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Some Environmental Issues In Malaysia
And Actions By Government

By

Goh Kiam Seng
Panel Discussion on 29 September 1987
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SOME ENVIRONMENTAL ISSUES IN MALAYSIA AND ACTIONS BY GOVERNMENT

BY

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INTRODUCTION

Malaysia is still a developing country with its overall objective of improving the quality of life of its people through its economic and social programmes. With a relatively small population of about 15.5 million people, Malaysia is rich in natural resources such as forests, wildlife, arable land, clean water, fresh air and abundant fuel. Thus the need and urgency for environmental conservation and protection among the government, private sectors and the general public have yet to attain a high priority amidst competing priorities of economic and industrial development.

Nevertheless, as early as the 1920s, various water enactments were passed for the protection of rivers and control of soil erosion. Subsequently other environment-related legislations concerning mining, forestry, petroleum and landuse planning activities were enacted and at the present moment there are about 38 environment-related laws in Malaysia. Among them is the Environmental Quality Act 1974 related to the protection, abatement and control of pollution, and enhancement of the environment. The Department of Environment (DOE) under the Ministry of Science, Technology and Environment had been established since 1975 to administer the Act.
Environmental issues and problems are usually regarded as the sole responsibility of Federal authorities, such as the DOE. With the dichotomy of powers between the Federal and State Governments, the administration of many of the environment-related legislations are within the jurisdiction of the various states. These cover the areas of mining and forestry, erosion and siltation and solid wastes disposal. Environmental management is thus the responsibility not only of the Federal Government, but also of the State Governments, the private sectors and the general population who harness the environment for our survival and well-being.

ENVIRONMENTAL PROBLEMS IN MALAYSIA

Public complaints received by the DOE do reflect upon the existing problems and what the people perceive as environmental pollution. The largest number of air pollution complaints received were about particulates, followed by smoke/fumes, noise, odour, gas and other types of air pollutants. The public also complained about water pollution by animal husbandry, palm oil mills, industries, mining and siltation, rubber mills, solid wastes, sewage as well as from other sources.

Some of the more important environmental issues in Malaysia are, in my opinion as follows:-

1. Air Pollution

Air pollution exists in the cities and in industrial areas. In cities like Kuala Lumpur, Penang, Johore Baru and Ipoh, concentrations of suspended particulates are
high due to exhaust emission from motor vehicles, fine
dusts churned up from the road surfaces and roadside
tables and smoke from open burning of solid wastes
including burning of domestic refuse, garden wastes,
trade and industrial wastes, construction wastes and
agricultural wastes.

In industrial areas, in addition to the air pollution
associated with motor traffic there is also stack
emission from industries as well as fugitive emissions
from the factory floor and from industrial processes
which are not practicable to prevent. Similarly, there
are also potentially hazardous industries such as
chemical plants which are subjected to accidental
spillage and releases of toxic chemicals due to the
presence of various pressure vessels as well as piping
and valves. In this respective, if such factories are
sited too close to residential areas or vice versa, air
pollution complaints are received from time to time.

In terms of air pollution control, the Department of
Environment through its eight Regional Offices enforces
the Environmental Quality (Clean Air) Regulations 1978
made under the Environmental Quality Act 1974. These
Regulations control the emission of air pollutants
including smoke from industries as well as open burning
of industrial wastes. The Motor Vehicles (Control of
Smoke and Gas Emission) Rules 1977 made under the Road
Traffic Ordinance 1958, control the emission of exces-
sive smoke from diesel vehicles. In addition, a set of
Regulations known as the Environmental Quality (Reduction of Lead in Motor Gasoline) Regulations 1985 has been enforced from July 1985 which has brought down the lead concentration in motor gasoline from 0.84 gm/litre to 0.4 gm/litre. The Regulations also stipulated that the lead concentration in motor gasoline will be reduced further to 0.15 gm/litre in January 1990. DOE is working on a new set of Regulations to replace the Motor Vehicle (Control of Smoke and Gas Emission) Rules 1977.

Besides legislative controls, the Department of Environment issues a set of guidelines known the Industrial Siting and Zoning Guidelines which promote the use of adequate buffer distances between industries and residential areas and vice versa. The Department of Environment is increasingly being referred to by State and Local Authorities for comments on the siting and planning approval of new industries.

