

APPENDIXES

TABLES

Table 1

Haze Episode: Health Indicator, Proposed Response and Possible Action Line

| ALERT LEVEL | AIR POLLUTANT INDEX (API) READINGS | | HEALTH EFFECT DESCRIPTOR | ACTION LINE | OUTPUT |
|-------------------------|------------------------------------|---|--------------------------|--|--|
| Early Alert 1 | 101 - 200 | <p>>101 <150 <i>exceeds 24hrs</i></p> <p>>101 <150 <i>exceeds 72hrs</i></p> | Unhealthy | <ul style="list-style-type: none"> • Car pooling • Construction sites: Usage of sprinkler systems to suppress dust • Industries to be alert for possible reduction of operating hours • All operations involving discharge of volatile organic compounds to be minimized (spraying, flaring, painting) • Alert industries and power stations to stockpile and eventual use of low sulphur content fuel oil and to switch to fuel gas • Car park rates to be increased • Public transport fares to be reduced • Step-up enforcement - intensify aerial surveillance and close monitoring of municipal disposal sites, forest areas, estates/plantation areas, construction/quarry sites • Monitoring of respiratory cases in hospitals and private clinics | <ul style="list-style-type: none"> • Daily API broadcast by radio/TV. • API issuance in newspapers. • List of industries on alert • Statement on offenders • Daily report on respiratory cases. |

| | | | | | |
|--------------------------|------------------|---|-----------------------|---|---|
| <p>Early Alert 2</p> | | <p>>151 <200 <i>exceeds</i> 72hrs</p> | <p>Unhealthy</p> | <ul style="list-style-type: none"> • Production and stockpile of lower sulphur content fuel oil • Total prohibition of open burning - all contravention licenses revoked temporarily • Advice public to get away from affected areas • Industries to reduce usage of liquid fuels by 30% • Cut down on traffic volume entering city • Overall load shedding by industries | <ul style="list-style-type: none"> • Reduced emission • Zero emission • Voluntary Reduced emission • Designated road closures |
| <p>On Alert 3</p> | <p>201 - 300</p> | <p>>201 <250 <i>exceeds</i> 48hrs</p> | <p>Very Unhealthy</p> | <ul style="list-style-type: none"> • Old buses and taxis to stop operations • Public health measures to be disseminated • Introduce discounted or free fares for public transport • Cut down lighting, air-conditioning and unnecessary electrical equipments • Air pollutants emitters to shed full load (cements, quarries and refineries) • Major industries and power stations switch to lower sulphur content fuel oil and/or gas • Cut down 50% of traffic volume entering the city • Cut down 50% fuel utilization | <ul style="list-style-type: none"> • Address health measures on radio, TV and newspapers. • Power station / industries / Vehicle |

| | | | | | |
|-----------------------|--------------|--|-----------|---|---|
| Warning 4 | 300 - 400 | >301 <400 <i>exceeds</i> <i>24hrs</i> | Hazardous | <ul style="list-style-type: none"> • Preparation of plan for reducing school hours • Shortened or staggered working hours • Introduce discounted or free fare for public transport • Patients with respiratory problems advised to leave town | <ul style="list-style-type: none"> • Daily API broadcast by radio/TV. • API issuance in newspapers |
| Emergency 5 | 301 - 400 | >301 <400 <i>exceeds</i> <i>24hrs</i> | Hazardous | <ul style="list-style-type: none"> • Patients with respiratory problems advised to leave town • Reduce cooking, eat ready food and nuts • Plan for evacuation • Declare emergency • Evacuation | <ul style="list-style-type: none"> • Daily API broadcast by radio/TV • API issuance in newspapers • Emergency declaration • Implementation of Evacuation Plan |

Source: The Star, 15 September (1997), p. 6 as in Foon and Kong (1998).

Table2**Government agencies equipped with legal powers for administering environmental resources and other environmentally-related matters**

| Subject | Agencies with legal powers |
|------------------------------------|---|
| Land | Department of Land and Cooperative Development; Land and District Office. |
| Water | Drainage and Irrigation Department; Department of Land; Department of Environment; Department of Fisheries; Local Authorities; Department of Health; Department of Mines. |
| Marine | Department of Environment; Department of Marines; Department of Fisheries; Marine Police. |
| Forest | Department of Forestry; Police. |
| Wildlife and National Parks | Department of Wildlife and National Parks. |
| Agriculture | Department of Agriculture; Department of Environment. |
| Air | Department of Environment; Local Authorities; Department of Road Transport; Department of Land and Cooperative Development; Department of Mines. |
| Solid Waste | Local Authorities; Department of Environment; Malaysia Highway Authority; Department of Forestry. |
| Noise | Department of Environment; Local Authorities; Factories and Machinery Department; Police. |

Table 3

Environmentally-related legislation in Malaysia

1. The Waters Enactment, Chapter 146, 1920 (Revised) Act 418, 1989
2. Mining Enactment, Chapter 147, 1929
3. Forest Enactment, Chapter 153, 1935
4. Natural Resources Ordinance, 1949
5. Poisons Ordinance, 1952 (Revised) Act 366, 1989
6. Sales of Food and Drugs Ordinance, No. 28, 1952 (Revised) Act 368, 1989
7. Dangerous Drugs Ordinance, No. 30, 1952 (Revised), 1980
8. Merchant Shipping Ordinance, 1952
9. Federation Port Rules, 1953
10. Irrigation Areas Ordinance, No. 31, 1953 (Revised), 1989
11. The Aboriginal Peoples Act, 1954, Act 134 (Revised), 1974
12. Drainage Works Ordinance, No. 1, 1954 (Revised) Act 354, 1988
13. Medicine (Sales and Advertisement) Ordinance, No. 10, 1956
14. Explosives Ordinance, 1957
15. Road Traffic Ordinance, 1958
16. Land Conservation Act, Act 3, 1960 (Revised), 1989
17. Fisheries Act, 1963, Act 317, 1985
18. National Land Code, Act 56 and P.P. 474, 1965
19. Housing Development Act (Licensing and Control) 1965
20. Continental Shelf Act, Act 83, 1966 (Revised), 1972
21. Petroleum Mining Act, Act 95, 1966 (Revised), 1972
22. Factories and Machinery Act, 1967, Act 139 (Revised), 1974
23. Radioactive Substances Act, Act 17, 1968

