in short it affected our income.

\textbf{b. Global}

\textbf{i. Air Pollution}

One of Earth's most important natural resources is its atmosphere. The atmosphere contains air without which plants and animals could not survive. It contains greenhouse gases that keep the planet naturally warmer than it would be otherwise, maintaining an average global temperature above freezing that allows water to exist in its liquid state, a necessary condition for most life. If mankind is to protect and preserve this unique natural resource for future generations as well as other ecosystems, it must continue to address the

\textsuperscript{88}See World Wide Web: http://www.doc.mmu.uk.ac/
problem of air pollution which affects the atmosphere from the local to the global scale. Currently, there exist four major air pollution issues which are the air quality, acid rain, global warming and ozone depletion.

Two important global conventions essentially concerned with atmospheric issues are the Vienna Convention on the Stratospheric Ozone Layer (together with its Montreal Protocol on Substance which Deplete the Stratospheric Ozone Layer) and the Framework Convention on Climate Change.

In Malaysia, air pollution and concern about air quality are not new. Air Quality monitoring work has been carried out by the Division of Environment since 1977. One observation that was made is that relatively high levels of gaseous pollutants are mainly concentrated in urban area, mainly due to motor vehicle.

Acid rain is a widespread term used to describe all forms of acid precipitation such as rain and snow. Atmospheric pollutants, particularly oxides of sulphur and nitrogen, can cause precipitation to become more acidic when converted to sulphuric and nitric acids, hence the term acid rain. Acid deposition, acid rain and acid precipitation all relate to the chemistry of air pollution and

---

See World Wide Web: http://www.doc.mmu.uk.aric/

92 Malaysia Environmental Report 1998
moisture in the atmosphere. Scientists generally use the term acid deposition but all three terms relate to the same issue\textsuperscript{93}.

The Earth has warmed up by about 0.6°C in the last 100 years. During this period, man-made emissions of greenhouse gases have increased, largely as a result of the burning of fossil fuels and deforestation. In the last 20 years, concern has grown that these two phenomena are, at least in part, associated with each other. That is to say, global warming is now considered most probably to be due to the enhanced greenhouse effect.

The ozone layer filters out incoming radiation in the "cell-damaging" ultraviolet (UV) part of the spectrum. Without ozone, life on Earth would not have evolved the way it has. The discovery of a large ozone hole over Antarctica and its association with man-made CFCs led the world to take action to protect the ozone layer.

Agenda 21 calls for action in the energy production, transport and industrial sectors, to enhance energy efficiency and reduce emissions of air pollutants and greenhouse gases which cause air pollution.

\textsuperscript{93} See World Wide Web: http://www.doc.mmu.uk.aric/
ii. Green House Effect

The Sun, which is the Earth's only external form of heat, emits solar radiation mainly in the form of shortwave visible and ultraviolet (UV) energy. As this radiation travels toward the Earth, 25% of it is absorbed by the atmosphere and 25% is reflected by the clouds back into space\(^4\). The remaining radiation travels unimpeded to the Earth and heats its surface. The Earth releases a lot of energy it has received from the Sun back to space. However, the Earth is much cooler than the Sun, so the energy re-emitted from the Earth's surface is much weaker, in the form of invisible longwave infrared (IR) radiation, sometimes called heat.

Greenhouse gases like water vapour, carbon dioxide, methane and nitrous oxide trap the infrared radiation released by the Earth's surface. The atmosphere acts like the glass in a greenhouse, allowing much of the shortwave solar radiation to travel through unimpeded, but trapping a lot of the longwave heat energy trying to escape back to space. This process makes the temperature rise in the atmosphere just as it does in the greenhouse. This is the Earth's natural greenhouse effect and keeps the Earth 33°C warmer than it would be without an atmosphere, at an average 15°C.

During the last 200 years, mankind has been releasing extra quantities of greenhouse gases that are trapping more heat in the atmosphere. Over the same

\(^4\) See http://www.doc.mmu.uk.aric/
period, the climate of the Earth has warmed, and many scientists now accept that there is a direct link between the man-made enhancement of the greenhouse effect and global warming\textsuperscript{95}.

iii. Global Warming

During the 20th century, the global climate has warmed by about 0.6°C, or about 0.06°C per decade. Computer models which simulate the effects on climate of increasing atmospheric greenhouse gas concentrations project that global average surface temperatures will rise by a further 2 to 3°C by the end of the 21st century, or 0.2 to 0.3°C per decade. It is currently believed that most ecosystems can withstand at most a 0.1°C global temperature change per decade, before experiencing severe ecological stresses, leading in some cases to species extinction\textsuperscript{96}.

A warming of 2°C over the next 100 years would shift current climate zones in temperate regions of the world about 300 km towards higher latitudes, and vertically by 300 m. The composition and geographical distribution of unmanaged ecosystems will change as individual species respond to new conditions. At the same time, habitats will be degraded and fragmented by the combination of climate change, deforestation, desertification and other environmental pressures.

\textsuperscript{95} See World Wide Web: http://www.doc.mmu.uk.aric
\textsuperscript{96} See http://www.doc.mmu.uk.aric/
The most vulnerable ecosystems to global warming include forests, deserts and semi-deserts, low-lying islands, polar regions, mountain systems, wetlands, coastal marshes and coral reefs. Changes in other climatic elements in addition to temperature, such as rainfall, sunshine, cloud cover, and the frequency and intensity of extreme weather events, will influence these vulnerable ecosystems.

Ecosystems have evolved to cope with natural climate changes, and in some cases, the influences of mankind. It is doubtful, however, given today's globalize and ever-increasingly energy- and resource-consuming society that ecosystems will be able to respond to unprecedented climatic pressures as they have managed to in the past.

Measurements of temperature taken by instruments all over the world, on land and at sea have revealed that during the 20th century the Earth's surface and lowest part of the atmosphere warmed up on average by about 0.6°C. During this period, man-made emissions of greenhouse gases, including carbon dioxide, methane and nitrous oxide have increased, largely as a result of the burning of fossil fuels for energy and transportation, and land use changes including deforestation for agriculture. In the last 20 years, concern has grown that these two phenomena are, at least in part, associated with each other. That is to say, global warming is now considered most probably to be due to the increases in greenhouse gas emissions and concurrent increases in atmospheric
greenhouse gas concentrations, which have enhanced the Earth's natural greenhouse effect. Whilst other natural causes of climate change can cause global climate to change over similar periods of time, computer models demonstrate that in all probability there is a real discernible human influence on the global climate.

If the climate changes as current computer models have projected, global average surface temperature could be 2 to 3°C higher by the end of the 21st century than at present. To put this temperature change into context, the increase in global average surface temperature which brought the Earth out of the last major ice age 14,000 years ago was of the order of 4 to 5°C. Such a rapid change in climate will probably be too great to allow many ecosystems to suitably adapt, and the rate of species extinction will most likely increase. In addition to impacts on wildlife and species biodiversity, human agriculture, forestry, water resources and health will all be affected. Such impacts will be related to changes in precipitation (rainfall and snowfall), sea level, and the frequency and intensity of extreme weather events, resulting from global warming. It is expected that the societies currently experiencing existing social, economic and climatic stresses will be both worst affected and least able to adapt. These will include many in the developing world, low-lying islands and coastal regions, and the urban poor.
would not be stopped reaching the Earth’s surface, causing untold damage to most living species. In the 1970s, scientists discovered that chlorofluorocarbons (CFCs) could destroy ozone in the stratosphere.

Ozone is created in the stratosphere when UV radiation from the Sun strikes molecules of oxygen (O2) and causes the two oxygen atoms to split apart. If a freed atom bumps into another O2, it joins up, forming ozone (O3). This process is known as photolysis. Ozone is also naturally broken down in the stratosphere by sunlight and by a chemical reaction with various compounds containing nitrogen, hydrogen and chlorine. These chemicals all occur naturally in the atmosphere in very small amounts.

In an unpolluted atmosphere there is a balance between the amount of ozone being produced and the amount of ozone being destroyed. As a result, the total concentration of ozone in the stratosphere remains relatively constant. At different temperatures and pressures (i.e. varying altitudes within the stratosphere), there are different formation and destruction rates. Thus, the amount of ozone within the stratosphere varies according to altitude. Ozone concentrations are highest between 19 and 23 km.

Most of the ozone in the stratosphere is formed over the equator where the level of sunshine striking the Earth is greatest. It is transported by winds.

---

98 See http://www.doc.mmu.uk.aric/
towards higher latitudes. Consequently, the amount of stratospheric ozone above a location on the Earth varies naturally with latitude, season, and from day-to-day. Under normal circumstances highest ozone values are found over the Canadian Arctic and Siberia, whilst the lowest values are found around the equator. The ozone layer over Canada is normally thicker in winter and early spring, varying naturally by about 25% between January and July. Weather conditions can also cause considerable daily variations.

Ozone is both beneficial and harmful to us. Near the ground, ozone forming as a result of chemical reactions involving traffic pollution and sunlight may cause a number of respiratory problems, particularly for young children. However, high up in the atmosphere in a region known as the stratosphere, ozone filters out incoming radiation from the Sun in the cell-damaging ultraviolet (UV) part of the spectrum. Without this ozone layer, life on earth would not have evolved in the way it has. Concentrations of ozone in the stratosphere fluctuate naturally in response to variations in weather conditions and amounts of energy being released from the Sun, and to major volcanic eruptions. Nevertheless, during the 1970s it was realised that man-made emissions of CFCs and other chemicals used in refrigeration, aerosols and cleansing agents may cause a significant destruction of ozone in the stratosphere, thereby letting through more of the harmful ultraviolet radiation. Then in 1985 evidence of a large "ozone hole" was discovered above the continent of Antarctica during the springtime. This has reappeared annually, generally growing larger and deeper each year. More
recently, fears have emerged about significant ozone depletion over the Arctic, closer to the more populous regions of the Northern Hemisphere.

In response to this and additional fears about more widespread global ozone depletion, the Montreal Protocol on Substances that Deplete the Ozone Layer was implemented in 1987\textsuperscript{99}. This legally binding international treaty called for participating developed nations to reduce the use of CFCs and other ozone depleting substances. In 1990 and again in 1992, subsequent Amendments to the Protocol brought forward the phase out date for CFCs for developed countries to 1995\textsuperscript{100}. Protecting the ozone layer is essential. Ultraviolet radiation from the Sun can cause a variety of health problems in humans, including skin cancers, eye cataracts and a reduction in the body's immunity to disease. Furthermore, ultraviolet radiation can be damaging to microscopic life in the surface oceans which forms the basis of the world's marine food chain, certain varieties of crops including rice and soya, and polymers used in paints and clothing. A loss of ozone in the stratosphere may even affect the global climate.

International agreements and other legislation have gone a long way to safeguarding this life-supporting shield. Nevertheless, for there to be real and long-lasting success, everyone must become part of the solution. Individual efforts taken together can be powerful forces for environmental change. There are a number of things that we, as individuals, can do to both protect the ozone

\textsuperscript{99} Entered into force on 27-NOV-89. See Appendix 4

\textsuperscript{100} Entered into force on 14-SEP-93 & subsequent amendment entered into force on 14-JUN-94. See Appendix 4
layer. These include proper disposal of old refrigerators, the use of halon-free fire extinguishers and the recycling of foam and other non-disposable packaging. Finally, we should all be aware that whilst emissions of ozone depleters are now being controlled, the ozone layer is not likely to fully repair itself for several decades. Consequently, we should take precautions when exposing ourselves to the Sun.

As early as 1985, Malaysia has from a National Steering Committee (NSC) on the protection of the Ozone Layer. Malaysia tops the list of developing countries who is serious in reducing the use of CFC’s in it’s industrial sectors and was awarded the Global Ozone Award in 1995 by UNEP.\(^{101}\)

v. Rise of Sea Level

The global sea level has already risen by around between 10 to 25 centimeters during the last 100 years, at the rate of 1 to 2 millimeters per year. Measuring past and current changes in sea level, however, is extremely difficult. There are many potential sources of error and systematic bias, such as the uneven geographical distribution of measuring sites and the effect of the land itself as it rises and subsides\(^{102}\).


\(^{102}\) See http://www.doc.mmu.uk.aric/
It is likely that most of this rise in sea level has been due to the increase in global temperature over the last 100 years. Global warming should, on average, cause the oceans to warm and expand thus increasing sea level. Climate models indicate that about 25% of the rise in sea level this century has been due to the thermal expansion of seawater. A second major cause of rising sea level is the melting of land-based ice caps. Presently, it is uncertain to what extent the melting of the Greenland and Antarctic ice caps has contributed to global sea level rise during the 20th century.

Forecasts of a rising sea level are based on climate model results, which indicate that the Earth’s average surface temperature may increase by 0.2°C per decade during the 21st century. Global warming is expected to cause a further rise of between 20 and 86 centimeters by the year 2100, with a best estimate of 50 centimeters, if emissions of greenhouse gases remain uncontrolled. This expected rate of change (an average of Forecasts of a rising sea level, however, involves many uncertainties. While most scientists believe that man-made greenhouse gas emissions are changing the climate, they are less sure about the details, and particularly the speed, of this change. Global warming is the main potential impact of greenhouse gas emissions, but other aspects of the climate besides temperature may also change. For example, some studies suggest that changes in precipitation will increase snow accumulation in Antarctica, which may help to moderate the net sea level rise. Another complication is that the sea level would not rise by the same amount all over the globe due to the effects of
the Earth's rotation, local coastline variations, changes in major ocean currents, regional land subsidence and emergence, and differences in tidal patterns and sea water density.

Nevertheless, some areas of Antarctica have warmed by $2.5^\circ$C during the past 50 years, a rate of warming 5 times faster than for the Earth as a whole. Whilst scientists believe this to reflect mostly regional changes in climate, the recent summertime disintegration of the Larsen Ice Shelf has renewed speculation that climatic changes in the polar regions have the potential to cause severe impacts via a rise in global sea level over the next 100 to 200 years.

vi. Famines

One of the impacts which global warming may have on the surface of the Earth is to exacerbate the worldwide problem of desertification. A decrease in the total amount of rainfall in arid and semi-arid areas could increase the total area of dry lands worldwide, and thus the total amount of land potentially at risk from desertification. Desertification was defined at the Rio Earth Summit in 1992 as "land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations and human activities". Desertification involves the depletion of vegetation and soils. Land degradation occurs all over the world, but it is only referred to as desertification when it takes place in dry lands. This is because these areas are especially prone to more permanent
damage as different areas of degraded land spread and merge together to form desert-like conditions.

Global warming brought about by increasing greenhouse gas levels in the atmosphere is expected to increase the variability of weather conditions and extreme events. Many dry land areas face increasingly low and erratic rainfalls, coupled with soil erosion by wind and the drying up of water resources through increased regional temperatures. Deforestation can also reduce rainfall in certain areas, increasing the threat of desertification. It is not yet possible, using computer models, to identify with an acceptable degree of reliability those parts of the Earth where desertification will occur. Existing dry lands, which cover over 40% of the total land area of the world, most significantly in Africa and Asia, will probably be most at risk to climate change. These areas already experience low rainfall, and any that falls is usually in the form of short, erratic, high-intensity storms. In addition such areas also suffer from land degradation due to over-cultivation, overgrazing, deforestation and poor irrigation practices.

The direct physical consequences of desertification may include an increased frequency of sand and dust storms and increased flooding due to inadequate drainage or poor irrigation practices. This can contribute to the removal of topsoil and vital soil nutrients needed for food production, and bring about a loss of vegetation cover which would otherwise have assisted with the removal of carbon dioxide from the atmosphere for plant photosynthesis.
Desertification can also initiate regional shifts in climate which may enhance climate changes due to greenhouse gas emissions.

The United Nations Convention to Combat Desertification\textsuperscript{103} intends to tackle the problem of desertification, by adopting a partnership approach between governments and local populations. The Convention aims to encourage local communities to regain a sense of respect for, and understanding of, their land and the climatic factors which affect it.

vii. Floods

With global warming and a rise in the global average surface temperature, increases in global rainfall and other forms of precipitation would be expected, due to the greater rates of evaporation of sea surface water. Unfortunately, no reliable estimates of evaporation increase exist. One problem is the effect of varying wind speed on evaporation rates, which may or may not be related to increases in temperature.

Several large-scale regional analyses of precipitation changes have been carried out. These have demonstrated that during the latter part of the 20th century precipitation has tended to increase in the mid-latitudes, for example in the former Soviet Union, but decrease in the Northern Hemisphere subtropics. A striking rainfall decrease occurred in the African Sahel north of the Sahara

\textsuperscript{103} United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, 12 September 1994.
Desert, between the 1960s and 1980s. This dramatic desiccation has been linked to changes in ocean circulation and tropical Atlantic sea surface temperatures. Whether such changes are linked to global warming however, remains open to analysis.

The accuracy of other precipitation records should be treated with caution. Precipitation is more difficult to monitor than temperature due to its greater geographical variability. Other uncertainties in the data set may be due to the collection efficiency of rain gauges. Consequently, the compilation of a global precipitation record can prove to be very difficult and is perhaps unjustified.

Malaysia has been very active and vocal in the intergovernmental Negotiating Committee (INC) for a Framework Convention on Climate Change. However its stand on the issue is not very clear as senior officials seemed to indicate that climate change is not a problem, even in global scale\textsuperscript{104}.

In terms of studies, not very many comprehensive ones have been undertaken to assess the problem within the national context. The amount of information in public domain is very small. There is yet to be any reliable assessment of whether current climate change that even the Klang Valley has been experiencing lately are part of the global climate changes predicted by the Intergovernmental Panel on Climate Change (IPCC), let alone for Malaysia.

However it has been estimated that 29,000 sq km or 9% of the total land area of the country is flood prone affecting up to 18% of the population\textsuperscript{105}.

3.3. Conclusion

Ultimately, if asked "why we should protect the environment against pollution", the answer will be because pollution has a very strong impact on the health of the people and economy of the Nation. It is a fact that we need development for various reasons. Whatever the reasons are we should not pollute our environment for it will be heavy costs to pay by our future generations. Therefore this chapter justifies the great effort at ensuring the existence of law and its compliance that will be discusses in the next chapter.

CHAPTER 4

The Environmental Quality Act 1974

4.0 Introduction

In Malaysia presently, there are numerous environment-related legislations at Federal and States level\(^{106}\). The Environmental Quality Act 1974 (EQA) is the most important piece of legislation pertaining to the prevention of pollution in Malaysia. The objectives of the Environmental Quality Act 1974 (EQA) which came into force on 15\(^{th}\) April 1974 are to the prevention, abatement, control of pollution and enhancement of environment and for purposes connected therewith\(^{107}\). To supplement EQA, numbers of regulations were gazetted\(^{108}\). There are a number of guidelines published to deal with Environmental Impact Assessment, Land and industries, ozone and wastes management\(^{109}\).

4.1 EQA mechanism

EQA is a framework legislation\(^{110}\). This means that for most of its provisions to take effect, Regulations need to be made by the Minister. The EQA employs a regulatory framework based upon the issuing of licenses and the prescription of premises to be regulated.

\(^{106}\) See Table 4.

\(^{107}\) Long Title of the Environmental Quality Act (Act 127)


\(^{109}\) See Table 3.

a. The role of Minister, Environmental Quality Council and Director General

The Minister of Science Technology and the Environment\textsuperscript{111}, in consultation with the Environment Quality Council\textsuperscript{112} that consists of representative from government bodies, industries, Sabah, Sarawak, academia and non-governmental organization\textsuperscript{113} make regulations for the protection of the environment. This includes prescribed standards or criteria, prohibited discharge, emission, deposit of environmentally hazardous substances, pollutants or wastes into the environment or use of any equipment and requiring the exercise of safety precautions for operations.

The Minister, in consultation with the Environment Quality Council, may prescribe any premises the occupation or use of which by any person to be an offence, unless that person is the holder of a license in respect of those premises.\textsuperscript{114}

The Director General (DG) main duty is to administer the EQA\textsuperscript{115}. The DG also has the power to grant, renew, transfer and revoke licenses, as well as to vary the pollution control conditions attached therein. In exercising this power,

\textsuperscript{111} Since April 2004, the name has been changed to the Ministry of Natural Resources and Environment.
\textsuperscript{112} Established by S4 of the EQA
\textsuperscript{113} Addition of two representative from non-governmental organisation after 1985 amendment
\textsuperscript{114} Ministry of Science and Environment (MOSTE)
\textsuperscript{115} S 3(1)(a) EQA
the Director General is bound to consider factors such as the practicability and
efficacy of imposing new and varied conditions, the economic life of existing
installations, the cost of complying with conditions and the nature of the industry
concerned.

The Director General may delegate his powers, duties and functions to
any government Department, local authority or committee\textsuperscript{116}.

4.2 How does EQA works

a) Licence to pollute

By looking at the title "Environmental Quality Act", without looking at the
content, one may be misled that it provides protection to the environment \textit{per
se}. This Act was actually designed to control pollution. This can be seen from
numerous sections dealing with pollution. For example Section 22 deals with air
pollution, Section 23 deals with noise pollution, Section 24 deals with pollution of
land, Section 25 deals with inland water pollution, Section 27 deal with oil
pollution or mixture containing oil into Malaysian waters and Section 29 on
discharge of wastes into Malaysian waters. All prohibition contained under the
various sections mentioned above are to be specified by the Minister after
consultation with the Environmental Quality Council\textsuperscript{117}.

\textsuperscript{116} S 49 of EQA
\textsuperscript{117} See Section 21 of EQA
There are a number of important points in the EQA that make it the most important law on the protection of environment. One, the EQA prescribes substantive offences and penalties for pollution of the atmosphere, soil, inland waters, territorial waters as well as noise pollution in contravention of these conditions, unless the person conducting these activities is licensed. Fees are payable for the issuance, transfer and renewal of licenses, and these vary according to the nature of the industry and the magnitude of the pollution caused.

S 18(2) of the EQA provides that for a failure to hold a license for a prescribed premises, as well as failure to comply with the conditions in the license, the offender may be fine up to RM50,000.00 or two years jail or both and RM1,000.00 per day for each day that the offence persists. It is also an offence to carry out any building, alteration or erection work which would cause a vehicle, ship or premises to become prescribed conveyances (vehicles) or prescribed premises under the EQA, unless the Director General has approved the plans and specifications for the proposed work and the competent planning authority has similarly approved the plans.

Further, the EQA prohibits specified materials, equipment or plant in any process, trade or industry. It prescribed for the reduction, recycling, recovery or regulation of specified hazardous substances. This includes prescription of

---

118 Alan K.J. Tan, Preliminary Assessment Of Malaysia's Environmental Law. Faculty of Law National University of Singapore. World Wide Web: http://www.nus.sg/

119 S 17(2) EQA
minimum percentages of recycled substances for specified products, and the labelling of such with declarations on recycled constituents and methods of manufacture and disposal (eco-labelling). It also prescribed the rules on deposit and rebate schemes to ensure environmentally sound recycling or disposal of specified products\textsuperscript{120}.

Under S. 31(1)(a)-(f) of the EQA, the Director General is empower to require any operator to install, operate, repair, alter or replace any pollution control equipment, to take samples and to report on pollutants, to conduct studies on environmental risks, to install or maintain monitoring programmes at the operator’s expense. Further it may adopt pollution control measures, irrespective of whether the operator is operating out of prescribed premises or conveyances (vehicle)\textsuperscript{121}. The EQA requires environmental audits\textsuperscript{122} to be conducted, irrespective of whether the operator is operating out of prescribed premises or conveyances. S2E of the EQA defines Environmental Audit as a periodic, systematic, documented and objective evaluation to determine compliance status to the environmental regulatory requirements; the environmental management system and the overall environmental risk of the premises\textsuperscript{123}. The advantage of this is obvious. If the DG was to have an informed view as to the effects of ongoing activities, problems can be nipped in the bud.

\textsuperscript{120} See note 102 at page 4
\textsuperscript{121} S. 31(1)(g)
\textsuperscript{122} See note 102 at page 5
\textsuperscript{123} DOE’s new clout to fight pollution, New Straits Times, 8/10/1996 [pp.11]
before they get out of hand\textsuperscript{124}. However since its amendment in 1996, there is no regulation on the matter, making it not operational. It is now a matter of when the regulations on Environmental Audit will come into effect\textsuperscript{125}.

EQA also requires environmental impact assessment (EIA) to be prepared on certain prescribed activities\textsuperscript{126}. It requires a report on the impact of the activity on the environment and measures to be taken to limit the said impact. The EIA detail report entails public participation by requiring it to make public and feedback to be sent to a review panel before Director General approve the said report and inform the approving authorities (usually the local planning authority).

As seen earlier in Appendix 2, Malaysia is a party to Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their disposal which come into force on 8\textsuperscript{th} January 1985. Article 4(3)(4) of the Convention provides that parties have to make the necessary legal provisions in their own legal systems to control the transboundary movement of hazardous wastes. Malaysia has taken up the matter by inserting S23 of the EQA, entitled “Control of Scheduled wastes”. According to the section, no one can transport any scheduled wastes in Malaysia, out of Malaysia or in transit through Malaysia, without permission of the DG. This is an offence punishable by fine up to RM500,000.00 or a jail term up to five years or both.

\textsuperscript{124} Azmi Sharom, \textit{Environmental Law: Ten Years After Rio}. 6 SJICL at pg 883
\textsuperscript{125} New EQA amendments a positive move but..., New Straits Times, 8/10/1996 [pp.11]
\textsuperscript{126} Prescribed activities under the Environmental Quality (Prescribed activities) (Environmental Impact Assesment) Order 1987. See Appendix 11
The EQA also provides for the establishment of an Appeal Board to hear appeals from any person aggrieved by any decision of the Director General in relation to the licensing system and the EIA procedure.

S 25 of the EQA imposed a "research cess"\textsuperscript{127} on wastes generated for purposes of financing research into any aspect of pollution or the prevention thereof. The establishment of an Environmental Fund to be operated as a Trust Account within the Federal Consolidated Fund, for the purposes of financing research, controlling pollution in general, preventing or combating spillages, discharges or dumpings of oil, wastes or hazardous substances, and encouraging conservation measures against damage arising from the said pollution. However, this section is without regulations to ensure their compliance and, therefore, they were not given much focus or attention\textsuperscript{128}.

Under the EQA there are miscellaneous provisions on the power to require information\textsuperscript{129}, to inspect premises\textsuperscript{130}, to seize and forfeit property, to examine persons acquainted with the case and the said persons are bound to answer any questions put to them\textsuperscript{131}, to test and prohibit use of vehicles or ship used for transporting wastes\textsuperscript{132}, as well as on the service of notices, evidential matters, composition of offences, jurisdiction of courts, the delegation of authority

\begin{flushright}
\textsuperscript{127} "Cess" here means tax
\textsuperscript{128} Lee Choong Loui, (1995) Pollution & Waste Disposal Dilemma of Industries and Factories in An Appraisal of Environmental Law In Malaysia at page 60
\textsuperscript{129} S 37 EQA
\textsuperscript{130} S 38 EQA
\textsuperscript{131} S 38A EQA
\textsuperscript{132} S46A EQA
\end{flushright}
by the Director General to federal and state agencies, and the prescription of subsequent subsidiary legislation by the Minister.

The EQA has undergone 4 amendments that have broadened the scope of EQA considerably. First The Environmental Quality (Amendment) Act 1985 (A636) which came into force on 19th January 1986\textsuperscript{133}, requires a report on impact on the environment resulting from prescribed activities to be submitted to the Director-General, who shall after examining the inquiries decide whether to approve or not to approve the report. Second the Environmental Quality (Amendment) Act 1996\textsuperscript{134}, third the Environmental Quality (Amendment) Act 1998 \textsuperscript{135} and fourth the Environmental Quality (Amendment) Act 2001 \textsuperscript{136}. The 2001 amendment dealt with open burning, an addition of definitions to the EQA and a refining of the Ministers powers\textsuperscript{137}.

4.3 The Role of The Department of Environment

a. Organizational Structure

Environmental management is conducted at the federal level by the Department of Environment (DOE) of the Ministry of Science, Technology and Environment (Since April 2004, known as Ministry of Natural Resources and Environment). The Department of Environment is headed by a Director General who is

\textsuperscript{133} See Section 34(A) Environmental Quality Act (Revised) 1985
\textsuperscript{134} Act A953, w.e.f. 1.8.1998
\textsuperscript{135} Act A1030/1998
\textsuperscript{136} Act A1102, w.e.f. 19.7.2001
appointed by the Minister among the members of the Public Service\textsuperscript{138}. One of his major functions is the establishment and maintenance of liaison and cooperation with the state authorities in relation to issues of environmental protection, pollution control and waste management. In short it's function is to administer the EQA. The Department has three Technical Divisions at its Head Office i.e. Control, Assessment and Development Planning as well as two Support Divisions which are the Administration and Finance, and Information Technology\textsuperscript{139}.

Within each state, the state governments have corresponding authorities and officials in charge of environmental matters. There are 15 State Offices, located at Johor Bahru (Johor), Alor Setar (Kedah), Kangar (Perlis), Kota Bahru (Kelantan) Kuala Lumpur (Federal Territory), Labuan (Federal Territory), Bandar Melaka (Melaka), Seremban (Negeri Sembilan), Kuantan (Pahang), Ipoh (Perak), Butterworth (Pulau Pinang), Kota Kinabalu (Sabah), Kuching (Sarawak), Kuala Terengganu (Terengganu) and Selangor. Four Branch Offices, Pulau Langkawi (Kedah), Temerloh (Pahang), Bintulu and Miri (Sarawak). and an Environmental Advisory Desk at the Malaysian Industrial Development Authority (MIDA) Office as well as an Environmental Skills and Training Institute (IKLAS).

The DOE principally deals with matters involving air and water quality, industrial wastes, noise levels and environmental impact assessments. Thus, it is

\textsuperscript{138} Section 3(1) of the Environmental Quality Act. 1974
\textsuperscript{139} See Figure 8.
concerned largely with industrial pollution and environmental quality in general. Jurisdiction over land use and natural resource management rests primarily with the respective state authorities exercising competence through state legislation. At the federal level, a vast array of Ministries including the Ministries of Primary Industries, Agriculture, Land and Cooperative Development and Transport, exercise supervisory and state liaison roles over the main natural resource sectors. Thus, issues like forestry, wetlands, mining and marine conservation do not fall directly within the DOE's mandate. It is only through the EIA process that the DOE exercises some measure of central supervision.

b. Enforcement power

i. Power to Prosecute

The number of cases prosecuted by DOE is steadily increasing due to number of reasons\textsuperscript{140}. One is the 1996 amendments which provide broader powers to the DG and his officers to investigate, seize, close down and prosecute offenders. In the year 1999, a total of 307 premises and companies were taken to court with a total collection of fine of RM2,489,900.00\textsuperscript{141}. The very next year of 2000, only 158 premises and companies were taken to court. However there is an increased of 29% in fines, totaling of RM3,506,800.00\textsuperscript{142}.

\textsuperscript{140} See Figure 9. (Figure 5.25). DOE: Number of Offences Prosecuted under the Environmental Quality Act, 1974 and Regulations Made Thereunder, 1990-1999. Environmental Quality Report 1999

\textsuperscript{141} See Figure 10. (Figure 5.26). DOE: Cases Prosecuted and Fines imposed according to States. DOE Annual Report 1999.

\textsuperscript{142} See DOE Annual Report 2000
The highest number of prosecution is for air pollution under Section 22 of EQA followed by inland water pollution under Section 25 of the same act\textsuperscript{143}.

**ii) Power to issue Compounds**

EQA empower the DOE to issue out compounds to the offender. Compounds were normally issued to first time offender. In the year 2000, a total of 1,645 compounds notices were issued against premises and companies for various offences amounting to RM2,560,000.00 compared to 1711 issued in the year 1999 with a total amount of RM2,838,350.00. Most were for air pollution offences, while the remaining were offences involving handling of scheduled wastes\textsuperscript{144}.

**iii) Power to issue Prohibition Orders**

Under Section 31A of the Environmental Quality Act 1974 (amendment 1998), the Director General may issue prohibition orders to owners or occupiers of Industrial Premises or processes to stop operation and prevent further releases of environmentally hazardous substances or pollutants into the environment. There are two circumstances wherein the Minister may stop the offender under the prohibition order. First, the Minister upon consultation from the Environmental Quality Council Gazette specifies certain circumstances where DG can issue a prohibition order stopping operations. Second, if the Minister is convinced that a

\textsuperscript{143} See Figure 11 (Figure 5.24). Number of cases prosecuted According to Offences, 1999. DOE Annual Report 1999.

\textsuperscript{144} DOE Annual Report 2000 & 1999
particular activity is a serious threat to environment, public health or safety, then he may direct the DG to issue the stop order. However such prohibition orders are issued only as a last resort after repeated advice, warnings, and reminders have been given but not heeded.\textsuperscript{145}

In the year 1999, 2 prohibition orders were issued for the pollution of inland water\textsuperscript{146}. While in the year 2000, 6 prohibition orders were issued\textsuperscript{147}. Such premises were only allowed to operate again after remedial steps had been taken to prevent recurrence.

iv) **Power to require Environmental Impact Assessment**

S34A of the EQA provides for Environmental Impact Assessment to be carried out for certain prescribed activities\textsuperscript{148}. It requires a report stating the likely impact that a project might have on the environment and what measures are to be taken to limit the said impact. If the DG is not satisfied with the report he may reject it and the person submitting the report may submit a fresh one. Alternatively the DG may be satisfied and approve the report with or without added conditions. Unfortunately the DG and DOE do not have a final say as to whether the project should continue or not.\textsuperscript{149} The power lies with the Local Planning Authority. This

\textsuperscript{146} Environment Quality Report 1999.
\textsuperscript{147} Environment Quality Report 2000.
\textsuperscript{148} See Appendix 11
\textsuperscript{149} See Note 146 at page 9
means that even if the EIA shows that a project may be disastrous for the environment, he DG has no power to ensure it does not go on at all.

4.4. Conclusion

The EQA has undergone a number of amendments which went by rather quietly unlike other Bills which saw heated debates, indicating the level of concern our politicians have for the environment\textsuperscript{150}. The penalties have increased significantly, fines have gone up as high as RM500,000.00 and jail term have been enhanced from two years to five years. With all these in sight and powers available to DOE, why is it that the environment in Malaysia is still threatened by the increasing number of pollution?. Clearly the DOE has enough strength to cope with the heavy responsibilities and whether the judges are on its side when passing sentences on environmental perpetrators.

\textsuperscript{150} DOE's New Clout to Fight Pollution, NST 8/10/1996 at page 11
CHAPTER 5
ENFORCEMENT PROBLEMS

5.0. Introduction

This chapter deals with problems of enforcement of the Environmental Quality Act 1974 and its regulations faced by the Department of Environment. It is said that the reasons are due to lack of manpower and budgets. This is further compounded by some constitutional issues, eg. no provision in the constitution for right to protect the environment and state vs. federal jurisdiction over environmental matter. Another issue discussed is the problem of "locus standi" or standing to bring a case to court.

5.1. Lack of Human Resources

As of 31st December 2000, the DOE had 605 staff which comprised of 129 Officers in the Managerial and Professional Group and 476 staff in Supporting Group. There is an increase of 6 additional staff from the previous year\(^\text{151}\). Does number of personnel have any bearing on the enforcement? One suggestion is that the Department should be promoted to the level of ministry with a more substantial budget and greater number of trained personnel\(^\text{152}\). It is important to understand that monitoring and enforcement is being done by the control department of DOE. In this department, there are less than 10 personnel,

\(^{151}\) See Figure 12. Source: Department of Environment Annual Report 2000, at page 17.
\(^{152}\) Understanding the Environmental Quality Act. Current Legal Problems, 1998 University of Malaya Press pg 12. Dr Azmi Sharom comment on the strength of the DOE.
wherein 5 are in the enforcement department and the balance is in the monitoring department.

5.2. Financial Allocation and expenditure for DOE

The total 2000 budget allocation for the Department of Environment was RM81,949,920.00 an increase of RM24,750,820.00 (43.7%) compared to 1999. From this amount RM50,519,020.00 (61.6%) was allocated for operational expenditure\(^\text{153}\) out of which RM650,000.00 (1.29%) utilized by the DOE and RM31,430,900 (38.4%) for development projects out of which RM16,570,000 (52.72%) utilized by the DOE\(^\text{154}\). It clearly shows that the DOE does not utilize the said budget to the maximum. Perhaps the DOE can do better not only if more money is allocated but increase the use of money allocated on research and development and engaged more manpower.

5.3 Constitutional issue

The Federal Constitution gave no explicit right for a citizen to a secure, healthy and ecologically sound environment. When the Constitution was drafted in 1956, environmental concerns were not in the consciousness of the members of the Reid Commission and could hardly be identified as a subject head for

\(^{153}\) See Figure 13. (Figure 3.3). Department of Environment: Allocation and Operational Expenditure, 1991-2000. Annual Report 2000 at page 17 & 18. Analysis on page 15

\(^{154}\) See Figure 14. (Figure 3.2). Department of Environment: Allocation and Expenditure for Development Projects, 1991-2000. Annual Report 2000 at page 17 & 18. Analysis on page 15
inclusion in the Constitution's enumerated power list. That being the case, the environment litigator is left with Article 5(1) "right to life" and it is open to the judge to decide on the matter\textsuperscript{155}.

Perhaps the constitutional provision with the most profound effect on the environmental law is the division of law making powers between the State and Federal Governments\textsuperscript{156}. This division of power and the relationship between State Governments and the Federal Government can be found in Part VI of the Constitution. Amongst the numerous provisions, there are three legislative lists which can be found in the Constitution. These lists are the Federal List, the State List and the Concurrent List.

The Federal Constitution of Malaysia leaves substantial powers over land use and natural resource management to the respective States. In addition, the Constitution guarantees certain unique rights and privileges to the Eastern Malaysian states of Sabah and Sarawak. The federal Parliament would have jurisdiction to legislate for the states only in those areas which had been explicitly identified by the Constitution. Thus, certain key matters relating to land use and natural resources remain within the exclusive jurisdiction of state legislation, and the DOE would consequently assume only a liaison and cooperative role with respect to the state organs. The problem is further compounded in relation to the implementation of international treaty obligations. Whilst the federal government

\textsuperscript{155} Right To Safe Environment NST 24 November 2002
\textsuperscript{156} Azmi Sharom, Malaysian Environmental Law: Ten Years After Rio. 6 SJICL at page 859
has the prerogative to accede to international treaties, the implementation of these treaty obligations remain with the states if these impinge on issues over which states have jurisdiction\textsuperscript{157}. 