24. Civil Aviation Act, Act 3, 1969
25. Malaria Eradication Act, Act 52, 1971
26. Trade Description Act, 1972
27. Protection of Wildlife Act, Act 76, 1972, (Revised) 1976
28. City of Kuala Lumpur (Planning) Act, Act 107, 1973 (Repealed), 1982
29. Street, Drainage and Building Act, Act 133, 1974
30. Petroleum Development Act, 1974
31. Geological Survey Act, Act 129, 1974
32. Pesticides Act, Act 149, 1974
33. Environmental Quality Act, Act 127, 1974
34. Municipal and Town Boards (Amendment) Act, Act A289, 1975
35. Destruction of Disease-Bearing Insects Act, Act 154, 1975
36. Antiquities Act, Act 168, 1976
37. Local Government Act, Act 171, 1976
38. Town and Country Planning Act, Act 172, 1976
39. The National Parks Act, Act 226, 1980
40. Malaysian Highway Authority Act, Act 231, 1980
41. Atomic Energy Licensing Act, Act 304, 1984
42. Exclusive Economic Zone Act, Act 311, 1984
43. National Forestry Act, Act 313, 1984
44. Sewerage Services Act, Act 508, 1993
45. Occupational Safety and Health Act, Act 514, 1994
46. Merchant Shipping (Oil Pollution) Act, Act 515, 1994
47. Mineral Development Act, Act 525, 1994

Table 4**List of implementing agencies and legislation concerned with the control of chemicals and hazardous wastes**

| Agency | Legislation |
|---|---|
| 1. Pesticides Board, Ministry of Agriculture | 1. Pesticides Act, 1974 <ol style="list-style-type: none">Pesticides (Amendment of First and Second Schedule) Order 1982Registered Pesticides 1978-1988Pesticides (Licensing for Sale and Storage for Sale) Rule 1988Guidelines on Applications for Approval of Advertisement on Pesticides 1981Guidelines on Application for Permit to Import Pesticides for Educational and Research Purposes 1981Guidelines on Registration, Labeling and Classification of Pesticides |
| 2. Ministry of Health | 1. Food Act 1983 <ol style="list-style-type: none">Food Regulations 1985 2. Sale of Food and Drugs Ordinance, 1952 <ol style="list-style-type: none">Sale of Food and Drugs Regulations, 1952Sale of Food and Drugs (Margosa Oil) Regulations, 1952Sale of Food and Drugs (Cliquinol) Regulations, 1982Control of Drugs and Cosmetics Regulations, 1984 3. Poisons Act, 1952 (Revised 1989) <ol style="list-style-type: none">Poisons List Order 1983Poisons (Sodium Arsenite) Regulations, 1949Poisons (Sodium Hydroxide) Regulations, 1962 4. Medicine (Advertisement and Sale) Act, 1956 (Revised 1983) |
| | 5. Dangerous Drug Acts, 1952 <ol style="list-style-type: none">Dangerous Drug (Amendment) Act, 1983Dangerous Drug Regulation, 1952 6. Dangerous Drug (Special Preventive Measures) Acts, 1985 |

| | |
|---|---|
| | 7. Hydrogen Cyanide Fumigation Act |
| 3. Ministry of Domestic Trade and Consumer Affairs | 3. Trade Description Act, 1972 a. Trade Description (Amendment) Act, 1982 |
| 4. Factories and Machinery Department, Ministry of Human Resources | 1. Factories and Machinery Act, 1967 a. Factories and Machinery (Asbestos Process) Regulations, 1986 b. Factories and Machinery (Lead) Regulations, 1989 2. Petroleum (Safety Measures) Act, 1984 a. Petroleum (Safety Measures)(Transportation by Pipeline) Regulations, 1985 |
| 5. Customs and Excise Department, Ministry of Finance | 1. Customs Act, 1967 a. Customs (Prohibition of Export) Order 1988 b. Customs (Prohibition of Import) Order 1988 c. Customs (Prohibition of Export) (Amendment)(No. 2) Order 1993 d. Customs (Prohibition of Import) (Amendment)(No. 3) Order 1993 |
| 6. Department of Environment, Ministry of Science, Technology and the Environment | 1. Environmental Quality Act, 1974 a. Environmental Quality Act (Amendment) 1985 b. Environmental Quality (Clean Air) Regulations 1978 c. Environmental Quality (Sewage and Industrial Effluent) Regulations 1979 d. Environmental Quality (Scheduled Waste) Regulations 1989 e. Environmental Quality (Prescribed Premises)(Scheduled Waste Treatment and Disposal Facilities) Order 1989 |