As a result, considerable difficulties have arisen over environmental protection issues, particularly in relation to forestry, land use and hydroelectricity generation, issues which reside within exclusive state competence. Hence, if certain states have inadequate legislation governing natural resource sectors, it would not be in the province of the federal government to impose its legislation (if any) on these states. Only the state legislatures would have competence to legislate in these matters, and any federal legislation which may exist would be inapplicable. Therefore, there can be confusion not only with respect to the applicable laws and agencies regulating a particular project but also fundamentally, whether the federal government has competence to regulate the subject-matter in the first place.

In view of this situation, the courts have at times been called upon to pronounce on the constitutional implications of Parliament's legislation on federal-state relations. One such celebrated case arose out of the controversy surrounding the construction of the Bakun dam in Sarawak. The Minister of

\textsuperscript{157} Alan K.J. Tan, Preliminary Assessment Of Malaysia's Environmental Law. Faculty of Law National University of Singapore. World Wide Web: http://www.nus.sg/
Science, Technology and Environment had prescribed a number of activities to be subject to the EIA process under the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 (pursuant to section 34A of the parent EQA). One such activity was the construction of dams and hydroelectric power schemes which had either one or both of the following features: (a) dams over 15 metres high and ancillary structures covering a total area in excess of 40 hectares; (b) reservoirs with a surface area in excess of 400 hectares. The Bakun dam fell to be considered as just such a project.\(^{158}\)

At the same time, however, there was in existence a Sarawak State Ordinance called the Natural Resources Ordinance 1949 (the Sarawak Ordinance), which required an EIA to be submitted to the Sarawak Natural Resource Board for review in cases of prescribed activities. In 1994, the Sarawak state government enacted the Natural Resources and Environment (Prescribed Activities) Order 1994, (hereinafter referred to as the "Sarawak Order"), which listed dam projects as prescribed activities. This effectively placed the Bakun dam within the ambit of the Sarawak legislation.

A seen in the earlier chapter, one of the procedural requirements of the federal EIA process was public consultation before the EIA could be approved.

Such issues demonstrate the common administrative challenges in federal system such as Malaysia where the interstices of federal-state competence create uncertainty over the applicable laws. In recent years, there has been criticism that inadequate attention is being given to environmental protection at the state level. Numerous calls have been made to the federal government in Kuala Lumpur to establish an Environment and Sustainable Development Council to promote the integration of federal-state policies and to incorporate environmental concerns into developmental planning. Until such efforts come to fruition, it appears that federal efforts to pursue environmental and natural resource management may continue to face challenges in sectors falling within exclusive (or even concurrent) state jurisdiction\(^{160}\).

The experiences of other federal systems in Australia, Canada and the United States\(^{161}\) show that the most effective way to bridge the federal-state gap is to institutionalise some form of partnership arrangements in environmental protection. These partnership arrangements would entail federal and state governments working closely together, with the former providing financial and technical resources and the latter the requisite enforcement mechanism. In pursuing this cooperation, the fine legal distinction between federal and state


\(^{161}\) Judson Starr, John Cooney and Joseph Block, *More Criminal Environmental Prosecution?* From the World Wide Web: The 'Letric Law Library;' At page 4
competence could be downplayed to maximise the environmental protection effort\textsuperscript{162}.

For example in Alameda County, California United States, they have adopted formal memorandums of understanding called interagency agreement in which the responsibilities of member agencies are clearly defined. Central Florida provided interagency training and foster interagency relationships, through temporary arrangements such as Environmental Protection Forum. Another good example is learning from the experience gained by Los Angeles County trough its LA Strike Force though it is unusual because of the number of agencies involved, the aggressive posture of many of its members, and the amount of financial and political backing it receives.

5.5 Numerous law and agencies to safeguard Natural Resources

Further challenges arise in relation to the competence of the various national agencies over natural resource sectors. The EQA (and its implementing agency, the DOE) remain responsible largely for industrial pollution control only. The vast natural resource sectors like forestry, fisheries, mining and agriculture come under the jurisdiction of other national ministries, with separate sets of regulatory laws. This creates the frequent problem of overlap in prescriptive and enforcement jurisdiction, since environmental concerns often cut across numerous natural resource sectors. Whilst the advisory Environmental Quality

\textsuperscript{162} See footnote 120 at page 1
Council established by the EQA maintains representation from the various governmental (and non-governmental) interests, it appears that effective coordination in policies can be further improved.

The overlapping in jurisdiction becomes clear in relation to the prescribed activities under the EIA system. The list of prescribed activities requiring EIA reports embraces issues ranging from industries and infrastructure projects to agriculture, land reclamation, fisheries and forestry issues. The EIA guidelines and regulations issued to date have attempted to formalise a system of inter-ministry consultation and collaboration. These efforts should be further bolstered to ensure that coherent developmental policies are formulated which take environmental concerns into account163.

5.6. Issue of Locus Standi

In many legal systems including Malaysia's, judicial recourse is available only to persons who can demonstrate a sufficient connection with or interest in the subject matter in dispute. This means that he has to have some sort of justification or affected interest to bring the case to court. This rule is designed to

163 Alan K.J. Tan, Preliminary Assessment Of Malaysia’s Environmental Law. Faculty of Law National University of Singapore. World Wide Web: http://www.nus.sg
protect defendants from mischievous plaintiffs as well to keep frivolous cases from wasting the court's time.\footnote{Azmi Sharom & Meenakshi Raman, "Public Interest Litigation In Malaysia: A Practitioners Viewpoint in Public Interest Law", Sothi Rachagan and M.P. Jain eds., AIDC-IACL, Louvain-la-Neuve, 1998 at page 25}

The scope of who deserves standing can be broad or narrow depending on the Court's interpretation. In Malaysia the rules of standing was first pronounced by Abdoolcader J in\footnote{[1982] 2 MLJ 97} Tan Sri Haji Othman Saat v Mohammad bin Ismail.\footnote{[1988] 2 MLJ 12} It was held that:

'A private individual may sue for a declaration if he has a cause of action in common law or to protect a statutory right, or if he suffers or will suffer special damages as a result of the defendant's action'.

However the rule of standing are given an extremely limited scope as illustrated in 1988 by the case of Government of Malaysia v Lim Kit Siang and United Engineers (M) Bhd v Lim Kit Siang.\footnote{See footnote 165} In this case, Mr Lim Kit Siang had applied for an injunction restraining UEM from signing a contract with the government of Malaysia for the construction of the north-south highway. His application was based on the ground that the tender awarded by the government to UEM was invalid.\footnote{See footnote 165} The court held that the respondent, an MP and the leader of the Opposition, had no locus standi to challenge the validity of an award of tender to UEM by the government. He had no locus either as a politician, or a

\footnote{165} [1982] 2 MLJ 97
\footnote{166} [1988] 2 MLJ 12
\footnote{167} See footnote 165
road and highway user or a tax payer to bring the action as his private rights as a citizen were not affected over and above that of an ordinary road user.

Recent court cases in Malaysia have consistently denied the *locus standi* (the right to sue) of NGOs on environmental matter. In the Bakun dam litigation, the plaintiffs argued successfully before the High Court that as residents in the affected area, they were directly and adversely affected by the inundation of the land caused by the construction of the dam.

The Court of Appeal, however, disagreed for several reasons. First, the plaintiffs had suffered no injury even if the word "life" in Article 5(1) of the Federal Constitution implicitly include the right to a reasonably healthy and pollution free environment, such rights may be extinguished "in accordance with existing law". Second, there was no suggestion that the plaintiffs were championing the cause of the other 10,000 natives whose livelihood and customary rights were equally affected by the project. Any injury suffered by the plaintiffs was not over and above the injury common to all others. Third, the Court of Appeal felt that the High Court judge failed to consider the public and national interests involved, in particular the interests of justice from the defendants' point of view. Hence, arising from the courts' strict interpretation of *locus standi*, environmental NGOs have had to resort to a host of non-legal measures to bring attention to their cause.¹⁶⁸

¹⁶⁸ Alan K.J. Tan, Preliminary Assessment Of Malaysia's Environmental Law. Faculty of Law National University of Singapore. World Wide Web: http://www.nus.sg/
The Asian Rare Earth (ARE)\textsuperscript{169} case pointed out that even if the plaintiffs were directly injured, the case law on action brought for injuries suffered as a result of exposure to toxic wastes demonstrates that the uncertain nature of these injuries presents several problems. First, the uncertain types of diseases associated with exposure to toxic substances and second, the long latency period between exposure and manifestation of an injury.

A related point is the issue of time limitation. If the victim's disease manifests years after exposure to the toxic substances beyond the prescribed limitation period, there can be no remedy. G.S.Nijar, a very well-known public interest lawyer says this in his paper at a Commonwealth Law Conference\textsuperscript{170}

"Toxic waste injuries have peculiarities of their own which differentiates them from the normal individualized wrongs. First is the uncertain aetiology of many diseases associated with exposure and manifestation of an injury. These can often create serious doctorinal and practical problems for recovery. Environmentally induced hard cancers have a latency period of between 10-30 years. The polluters may long since have become defunct or insolvent.

\textsuperscript{169} See the case of Wan Tan Kong & 7 Ors v Asia Rare Earth Sdn Bhd (1992) 4 CLJ 2207. Supreme Court 23 Dec 1993

\textsuperscript{170} See Meenakshi Raman, 'Environmental Problems: Rights of Citizens/Victims', Paper presented in the national seminar, 'Seminar Undang-Undang Alam Sekitar', UKM
Malaysian courts also impose a high burden of proof on plaintiffs to prove causation of damage. This imposes another difficulty in the way of seeking legal remedies\textsuperscript{171}.

In United States courts are more liberal in dealing with the issue of causation. All the plaintiff has to show is that his injuries are a type consistent with those known to result from the defendant’s conduct and burden then shift to the defendant to prove otherwise\textsuperscript{172}.

5.7 Amendment to the Federal Constitution

The fact remains that it is better to have an explicit provision spelling out the need to protect the environment\textsuperscript{173}. Indeed, this is the trend that is emerging at present. Therefore It is suggested that Federal Constitution be amended to include a provision guaranteeing every person a right to clean, safe and sustainable environment as our counterparts in Philippines, the Philippines Constitution has guaranteed the right to a balanced and healthful ecology to the citizens of the country as a fundamental right\textsuperscript{174}.

\textsuperscript{171} Azmi Sharom & Meenakshi Raman, "Public Interest Litigation In Malaysia: A Practitioners Viewpoint in Public Interest Law, Sothi Rachagan and M.P.Jain eds., AIDC-IACL, Louvin-la-Neuve, 1998

\textsuperscript{172} Allen v The United States [1984] 588 F Supp 247

\textsuperscript{173} Abdul Aziz Bari, Dr., Right to life under the Constitution and Environmental Issues. [1999] MLJ ix

\textsuperscript{174} Abdul Haseeb Ansari, Dr., Right To A Healthful Environment As A Means To Ensure Environmental Justice: An Overview with Special Reference to India, Philippines and Malaysia. [1998] 4 MLJ xxv
Section 16, article II of the 1987 Constitution explicitly provides:

‘The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.’ This right unless with the right to health, which is provided for in section 15 of the same article: ‘The state shall protect and promote the right to health of the people and instill health consciousness among them.’

The new constitution of Ukraine expressly declares that:

‘everyone shall have the right to the environment that is ecologically safe for life and health’.

Corresponding positions are also to be found in the Constitution of the Russian Federation, the Constitution of the Republic of Belarus and the Constitution of the Republic of Kazakhstan.

5.8. Conclusion

The normal justification on the part of DOE is lack of resources such as manpower and allocation. What is evident from this dissertation is that although certain states are provided with greater number of staff, the number of cases being prosecuted in court and fines collected do not reflect this, compared to a state with lesser or same number of staff. For example in 1999 Malacca and Negeri Sembilan has the same number of staff but Malacca has a 90% higher

\[175\] See Deimann & Dyssli (eds), Environmental Rights Law, Litigation & Access to Justice (1995) at page 34.
\[176\] Ibid, pp 34-35
number of cases being prosecuted and fines imposed compared to Negeri Sembilan. Although number of staff does have bearing on the enforcement, awareness, special training and relevant skills on environment issues are more important aspects to be look at to enhance enforcement quality.

Also contrary to the general believe that greater funding should be given in order for DOE to be effective, the fund allocated to DOE has been steadily increasing from 1999-2000, however only 85-90% of each year’s allocation was used. Asking for more allocation is useless if every year there will be excess of fund going back to the federal government.

It is submitted that provision must be made to empower the federal government to have exclusive jurisdiction to legislate on matters relating to the protection of the environment, ecosystems and biodiversity. The legislative list should also be amended to give exclusive power to federal government to legislate on matters relating to the protection and preservation of our environment and the ecosystems.

It is also submitted since environmental protection is crucial to ensure the survival of humankind and other living things, it is timely that Part II of the
Constitution which deals with fundamental liberties be amended to provide for the right to clean and **safe** environment.

The idea of an unlimited fine for convictions through indictment is something to be considered. It would surely be a tremendous deterrent if it is used and made public. Which leads to the lesson and that is the practice of the DOE to publicise their prosecutions. This has two effects, firstly it raises public awareness as to the offences that exist regarding pollution and it also acts as a warning to industries to keep their activities within the confines of the law.

The DOE should not be the only body able to prosecute polluters. Private citizens have the right to do so and there have been success stories such as Greenpeace successfully prosecuting an American Chemical company for unlawful discharges in Cumbria\(^{177}\). This might be an option to be considered for Malaysia, for by opening the power to prosecute to private citizens and groups; the DOE itself need not necessarily be burdened with the entire responsibility for prosecution.

CHAPTER 6
The Role Of The Judiciary

6.0. Introduction

This chapter examines the Bakun Dam decision and a number of other cases in matter relating to the protection of environment. It provides insights of what is in the mind of the judges, what the future holds for the EQA and the environmental prosecution\textsuperscript{178}.

6.1 Judicial Decision

In \textit{Ketua Pengarah Jabatan Alam Sekitar & Anor v Kajing Tubik & 2 Others}\textsuperscript{179} which is about the construction of the Hydro-Electric Project in the State of Sarawak. The said project would affect the lives and culture of the natives of some longhouses in Belaga Sarawak. The said project involves a 69,640 hectare area of land and therefore come within the EQA (Prescribed Activities)(Environmental Impact Assesment) Order 1987 which requires EIA to be conducted.

\textsuperscript{179} [1997] 3 AMR 2521
The EIA report were prepared and approved\textsuperscript{180} without public participation and the public was not invited to give their comments on the issue in contravention of the EIA guidelines.

The Minister had made an order known as the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) (Amendment order\textsuperscript{1995}\textsuperscript{181} which came into force on 20\textsuperscript{th} April 1995. It gives the Sarawak State Government authority to use their own EIA rules, namely the Natural Resources and Environment (Prescribed Activities) Order 1994 which came into force on 1\textsuperscript{st} September 1994. The said rules provide for EIA to be conducted but there is no provision to make public the said document or allow for public participation. And further the said rules also have retrospective effect as it take effect since 1\textsuperscript{st} September 1994.

The basis of complaint and the main question raised in court is whether the order of the minister to amend the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) (Amendment) Order 1995 to exclude dams from the federal law was valid as it was done retrospectively and took away vested rights of the natives to peruse the report and give their comments before the EIA could be approved. At the High Court, Justice James Foong held that the exclusion was held to be invalid\textsuperscript{182}. This is because the EQA

\textsuperscript{180} 1\textsuperscript{st} April 1995, Press reported that the EIA report has been approved
\textsuperscript{181} P.U.(A) 117/95
\textsuperscript{182} High Court decision reported in [1996] 2 MLJ 388. Only issue relating to EQA discussed in this chapter.
does not provide for retrospective orders. In order for the Minister to make a retrospective order he must expressly state that he's using S 20 of the Interpretation Act 1984 and 1967 (Act 388) and this was not done.

The Malaysian Court of Appeal however overturned the High Court decision. Gopal Sri Ram JCA held that the crux of the matter is whether EQA particularly S34A was applicable to Sarawak? His reasoning is principally based on two grounds. First, that constitutionally, the state of Sarawak had the exclusive jurisdiction in this case, so that state law applied to the exclusion of the EQA. As such the natives had no substantive “locus standi” to obtain declaratory relief as no question of deprivation of procedural fairness can possibly arise on the facts of the case.

On the issue of constitution, the judge held that on the facts of the case, the “environment” upon which the project would have an impact was land and water. Since the environment in question, by the operation of the application of the State List for Sarawak (Item 2(a) of List II and item 13 of List III A) (Supplement to concurrent List for Sabah and lies wholly within the legislative and constitutional province of the State of Sarawak, the State has exclusive authority to regulate by legislation, the use of it in such manner as it deems fit. Therefore it was decided state law was applicable and there could be no recourse to the provisions of the EQA on which the natives relied.
An integral and major component of this project includes submarine
cables running outside Sarawak’s boundaries, under the South China Sea and
into and through several States in West Malaysia. The court’s approach implies
that, in relation to one project, several laws may have to be invoked.

So, if a river in one State could cause potential adverse environmental
injury or degradation to another State through which the same river flows, who
then makes the assessment as to the EIA? What are the considerations to take
into account? Can one State take into account the impact in other States which
its approval of the project may cause and knock back the project for this reason?
Can a State pass environmental laws prohibiting all activity carried out in another
State which has the effect of creating serious adverse consequences within its
jurisdiction?183

The Sarawak law, for example, renders public participation for reviewing
EIAs a mockery, when public participation is allowed after the approval process,
as submitted by the Attorney General of Sarawak. This position differs from that
under the EQA, where public participation is before and part and parcel of the
approval process184.

This Malaysian Court of Appeal’s decision based on narrow and
unrealistic compartmentalization of the environment into neat geographically-

184 See Note 154 at page 10
limited units, dependent on the kind of activity, and then identifying which list in the Constitution the activity related to, may well become, with respect, an error of major proportions with possibly serious and lasting repercussions on the management of the environment in Malaysia. The decision of the Court of Appeal, with respect, has spawned a plethora of problems, and created a classic scenario for 'environmental-regulation chaos'. It has in a way provided a way for the defendants to escape prosecution from EQA. If this were the case, the offender will only need to argue that the particular section of the EQA was unconstitutional and be free.

In Quek Gin Hong v Public Prosecutor. The facts of the case are as follows. The accused was charged for allowing open burning of certain vegetation waste without a licence contrary to regulation 12 of the Environmental Quality (Clean Air) Regulations 1978 ('the Regulations'). He was found guilty and sentenced to six months' imprisonment.

Counsel for the accused requested for a revision on the grounds that: (i) S 44 of the Environmental Quality Act 1974 ('the Act') which provides for the prosecution of offences under the Act by the Director General was ultra vires Art 145(3) of the Federal Constitution; (ii) there was no written authority to prosecute from the Public Prosecutor pursuant to s 377 of the Criminal Procedure Code (FMS Cap 6) ('the CPC'); and (iii) he was charged for an offence which was

---

185 See Note 154 at page 11
186 [1998] 4 MLJ 161
unknown to law. A further issue was whether s 422 of the CPC would save the sentence if there was want of authorization to prosecute. The court set aside the order and acquitted the accused.

In Public Prosecutor v Ta Hsin Enterprise Sdn Bhd\textsuperscript{187}, the respondent a factory sited in Pending Industrial Estate, Kuching, Sarawak was found to have discharged effluents in excess of the amount prescribed under regulation 8(1)(b) of the Environment Quality (Sewage and Industrial Effluents) Regulations 1979. The respondent was charged under s 25(1) of the Environmental Quality Act 1974 ('the EQA') for discharging wastes into inland waters without licence. The sessions judge held that, the EQA did not apply to this case. The High Court judge allows the appeal.