Table 5

Business Charter for Sustainable Development

1. Corporate Priority: To recognize environmental management as among the highest corporate priorities and as a key determinant to sustainable development; to establish policies, programs, and practices for conducting operations in an environmentally sustainable manner.
2. Integrated Management: To integrate these policies, programs, and practices fully into each business as an essential element of management in all its functions.
3. Process of Improvement: To continue to improve corporate policies, programs, and environmental performance, taking into account technological developments, scientific understanding, consumer needs, and community expectations with legal regulations as a starting point; and to apply the same environmental criteria internationally.
4. Employee Education: To educate, train, and motivate employees to conduct their activities in an environmentally responsible manner.
5. Prior Assessment: To assess environmental impacts before starting a new activity or project and before decommissioning a facility or leaving a site.
6. Products and Services: To develop and provide products or services that have no undue environmental impacts and are safe in their intended use, that are efficient in their consumption of energy and natural resources, and can be recycled, reused, or disposed of safely.
7. Consumer Advice: To advise, and where relevant, to educate customers, distributors, and the public in the safe use, storage, and disposal of products provided: and to apply similar considerations to the provision of services.
8. Facilities and operations: To develop, design, and operate facilities and conduct activities, taking into consideration the efficient use of energy and materials, the sustainable use of renewable resources, the minimization of adverse environmental impacts and waste generation, and the safe and responsible disposal of residual waste.
9. Research: To conduct or support research on the environmental impacts of raw materials, products, processes, emissions, and waste associated with the enterprise and on the means of minimizing such adverse impacts.
10. Precautionary Approach: To modify the manufacture, marketing, or use of products or services or the conduct of activities, consistent with scientific and technical understanding, to prevent serious and irreversible environmental degradation.
11. Contractors and Suppliers: To promote the adoption of these principles by contractors acting on behalf of the enterprise, encouraging and, where appropriate, requiring improvements in their practices to make them consistent with those of the enterprise: and to encourage wide adoption of these principles by suppliers.
12. Emergency Preparedness: To develop and maintain, where significant hazards exist, emergency preparedness plans in conjunction with the emergency services, relevant authorities, and the local community, recognizing potential boundary impacts.
13. Transfer of technology: To contribute to the transfer of environmentally sound technology and management methods throughout the industrial and public factors.
14. Contributing to the Common Effort: To contribute to the development of the public policy and to business, government, and intergovernmental programs and educational initiatives that will enhance environmental awareness and protection.
15. Openness to Concerns: To foster and dialogue employees and the public anticipating and responding to their concerns about the potential hazards and impacts of operations, products, wastes, or services including those of transboundary or global significance.
16. Compliance and Reporting: To measure environmental performance; to conduct regular environmental audits and assessments of compliance with company requirements, legal requirements, and these principles, and periodically to provide appropriate information to the board of directors, the shareholders, the employees, the authorities, and the public.

Source: Shrivastava (1995a), p. 948.

Table 6

Representative Conceptions of Sustainable Development

To maximize simultaneously the biological system goals (genetic diversity, resilience, biological productivity), economic system goals (satisfaction of basic needs, enhancement of equity, increasing useful goods and services), and social system goals (cultural diversity, institutional sustainability, social justice, participation) [Barber, 1987:103].

Improving the quality of human life while leaving within the carrying capacity of supporting ecosystems. [The World Conservation Union, United Nations Environment Program & Worldwide Fund for Nature, 1991:10].

Sustainability is a relationship between dynamic human economic systems and larger dynamic, but normally slower-changing ecological systems in which (a) human life can continue indefinitely, (b) human individuals can flourish and (c) human cultures can develop; but in which effects of human activities remain within bounds, so as not to destroy diversity, complexity and human function of the ecological life support system [Costanza, Daly & Bartholomew, 1991:8].

A sustainable society is one that can persist over generations, one that is far-seeing enough, flexible enough and wise enough not to undermine either its physical or its social systems of support [Meadows, Meadows & Randers, 1992:209].

Sustainability is an economic state where the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations. It can also be expressed as.... leave the world better than you found it, take no more than you need, try not to harm life or the environment and make amends if you do [Hawken, 1993:139].

Our vision is of a life-sustaining earth. We are committed to the achievement of a dignified, peaceful and equitable existence. We believe a sustainable United States will have an economy that equitable provides opportunities for satisfying livelihoods and a safe, healthy of life for current and future generations. Our nation will protect its environment, its natural resource base and the functions and viability of natural systems on which all life depends [U.S. President's Council on Sustainable Development, 1994:1].

Sustainability is a participatory process that creates and pursues a vision of community that respects and makes prudent use of all its resources – natural, human, human-created, social, cultural, scientific, etc. Sustainability seeks to ensure, to the degree possible, that present generations attain a high degree of economic security and can realize democracy and popular participation in control of their communities, while maintaining the integrity of the ecological systems all life and all production depends and while assuming responsibility to future generations to provide them with the where-with-all for their vision, hoping that they have the wisdom and intelligence to use what is provided in an appropriate manner [Viederman, 1994:5].

Table 7

Summary of Steps or Stages of Practice-Based Ethical Decision-Making Models

| Corey, Corey, & Callanan (1998) | Forester-Miller & Davis (1996) | Keith-Spiegel & Koocher (1985) | Rae, Fournier, & Roberts (in press) | Stadler (1986) | Steinman, Richardson, & McEnroe (1998) | Tarvydas (1998) | Tymchuk (1986) | Welfel (1998) |
|---|--|--|--|---|---|---|--|--|
| 1. Identify the problem | 1. Identify the problem | 1. Describe the parameters | | 1. Identify competing principles | 1. Identify the problem | 1. Interpret situation | 1. Determine stakeholders | 1. Develop ethical sensitivity |
| 2. Identify potential issues involved | | 2. Define the potential issues | 1. Gather information | 2. Secure additional information | | 2. Review problem or dilemma | | 2. Define the dilemma and options |
| 3. Review relevant ethical guidelines | 2. Apply the ACA Code of Ethics | 3. Consult legal and ethical guidelines | 2. Consult legal and ethical guidelines | 3. Consult with colleagues | 2. Identify the relevant ethical standard | 3. Determine standards that apply to dilemma | | 3. Refer to professional standards |
| 4. Obtain consultation | 3. Determine nature of dilemma | 4. Evaluate the rights, responsibilities, and welfare of all | | 4. Identify hoped-for outcomes | 3. Determine possible ethical traps | | | 4. Search out ethics scholarship |
| 5. Consider possible and probable courses of action | 4. Generate potential courses of action | 5. Generate alternate decisions | 3. Generate possible decisions | 5. Brainstorm actions to achieve outcomes | 4. Frame preliminary response | 4. Generate possible and probable courses of action | 2. Consider all possible alternatives | 5. Apply ethical principles to situation |
| 6. Enumerate consequences of various decisions | 5. Consider potential consequences, determine course of action | 6. Enumerate the consequences of each decision | 4. Examine possible outcomes, given context | 6. Evaluate effects of actions | 5. Consider consequences of that response | 5. Consider consequences for each course of action | 3. Consider consequences for each alternative | |
| 7. Decide on best course of action | | 7. Estimate probability for outcomes of each decision | | 7. Identify competing nonmoral values | | 6. Consult with supervisor and peers | | 6. Consult with supervisor and peers |
| | | 8. Make the decision | | 8. Choose a course of action | 6. Prepare an ethical resolution | 7. Select an action by weighing competing values, given context | 4. Balance risks and benefits to make the decision | 7. Deliberate and decide |
| | 6. Evaluate selected course of action | | | 9. Test the course of action | 7. Get feedback from peers and supervisor | | 5. Decide on level of review | |
| | 7. Implement course of action | | 5. Implement best choice and evaluate | 10. Identify steps, take action, evaluate | 8. Take action | 8. Plan and execute the selected action | 6. Implement the decision | 8. Inform supervisor and take action |
| | | | 6. Modify practices to avoid future problems | | | 9. Evaluate course of action | 7. Monitor the action and outcome | 9. Reflect on the experience |