Perhaps the decision of \textit{Malaysian Vermicelli Manufacturers (Melaka) Sdn. Bhd. V PP},\textsuperscript{188} shows a change of direction by the judge. The facts of the case are as follows. On 13\textsuperscript{th} January 2000, the Malacca Sessions Court convicted and sentenced the appellant to a fine of RM75,000.00 on a charge of discharging effluent into inland waters (Malacca river) exceeding the limit laid down by the regulation\textsuperscript{189}. Further more they were making this discharge without a license, which is an offence under section 25 (1) of the Environmental Quality Act 1975 (EQA) punishable under section 25(3) of the same Act.

\textsuperscript{187} [1998] 6 MLJ 748
\textsuperscript{188} [2001] MLJ 359
\textsuperscript{189} Offence by Regulation 8(1)(b) of the Environmental Quality (Sewage and Industrial Effluents) Regulations (the Regulations)
Following the principle in Bakun Dam case judgement, the appellant argued that the state works and water including water supplies, rivers and canals are under the control of state government and since the EQA and Regulations affected discharge of waste in inland waters (which was within the legislative competence of the State), the Regulations were ultra vires the powers of the Minister and were not applicable to the State of Malacca. Since the Regulations were not applicable to the State of Malacca, no offence was validly created. Hence, the charge preferred against the appellant could not stand.

The judge held that the vital question in this case is the object and purpose of the Section 25 of the EQA and Regulations regarding river. Does it encroach the state government 's constitutional power to make laws regarding water supplies, rivers and canals?

Justice Ahmad Maarop in his conclusion stated

"The object and purpose of the Regulations are the prevention, abatement and control of pollution as well as enhancement of the health of the public in general as declared in the long title of the EQA. To my mind the real object and purpose of all these is the protection, promotion, maintenance and enhancement of health of public in general. That is the true nature of the regulations. When the true test is applied to the regulations, it is clear that the regulations are not legislation with respect
to “water” that is to say water (including water supplies, rivers and canal).

I do not think a law which has, as its object and purpose, the prevention, abatement and control of pollution can be classified as legislation with respect to (on the subject of) “state works and water, that is to say: subject to Federal List, water (including water supplies, rivers and canals) control of silt; riparian rights”

By linking the dam to land and thus categorizing it as constitutionally a state issue leads to many problems encountered by states because of the transboundary nature of the pollution and EIA process nature is akin to town and country planning, which is in the concurrent list and not under the state list.

It is often complaint amongst environmentalist that judges are unwilling to impose the maximum sentence, or a high enough sentence on polluters. The case of Pendakwa Raya Iwn NCK Aluminium Extrusion Sdn Bhd¹⁹⁶ hopefully become a precedent for firmer judgments for cases regarding environmental damage. In this case the Public Prosecutor had appealed to the Kuala Lumpur High Court to increase the sentence imposed by the lower court on a company that had admitted to polluting inland waterway. The company was operating without a license from Department of Environment (DOE) and on 26 April 2000, test confirmed that they were polluting a stream 12 times over the accepted level as determined by the Environmental Quality (Sewage and Industrial Effluents)

¹⁹⁶ [2002] 6 MLJ 96
Regulations 1979. The judge at first instance fined the company RM5,000.00, even though the maximum fine available under the EQA was RM100,000.00.

The judge at first instance admitted that the offence was a serious one but he was moved by the defendant's apparent contriteness and willingness to comply with the DOE demands for the fitting for pollution control devices. Furthermore, because the DOE had given the company several months to comply with their demands, the judge was of the opinion that the offence can't have been a very serious one in the eyes of the DOE seeing as they did not demand immediate action.

Justice Mohd Ghazali of the High Court Kuala Lumpur, sitting as a court of appeal, was not convinced by the reasoning of the judge at first instance. He held that he had failed to apply the purpose of the EQA, that is to protect the Malaysian Environment, and he had also failed to consider the seriousness of the offence in relation to the environment.

Furthermore, the contriteness of the defendant had moved the judge at first instance a little too much, as he failed to take into account that the defendant had been operating for many years without a license and was probably contravening the EQA and its regulations for that time, stopping when they were actually charged.
Due to this fact that the judge at first instance had erred on matters of principle in coming to his decision, the appeal judge felt himself justified in changing the penalty to a higher one. The offending company was ordered to pay RM90,000.00.

S34A(2) of the EQA lays down the requirement for an environmental impact assessment (EIA) report to be submitted and approved by the DOE before certain types of projects are undertaken. The Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987\(^{192}\) (the Order) lists down the type of projects and activities which require an EIA. Order 17(a) states that the construction of costal resort facilites or hotels with more than 80 rooms, is one such activity.

In the case of *Tenggara Gugusan Holidays Sdn Bhd v Public Prosecutor*\(^{193}\), a resort project on the beach of Kampung Pulau Kerengga, Marang, Terengganu, clearly falls within the ambit of Order 17(a) and thus would require and EIA as laid down by S34A of the EQA. The project consisted of the building of 100 chalets with over 80 rooms. These chalets were constructed by the appellants in 1995. The EIA was completed in July 1996 and approved on 29\(^{th}\) October 1996. In short an EIA was conducted only after the project was completed.

\(^{192}\) P.U.(A) 362/87

\(^{193}\) [2003] MLJ 508
This being the case the appellants were then fined RM20,000.00 under 34A(8) of the EIA which reads:

Any person who contravenes this section shall be guilty of an offence and shall be liable to a fine not exceeding one hundred thousand ringgit or to imprisonment for a period not exceeding five years or to both and to a further fine of one thousand ringgit for every day that the offence is continued after a notice by the Director General requiring him to comply with the act specified therein has been served upon him.

The fact were not in dispute. What was in dispute however is the term “any person”. The appellants argued that “any person” means the owner of the project. Seeing as they are merely contractors who were carrying out the project on behalf of the owner, they have been wrongly fined. This was rejected by the Federal Court. Nik Hashim J held that;

"In this case, even though the EIA report was subsequently approved by the Director General, the appellant could not escape from being liable for the offence as s34A under which the appellant was charged states clearly that any person, which includes the appellant by virtue of s 3 of the Interpretation Act 1948 and 1967 which defines a "person" to include a body of persons, corporate or incorporated, who carries out the prescribed activities under O 17(a) of the Order without first submitting
The main issue is who carried out the project, not who owns the project. In the words of the judge, “ownership is not the ingredient of the offence”.

One interesting thing to note from this is the sequence of events which raises some interesting questions as to the modus operandi of the DOE. The project was completed in 1995. The EIA report was completed on July 18, 1996 and submitted on July 13, 1996. In September 14, 1996 a team of DOE officers visited the site and on October 29, 1996 the EIA was approved. It seems odd that the DOE would still approve the EIA even though their officers had visited the site and were surely aware that the project was already completed. It appears that if EIAs can still be approved even after the fact, then the entire purpose of having an environmental impact assessment is redundant.

We may look at how the judges have given ways to uphold the environmental right.

6.2. Judicial Activism

One way of equating environmental right is through the right to equality. In an Indian case of Ajoy Hasia v Khalid Mujib Shervardi, the judge decided that
equality may be infringed by government decisions that have an impact on the environment. The court held that

"Article 14 that guarantee the right to equality, among other things, strikes at arbitrariness 'because an action that is arbitrary must necessarily involved a negation of equality.'"

In India, urban environmental group frequently resort to Article 14 to quash arbitrary municipal permissions for construction that are contrary to development regulations. It was also invoked to challenge government sanctions for mining and other activities with high environmental impacts\(^{196}\).

In the Philippines, the case of Minors Opasa v Factoran\(^{197}\) broke new ground in many environmental law areas including in the issues of standing to represent the future generations. The facts of the case are as follows. The Plaintiffs in this case were minors represented by their parents and by an NGO called the Philippines Ecological Network Inc. They had brought a taxpayer class action to court demanding that the defendants cancel all existing Timber licence Agreements. The parents had claimed that the children they represented also represented the generations yet born.

\(^{195}\) AIR (1981) SC 487, 499


The plaintiffs lost in the lower court because the trial judge had held that they had no cause of action. However in the Supreme court, it was held that they did have a cause of action based on the Philippine Constitution, in particular Section 16 Article II which provides that ‘The State shall protect and advance the right of the people to a balance and healthful ecology in accord the rhythm and harmony of nature’. Although this was not part of the bill of rights it was decided that it carried the same weight as any other fundamental right.

The court even went on to say that the right to clean environment is so fundamental that it need not even be recorded in the Constitution to have any authority. On the matter of standing, it held that the petitioners did have standing. They held that the subject matter of the complaint is of common and general interest not just to several but to all citizens of the Philippines. Consequently since the parties are so numerous, it becomes impracticable, if not impossible, to bring all of them before the court’. They also held that the Plaintiffs personality to sue on behalf of the succeeding generations can only be based on the concept of intergenerational responsibility insofar as the right to a balanced and healthful ecology is concerned’ Thus recognizing the representation of future generations.

In a Philippine case of David & Ors v The Rionable Fulgencio S Factoran, JR & Ors198, a number of minors through their natural guardians

---

198 The decision of the Supreme Court was promulgated on 30 July 1993. It has been reproduced in 33 ILM 1994 at p 175
(parents) and the Philippine Ecological Network, INC filed a suit against the secretary of the Department of Environment and Natural Resources to enforce their constitutional rights and the twin concepts of 'inter-generation responsibility' and 'inter-generation justice'. The Supreme Court held that:

"While the right to a balanced and healthful ecology is to be found under the Declaration of Principles and State Policies and not under the Bill of Rights, it does not follow that it is less important than any of the civil and political rights enumerated in the latter. Such a right belongs to a different category of rights altogether for it concerns nothing less than self-preservation and self-perpetuation aptly and fittingly stressed by the petitions. The advancement of which may even be said to predate all governments and constitutions. As a matter of fact, these basic rights need not even be written in the constitution for they are assumed to exist from the inception of mankind. If they are now explicitly mentioned in the fundamental character, it is because of the well-founded fear of its framers that unless the rights to a balanced and healthful ecology and to health are mandated as state policies by the Constitution itself, thereby highlighting their continuing importance and imposing upon the state a solemn obligation to preserve the first and protect and advance the second, the day would not be too far when all else would be lost not only for the present generation, but also for those to come which stand and inherit nothing but parched earth incapable of sustaining life. The right to

\[199\] Emphasis added
a balanced and healthful ecology carries with it the correlative duty to refrain from impairing the environment.

This is an epoch-making judgment. It considers the right to a balanced and healthful ecology as a natural right of mankind. Further, it need not even be written in the constitution for they are assumed to exist from the inception of mankind (They are natural rights).

The court further said that:

'This case, however, has a special and novel element. The petitioners assert that they represent their generation as well as generations yet unborn. We find no difficulty in ruling that they can, for themselves, for others of their generation and for the succeeding generations, file a class suit. Their personality to sue on behalf of the succeeding generations can only be based on the concept of inter-generation responsibility in so far as the right to a balanced and healthful ecology is concerned, such a right considers the 'rhythm and harmony of nature'. Such rhythm and harmony indispensably include, inter alia, the judicious disposition, utilization, management, renewal and conservation of the country's forest, mineral, land, water, fisheries, wildlife, off-shore areas and other natural resources to the end that their exploration development and utilization be equitably accessible to the present as well as future generations. Needless to say, every generation has a responsibility to the next to preserve that rhythm and harmony for the full enjoyment of a balanced healthful ecology. Put a
title differently, the minors’ assertion of their right to a sound environment constitutes, at the same time, the performance of their obligation to ensure the protection of that right for the generations to come.

In Malaysia, the Court of Appeal, in Tan Tek Seng v Suruhanjaya Perkhidmatan Pendidikan & Anor\textsuperscript{200}, has given a liberal meaning to Article 5\textsuperscript{201}. Article 5(1) of the Federal Constitution reads: ‘No person shall be deprived of his life or personal liberty save in accordance with law”. In that case, the judge held:

"[T]he expression “life” appearing in Article 5(1) does not refer to mere existence. It incorporates all those facets that are an integral part of life itself and those matters which go to form the quality of life. Of these are the right to seek and be engaged in lawful and gainful employment and to receive those benefits that our society has to offer its members. It includes the right to live in a reasonably healthy and pollution free environment"

This case was about a teacher’s dismissal from his post, he seek for a declaration that his dismissal was null and void. Therefore the statements on the environment could be interpreted as merely obiter dicta.\textsuperscript{202}

\textsuperscript{200} [1996] 1 MLJ 261.
\textsuperscript{201} Article 5 of the Federal Constitution is on liberty of the person. It is one of nine articles under Pt II of the Constitution, under the title ‘Fundamental Liberties’.\textsuperscript{202} Azmi Sharom, \textit{Malaysian Environmental Law: Ten Years After Rio}. (2002) 6 SJICL, at page 885
However, the "Bakun Dam" case shows that even if the right to life is interpreted broadly and a right to a clean environment is accepted as part of the rights of all Malaysians, it is still possible that such right will not be inalienable. It shows that the judiciary is still not willing to place constitutionalism and basic structure arguments above the will of the executive and legislature. What the judiciary needs is perhaps a guideline to direct them to a more consistent decision.

6.3. Guidelines under Global Judges Symposium 2002

UNEP has organized six Regional Symposium for Judges on the Role of the Judiciary in Promoting the Rule of Law in the Area of Sustainable Development. The initiative is based on the idea that the role of the Judiciary is fundamental in the promotion of compliance with and enforcement of international and national environmental law and aims to promoting judiciary networking, sharing of legal information and harmonisation of the approach to the implementation of global and regional instruments.

The Global Judges Symposium on Sustainable Development and the Role of Law being held in Johannesburg, 18-20 August 2002 builds on the experience of these previous regional Symposium. In this Symposium, Judges from 70 States around the world attended the Global Judges Symposium held in Johannesburg, 203

203 The six Symposia were designed as regional, and brought together Chief Justices and Prosecutors from several countries in Africa, Asia and the Pacific and Latin America and the Caribbean. They were held in Kenya (1996), Sri Lanka (1997), Philippines (1999), Mexico (2000), Saint Lucia (2001) and Australia (2002).
South Africa. Unfortunately Malaysia has no representative in this gathering. Here, the judges from various part of the world themselves made the guidelines for the judiciary and recommendation in promoting the goals of sustainable development trough the application of the law.

Some of the salient points are as follows. The Judiciary is to give full commitment to contributing towards the realization of the goals of sustainable development through the judicial mandate to implement, develop and enforce the law, and to uphold the Rule of Law and the democratic process.

In order for the world to realise the goals of the Millenium Declaration of the United Nations General Assembly which depends upon the implementation of national and international legal regimes that have been established for achieving the goals of sustainable development, in the field of environmental law there is a need for a concerted and sustained programme of work focused on education, training and dissemination of information, including regional and sub-regional judicial colloquia.

There is a need for collaboration among members of the Judiciary and others engaged in the judicial process within and across regions in order to

---

achieve a significant improvement in compliance with, implementation, development and enforcement of environmental law.

Recommendations

It was submitted that there is an urgent need for the improvement of the capacity of those involved in the process of promoting, implementing, developing and enforcing environmental law, such as judges, prosecutors, legislators and others, to carry out their functions on a well informed basis, equipped with the necessary skills, information and material. It is true in so far as the Malaysian judicial system is concerned, that the above people involved in the protection of the environment in the legal system lack special training and skills to fulfill their obligation.

Environmental law education needs to be thought in schools and universities and Judges with the environmental law background should be given priority to handle environmental cases. The judges should keep in view justice on environmental disputes, enforcement of environmental rights by citizens and public access to information kept by authority.
At National level, there should be an ad hoc committee of Judges consisting of Judges representing the states to review the law and the emerging environmental jurisprudence. It is also submitted that there should be an institution at the sub-regional, regional and global for the mutual benefit of judges of the world and exchange of information among the Judiciaries with a view to benefiting from each other’s knowledge, experience and expertise. International organization such as UNEP and its partner agencies should provide support to the Judges in accomplishing its task.

6.5. Conclusion

In conclusion, the judiciary duty lies with the way they interpret the “right to life” under Article 5(1) of Constitution. The attitude of the courts, as shown in Bakun Dam case leave a lot to desire and reflect the idea that is the issue is small (as in Tak Tek Seng case) then there are strong worded judgments regarding constitutionalism and fairness, yet those very same ideals are put to the side when multi million dollar dam is the issue at hand. What is obvious from this chapter that an active and courageous judiciary is vital in ensuring that public interest law is well developed to advance the protection of the environment.

CHAPTER 7: IN CONCLUSION

INTRODUCTION

In Chapter One of this dissertation, it was put forward that the main objective of this dissertation is to highlight the problems surrounding the enforcement of the Environmental Quality Act. It is an attempt to assess the Environmental Quality Act mechanism and how it works, analyse the enforcement problems faced by DOE and attitudes of the judiciary on environmental protection against pollution.

Chapter 2 gave an overview of what International Environmental Law is. It was necessary to understand the nature of International Environmental Law as it is the basis for most national environmental laws including Malaysia's. This chapter closes on an optimistic note that Malaysia has taken up international obligations in justifying the protection of environment against pollution.

Chapter 3 establishes the second justification for measures taken to protect the environment against pollution which is the effect of pollution to the current state of environment and the future generations. This chapter shows that pollution has a very strong impact on the health of the people and the economy of the Nation. Therefore this chapter justifies the great effort at ensuring the existence of law and its compliance which is discussed in chapter 4.
Chapter 4 discussed the main law against pollution; The Environmental Quality Act 1974 (EQA). The EQA has undergone a number of amendments to improve enforcement and management of environment against pollution. Despite the fact that EQA has been in existence for almost 20 years, it is being surrounded by problems outside the statute which influence its efficacy.

The chapter then goes on to discuss on the role of Department of Environment (DOE) in overseeing and enforcing environmental regulations to ensure the effectiveness of EQA.

Chapter 5 deals with problems of enforcement of the EQA and its regulations faced by the DOE. It is submitted in this chapter that the environment enforcement problems is not only caused by the lack of law but due to many factors which hinders the efficiency of the DOE.

Chapter 6 examines the Bakun Dam Case decision and a number of other cases in matters relating to the protection of environment. It provides insights of what is in the mind of the judges, what the future holds for the EQA and environmental prosecution.
7.1 International Environmental Law

International Environment Law examined in Chapter 2 suggest that international conventions, treaties, international custom, general principles of law, and as secondary resources judicial decisions and teachings of the most highly qualified publicist are the sources of International Environmental Law. Treaties are the most important source of international environmental law. However, International agreements known as "soft law" is also an important source as it provides for self-contained regime whose characteristics depend on the parties' intentions in the specific case. They are a simpler and more flexible foundation for future relations among states with no obligation attached.

Malaysia has undertaken a moral and ethical obligation to live up to the principles of International Environmental Law. Primarily to take measures to ensure that the environment is protected for the present and future generations.

Chapter 3 suggests that another effective and workable type of argument to justify and promote environmental law is because pollution has adverse impact on the health of the people and economy of the Nation.