Note. ACA = American Counseling Association.

Source: Cottone and Claus (2000), p. 279.

Table 8
Employment in the Manufacturing Sector by Industry, 2000-2010

| Industry | Number ('000 Persons) | | | % of Total | | | Average Annual Growth Rate (%) | |
|---|-----------------------|----------------|----------------|--------------|--------------|--------------|--------------------------------|------------|
| | 2000 | 2005 | 2010 | 2000 | 2005 | 2010 | 8MP | 9MP |
| Resource-Based | 1,186.6 | 1,423.7 | 1,703.4 | 46.2 | 45.4 | 47.3 | 3.7 | 3.7 |
| Food Processing, Beverages & Tobacco | 237.7 | 298.9 | 346.5 | 9.3 | 9.5 | 9.6 | 4.7 | 3.0 |
| Wood Products including Furniture | 352.7 | 373.8 | 405.8 | 13.7 | 11.9 | 11.3 | 1.2 | 1.7 |
| Paper & Paper Products, Printing & Publishing | 121.6 | 137.7 | 156.3 | 4.7 | 4.4 | 4.3 | 2.5 | 2.6 |
| Chemicals, Fertilizers, Plastics & Petroleum Products | 238.1 | 327.0 | 477.6 | 9.3 | 10.4 | 13.3 | 6.5 | 7.9 |
| Rubber Processing & Products | 132.0 | 171.5 | 201.6 | 5.1 | 5.5 | 5.6 | 5.4 | 3.3 |
| Non-Metallic Mineral Products | 104.5 | 114.9 | 115.6 | 4.1 | 3.7 | 3.2 | 1.9 | 0.1 |
| Non-Resource-Based | 1,319.4 | 1,628.3 | 1,798.3 | 51.4 | 52.0 | 50.1 | 4.3 | 2.0 |
| Textiles & Textile Products | 215.8 | 214.8 | 192.3 | 8.4 | 6.9 | 5.3 | -0.1 | -2.2 |
| Basic Metal & Metal Products | 193.8 | 282.8 | 340.0 | 7.6 | 9.0 | 9.5 | 7.9 | 3.8 |
| Machinery & Equipment | 161.4 | 162.6 | 178.1 | 6.3 | 5.2 | 5.0 | 0.1 | 1.8 |
| Electrical & Electronic Products | 647.1 | 840.8 | 943.6 | 25.2 | 26.8 | 26.3 | 5.4 | 2.3 |
| Transport Equipment | 101.3 | 127.4 | 144.3 | 3.9 | 4.1 | 4.0 | 4.7 | 2.5 |
| Others | 61.6 | 80.0 | 93.0 | 2.4 | 2.6 | 2.6 | 5.4 | 3.0 |
| TOTAL | 2,565.8 | 3,132.1 | 3,594.7 | 100.0 | 100.0 | 100.0 | 4.1 | 2.8 |

Source: Economic Planning Unit

Source: Economic Planning (2006), p.130.

Table 9
Employment by Gender and Sectors, 2000 and 2005

| Sector | Number ('000) | | | | % | | | |
|--|----------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------|
| | 2000 | | 2005 | | 2000 | | 2005 | |
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Agriculture, Forestry, Livestock and Fishing | 1,030.3 | 392.7 | 1,046.9 | 358.8 | 17.3 | 11.9 | 15.2 | 9.0 |
| Mining and Quarrying | 36.5 | 5.3 | 39.9 | 2.8 | 0.6 | 0.2 | 0.6 | 0.1 |
| Manufacturing | 1,460.0 | 1,105.8 | 1,865.8 | 1,266.3 | 24.5 | 33.5 | 27.0 | 31.7 |
| Construction | 704.3 | 47.9 | 703.5 | 56.1 | 11.8 | 1.5 | 10.2 | 1.4 |
| Electricity, Gas and Water | 66.8 | 8.2 | 81.5 | 11.5 | 1.1 | 0.2 | 1.2 | 0.3 |
| Transport, Storage and Communications | 402.8 | 58.8 | 536.3 | 94.9 | 6.7 | 1.8 | 7.8 | 2.4 |
| Wholesale and Retail Trade, Hotels and Restaurants | 954.7 | 628.2 | 1,176.6 | 750.6 | 16.0 | 19.0 | 17.0 | 18.7 |
| Finance, Insurance, Real Estate and Business Services | 296.4 | 203.8 | 421.4 | 310.9 | 5.0 | 6.1 | 6.1 | 7.8 |
| Other Services | 1,019.0 | 853.1 | 1,026.6 | 1,144.4 | 17.0 | 25.8 | 14.9 | 28.6 |
| Total | 5,970.8 | 3,303.8 | 6,898.5 | 3,996.3 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Economic Planning Unit

Source: Economic Planning Unit (2006), p. 283.