The enactment of the Environmental Quality Act and its regulation, the setting up of the Department of Environment are seen as proof of our undertaking to protect the environment.
7.2 The Role Played by the Environmental Quality Act 1974

The role that EQA and its regulations played in the prevention of pollution is very important. It prescribes substantive offences and penalties for pollution of the atmosphere, soil, inland waters, territorial waters as well as noise pollution. The EQA requires environmental audits to be conducted, irrespective of whether the operator is operating out of prescribed premises or vehicle. The advantage of this is obvious. If the DG was to have an informed view as to the effects of ongoing activities, problems can be nipped in the bud before they get out of hand. However since its amendment in 1996, there is no regulation on the matter, making it not operational. It is now a matter of when the regulations on Environmental Audit will come into effect.

EQA also requires environmental impact assessment (EIA) to be prepared on certain prescribed activities. It requires a report on the impact of the activity on the environment and measures to be taken to limit the said impact. The EIA detail report entails public participation by requiring it to make public and feedback to be sent to a review panel before Director General approve the said report and inform the approving authorities.

The EQA impose the "Environmental Cess" on wastes generated for purposes of financing research into any aspect of pollution or the prevention thereof. The establishment of an Environmental Fund to be operated as a Trust Account within the Federal Consolidated Fund, for the purposes of financing research, controlling pollution in general, preventing or combating spillages, discharges or
dumpings of oil, wastes or hazardous substances, and encouraging conservation measures against damage arising from the said pollution. However this section is without regulations to ensure their compliance and, therefore, they were not given much focus or attention.

Therefore, the problem is not the EQA, instead it is the lack of true political will to put those laws to their full use. Be that as it may, what is needed now are foresight, the courage and the will to put those laws to good use.

7.3 The Role of The Department of Environment

The DOE is a department under the Ministry of Science, Technology and Environment (Since April 2004, known as Ministry of Natural Resources and Environment). Its main function is to administer the EQA. The 1996 amendments provided broader powers to the DG and his officers to investigate, seize, close down and prosecute offenders. The DOE has the power to prosecute environmental offender in court. It is suggested from the statistics, DOE is keener in collecting compounds than bringing the matters to court. It is believed that this is a faster way of penalizing the offender. The prohibition orders stopping operational activities that cause serious threat to the environment, public health or safety only issued as a last resort after repeated advice, warnings, and reminders have been given but not followed. DOE may requires the Environmental Impact Assessment stating the likely impact that a project might
have on the environment and what measures are to be taken to limit the said impact. Unfortunately the DOE do not have a final say as to whether the project should continue or not.

Clearly the DOE is rather ambitious in enforcing the EQA. It is now a matter of whether DOE has enough strength to cope with the problems surrounding it.

7.4 Enforcement Problems

Many other factors influence enforcement besides the law. The normal justification by DOE for lack of enforcement on the part of DOE is due to lack of resources such as man power and allocation. What is evident from this dissertation is that although certain states are provided with greater number of staff, the number of cases being prosecuted in court and fines collected do not reflect this, compared to a state with lesser or same number of staff. Therefore although number of staff does have bearing on the enforcement, awareness, special training and relevant skills on environment issues are more important aspects to be look at to enhance enforcement quality.

Another factor that influences the enforcement of the Environmental Quality Act 1974 and its regulations is that there are no provisions in the constitution for a right to a clean environment. That being the case, the environment litigator is left with Article 5(1) "right to life" and it is open to the judge to decide on the matter. As illustrated in the Bakun Dam case, even if the word "life" in Article 5(1) of the
Federal Constitution implicitly include the right to a reasonably healthy and pollution free environment, such rights may be extinguished "in accordance with existing law". Therefore it is suggested that the constitution be amended to explicitly provide for the right to clean and safe environment to solve the interpretation problem.

The Federal Constitution of Malaysia leaves substantial powers over land use and natural resource management to the respective States. Thus, certain key matters relating to land use and natural resources remain within the exclusive jurisdiction of state legislation, and the DOE would consequently assume only a liaison and cooperative role with respect to the state organs. The problem is further compounded in relation to the implementation of international treaty obligations. Whilst the federal government has the prerogative to accede to international treaties, the implementations of these treaty obligations remain with the states if these impinge on issues over which states have jurisdiction. As a result, considerable difficulties have arisen over environmental protection issues, particularly in relation to forestry, land use and hydroelectricity generation, issues which reside within exclusive state competence.

The issue of state against federal government jurisdiction over environmental matters may be solve by having a provision to empower the federal government to have exclusive jurisdiction to legislate on matters relating to the protection of the environment, ecosystems and biodiversity.

---

206 See Chapter 5.1
There is an issue of the competence of the various national agencies over natural resource sectors as EQA and its implementing agency, the DOE remain responsible largely for pollution control only. The overlap in prescriptive and enforcement jurisdiction may arise, since environmental concerns often cut across numerous natural resource sectors. It appears that effective coordination is needed and existing programmes be further improved.

Another issue discussed is the problem of "locus standi" or standing to bring a case to court. It is the general rule of law that judicial recourse is available only to persons who can demonstrate a sufficient connection with or interest in the subject matter in dispute. The scope of who deserves standing can be broad or narrow depending on the Court's interpretation. Recent court cases in Malaysia have consistently denied the *locus standi* (the right to sue) of NGOs on environmental matter. Therefore the DOE should not be the only body able to prosecute polluters. EQA should give private citizens the right to do so and there have been success stories such as Greenpeace successfully prosecuting an American Chemical company for unlawful discharges in Cumbria.\(^\text{207}\). This might be an option to be considered for Malaysia, for by opening the power to prosecute to private citizens and groups; the DOE itself need not necessarily be burdened with the entire responsibility for prosecution.

It is also suggested that EQA should provide for an unlimited fine for convictions through indictment. It would surely be a tremendous deterrent if it is used and made public. DOE need to publicise their prosecutions. This has two effects, firstly it raises public awareness as to the offences that exist regarding pollution and it also acts as a warning to industries to keep their activities within the confines of the law.

7.5 The Role of Judiciary

Following the Bakun Dam case, there are a number of cases which shows some positive sign in the attitude of the judges on environment protection. The insights of what is in the mind of the judges, what the future holds for the EQA and the environmental prosecution in can be seen in the following judgments:-

In Malaysian Vermicelli Manufacturers (Melaka) Sdn. Bhd. V PP\textsuperscript{208}, the court departing from the Bakun Dam case judgement held that the objective and purpose of Section 25 of the EQA and Regulations is the protection, promotion, maintenance and enhancement of health of public in general and does not encroach the state government's constitutional power to make laws regarding water supplies, rivers and canals.

\textsuperscript{208} [2001] MLJ 359
The case of *Pendakwa Raya lwn NCK Aluminium Extrusion Sdn Bhd*\(^{209}\), shows that the judge is willing to impose the maximum sentence on polluters. In this case the lower court judge imposed a fined of RM5,000.00 to the offender for operating without a license and contravening the EQA and its regulations even though the maximum fine available under the EQA was RM100,000.00 and the seriousness of the offence in relation to the environment. The High Court on appeal ordered the offender to pay a higher fined of RM90,000.00.

In *Tenggara Gugusan Holidays Sdn Bhd v Public Prosecutor*\(^{210}\), the judge hold that the contractors who were carrying out the project on behalf of the owner is liable for a fine of RM20,000.00 for not preparing the EIA report before carrying the said work.

Although the judiciary is currently in the right direction, much more can be done. To further enhance the judge roles on environment protection, the Global Judges Symposium on Sustainable Development and the Role of Law held in Johannesburg gives an important guide to the judges. It supported the idea that the role of the Judiciary is fundamental in the promotion of compliance with and enforcement of international and national environmental law. In the field of environmental law there is a need for a concerted and sustained programme of

\(^{209}\)[2002] 6 MLJ 96
\(^{210}\)[2003] MLJ 508
work focused on awareness, education, training and dissemination of information.

The capacity of judges to carry out their functions may be improved if they are well informed (in terms of knowledge, experience and expertise), equipped with the necessary skills, information and material. An active and courageous judiciary is vital in ensuring that public interest law is well developed to advance the protection of the environment. Until the constitution amended to include the right to clean and safe environment, the judiciary duty lies with the way they interpret the "right to life" under Article 5(1) of the Constitution.
BIBLIOGRAPHY


Azmi Sharom, The ASEAN Regional Environmental Protection Framework in World Survey of Environmental Law 1986-1996


*State of Environment in Malaysia*: Compilation of selected papers presented at Consumer Association of Penang and Sahabat Alam Malaysia Conference (1996)


Abdul Aziz Bari, Dr., Right to life under the Constitution and Environmental Issues. [1999]1 MLJ Ix

Abdul Haseeb Ansari, Dr., Right To A Healthful Environment As A Means To Ensure Environmental Justice: An Overview with Special Reference to India, Philippines and Malaysia. [1998] 4 MLJ xxv

See Deimann & Dyssli (eds), Environmental Rights Law, Litigation & Access to Justice (1995) at p 34


DOE's new clout to fight pollution, New Straits Times, 8/10/1996 [pp.11]

New EQA amendments a positive move but.. New Straits Time. 8/10/1996 [pp.11]


Department of Environment Annual Reports 1999 & 2000

Department of Environment Environmental Quality Reports 1998
9 April 2001

Pn Hajjah Rosnani Ibrahim
Ketua Pengarah
Jabatan Alam Sekitar
Tingkat 12 dan 13, Wisma Sime Darby
Jalan Raja Laut
50662 Kuala Lumpur

Puan

Re: Pelajar LLM, Nahzatul Ain binti Mohd Khalid


Saya sangat berharap bahawa pihak Puan boleh membantu beliau dengan kaji solidiknya dengan membenarkan beliau berjumpa dengan beberapa orang pegawai yang relevan.

Kerjasama pihak puan sangat dihargai.

Terima kasih.

Yang benar,

[Signature]

Profesor Mahdia Dr Cheong May Pung
Timbalan Dekan (Pembangunan)
Cik Nahzatul Ain Mohd. Khalid  
No. 2, Jalan Indah 3/3  
Taman Ampang Indah  
68000 AMPANG  
Selangor

Puan,

Permohonan Sesi Temubual Mengenai Isu-Isu Berkaitan  
Penguatkuasaan Akta Kualiti Alam Sekeliling 1974

Merujuk kepada permohonan puan mengenai perkara di atas. sukacita sekiranya dapat puan menghubungi pejabat Pengarah Bahagian Kawalan Jabatan Alam Sekitar di talian 8885-8203 untuk menetapkan tarikh temujanji bagi perkara berkenaan.

Sekian, dimaklumkan. Terima kasih.

‘BERKHIDMAT UNTUK NEGARA’

Saya yang menurut perintah,

(RAHANI HUSSIN) 
b.p Ketua Pengarah Alam Sekitar

JABATAN ALAM SEKITAR  
KEMENTERIAN SAINS, TEKNOLOGI DAN  
ALAM SEKITAR.  
TINGKAT 12 & 13, WISMA SIME DARBY.  
JALAN RAJA LAUT.  
50662 KUALA LUMPUR

Ruj. Tuan

Ruj. Kami: AS  
91/110/  
Tarikh: 28 Mei 2001

(Sila catatkan rujukan Jabatan ini apabila berhubung)
Appendix 1

PERLEMBAGAAN DAN AKTA KUALITI ALAM SEKITAR

a) Apakah masalah-masalah yang dihadapi oleh Bahagian Kawalan Alam Sekitar Jabatan Alam Sekitar yang melibatkan Perlembagaan Malaysia, Akta Kualiti Alam Sekitar dan lain-lain Akta yang berkaitan?

KEKURANGAN SUMBER KEWANGAN

a) Carta Organisasi Jabatan Alam Sekitar?

b) Berapakah jumlah kakitangan jabatan alam sekitar tahun 1999

c) Adakah Jabatan Alam Sekitar Menghadapi masalah kekurangan kakitangan penguatkuasaan?

d) Statistik peruntukan kewangan kepada Jabatan Alam Sekitar 1999 & 2000

e) Kepada Bahagian manakah kebanyakkan peruntukan tersebut digunakan?

f) Berapa banyak peruntukan untuk bahagian penguatkuasaan? Digunakan untuk tujuan apa?

g) Hasil pendapatan
PENDAKWAAN

a) Jumlah Kes yang dihadapkan ke mahkamah

i) Apakah yang menyebabkan turun naik jumlah pendakwaan kes ke mahkamah?

ii) Mengapa pada tahun 1998 jumlah denda yang dikenakan telah meningkat sebanyak 8% walaupun terdapat kemerosotan jumlah kes yang didakwa di mahkamah?


b) Jenis kes

i) Adakah pernah mahkamah menjatuhkan hukuman penjara ke atas pesalah alam sekitar? Berapa jumlah kes? Jenis Kes?

ii) Jika tidak mengapa? Apakah rasional yang diberikan oleh mahkamah?

iii) Adakah bahagian penguatkuasaan Alam sekitar berpuas hati dengan keputusan mahkamah? Jika tidak adakah saluran untuk menyatakan ketidakpuasan tersebut? Adakah pernah Pendakwaan merayu keputusan mahkamah bagi menambahkan jumlah denda atau penjara kepada pesalah alam sekitar?
iv) Kemanakah wang daripada kutipan denda dan kompoun alam sekitar di
salurkan? Adakah ia melambangkan pengiktirafan kepada prinsip "pesalah
alam sekitar bayar" (polluters pay).

v) Apakah jumlah denda dan kompoun yang dikenakan munasabah? Jika
tidak mengapa?

c) Kejayaan pendakwaan.

d) Kompoun

i) Berapa banyak operasi dilakukan oleh bahagian penguatkuasaan dalam
masa setahun?

ii) Adakah terdapat "follow up" terhadap syarikat-syarikat yang dikompounkan?

iii) Apakah system pengawalan (monitoring) yang digunakan?

e) Perintah Larangan/ Prohibitory Order (P.O)

i) Apa itu perintah larangan?

ii) Berapa banyak perintah larangan dikeluarkan

iii) Apakah kesan kepada ketidak patuhan perintah larangan
		tersebut?

iv) Prosedur Perintah larangan
v) Mengapa hanya 6 Perintah Larangan sahaja dikeluarkan? Terhadap syarikat apa?

vi) Apakah masalah-masalah/alasan-alasan yang dikemukakan oleh pesalah-pesalah Alam Sekeliling bagi pematuhan kepada Akta dan Peraturan berkaitan Alam sekitar?

vii) Apakah medium yang digunakan bagi menerima kritikan/komen terhadap penguatkuasaan alam sekitar?

viii) Apakah cara Bahagian pengautkuasaan mengawasi pesalah-pesalah Alam Sekitar?
4 September 2001

To:
All legal firms in Kuala Lumpur
Atten: The Managing Partner

Dear Sir/Madam

ENVIRONMENTAL LAW AND PRACTICE QUESTIONNAIRE

The Environmental Law Sub-Committee of the Kuala Lumpur Bar Committee is conducting a study of members’ views on environmental issues. We intend to use the information garnered from the study to make concrete proposals to the relevant authorities as to how we can have a better environment. Concurrently, we will be doing a study of the existing legislation to see if we can identify any areas for improvement.

To enable us to successfully carry out this exercise, we seek your co-operation and assistance in completing the attached questionnaire and returning same by facsimile to the Kuala Lumpur Bar Committee (Attention: Ms Mary Tan at fax no. 03-2691 1090/2694 0068 or e-mail to klbar@po.jaring.my) on or before 30 September 2001.

We look forward to receiving your response.

Thank you.

Yours sincerely

JANET LOOI
Chairperson
Environmental Law Sub-Committee

Encl
ENVIRONMENTAL LAW AND PRACTICE QUESTIONNAIRE

1. Which of the following do you consider as environmental issues with related legal ramifications:
   - Air pollution
   - Water pollution or contamination
   - Noise
   - Sewage
   - Town and country planning
   - Health eg cleanliness, diseases
   - Others (please state)

2. What portion of your practice deals with environmental issues?
   - Less than 5%
   - Between 5% to 20%
   - Between 20% to 50%
   - More than 50%

3. Do you represent or advise the following types of Plaintiffs:
   - The Department of Environment
   - Other authorities concerned with environmental health and safety cases
   - Representative cases (a class of Plaintiffs)
   - Municipal councils or local government
   - Private (individual) Plaintiffs
   - Others (please state)

4. Do you represent or advise the following types of Defendants:
   - Manufacturers
   - Refineries
   - Sewage companies
   - Solid waste companies
   - Personal individuals
   - Others (please state)

5. What type of cases do you normally deal with:
   - Environmental Quality Act, 1974 type contraventions
   - Other environmental statutes contraventions (please specify)
   - Public liability cases, eg contamination of water or air, public nuisance
   - Private torts (nuisance)
   - Planning approvals, eg Highlands Towers type cases

6. If you act for Defendants, what are the most common defences or issues or explanations given:
   - Ignorance of the law
   - Too expensive to comply
   - Procedures are too complicated
   - Commercial interest prevails
   - Human nature eg lack of respect for others, bad habits, apathy
   - Others (please specify)
7. What are the main weaknesses that you perceive in the Prosecutor's/Authorities' cases?
- defective charge sheets
- insufficient evidence
- inadequate fines
- others (please specify)

8. If your clients are Defendants, do they usually;
- plead guilty
- defend the case

9. What percentage of clients plead guilty:
- All
- More than 50%
- Less than 50%
- Less than 20%

10. If the client pleads guilty, the main reasons for doing so are:
- to avoid publicity
- to save face
- cheaper to pay the fine
- genuine remorse

11. In mitigation do they normally state that:
- it was a first offence
- they are in process of compliance
- others (please specify)

12. If you act for Plaintiffs, what are the main challenges faced by them?
- insufficient resources to monitor and prosecute
- insufficient or absence of support from other authorities (please specify)
- intimidation from or bullying tactics of the Defendant
- Sanctions provided in the statutes are insufficient
- Insufficient public awareness
- Others (please specify)

13. If you are an Environmental Lawyer, what are the major challenges facing your practice?
- lack of expert witnesses
- inaccessibility to environmental information
- lack of evidence
- unavailable research material
- little cohesion between governmental or municipal authorities which does not result in integrated enforcement of environmental laws
14. In your experience as an Environmental Lawyer, what areas of the law require attention?

imposition of duty to disclose environmental information available to others (please specify) .......................................................... 

15. In your view, should contravention licenses be abolished?

☐ yes
☐ no

Please state your reasons for either answer: ..........................................................................................................

16. Do you think that privatisation has affected the existence of accountability for environmental issues previously held by the statutory bodies?

☐ yes
☐ no

17. If your answer to 16 is yes, how do you think should concessionaires or companies operating privatised facilities be made accountable for environmental issues, e.g., the overflow of rivers due to construction works resulting in flooding.

18. In your views, what is the impact of going paperless on our legal system:

☐ Evidence Act
☐ Rules of High Court
☐ Others (please specify) ..........................................................................................................

18. Other comments:

C:\environmental questionnaire\taa
The Environmental Law Sub-Committee of the Kuala Lumpur Bar Committee conducted a survey around mid-2001, with questionnaires being circulated to all legal firms in Kuala Lumpur. The questionnaire was aimed at trying to ascertain the state of practice of Environmental Law by legal firms in Kuala Lumpur. The results of the survey are based on the 27 responses returned.

In order to ascertain the boundaries of Environmental Law practice in Malaysia, participants were asked for their perceptions on what the same entailed. The response received (in descending order of choice) included issues pertaining to water pollution or contamination, air pollution, town and country planning, health related matters including cleanliness and disease & noise and sewage. Others were logging, infrastructure projects, locations of high-tension electricity wires in residential areas, mining, fishing, trade and consumption of species, unhealthy lifestyles and forestry.

As anticipated, Environmental Law is presently not widely practised by firms in Kuala Lumpur. Only 4 out of the 27 respondents said that 5% to 20% of their practice dealt with environmental issues. The majority said that less than 5% of their time was taken up by these issues.

Plaintiffs were comprised of mainly private individuals, whilst Defendants were comprised of primarily private individuals, manufacturers, refineries and sewage companies. Other litigants included Independent Power Producers (IPPs), private companies applying for environmental clearances and bus companies.

A substantial part of Environmental Law practice was said to be concentrated in the area of private torts such as nuisance. Close behind were the contravention of different provisions under the Environmental Quality Act, 1974, issues relating to planning approvals (e.g. Highlands Towers) and various breaches of statutory duty (e.g. contamination of waterways, of air and public nuisances generally). Less common was the issue of contravention of the provisions relating to atomic energy.

Most firms acting for Defendants stated that the most common defence or explanation set up by their clients was that their Commercial interests had to prevail as it was far too expensive to ensure compliance with the requirements of the law. Others stated
that a proportion of Defendants were unhappy with the procedures for compliance laid down by the authorities as it was too complicated and the remaining firms stated that some Defendants pleaded ignorance of the law, apathy or a lack of respect for others.

Most Defendants entered a plea of guilty in order to avoid undue publicity. Additionally, the penalty involved was said to be minimal in comparison to prevailing Commercial interests. A minuscule proportion admitted to being remorseful, although in mitigation most stated that they were in the process of effecting compliance with the requirements of the law. The second most popular plea in mitigation was cited as being that of being a 1st time offender.

On the other hand, the main weaknesses of the Public Authorities/Prosecutors cases were insufficient evidence and procedural deficiencies (such as defective charge sheets). Prosecution of infringements were also said to be undermined by inadequate penalties meted out or provided for at law. Another weakness was the willingness (or lack thereof) of authorities to commence prosecutions as marked by unattended complaints and lack of experience.

On the part of private Plaintiffs, the main challenge faced was insufficient resources to monitor and prosecute any contravention of the laws. Other challenges included the lack of public awareness, the insufficiency or absence of support from authorities, intimidation or bullying tactics by infringers, lack of technical knowledge and the inadequacies of sanctions found in the legislative framework.

On the part of lawyers, the main challenges faced were the lack of cohesion between governmental or municipal authorities, which resulted in a deficiency in the integrated enforcement of environmental laws as well as an apparent inaccessibility to environmental information. Other challenges cited were the lack of expert witnesses, the dearth of research material and lack of evidence.

An overwhelming majority of respondents felt that the law should impose a duty on parties to disclose environmental information pertaining to their activities. Many felt that heavier fines and sanctions should be imposed and that there should be more stringent enforcement of laws by the relevant governmental authorities. Participants also felt that government departments or agencies ought to share information and co-operate with each other
as well as adopting a consistency in the enforcement of regulations towards achieving compliance.

On the issue of contravention licences, opinion was closely divided. 51.8% of respondents felt that contravention licences should not be abolished or at least should not be abolished in the immediate future. Of this group, it was felt that contravention licences conferred the authorities with more control and supervision over the activities of a relevant applicant. In addition, it was felt that in a developing country such as Malaysia, the cost of compliance was still much too high thus affecting businesses and the economy as a whole.

The balance 48.2%, advocating abolition of contravention licences, felt that there was no moral or legal sense in legalising contravention. In addition, contravention licenses were often said to be open to abuse.

Participants were similarly divided as above on the issue of the negative effect of privatisation on accountability in environmental issues, previously maintained by statutory bodies. The majority of participants agreed.

Those who felt that privatisation had a negative impact on accountability suggested that, in order to ensure accountability by concessionaires or companies operating privatised facilities, privatisation or concession agreements ought to include provisions for periodic environmental reporting and compliance of regulations. It was also viewed that authorities ought to formulate guidelines, in the construction of infrastructure facilities, which also incorporate environmental aspects. Such guidelines include suggestions:

(a) that such companies be required to contribute to an environmental damage fund which will be utilised to rectify any damage caused in the event of a disaster as a result of the activities of the said company;

(b) that audits be implemented to ascertain pre-commencement and post-completion compliance (in addition to periodical environmental reporting); and

(c) that open consultation be had with the public before any action is taken which may affect the public.

Other suggestions included the requirement for the furnishing of performance bonds to authorities to compel compliance
A number of respondents felt that there has been an absence of accountability by both statutory bodies and the private sector in the building of infrastructure projects and that the status quo remains. In was also the experience of some respondents that local authorities often ignored environmental or town & country planning regulations particularly in the approval of development projects. The actions of these bodies are driven by purely commercial interest with flagrant disregard to the negative impact on the surrounding community.

Finally, the respondents proposed that an Environmental Court be established to specifically deal with issues arising under the various environmental legislation. In addition, some respondents proposed that the enforcement of environmental laws be privatised or that provision be made for the issue of private summonses for such contravention and that both the authorities and lawyers in private practice be entitled to represent private litigants to enforce compliance and/or litigate cases.

On the question of the effect of the Malaysian legal system adopting a paperless system akin to that of other jurisdictions like Singapore (in an effort to reduce usage of natural resources), most felt that difficulties might be prevalent in the light of the present evidential and procedural requirements. Questions were also posed relating to the security, durability and accessibility of such a paperless system. Perhaps this could be the subject of yet another survey.

In conclusion, it is apparent that the practice of Environmental Law remains relatively unexplored and untapped by our Kuala Lumpur lawyers. Awareness, both of environmental law as well as environmental efforts, needs to be enhanced within our legal community to stimulate the growth of new areas of practice in addition to fulfilling our corporate and individual responsibilities to society as a whole.

The legal fraternity must awaken to the catalytic role it has been accorded and every individual lawyer must realise the cohesive part they play in the area of Environmental Law and the environment. A robust and positive interventionist role should be adopted in creating this awareness in their clients as part of the professional service rendered. We are no longer the interpreters of the law but also the doers of the same.
<table>
<thead>
<tr>
<th>Date Entered into Force</th>
<th>Date of Signature</th>
<th>State</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-AUG-57</td>
<td></td>
<td>MALAYSIA</td>
<td>General Agreement on Tariffs and Trade</td>
</tr>
<tr>
<td>17-SEP-57</td>
<td></td>
<td>MALAYSIA</td>
<td>Charter of the United Nations</td>
</tr>
<tr>
<td>11-NOV-57</td>
<td></td>
<td>MALAYSIA</td>
<td>Constitution of the International Labour Organization</td>
</tr>
<tr>
<td>20-NOV-57</td>
<td></td>
<td>MALAYSIA</td>
<td>Plant Protection Agreement for the Asia and Pacific Region</td>
</tr>
<tr>
<td>09-NOV-57</td>
<td></td>
<td>MALAYSIA</td>
<td>Constitution of the Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>07-MAR-58</td>
<td>07-MAR-58</td>
<td>MALAYSIA</td>
<td>Agreement of the International Monetary Fund</td>
</tr>
<tr>
<td>07-MAR-58</td>
<td>07-MAR-58</td>
<td>MALAYSIA</td>
<td>Agreement of the International Bank for Reconstruction and Development</td>
</tr>
<tr>
<td>24-APR-58</td>
<td>24-APR-58</td>
<td>MALAYSIA</td>
<td>Constitution of the World Health Organization</td>
</tr>
<tr>
<td>07-MAY-58</td>
<td></td>
<td>MALAYSIA</td>
<td>Convention on International Civil Aviation Annex 16 Aircraft Noise</td>
</tr>
<tr>
<td>18-JUN-58</td>
<td></td>
<td>MALAYSIA</td>
<td>Convention of the World Meteorological Organization</td>
</tr>
<tr>
<td>15-SEP-58</td>
<td></td>
<td>MALAYSIA</td>
<td>Agreement for the Establishment of the Asia Pacific Fishery Commission</td>
</tr>
<tr>
<td>10-OCT-58</td>
<td></td>
<td>MALAYSIA</td>
<td>Convention on Road Traffic</td>
</tr>
<tr>
<td>24-SEP-60</td>
<td></td>
<td>MALAYSIA</td>
<td>Articles of Agreement of the International Development Association</td>
</tr>
<tr>
<td>30-SEP-62</td>
<td></td>
<td>MALAYSIA</td>
<td>Convention on the High Seas</td>
</tr>
<tr>
<td>30-SEP-62</td>
<td>01-MAY-61</td>
<td>MALAYSIA</td>
<td>Optional Protocol of Signature concerning the Compulsory Settlement of Disputes</td>
</tr>
<tr>
<td>10-JUN-64</td>
<td></td>
<td>MALAYSIA</td>
<td>Convention on the Continental Shelf</td>
</tr>
<tr>
<td>15-JUL-64</td>
<td>08-AUG-63</td>
<td>MALAYSIA</td>
<td>Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water</td>
</tr>
<tr>
<td>10-SEP-64</td>
<td></td>
<td>MALAYSIA</td>
<td>Convention on the Territorial Sea and the Contiguous Zone</td>
</tr>
<tr>
<td>01-OCT-64</td>
<td></td>
<td>MALAYSIA</td>
<td>Agreement concerning the voluntary contributions to be given for the execution of the project to save the Abu Simbel Temples</td>
</tr>
<tr>
<td>16-NOV-65</td>
<td></td>
<td>MALAYSIA</td>
<td>International Convention for the Safety of Life at Sea</td>
</tr>
<tr>
<td>20-MAR-66</td>
<td></td>
<td>MALAYSIA</td>
<td>Convention on Fishing and Conservation of the Living Resources of the High Seas</td>
</tr>
<tr>
<td>22-AUG-66</td>
<td>04-DEC-65</td>
<td>MALAYSIA</td>
<td>Agreement establishing the Asian Development Bank</td>
</tr>
<tr>
<td>04-NOV-66</td>
<td></td>
<td>MALAYSIA</td>
<td>Statutes of the International Centre for the Study of the Preservation and Restoration of Cultural Property</td>
</tr>
<tr>
<td>20-FEB-67</td>
<td></td>
<td>MALAYSIA</td>
<td>Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies</td>
</tr>
<tr>
<td>Date</td>
<td>MALAYSIA</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>26-JAN-68</td>
<td>Agreement establishing the Southeast Asian Fisheries Development Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-JUN-68</td>
<td>Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects launched into Outer Space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-JAN-69</td>
<td>Statute of the International Atomic Energy Agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-AUG-69</td>
<td>Amendment of the Plant Protection Agreement for the Asia and Pacific Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-MAR-70</td>
<td>Treaty on the Non Proliferation of Nuclear Weapons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-DEC-70</td>
<td>Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-JUN-71</td>
<td>Convention on the International Maritime Organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-JUN-72</td>
<td>Agreement on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea Bed and the Ocean Floor and in the Subsoil thereof</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-MAR-74</td>
<td>Agreement concerning the Voluntary Contributions to be given for the Execution of the Project to preserve Borobudur</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-JAN-78</td>
<td>Convention on International Trade in Endangered Species of Wild Fauna and Flora</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23-DEC-80</td>
<td>Convention on the International Regulations for Preventing Collisions at Sea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-JAN-84</td>
<td>Protocol relating to the International Convention for the Safety of Life at Sea (SOLAS Prot.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-JAN-84</td>
<td>International Convention for the Safety of Life at Sea (SOLAS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-APR-85</td>
<td>International Tropical Timber Agreement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09-JUL-85</td>
<td>ASEAN Agreement on the Conservation of Nature and Natural Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-FEB-86</td>
<td>Convention on the Recognition and Enforcement of Foreign Arbitral Awards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-JUN-87</td>
<td>Convention on the Law of Treaties between States and International Organizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02-OCT-87</td>
<td>Convention on Early Notification of a Nuclear Accident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02-OCT-87</td>
<td>Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27-NOV-89</td>
<td>Convention for the Protection of the Ozone Layer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27-NOV-89</td>
<td>Protocol on Substances that deplete the Ozone Layer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-MAR-89</td>
<td>Convention concerning the Protection of the World Cultural and Natural Heritage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-MAY-91</td>
<td>International Plant Protection Convention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-MAY-91</td>
<td>International Plant Protection Convention (Revised Text)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04-JUL-91</td>
<td>Agreement for the Establishment of the Network of Aquaculture Centres in Asia and the Pacific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Treaty Name</td>
<td>Country</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>26-SEP-91</td>
<td>Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>30-APR-92</td>
<td>International Convention on Standards of Training, Certification and Watchkeeping for Seafarers</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>14-SEP-93</td>
<td>Amendment to the Montreal Protocol on Substances that deplete the Ozone Layer</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>14-JUN-94</td>
<td>Amendment to the Montreal Protocol on Substances that deplete the Ozone Layer</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>26-AUG-94</td>
<td>Vienna Convention on the Law of Treaties</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>22-SEP-94</td>
<td>Convention on Biological Diversity</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>11-OCT-94</td>
<td>Framework Convention on Climate Change</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>08-JAN-95</td>
<td>Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>10-MAR-95</td>
<td>Convention on Wetlands of International Importance especially as Waterfowl Habitat</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>06-APR-95</td>
<td>International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>26-DEC-96</td>
<td>International Convention to combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>15-DEC-95</td>
<td>Treaty on the Southeast Asia Nuclear Weapon Free Zone</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>15-DEC-95</td>
<td>Protocol to the Treaty on Southeast Asia Nuclear Weapon Free Zone</td>
<td>MALAYSIA</td>
<td></td>
</tr>
<tr>
<td>01-JAN-97</td>
<td>International Tropical Timber Agreement</td>
<td>MALAYSIA</td>
<td></td>
</tr>
</tbody>
</table>

*Treaty status information provided by [IUCN](http://www.iucn.org).*

*Comments and questions welcome to [entri@ciesin.org](mailto:entri@ciesin.org).*

*Return to [ENTRI home page](http://www.ciesin.org).*
5. The natural growth of population continuously presents problems for the preservation of the environment, and adequate policies and measures should be adopted, as appropriate, to face these problems. Of all things in the world, people are the most precious. It is the people that propel social progress, create social wealth, develop science and technology and, through their hard work, continuously transform the human environment. Along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day.

6. A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. There are broad vistas for the enhancement of environmental quality and the creation of a good life. What is needed is an enthusiastic but calm state of mind and intense but orderly work. For the purpose of attaining freedom in the world of nature, man must use knowledge to build, in collaboration with nature, a better environment. To defend and improve the human environment for present and future generations has become an imperative goal for mankind—a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide economic and social development.

7. To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future.

Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. International cooperation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive cooperation among nations and action by international organizations in the common interest.

The Conference calls upon Governments and peoples to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity.
Appendix 6

Declaration of the United Nations Conference on Human Environment

Principles

States the common conviction that:

Principle 1

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

Principle 2

The natural resources of the earth including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Principle 3

The capacity of the earth to produce vital renewable resources must be maintained and, whenever practical, restored or improve.

Principle 4

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperiled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development.

Principle 5

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.

Principle 6
The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the peoples of ill countries against pollution should be supported.

Principle 7

States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Principle 8

Economic and social development is essential for ensuring a favorable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.

Principle 9

Environmental deficiencies generated by the conditions of under-development and natural disasters pose grave problems and can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries and such timely assistance as may be required.

Principle 10

For the developing countries, stability of prices and adequate earnings for primary commodities and raw materials are essential to environmental management, since economic factors as well as ecological processes must be taken into account.

Principle 11

The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organizations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

Principle 12
Resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international technical and financial assistance for this purpose.

Principle 13

In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and coordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population.

Principle 14

Rational planning constitutes an essential tool for reconciling any conflict between the needs of development and the need to protect and improve the environment.

Principle 15

Planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all. In this respect projects which are designed for colonialist and racist domination must be abandoned.

Principle 16

Demographic policies which are without prejudice to basic human rights and which are deemed appropriate by Governments concerned should be applied in those regions where the rate of population growth or excessive population concentrations are likely to have adverse effects on the environment of the human environment and impede development.

Principle 17

Appropriate national institutions must be entrusted with the task of planning, managing or controlling the environmental resources of States with a view to enhancing environmental quality.

Principle 18

Science and technology, as part of their contribution to economic and social development, must be applied to the identification, avoidance and control of
environmental risks and the solution of environmental problems and for the common good of mankind.

Principle 19

Education in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension. It is also essential that mass media of communications avoid contributing to the deterioration of the environment, but, on the contrary, disseminates information of an educational nature on the need to project and improve the environment in order to enable man to develop in every respect.

Principle 20

Scientific research and development in the context of environmental problems, both national and multinational, must be promoted in all countries, especially the developing countries. In this connection, the free flow of up-to-date scientific information and transfer of experience must be supported and assisted, to facilitate the solution of environmental problems; environmental technologies should be made available to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

Principle 21

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 22

States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

Principle 23

Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the
most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

Principle 24

International matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries, big and small, on an equal footing.

Cooperation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States.

Principle 25

States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and improvement of the environment.

Principle 26

Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

(United Nations publication, Sales No. E.73.II.A.14 and corrigendum), chap. I.
PREAMBLE

Having met at Rio de Janeiro from 3 to 14 June 1992,


With the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among States, key sectors of societies and people.

Working towards international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system.

Recognizing the integral and interdependent nature of the Earth, our home,

PROCLAIMS THAT:
Principle 1
Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2
States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 3
The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.

Principle 4
In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5
All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

Principle 6
The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

Principle 7
States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressure their societies place on the global environment and of the technologies and financial resources they command.

Principle 8
To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9
States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10
Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11
States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Principle 12
States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.
Principle 13
States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14
States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation, or are found to be harmful to human health.

Principle 15
In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Principle 16
National authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

Principle 17
Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 18
States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those states. Every effort shall be made by the international community to help States so afflicted.

Principle 19
States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at any early stage and in good faith.

Principle 20
Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development and ensure a better future for all.

Principle 21
The creativity, ideals and courage of the youth of the world should be mobilised to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

Principle 22
Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Principle 23
The environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24
Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

Principle 25
Peace, development and environmental protection are interdependent and indivisible.

Principle 26
States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

Principle 27
States and people shall cooperate in good faith and in a spirit of partnership in the fulfillment of the principles embodied in this Declaration and in the further development of international
1. The UN Conference on Human Environment held at Stockholm in 1972 provided a strong stimulus for the development of regional and sub-regional environmental programmes with a view to dealing with environmental problems in a cooperative framework. The ASEAN Environment Programme I (ASEP I), initiated 1977 through the catalytic support of the United Nations Environment Programme (UNEP), marked the beginning of regional environmental cooperation in ASEAN.

2. ASEP I described the extent of regional cooperation and listed the different priority areas and projects/activities on environment. On the recommendation of the ASEAN Committee on Science and Technology, the first meeting of the ASEAN Experts Group on the Environment (AEGE) was held in Jakarta in December 1978 to consider ASEP I. The First ASEAN Ministerial Meeting on the environment which was held in Manila in April 1981 endorsed ASEP I, thereby adopting its objectives and guidelines.

3. In 1981, the first ASEAN declaration on cooperation on the environment was made. It defined the broad objective of cooperation as being to “ensure the protection of the ASEAN environment and the sustainability of its natural resources so that it can sustain continued development with the aim of eradicating poverty and attaining the highest possible quality of life for the people of the ASEAN countries”. It enumerated a number of policy guidelines enjoining member countries to: develop a common awareness of the environmental considerations are taken into environmental protection measures, ensure that environment programmes were developed and implemented. namely, ASEP II covering the period 1982-1987, and ASEP III covering the period 1988 - 1992.