Table 10
Merchandise Trade, 2000-2005

| <i>Item</i> | <i>RM million</i> | | <i>% of Total</i> | | <i>Average Annual Growth Rate (%), 2001-2005</i> |
|-----------------------|-------------------|----------------|-------------------|--------------|--|
| | <i>2000</i> | <i>2005</i> | <i>2000</i> | <i>2005</i> | |
| Gross Exports | | | | | |
| Agriculture | 22,892 | 37,421 | 6.1 | 7.0 | 10.3 |
| Mining | 26,877 | 52,321 | 7.2 | 9.8 | 14.3 |
| Manufacturing | 317,908 | 429,873 | 85.2 | 80.5 | 6.2 |
| Others | 5,593 | 14,175 | 1.5 | 2.7 | 20.4 |
| Total | 373,270 | 533,790 | 100.0 | 100.0 | 7.4 |
| Gross Imports | | | | | |
| Capital Goods | 44,171 | 60,734 | 14.2 | 14.0 | 6.6 |
| Intermediate Goods | 232,687 | 308,335 | 74.7 | 71.0 | 5.8 |
| Consumption Goods | 17,040 | 24,600 | 5.5 | 5.7 | 7.6 |
| Other ¹ | 11,043 | 18,479 | 3.5 | 4.3 | 10.8 |
| Retained Imports | 304,941 | 412,148 | 97.9 | 95.0 | 6.2 |
| Import for Re-Exports | 6,518 | 21,862 | 2.1 | 5.0 | 27.4 |
| Total | 311,459 | 434,010 | 100.0 | 100.0 | 6.9 |

Source: Department of Statistics

Source: Economic Planning Unit (2006), p. 60.

Table 11

Motivations for Ecological Responsiveness

| Motivation | Exemplary Quotes |
|-----------------------|--|
| Competitiveness | <p>It was seen as good business management to turn a waste product into something which has value. Environmental initiatives are seen as both an environmental opportunity and a business opportunity.</p> <p>There are a number of firms which are thinking about how to establish an ecobusiness...The expense for environmental conservation is becoming so big that there are plenty of business opportunities.</p> <p>Jealousy, competitiveness, call it what you like. That is what drives the organization. It is greed and competition.</p> <p>And I suppose if we're brutally honest about it, if environmental issues have volume, put money in the till, then it will become a primary consideration.</p> <p>Environment is going to be some kind of business strategy.</p> |
| Legitimation | <p>The worst scenario is that we do something stupid and then we pay for it in the way of fines, penalties, and lousy reputation.</p> <p>At the end of the day, we are talking about insurance.</p> <p>The business issues are forced home through stakeholders, which include customers, employees, shareholders, peer competitors, suppliers, and increasingly more, the local community.</p> <p>We are trying to gain legitimacy or credibility with stakeholders and also with competitors.</p> <p>We will do what we need to do legally.</p> |
| Social Responsibility | <p>It's something that we can do, costs nothing to do it, and it's the right thing to do from our standpoint, the right thing to do from consumer's standpoint.</p> <p>Overall, when I show you our policy, the thing that we talk about in our policy is being committed to working with government to find the best reward for what is best for the environment. I don't mean what is best for our industry or for (us) but what is best for society.</p> <p>It's about being a good environmental citizen, about being responsible. There's nothing wrong with doing good.</p> |

Source: Adaptation from Bansal and Roth (2000), p. 725.

Table 12**Key Dimensions Differentiating Motivations**

| Key differentiating Dimensions | Competitiveness | Legitimacy | Social Responsibility |
|---------------------------------------|------------------------|---|------------------------------|
| Ends | Profitability | Firm survival | Corporate morale |
| Means | Competitive advantage | Compliance with norms and regulations | Social good |
| Constituent focus | Customers, Investors | Government, local community, stakeholders | Society |
| Decision analysis | Cost-benefit analysis | Costs and risks of noncompliance | Ecological values |
| Decision role | Maximize | Satisfice | Idealize |
| Strategic posture | Innovative | Isomorphic/imitative | Independent |

Source: Simplified from Bansal and Roth (2000), p.726.

EXHIBITS

Exhibit 1

Declaration of Emergency in Sarawak by Y.B. Dato' Seri Dr. Mahathir Mohamed, Prime Minister of Malaysia



PENGISYTIHARAN DARURAT JEREBU

Memandangkan keadaan jerebu di Negeri Sarawak pada masa ini telah mencapai tahap Indeks Pencemar Udara (IPU) 500 ke atas dan adalah dianggarkan tahap ini akan berterusan beberapa lama lagi, maka dengan ini, saya mengisytiharkan keadaan Darurat bagi seluruh Negeri Sarawak mulai dari sekarang hingga ke suatu masa pengisytiharan ini ditarik balik, selaras dengan keputusan Jemaah Menteri pada 18 September 1997.

2. Adalah dijelaskan bahawa pengisytiharan Darurat jerebu ini tidak melibatkan penguatkuasaan perintah berkurung dan juga tidak ada perubahan dalam corak dan sistem pemerintahan Kerajaan Negeri Sarawak sekarang ini. Walau bagaimanapun, Polis DiRaja Malaysia dan Angkatan Tentera Malaysia hendaklah mengatur dan mengambil langkah-langkah yang perlu bagi menjamin berterusan keamanan dan keselamatan Negeri Sarawak.

3. Satu Garis Panduan mengenai tindakan untuk menghadapi Darurat jerebu ini disediakan seperti di Lampiran A. Semua pihak hendaklah melaksanakan tugas dan tanggungjawab masing-masing dengan berpandukan Garis Panduan tersebut.