4. The Fourth Meeting of the ASEAN Senior Officials on the Environment held in July 1993 in Bangkok, agreed that a new ASEAN Action Plan should be developed taking into account new developments following the outcome of UNCED which adopted Agenda 21. The plan should take into consideration the need to harmonise the working groups’ objectives, strengthen the existing institutional arrangements, identify priority regional issues including environmentally related implications of the ASEAN Free Trade agreement (AFTA), as well as establish ASEAN’s position in international for a such as the Commission on Sustainable Development (CSD) and Inter-Governmental Committee on the Convention on Biological Biodiversity (ICCB). The Meeting requested the ASEAN Secretariat to initiate action to prepare such a plan.

5. This Strategic Plan of Action on the Environment has the following five objectives:
   a. to respond to specific recommendations of Agenda 21 requiring priority action in ASEAN;
   b. to introduce policy measures and promote institutional development that encourage the integration of environmental factors in all developmental processes both at the national and regional levels;
   c. to establish long term goals on environmental quality and work towards harmonised environmental quality standards for the ASEAN region;
   d. to harmonise policy directions and enhance operational and technical cooperation on environmental matters. and undertake joint actions to address common environmental problems; and
   e. to study the implications of AFTA on the environment and take steps to integrate sound trade policies with sound environmental policies.

6. To attain these objectives, the following strategic thrusts and actions will be pursued.

   **STRATEGY 1:**
   Support the development of a regional framework for integrating environment and development concerns in the decision-making process

   **STRATEGY 2:**
   Promote government-private sector interactions that lead towards the development of policies that mutually support the thrust of each sector

   **STRATEGY 3:**
   Strengthen the knowledge and information database on environmental matters

   **STRATEGY 4:**
   Strengthen institutional and legal capacities to implement international agreements on environment

   **STRATEGY 5:**
   Establish a regional framework on biological diversity conservation and sustainable utilisation of its component

   **STRATEGY 6:**
   Promote the protection and management of coastal zone and marine resources
STRATEGY 7:
Promote environmentally sound management of toxic chemicals and hazardous wastes, and control of transboundary movement of hazardous wastes

STRATEGY 8:
Develop a system for the promotion of environmentally sound technologies

STRATEGY 9:
Promote regional activities that strengthen the role of major groups in sustainable development

STRATEGY 10:
Strengthen the coordinative mechanism for the implementation and management of regional environment programmes

7. To implement the Plan of Action, various funding sources and schemes should be explored. These include: cost-sharing arrangements among participating ASEAN member countries for selected priority projects; the ASEAN Fund which gives priority to urgent, short-term projects of strategic or confidential nature and which are considered fundamental in building a stronger cooperative ASEAN infrastructure; the ASEAN Sub-regional Environment Trust (ASSET); and other project-related sources of funding such as ASEAN's Dialogue Partners, the Global Environment Facility (GEF) and the Asia Sustainable Development Fund.

Source: ASEAN Strategic Plan of Action on the Environment, 1994-1998 (Executive Summary)
THE LANGKAWI DECLARATION ON THE ENVIRONMENT, 1989

THE LANGKAWI DECLARATION ON THE ENVIRONMENT

We, the Heads of Government of the Commonwealth, representing a quarter of the world's population and a broad cross-section of global interests, are deeply concerned at the serious deterioration in the environment and the threat this poses to the well-being of present and future generations. Any delay in taking action to halt this progressive deterioration will result in permanent and irreversible damage.

2. The current threat to the environment, which is a common concern of all mankind, stems essentially from past neglect in managing the natural environment and resources. The environment has been degraded by decades of industrial and other forms of pollution, including unsafe disposal of toxic wastes, the burning of fossil fuels, nuclear testing and non-sustainable practices in agriculture, fishery and forestry.

3. The main environmental problems facing the world are the 'greenhouse effect' (which may lead to severe climatic changes that could induce floods, droughts and rising sea levels), the depletion of the ozone layer, acid rain, marine pollution, land degradation and the extinction of numerous animal and plant species. Some developing countries also face distinct environmental problems arising from poverty and population pressure. In addition, some islands and low-lying areas of other countries are threatened by the prospect of rising sea level.

4. Many environmental problems transcend national boundaries and interests, necessitating a co-ordinated global effort. This is particularly true in areas outside national jurisdiction, and where there is transboundary pollution on land and in the oceans, atmosphere and outer space.

5. The need to protect the environment should be viewed in a balanced perspective and due emphasis be accorded to promoting economic growth and sustainable development, including eradication of poverty, meeting basic needs, and enhancing the quality of life. The responsibility for ensuring a better environment should be equitably shared and the ability of developing countries to respond be taken into account.

6. To achieve sustainable development, economic growth is a compelling necessity. Sustainable development implies the incorporation of environmental concerns into economic planning and policies. Environmental concerns should not be used to introduce a new form of conditionality in aid and development financing, nor as a pretext for creating unjustified barriers to trade.

7. The success of global and national environmental programmes requires mutually reinforcing strategies and the participation and commitment of all levels of society - government, individuals and organisations, industry and the scientific community.

8. Recognising that our shared environment binds all countries to a common future, we, the Heads of Government of the Commonwealth, resolved to act collectively and individually, commit ourselves to the following programme of action:

- advance policies and programmes which help achieve sustainable development, including the development of new and better techniques in integrating the environmental dimension in economic decision-making;

- strengthen and support the development of international funding mechanisms and appropriate decision-making procedures to respond to environmental protection needs which will include assisting developing countries to obtain access to and transfer of needed environmental technologies and which should take account of proposals for an international environment fund/Planet Protection Fund;

- support the work of the UNEP-WMO Intergovernmental Panel on Climate Change (IPCC);

- call for the early conclusion of an international convention to protect and conserve the global climate and, in this context, applaud the efforts of member governments to advance the negotiation of a framework convention under UN auspices;

- support the findings and recommendations of the Commonwealth Expert Group's Report on Climate Change as a basis for achievable action to develop strategies for adapting to climate change and for reducing greenhouse gas emissions, as well as making an important contribution to the work of the IPCC;

- support measures to improve energy conservation and energy efficiency;

- promote the reduction and eventual phase-out of substances depleting the ozone layer;

- promote afforestation and agricultural practices in developed and developing countries to arrest the increase in atmospheric carbon dioxide and halt the deterioration of land and water resources;

- strengthen efforts by developing countries in sustainable forest management and their manufacture and export of higher value-added forest products and, in this regard, support the activities of the International Tropical Timber Organisations and the Food and Agriculture Organisation's Tropical Forestry Action Plan, as well as take note of the recommendations of the 13th Commonwealth Forestry Conference;
• support activities related to the conservation of biological diversity and genetic resources, including the conservation of significant areas of virgin forest and other protected natural habitats;

• support low-lying and island countries in their efforts to protect themselves and their vulnerable natural marine ecosystems from the effects of sea level rise;

• discourage and restrict non-sustainable fishing practices and seek to ban tangle net and pelagic drift net fishing;

• support efforts to prevent marine pollution including curbing ocean dumping of toxic wastes;

• strengthen international action to ensure the safe management and disposal of hazardous wastes and to reduce transboundary movements, particularly to prevent dumping in developing countries;

• participate in relevant international agreement relating to the environment and promote new and innovative instruments which will attract widespread support for protecting the global environment and

• strengthen national, regional and international institutions responsible for environmental protection as well as the promotion of active programmes on environmental education to heighten public awareness and support.

9. We, the Heads of Government of the Commonwealth, resolve to take immediate and positive actions on the basis of the above programme. In this regard, we pledge our full support for the convening of the 1992 UN Conference on Environment and Development.

10. We call on the international community to join us in the endeavour.

Issued by Commonwealth Heads of Government at Langkawi, Malaysia October 21, 1989
AWARE, that the management of the environment and the pursuit of sustainable development are imperative to secure the well-being of the people of ASEAN today and in the future.

FURTHER AWARE, that the management of the environment and the pursuit of sustainable development require close cooperation between the member countries of ASEAN in particular and global cooperation in general, and that ASEAN should endeavour to strengthen such cooperation.

CONSCIOUS, that the United Nations Conference on Environment and Development, to be held in 1992, provides a forum and an opportunity to further promote such cooperation and for ASEAN to assert its views on environmental management and sustainable development.

RECOGNISING, that the formulation of such views and practices would require preparatory steps and studies, jointly as well as separately.

ALSO RECOGNISING that in such formulation, it would be beneficial to take note of:

- the Manila Declaration of 1981
- the Bangkok Declaration of 1984
- the Jakarta Resolution of 1987
- the Manila Summit Declaration of 1987, and
- the Langkawi Declaration of 1989

WE THE ASEAN MINISTERS FOR THE ENVIRONMENT HEREBY AGREE:

1. To initiate efforts leading towards concrete steps pertaining to environmental management, including:
   a. the formulation of an ASEAN strategy for sustainable development and a corresponding action programme,
   b. the harmonisation of environmental quality standards,
   c. the harmonisation of transboundary pollution prevention and abatement practices,
   d. the undertaking of research and development and the promotion of the use of cleaner technologies.

2. To initiate efforts leading towards concrete steps pertaining to natural resource management, including:
   a. the harmonisation of approaches in natural resource assessment,
   b. the development of joint natural resource management programmes,
   c. the development and harmonisation of procedures aimed at obtaining a better reflection of the state of natural wealth in the context of the System of National Accounts.

3. To initiate efforts enabling the inclusion of environmental factors into economic calculations and thus providing a better base for international economic cooperation.

4. To develop and formulate a common ASEAN position to be presented to the Ministerial Level Conference on the Environment for Asia and the Pacific and later to the United Nations Conference on Environment and Development in 1992, including:
   a. affirming ASEAN’s commitment to the pursuit of sustainable development;
   b. stressing the need to strengthen regional and international cooperation and proposing the principles upon which such cooperation should be based;
   c. emphasizing the importance of a global environmental agenda which reflects the priorities and concerns of all countries;
   d. calling attention to the patterns of international relations that inhibit the implementation of national environmental efforts in developing countries and their participation in global environmental efforts;
   e. reiterating the urgency for a supportive and predictable international economic environment which promotes economic growth and development of all countries;
   f. stressing the need for equitable sharing of responsibilities and allocation of liabilities in global environmental efforts;
   g. stressing that although global environmental efforts will benefit the common good, such benefits should be shared equitably, including the benefits of Research and Development;
   h. underlining the need for substantial additional resources to assist developing countries to pursue their goals of sustainable development as well as access to, and transfer of, environmentally sound technologies at affordable costs and the establishment of appropriate funding mechanisms.

The Fourth Asean Ministerial Meeting on the Environment (AMME)
Subang, Selangor Darul Ehsan, Malaysia 18-19 June 1990
LIST OF PRESCRIBED ACTIVITIES
[Extract from the Environmental Quality (Prescribed Activities)
(Environmental Impact Assessment) Order 1987]

1. AGRICULTURE:
   (a) Land development schemes covering an area of 500 hectares or more to bring forest land into agricultural production.
   (b) Agricultural programmes necessitating the resettlement of 100 families or more.
   (c) Development of agricultural estates covering an area of 500 hectares or more involving changes in types of agricultural use.

2. AIRPORT:
   (a) Construction of airports (having an airstrip of 2,500 metres or longer).
   (b) Airstrip development in state and national parks.

3. DRAINAGE AND IRRIGATION:
   (a) Construction of dams and man-made lakes and artificial enlargement of lakes with surface areas of 200 hectares or more.
   (b) Drainage of wetland, wildlife habitat or of virgin forest covering an area of 100 hectares or more.
   (c) Irrigation schemes covering an area of 5,000 hectares or more.

4. LAND RECLAMATION:
   Coastal reclamation involving an area of 50 hectares or more.

5. FISHERIES:
   (a) Construction of fishing harbours.
   (b) Harbour expansion involving an increase of 50 percent or more in fish landing capacity per annum.
   (c) Land-based aquaculture projects accompanied by clearing of mangrove swamp forests covering an area of 50 hectares or more.

6. FORESTRY:
   (a) Conversion of hill forest land to other land use covering an area of 50 hectares or more.
   (b) Logging or conversion of forest land to other land use within the catchment area of reservoirs used for municipal water supply, irrigation or hydro-power generation or in areas adjacent to state and national parks and national marine parks.
   (c) Logging covering an area of 500 hectares or more.
   (d) Conversion of mangrove swamps for industrial, housing or agricultural use covering an area of 50 hectares or more.
   (e) Clearing of mangrove swamps on islands adjacent to national marine parks.

7. HOUSING:
   Housing development covering an area of 50 hectares or more.

8. INDUSTRY:
   (a) Chemical - Where production capacity of each product or of combined products is greater than 100 tonnes/day.
   (b) Petrochemicals - All sizes.
   (c) Non-ferrous - Primary smelting:
      Aluminium - all sizes.
      Copper - all sizes.
      Others - producing 50 tonnes/day and above of products.
   (d) Non-Metallic - Cement - for clinker throughput of 30 tonnes/hour and above.
      Lime - 100 tonnes/day and above burnt lime rotary kiln or 50 tonnes/day and above vertical kiln.
   (e) Iron and steel - Require in iron ore as raw materials for production greater than 100 tonnes/day, or
      Using scrap iron as raw materials for production greater than 200 tonnes/day.
   (f) Shipyards - Dead Weight Tonnage greater than 5,000 tonnes.
   (g) Pulp and paper industry - Production capacity greater than 50 tonnes/day.

9. INFRASTRUCTURE:
   (a) Construction of hospitals with outfall into beachfronts used for recreational purposes.
   (b) Industrial estate development for medium and heavy industries covering an area of 50 hectares or more.
   (c) Construction of expressways.
   (d) Construction of national highways.
   (e) Construction of new townships.

10. PORTS:
    (a) Construction of ports.
    (b) Port expansion involving an increase of 50 percent or more in handling capacity per annum.
LIST OF PRESCRIBED ACTIVITIES
AS GIVEN IN FIRST SCHEDULE OF THE NATURAL RESOURCES & ENVIRONMENT ORDINANCE (PA) ORDER 1994 (SARAWAK)

11. MINING:
   (a) Mining of minerals in new areas where the mining lease covers a total area in excess of 250 hectares.
   (b) Ore processing, including concentrating for aluminium, copper, gold or tantalum.
   (c) Sand dredging involving an area of 50 hectares or more.

12. PETROLEUM:
   (a) Oil and gas fields development.
   (b) Construction of off-shore and on-shore pipelines in excess of 50 kilometres in length.
   (c) Construction of oil and gas separation, processing, handling and storage facilities.
   (d) Construction of oil refineries.
   (e) Construction of product depots for the storage of petrol, gas or diesel (excluding service stations) which are located within 3 kilometres of any commercial, industrial or residential areas and which have a combined storage capacity of 60,000 barrels or more.

13. POWER GENERATION AND TRANSMISSION:
   (a) Construction of steam generated power stations burning fossil fuels and having a capacity of more than 10 megawatts.
   (b) Dams and hydroelectric power schemes with either or both of the following:
      (i) dams over 15 metres high and ancillary structures covering a total area in excess of 40 hectares;
      (ii) reservoirs with a surface area in excess of 400 hectares.
   (c) Construction of combined cycle power stations.
   (d) Construction of nuclear-fueled power stations.

14. QUARRIES:
    Proposed quarrying of aggregate, limestone, silica, quartzite, sandstone, marble and decorative building stone within 3 kilometres of any existing residential, commercial or industrial areas, or any area for which a licence, permit or approval has been granted for residential, commercial or industrial development.

15. RAILWAYS:
   (a) Construction of new routes.
   (b) Construction of branch lines.

16. TRANSPORTATION:
    Construction of Mass Rapid Transport projects.

17. RESORT AND RECREATIONAL DEVELOPMENT:
   (a) Construction of coastal resort facilities or hotels with more than 80 rooms.
   (b) Hill station resort or hotel development covering an area of 50 hectares or more.
   (c) Development of tourist or recreational facilities in national parks.
   (d) Development of tourist or recreational facilities on islands in surrounding waters which are gazetted as national marine parks.

18. WASTE TREATMENT AND DISPOSAL:
   (a) Toxic and Hazardous Waste -
      (i) Construction of incineration plant.
      (ii) Construction of recovery plant (off-site).
      (iii) Construction of wastewater treatment plant (off-site).
      (iv) Construction of secure landfill facility.
      (v) Construction of storage facility (off-site).
   (b) Municipal Solid Waste -
      (i) Construction of incineration plant.
      (ii) Construction of composting plant.
      (iii) Construction of recovery/recycling plant.
      (iv) Construction of municipal solid waste landfill facility.
   (c) Municipal Sewage -
      (i) Construction of wastewater treatment plant.
      (ii) Construction of marine outfall.

19. WATER SUPPLY:
   (a) Construction of dams or impounding reservoirs with a surface area of 200 hectares or more.
   (b) Groundwater development for industrial, agricultural or urban water supply of greater than 4,500 cubic metres per day.

1. Agriculture
2. Logging
3. Development of Commercial Industrial Housing Estates
4. Activities which may Pollute Inland Water or Affect Sources of Water Supply.
5. Fisheries and Activities which may Endanger Marine or Aquatic Life, Plants in Inland Waters or Erosion of River Banks.
7. Any other activities which may damage or have an adverse impact on Quality of Environment or Natural Resources of the State.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Stationary Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Chemical Industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Pesticides and Fertilizer</td>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>91</td>
<td>80</td>
<td>49</td>
</tr>
<tr>
<td>- Acid manufacturing</td>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>- Chemical Manufacturing</td>
<td></td>
<td>198</td>
<td>196</td>
<td>192</td>
<td>194</td>
<td>175</td>
<td>98</td>
<td>124</td>
<td>89</td>
</tr>
<tr>
<td>- Paint and Varnish</td>
<td></td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>20</td>
<td>26</td>
<td>54</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>- Plastics and Resin</td>
<td></td>
<td>92</td>
<td>92</td>
<td>90</td>
<td>91</td>
<td>142</td>
<td>54</td>
<td>53</td>
<td>44</td>
</tr>
<tr>
<td>- Soaps and Detergents</td>
<td></td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>24</td>
<td>69</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>b. Food and Agriculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Animal Feed</td>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>54</td>
<td>54</td>
<td>35</td>
</tr>
<tr>
<td>- Fishmeal Mill</td>
<td></td>
<td>189</td>
<td>185</td>
<td>185</td>
<td>182</td>
<td>176</td>
<td>158</td>
<td>158</td>
<td>39</td>
</tr>
<tr>
<td>- Palm Oil Mill</td>
<td></td>
<td>250</td>
<td>250</td>
<td>260</td>
<td>258</td>
<td>267</td>
<td>286</td>
<td>286</td>
<td>157</td>
</tr>
<tr>
<td>- Rice Mill</td>
<td></td>
<td>373</td>
<td>352</td>
<td>318</td>
<td>301</td>
<td>482</td>
<td>497</td>
<td>455</td>
<td>99</td>
</tr>
<tr>
<td>- Rubber Mill</td>
<td></td>
<td>209</td>
<td>209</td>
<td>211</td>
<td>209</td>
<td>184</td>
<td>184</td>
<td>168</td>
<td>70</td>
</tr>
<tr>
<td>- Rubber Products Manufacturing</td>
<td></td>
<td>77</td>
<td>78</td>
<td>82</td>
<td>91</td>
<td>322</td>
<td>595</td>
<td>594</td>
<td>284</td>
</tr>
<tr>
<td>- Smoke House</td>
<td></td>
<td>700</td>
<td>682</td>
<td>655</td>
<td>627</td>
<td>81</td>
<td>67</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>c. Metal Industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Aluminium Works 19</td>
<td></td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>34</td>
<td>34</td>
<td>39</td>
<td>0</td>
</tr>
<tr>
<td>- Foundries</td>
<td></td>
<td>297</td>
<td>295</td>
<td>277</td>
<td>261</td>
<td>314</td>
<td>314</td>
<td>228</td>
<td>121</td>
</tr>
<tr>
<td>- Iron and Steel Mill</td>
<td></td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>26</td>
<td>26</td>
<td>51</td>
<td>41</td>
</tr>
<tr>
<td>- Lead Smelter and Related Works</td>
<td></td>
<td>4</td>
<td>4</td>
<td>11</td>
<td>11</td>
<td>32</td>
<td>32</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>- Tin Smelting</td>
<td></td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>d. Mineral Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Asbestos Works</td>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>- Asphalts and Concrete Batching</td>
<td></td>
<td>62</td>
<td>62</td>
<td>56</td>
<td>57</td>
<td>57</td>
<td>47</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>- Bricks Works, Clay and Clay Works</td>
<td></td>
<td>98</td>
<td>96</td>
<td>82</td>
<td>82</td>
<td>185</td>
<td>306</td>
<td>313</td>
<td>95</td>
</tr>
<tr>
<td>- Cement Products</td>
<td></td>
<td>178</td>
<td>178</td>
<td>178</td>
<td>180</td>
<td>241</td>
<td>270</td>
<td>219</td>
<td>125</td>
</tr>
<tr>
<td>- Glass Work</td>
<td></td>
<td>29</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>39</td>
<td>52</td>
<td>46</td>
<td>0</td>
</tr>
<tr>
<td>- Limes and Plaster Works</td>
<td></td>
<td>321</td>
<td>320</td>
<td>319</td>
<td>315</td>
<td>3</td>
<td>8</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>- Portland Cement Manufacturing</td>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>47</td>
<td>47</td>
<td>0</td>
</tr>
<tr>
<td>- Stone Quarrying</td>
<td></td>
<td>355</td>
<td>324</td>
<td>293</td>
<td>285</td>
<td>350</td>
<td>638</td>
<td>426</td>
<td>0</td>
</tr>
<tr>
<td>e. Petroleum Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Petroleum Refineries</td>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>46</td>
<td>21</td>
</tr>
<tr>
<td>- Miscellaneous Petroleum Process</td>
<td></td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>32</td>
<td>36</td>
<td>36</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>- Gas Processing</td>
<td></td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>25</td>
<td>25</td>
<td>30</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>f. Woodbase Products and Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Charcoal Making</td>
<td></td>
<td>547</td>
<td>522</td>
<td>493</td>
<td>484</td>
<td>484</td>
<td>380</td>
<td>31</td>
<td>15</td>
</tr>
<tr>
<td>- Pulp and Paper Recycling</td>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>- Paper Products</td>
<td></td>
<td>54</td>
<td>53</td>
<td>54</td>
<td>58</td>
<td>58</td>
<td>58</td>
<td>62</td>
<td>42</td>
</tr>
<tr>
<td>- Sawmills</td>
<td></td>
<td>1079</td>
<td>1066</td>
<td>1014</td>
<td>1006</td>
<td>1212</td>
<td>1206</td>
<td>1625</td>
<td>870</td>
</tr>
</tbody>
</table>
Continuation...

### Type of Sources

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>g. Fuel Combustion Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal Power Station</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>32</td>
<td>32</td>
<td>213</td>
</tr>
<tr>
<td>Boiler and Furnaces</td>
<td>2141</td>
<td>2209</td>
<td>2374</td>
<td>2526</td>
<td>2613</td>
<td>2828</td>
<td>2941</td>
<td>297</td>
</tr>
<tr>
<td>Incinerator</td>
<td>223</td>
<td>234</td>
<td>250</td>
<td>279</td>
<td>406</td>
<td>427</td>
<td>448</td>
<td>30</td>
</tr>
</tbody>
</table>

|                      |      |      |      |      |      |      |      |      |
| **Sub Total I**      | 2378 | 2457 | 2638 | 2638 | 2819 | 3033 | 3287 | 549  |

| **Sub Total II**      | 7653 | 7610 | 7600 | 7711 | 8054 | 9012 | 8899 | 2875 |

### 2. Mobile Sources

|                      |      |      |      |      |      |      |      |      |
| Motor Vehicles       |      |      |      |      |      |      |      |      |
| Petrol Powered       | 3974845 | 4208947 | 4461275 | 4844932 | 5140907 | 5452876 | 5863454 | 6837010 |
| Diesel Powered       | 274913  | 298177 | 350158 | 366990 | 398562 | 418457 | 451686 | 5311319 |

| **Sub Total II**      | 4249758(a) | 4507124(b) | 4811433(c) | 5211922(d) | 5539469(e) | 5871333 | 6315140 | 7368329 |

### 3. Solid Waste Disposal

|                      |      |      |      |      |      |      |      |      |
| Municipal Waste      |      |      |      |      |      |      |      |      |
| Disposal Site*       | 38   | 29   | 43   | 78   | 55   | 24   | 16   | 20   |
| Municipal Incinerator| 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |

| **Sub Total III**     | 40   | 31   | 45   | 80   | 57   | 26   | 18   | 21   |

| **Grand Total**       | 4257451 | 4514765 | 4795049 | 5212002 | 5547580 | 5880371 | 6324057 | 7371225 |

**Note:**
- Open Burning Practice detected at Solid Waste Disposal Sites
- (a): Number of Motor Vehicles Until December, 1988 for Peninsular Malaysia only.
- (b): Number of Motor Vehicles Until December, 1989 for Peninsular Malaysia only.
- (c): Number of Motor Vehicles Until October, 1990 for Peninsular Malaysia only.
- (d): Number of Motor Vehicles Until November, 1991 for Peninsular Malaysia only.
- (e): Number of Motor Vehicles Until October, 1992 for Peninsular Malaysia only.
<table>
<thead>
<tr>
<th>No.</th>
<th>Regulations/Order</th>
<th>P.U. (A)</th>
<th>Effective Date of Enforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Environmental Quality (Prescribed Premises) (Crude Palm Oil) Order 1977</td>
<td>199</td>
<td>1 July 1978</td>
</tr>
<tr>
<td>3.</td>
<td>Environmental Quality (Licensing) Regulations 1977</td>
<td>198</td>
<td>1 October 1977</td>
</tr>
<tr>
<td>5.</td>
<td>Environmental Quality (Prescribed Premises) (Raw Natural Rubber) (Amendment) Order 1978</td>
<td>337</td>
<td>1 April 1979</td>
</tr>
<tr>
<td>7.</td>
<td>Environmental Quality (Clean Air) Regulations 1978</td>
<td>280</td>
<td>1 October 1978</td>
</tr>
<tr>
<td>8.</td>
<td>Environmental Quality (Compounding of Offences) Regulations 1978</td>
<td>281</td>
<td>1 October 1978</td>
</tr>
<tr>
<td>9.</td>
<td>Environmental Quality (Sewage and Industrial Effluents) Regulations 1979</td>
<td>12</td>
<td>1 January 1979</td>
</tr>
<tr>
<td>10.</td>
<td>Environmental Quality (Control of Lead Concentration in Motor Gasoline) Regulations 1985</td>
<td>296</td>
<td>11 July 1987</td>
</tr>
<tr>
<td>11.</td>
<td>Environmental Quality (Motor Vehicles Noise) Regulations 1987</td>
<td>244</td>
<td>16 July 1987</td>
</tr>
<tr>
<td>13.</td>
<td>Environmental Quality (Scheduled Wastes) Regulations 1989</td>
<td>139</td>
<td>1 May 1989</td>
</tr>
<tr>
<td>15.</td>
<td>Environmental Quality (Prescribed Premises) (Scheduled Wastes Treatment and Disposal Facilities) Regulations 1989</td>
<td>141</td>
<td>1 May 1989</td>
</tr>
<tr>
<td>16.</td>
<td>Environmental Quality (Prohibition on the Use of Propellants and Blowing Agent) Order 1993</td>
<td>434</td>
<td>30 December 1993</td>
</tr>
<tr>
<td>17.</td>
<td>Environmental Quality (Delegations of Powers on Marine Pollution Control)</td>
<td>537</td>
<td>8 December 1994</td>
</tr>
<tr>
<td>18.</td>
<td>Environmental Quality (Prohibition on the Use of Controlled Substance in Soap, Synthetic Detergent and Other Agents) Order 1995</td>
<td>115</td>
<td>11 April 1995</td>
</tr>
<tr>
<td>21.</td>
<td>Environmental Quality (Control of Emission from Diesel Engines) Regulations 1996</td>
<td>429</td>
<td>1 September 1996</td>
</tr>
<tr>
<td>22.</td>
<td>Environmental Quality (Control of Emission from Petrol Engines) Regulations 1996</td>
<td>543</td>
<td>1 November 1996</td>
</tr>
<tr>
<td><strong>TABLE 3</strong></td>
<td><strong>LIST OF ENVIRONMENTAL GUIDELINES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EIA GUIDELINES</strong></td>
<td><strong>LAND/INDUSTRIAL DEVELOPMENT GUIDELINES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Groundwater and/or Surface Water Supply, 1995</td>
<td>- Export of Scheduled Wastes, 1993</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Drainage and/or Irrigation Projects, 1995</td>
<td>- Storage of Scheduled Wastes, 1993</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Dams and/or Reservoirs Projects, 1995</td>
<td>- Interim Guidelines for the Transportation on Dangerous Goods (Chemicals Not Otherwise Controlled) 1993</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Thermal Generation and/or Transmission Projects, 1995</td>
<td>- Import of Scheduled Wastes, 1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Fishing Harbours and/or Land-Based Aquaculture Projects, 1995</td>
<td>- Zero Burning of Felled Plant Materials, 1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Mines and Quarries, 1995</td>
<td>- Guidelines on the export, import and storage of scheduled wastes in Malaysia (CD ROM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Municipal Solid Waste and Sewage Treatment and Disposal Projects, 1995</td>
<td>- Air Pollution Control Measures in Palm Oil Mills, 1977</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Erection of Fuel Burning Equipment, 1981

- Control Measures for Protection of Ozone Layer, 1994
- Project Preparation under the Multilateral Fund, 1995
- Prequalifying and Selection Criteria for Acceptable Alternatives of Ozone Depleting Substances in Malaysia, 1995

- Interim Guidelines for Controlled Burning of Felled Plant Materials and Combustible Solid Wastes from the Housing Industry in the Klang Valley, 1991
- Code of Practice for Service Stations, 1980 (revised 1993)

- Siting and Zoning of Industries, 1976 (revised 1994)
- Prevention and Control of Soil Erosion and Siltation, 1978 (revised 1996)


- OZONE-DEPLETING SUBSTANCES GUIDELINES

- Waste Management GUIDELINES

- Interim Guidelines for Export of Scheduled Wastes, 1995
- Interim Guidelines for the Export of Scheduled Wastes, 1995
- Interim Guidelines for the Export of Scheduled Wastes, 1995
- Interim Guidelines for the Export of Scheduled Wastes, 1995
- Interim Guidelines for the Export of Scheduled Wastes, 1995
- Interim Guidelines for the Export of Scheduled Wastes, 1995
- Interim Guidelines for the Export of Scheduled Wastes, 1995
### FEDERAL LAWS

<table>
<thead>
<tr>
<th>No.</th>
<th>Act/Ordinance</th>
<th></th>
<th>No.</th>
<th>Act/Ordinance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Merchant Shipping Ordinance, 1952</td>
<td></td>
<td>4.</td>
<td>Mining Enactment (Malacca)</td>
</tr>
<tr>
<td>3.</td>
<td>Road Traffic Ordinance, 1958</td>
<td></td>
<td>6.</td>
<td>Mining Ordinance (Sabah)</td>
</tr>
<tr>
<td>7.</td>
<td>Drainage Works Ordinance, 1 (Revised 1972)</td>
<td></td>
<td>10.</td>
<td>Forest Enactment (Strait Settlement Chapter 147) 1947</td>
</tr>
<tr>
<td>16.</td>
<td>Local Government Act, 1976</td>
<td></td>
<td>18.</td>
<td>Natural Resources Ordinance (Sarawak) Chapter 84, 1949</td>
</tr>
<tr>
<td>22.</td>
<td>Exclusive Economic Zone Act, 1985</td>
<td></td>
<td>24.</td>
<td>The Natural Resources and Environment (Amendment) Ordinance, 1993 (Sarawak)</td>
</tr>
<tr>
<td>23.</td>
<td>Customs Act, 1967, Customs Duties (Amendment) (No. 35) Order, 1989</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Customs (Prohibition of Import)(Amendment) (No. 2) Order 1993</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Customers (Prohibition of Export) (Amendment) (No. 3) Order 1993</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### STATE LAWS

<table>
<thead>
<tr>
<th>No.</th>
<th>Act/Ordinance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Waters Enactment (F.M.S. Chapter 146) 1920</td>
</tr>
<tr>
<td>2.</td>
<td>Rivers and Drainage Enactment (Kelantan)</td>
</tr>
<tr>
<td>3.</td>
<td>Mining Enactment (F.M.S. Chapter 147) 1929</td>
</tr>
</tbody>
</table>

(Applicable for States of Negeri Sembilan, Pahang, Perak and Selangor; slightly amended for Kedah, Perlis, Johore, Kelantan and Terengganu)

Figure 5.29 DOE: Complaint Cases, 1989-1999
Rajah 5.30 Jabatan Alam Sekitar: Bilangan dan Jenis-Jenis Pencemaran Yang Diadukan Mengikut Negeri, 1999

Figure 5.30 Department of Environment: Number and Types of Pollution Complaints by State, 1999.
FIGURE 3

Rajah 5.32 Jabatan Alam Sekitar : Jenis-Jenis Aduan Yang Diterima, 1999
Figure 5.32 Department of Environment : Types of Complaints received, 1999
FIGURE 5

Chart 19-1

EMISSION OF POLLUTANTS TO THE ATMOSPHERE
BY SOURCE, 1987-1995

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Sources</td>
<td>571.1</td>
<td>542.1</td>
<td>572.7</td>
<td>630.8</td>
<td>681.0</td>
<td>1282.1</td>
<td>1233.1</td>
<td>1388.9</td>
<td>1426.7</td>
</tr>
<tr>
<td>Stationary Sources</td>
<td>364.4</td>
<td>368.2</td>
<td>184.9</td>
<td>194.7</td>
<td>204.4</td>
<td>296.9</td>
<td>293.0</td>
<td>376.3</td>
<td>464.7</td>
</tr>
<tr>
<td>Burning of Wastes</td>
<td>10.7</td>
<td>33.2</td>
<td>15.3</td>
<td>24.0</td>
<td>25.9</td>
<td>27.7</td>
<td>37.8</td>
<td>83.8</td>
<td>109.7</td>
</tr>
</tbody>
</table>

Notes: Mobile Sources — Vehicles
Stationary Sources — Power Stations, Industrial Fuel Burning Processes and Domestic Fuel Burning
Burning of Wastes — Burning of Municipal and Industrial Waste
FIGURE 6

CHART 19-2

RIVER WATER QUALITY INDEX. 1987-1995

<table>
<thead>
<tr>
<th>Year</th>
<th>Clean</th>
<th>Slightly Polluted</th>
<th>Very Polluted</th>
<th>Total Rivers Monitored</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>114</td>
</tr>
<tr>
<td>1988</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>116</td>
</tr>
<tr>
<td>1989</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>119</td>
</tr>
<tr>
<td>1990</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>114</td>
</tr>
<tr>
<td>1991</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>116</td>
</tr>
<tr>
<td>1992</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>119</td>
</tr>
<tr>
<td>1993</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>114</td>
</tr>
<tr>
<td>1994</td>
<td>114</td>
<td>116</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>119</td>
<td>119</td>
<td>119</td>
<td></td>
</tr>
</tbody>
</table>
CHART 19-3
SOLID WASTE GENERATED BY SELECTED LOCAL AUTHORITY AREAS, 1990-2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kangar</td>
<td>43</td>
<td>57</td>
<td>68</td>
<td>82</td>
<td>139</td>
</tr>
<tr>
<td>K. Baharu</td>
<td>66</td>
<td>85</td>
<td>132</td>
<td>146</td>
<td>175</td>
</tr>
<tr>
<td>K. Terengganu</td>
<td>58</td>
<td>85</td>
<td>119</td>
<td>172</td>
<td>211</td>
</tr>
<tr>
<td>Kuantan</td>
<td>36</td>
<td>44</td>
<td>67</td>
<td>85</td>
<td>107</td>
</tr>
<tr>
<td>Seremban</td>
<td>65</td>
<td>95</td>
<td>160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melaka</td>
<td>94</td>
<td>115</td>
<td>168</td>
<td>215</td>
<td>236</td>
</tr>
<tr>
<td>Kota Setar</td>
<td>98</td>
<td>128</td>
<td>142</td>
<td>182</td>
<td>229</td>
</tr>
<tr>
<td>J. Baharu</td>
<td>107</td>
<td>140</td>
<td>180</td>
<td>236</td>
<td>304</td>
</tr>
<tr>
<td>Ipoh</td>
<td>105</td>
<td>121</td>
<td>164</td>
<td>218</td>
<td>324</td>
</tr>
<tr>
<td>P. Pinang</td>
<td>155</td>
<td>192</td>
<td>273</td>
<td>355</td>
<td>386</td>
</tr>
<tr>
<td>K. Lumpur</td>
<td>766</td>
<td>913</td>
<td>1022</td>
<td>1058</td>
<td>1095</td>
</tr>
</tbody>
</table>
DEPARTMENT OF ENVIRONMENT ORGANISATION CHART

DIRECTOR GENERAL

DEPUTY DIRECTOR GENERAL

LEGAL OFFICER

ADMINISTRATION & FINANCE

INFORMATION TECHNOLOGY

CONTROL

DEVELOPMENT & PLANNING

ASSESSMENT

IKLAS

FINANCE

ADMINISTRATION

WEBSITE & WEBPAGE DEVELOPMENT

ENFORCEMENT

MONITORING

GIS PAT KB

ADMIN

PERSONNEL

FINANCE TECHNOLOGY

MINISTRATION & INFORMATION

INANCE

TRAINING & DEVELOPMENT

CONTRACTS

MONITORING MONTREAL AIR INVENTORY

WEBSITE & WEBPAGE DEVELOPMENT

ENVIRONMENTAL SERVICES CENTRE MIDA

ADVISORY SERVICES

INTERNATIONAL AFFAIRS

EIA

IT SUPPORT

STATE DIRECTORS

KEDAH

PERLIS

P. PINANG

SELANGOR

PERAK

MELAKA

WP LABUAN

WP KL

N SEMBILAN

JOHOR

T'GANU

PAHANG

SABAH

SARAWAK

KELANTAN

Langkawi

Terengganu

(Miri, Bintulu)
FIGURE 9

DEPARTMENT OF ENVIRONMENT: NUMBER OF CASES PROSECUTED ACCORDING TO OFFENCES, 1999
Department of Environment: Distribution of Personnel, 1999

- Support Group
- Managerial and Professional Group

Department of Environment: Distribution of Personnel, 2000

- Support Group
- Managerial and Professional Group