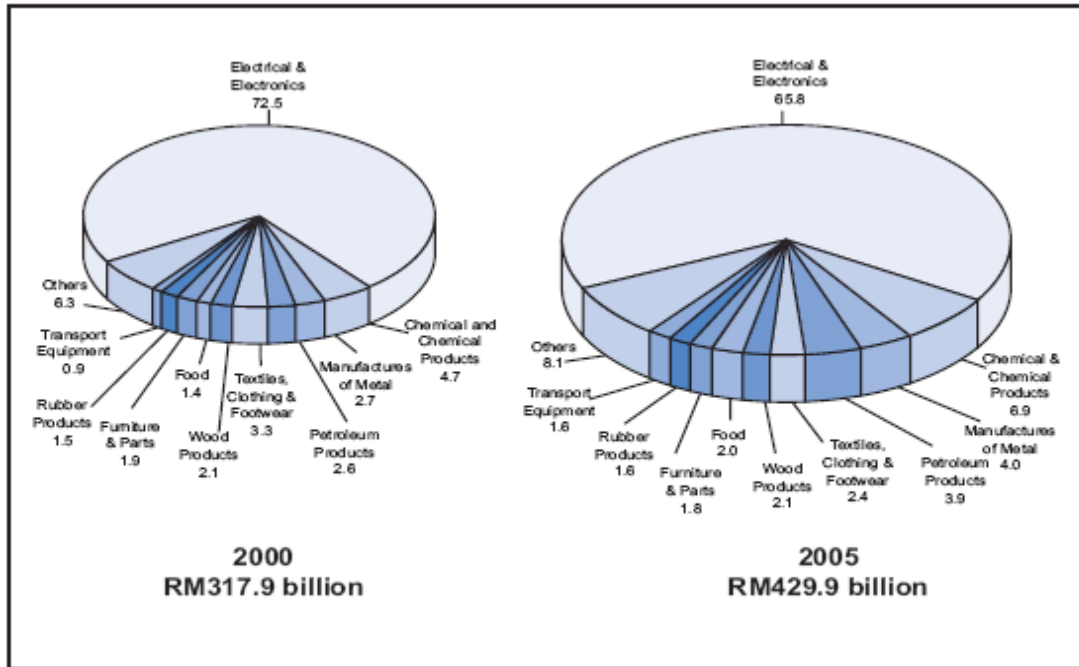
A handwritten signature in black ink, appearing to be 'M. Mahathir', written over a horizontal line.

DATO' SERI DR. MAHATHIR BIN MOHAMAD,
Perdana Menteri
Merangkap Pengarah Gerakan Negara

Bertarikh : 19 September 1997

Exhibit 2

Gross Exports of Manufactured Goods, 2000 and 2005 (% of Total)

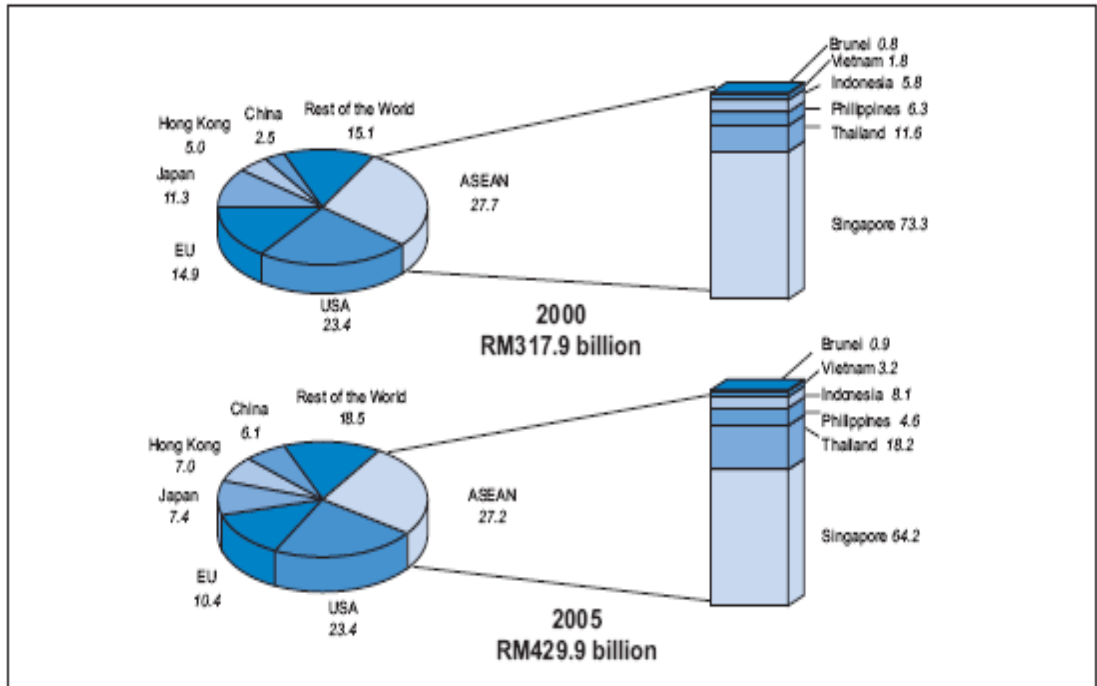


Source: Department of Statistics and Bank Negara Malaysia

Source: Economic Planning Unit (2006), p.60.

Exhibit 3

Major Export Destinations for Manufactured Products, 2000-2005 (%)



Source: Department of Statistics

Source: Economic Planning Unit (2006), p. 111.

Exhibit 4

Pictures taken from The Haze: When Smoke Gets In Your Eyes



Source: by Foon and Kong (1998).

Exhibit 5

Pictures taken from The Haze: When Smoke Gets In Your Eyes



Source: by Foon and Kong (1998).

Exhibit 6

Pictures taken from The Haze: When Smoke Gets In Your Eyes



Source: by Foon and Kong (1998).

Exhibit 7

Plastic bags of household refuse, litter and floating wastes from all types of industries are common in the rivers and coastal areas.



Exhibit 8

Waste collection in squatter areas is limited.



Exhibit 9

Water pollution



Exhibit 10
Persuasive Letter



19th October 2009

Dear Sir/Madam,

A Survey on the Firm's Environmental Ethical Commitment (EEC) of the Business Corporations in Malaysia.

I am a PhD candidate from the University of Malaya doing a research about the interaction of corporations, ethics and the natural environment. You are one of the selected companies among other companies listed in the Federation of Malaysian Manufacturing. Your response is highly needed as it will portray the commitment of the Malaysian corporations towards the natural environment. As the developed-country managers are concerned about the environment, it is claimed that Malaysia as one of the developing countries is more concerned about unemployment and poverty. Therefore, the objective of the study is to examine how business corporations in Malaysia perceive the issue of the natural environment, its ethical commitment and approaches to the natural environment. The findings of this study would be able to:

- develop EEC framework which can be used to empirically test the importance of several possible factors as having an influence on firms'EEC.
- identify the factors contributing to Malaysian manufacturing companies' EEC to the natural environment.
- determine which stakeholders to have major influence on EEC.
- measure the perception of companies towards environmental issues.

To complete this questionnaire, it will take some of your time. I hope you will answer as honestly as possible and return it using the self-addressed and stamped envelope. Your response is so valuable to this study. It will only be used for academic purpose and all your responses will remain strictly anonymous. I do rely on your response as it will show your interest to preserve our natural environment. Thank you very much for your cooperation as I believe besides profitability, you do concern about the natural environment.

Thank you, I remain.

Yours sincerely,

.....
(Maliza Delima Bt Kamarul Zaman)
PhD Candidate,
The Faculty of Business & Accountancy,
University of Malaya.

Exhibit 11
The Questionnaire


Please answer the following questions.

SECTION A

Instruction:

The following statements are regarding your perception of your company's commitment towards the natural environment (Environmental Ethical Commitment/EEC).

Please indicate by circling one number of each of the following statement using the scale of 1 to 6 with anchorage of strongly disagree and strongly agree.

| | | <div style="display: flex; justify-content: space-between; align-items: center;"> Strongly Disagree Strongly Agree </div>  | | | | | |
|------------|---|---|---|---|----------|---|---|
| My company | | | | | | | |
| | 1. feels people worry too much about pesticides on food products. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 2. becomes angry when we think about the harm being done to the planet and animal life by pollution. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 3. gets depressed on hazy days. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 4. normally worries about the effects of haze on ourselves and family. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 5. thinks that a person should urge their friends not to use products that pollute. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 6. is usually bothered by so-called "noise pollution". | 1 | 2 | 3 | 4 | 5 | 6 |
| | 7. is personally interested in the pollution aspects of products we buy. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 8. past experiences and accomplishments increase our confidence that we will be able to perform successfully. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 9. believes that the cost to comply to the environmental ethical commitment (EEC) would have great influence to us. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 10. has moral obligations to make sure that our operations do not harm the natural environment. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 11. has moral obligations to make sure that our operation does not harm people. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 12. believes we have moral obligations to our customers to disclose any information regarding the environment aspect of the production if required. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 13. is required by law to disclose any information regarding the environment aspect of the production if required. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 14. has benefitted much on gaining information regarding the natural environment from the television/radio. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 15. has been pressured by the supplier to be ethical to the natural environment. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 16. is pressured by the shareholders to include environmental aspects in our environmental management strategy. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 17. is pressured to be environmentally ethical committed by NGOs who are concerned over the environment. | 1 | 2 | 3 | 4 | 5 | 6 |
| | | Strongly | | | Strongly | | |

| | | Disagree ←————→ Agree | | | | | |
|--------------------------------------|--|-----------------------|---|---|---|---|---|
| EEC is | | | | | | | |
| | 18. necessary to achieve high levels of environmental performance. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 19. an important component of a company's environmental management strategy. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 20. an important component of manufacturing management | 1 | 2 | 3 | 4 | 5 | 6 |
| | 21. an effective environmental management strategy. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 22. the most desirable waste management goal. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 23. EEC should be seen as an important component of a firm's bottom line. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 24. Any EEC effort to the natural environment are worthwhile. | 1 | 2 | 3 | 4 | 5 | 6 |
| My company feels that | | | | | | | |
| | 25. every person should reduce his/her consumption of products that contributes to pollution so that our resources will last longer. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 26. the pollution aspect of modern products are more important than benefits of using it. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 27. all consumers should be interested in the pollution aspects of products they purchased. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 28. natural resources must be preserved even if people must do without some products. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 29. it is useless for the individual consumer to try to do anything about pollution. (R) | 1 | 2 | 3 | 4 | 5 | 6 |
| The leadership of my company thinks: | | | | | | | |
| | 30. the government should take stronger actions to protect our nation's resources. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 31. pollution laws are sufficient to protect the environment. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 32. the natural environment is valuable in itself and should be protected at all costs. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 33. antipollution laws should be enforced more strongly. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 34. our company should emphasize environment more than the jobs. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 35. the government should use full capacity of its authority in its efforts to protect natural resources. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 36. environmental regulations have placed fair burdens on all industries. | 1 | 2 | 3 | 4 | 5 | 6 |

| | | Strongly Disagree ←-----→ Strongly Agree | | | | | |
|---|--|--|---|---|---|---|---|
| In my company, | | | | | | | |
| | 37. the law or ethical code of the profession is the major consideration. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 38. employees are expected to strictly follow legal or professional standards. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 39. the first consideration is whether a decision violates any law. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 40. it is very important to follow the company's rules and procedures. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 41. everyone is expected to stick by company rules and procedures. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 42. job satisfaction supersedes job expectations. | 1 | 2 | 3 | 4 | 5 | 6 |
| Employees in my company | | | | | | | |
| | 43. do not anticipate any problems in adjusting to work and the natural environment aspects. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 44. strictly obey the company policies. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 45. feel that they are overqualified for the job. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 46. have all the technical knowledge they need to deal with environmental issues, however they still need practical experience. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 47. feel confident that their skills and abilities are equal. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 48. could have handled more challenging job than the one they are doing. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 49. are expected to comply with the law and professional standards over and above other considerations. | 1 | 2 | 3 | 4 | 5 | 6 |
| Overall, committing ethically to the environment will improve the cost position of my company thus: | | | | | | | |
| | 50. influence its corporate bottom line. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 51. offer opportunity to compete in the global market. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 52. achieve competitive advantage | 1 | 2 | 3 | 4 | 5 | 6 |
| 53. | It is my company's professional responsibility to describe any information regarding the environment aspect of the production if required. | 1 | 2 | 3 | 4 | 5 | 6 |
| 54. | The cost of complying with the environmentally ethical commitment (EEC) would influence my company's decision. | 1 | 2 | 3 | 4 | 5 | 6 |
| 55. | It frightens my company to think that much of the food we eat is contaminated with pesticides. | 1 | 2 | 3 | 4 | 5 | 6 |

| | | Strongly Disagree Strongly Agree | | | | | |
|-----|--|---|---|---|---|---|---|
| | | ← | | | | | → |
| 56. | The statement “The world will be dead in 40 years if we don’t remake the environment”, does affect my company. | 1 | 2 | 3 | 4 | 5 | 6 |
| 57. | When my company thinks of the days industries are polluting, we get frustrated and angry. | 1 | 2 | 3 | 4 | 5 | 6 |
| 58. | The whole pollution issue has upsets my company too much since we feel it’s getting worst. | 1 | 2 | 3 | 4 | 5 | 6 |
| 59. | Successful people in my company are law abiding citizens. | 1 | 2 | 3 | 4 | 5 | 6 |
| 60. | The job scope in my company is well within each employee’s abilities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 61. | It would be morally wrong for my company to allow the discharge of our untreated hazardous waste into the river. | 1 | 2 | 3 | 4 | 5 | 6 |
| 62. | The newspaper has played an important role in providing information to my company. | 1 | 2 | 3 | 4 | 5 | 6 |
| 63. | Our customers have given great information to my company with regards to the natural environment. | 1 | 2 | 3 | 4 | 5 | 6 |
| 64. | Information of the competitors have provided my company source of information insofar as the natural information is concerned. | 1 | 2 | 3 | 4 | 5 | 6 |
| 65. | Government has played a major role in providing information to my company. | 1 | 2 | 3 | 4 | 5 | 6 |
| 66. | Trade associations have played a vital role with regards to the natural environment to provide information to my company. | 1 | 2 | 3 | 4 | 5 | 6 |
| 67. | Environmental organizations provide my company with necessary information regarding the natural environment. | 1 | 2 | 3 | 4 | 5 | 6 |
| 67. | Informal networking with other firms doing similar work has benefitted my company insofar as the environmental issues are concerned. | 1 | 2 | 3 | 4 | 5 | 6 |
| 69. | The customers are pressuring my company to consider/value the environmental aspect in manufacturing management. | 1 | 2 | 3 | 4 | 5 | 6 |
| 70. | Government regulation has played a major source of pressure to my company to be environmentally ethical. | 1 | 2 | 3 | 4 | 5 | 6 |
| 71. | The employees are pressuring my company to be environmentally committed. | 1 | 2 | 3 | 4 | 5 | 6 |
| 72. | Pressures are gained from environmental organization insofar as the environmental issues are concerned | 1 | 2 | 3 | 4 | 5 | 6 |
| 73. | The community is somehow pressuring my company to be environmentally ethical committed. | 1 | 2 | 3 | 4 | 5 | 6 |
| 74. | The employees are giving information regarding the environment to the company. | 1 | 2 | 3 | 4 | 5 | 6 |

SECTION B

Please number (rank) 1 to 9 to the importance of each source of information and 1 to 8 to the importance of each source of pressure to your company.

Example:

| Source of Information (1 to 9) | Rank |
|--------------------------------|------|
| 1. newspaper | 9 |
| 2. television/radio | 1 |
| 3. customers | 3 |
| 4. competitors | 2 |
| 5. government | 8 |
| 6. trade associations | 4 |
| 7. environmental organizations | 5 |
| 8. employee information | 7 |
| 9. informal network | 6 |

1 Not at all important – 9 Very Important

| Source of Information (1 to 9) | Rank |
|--------------------------------|------|
| • newspaper | |
| • television/radio | |
| • customers | |
| • competitors | |
| • government | |
| • trade associations | |
| • environmental organizations | |
| • employee information | |
| • informal network | |

1 Not at all important – 8 Very Important

| Source of pressure (1 to 8) | Rank |
|-------------------------------|------|
| • customers | |
| • suppliers | |
| • shareholders | |
| • government regulations | |
| • employees | |
| • environmental organizations | |
| • neighborhood/community | |
| • other lobby groups | |

SECTION C

Please tick the box which corresponds to your company's perception relating to environmental issues.

In the next five years in general, how important will environmental issues be to your company relative to the present?

| | |
|--------------------------|--|
| Increase in importance | |
| Decrease in importance | |
| Remain unchanged | |
| Not important/applicable | |

SECTION D

Kindly answer and tick (/) the most appropriate response.

1. Type of industry:

2. Number of employees:

- a) 0-50
- b) 51-150
- c) More than 150

3. Age of the company:

- a) One year or less
- b) 1-5 years
- c) More than 5 years

4. Which of the classification below suits your company's approaches to the natural

environment? (Please tick one)

- a) Defensive
- b) Reactive
- c) Accommodative
- d) Proactive

THANK YOU FOR PARTICIPATING