2. Water Pollution

A second environmental issue in this country is that many of the drains and rivers that pass through industrial and urban areas are polluted by industrial waste water discharge; domestic sewage and sullage water; silt from mining, logging and site clearing, housing development and road construction activities as well as refuse and other solid wastes. As a result, some rivers like Sg. Kelang, Sg. Pencala and Sg. Pinang are badly polluted with organic pollutants, sediment load, debris and even chemical pollutants. These waterways look dirty and sometimes even smelly.
Government has enforced the Environmental Quality (Sewage and Industrial Effluent) Regulations 1979 which control the effluent discharge from industries and sewerage treatment plants. The Mining Enactments 1929 control the discharge of sediment in mining effluents. The Local Government Act 1976, the Waters Enactment 1920 and the various municipal enactments prohibit the dumping of waste into water courses. The various Local Authorities through their earthworks by-laws regulate earthmoving activities in order to minimise soil erosion and soil wash on to the roads and water courses.

The Department of Environment has prepared a set of guidelines on the prevention of soil erosion and siltation to be used by those carrying out various development activities such as logging, mining, site clearing and housing development and road construction.

3. Marine Pollution

Pollution of the marine environment is as important if not more than that of the freshwater environment. The country depends heavily on marine fisheries for over 75 percent of the country's animal protein supply. Other than supporting the viability of these basic resources, coastal waters are also used as much to receive and assimilate all types of wastes from both vessel sources and land-based discharges, as to provide readily the most accessible segment of the environment for recreation and other amenities.
The coastal waters continue to be polluted by silt and faecal contamination and the presence of heavy metals is also detected. There is oil pollution from vessels and other marine sources and the threat of a major oil pollution from oil spills due to oil tanker accidents is ever present particularly in the Straits of Malacca and to a lesser extent in the South China Sea.

To protect the coastal waters from being contaminated by land-based sources requires not only the enforcement of regulations made under the Environmental Quality Act 1974 but also of the regulations made under other environment-related legislations relating to silt control and the construction of sewerage treatment facilities by the Local Authorities.

As for oil pollution, while there is no practicable means to constantly monitor the discharge of bilge or ballast water from passing vessels, indiscriminate acts by vessels discharging oil sludge and slop into the sea are being closely monitored. The Government has also drawn up Oil Spill Contingency Plans for the Straits of Malacca and the South China Sea in order to combat major oil spills. The Plan includes the setting up of a national oil spill control communications centre and the acquisition of oil spill control equipment such as booms, skimmers as well as various types of vessels.

4. Toxic and Hazardous Wastes

Data gathered by the DOE confirmed that many industries are generating significant quantities of toxic and hazardous wastes including sludges from in-house
wastewater treatment facilities. In addition, a number of industries are discharging wastewater containing toxic substances without any form of pretreatment into drains. Most of these industries are small and medium scale industries. Toxic and hazardous wastes generated include metal-finishing wastes, paints, inks, solvents, pesticides, discarded acids and alkalis, textile wastes, tannery wastes, clinical wastes, photographic processing wastes, mineral oil and hydrocarbon wastes. The DOE had conducted a detailed investigation of the volume of toxic and hazardous wastes being generated in the country and their methods of disposal. There are altogether about 700 such industries generating over 200,000 cu m of toxic and hazardous waste in Malaysia.

Malaysia currently does not have any suitable facility to handle the categories of wastes identified as potentially toxic and hazardous other than individual wastewater treatment facilities/plants set up by industries. Existing domestic landfill sites used for dumping household wastes are inadequate and environmentally unsuitable to receive the toxic wastes generated. Similarly, the incineration facilities available in the country are not designed to completely destroy the highly persistent group of combustible toxic wastes. Furthermore, in view of the significant quantities of liquid wastes produced by the medium and small scale metal-finishing industries etc., it is felt that further investigation is needed to determine the actual size and number of centralised physical/chemical facilities required.
To avoid these problems in Malaysia, a Comprehensive Hazardous Waste Management Programme is being developed that will establish the most cost-effective treatment and disposal practices; track hazardous wastes from their generation to ultimate disposal; and address the safety and operational protocols that should be followed during the handling, transportation, storage, treatment and disposal of these wastes. A set of regulations known as the Environmental Quality (Scheduled Wastes) Regulations was drafted to prescribe ways in which wastes shall be managed so as to render them innocuous to the environment. The proposed Regulations shall apply to waste generators, waste contractors and waste disposal site operators.

5. Chemicals in the Environment

In Malaysia, there are currently about 500 chemical industries producing a variety of products such as fertilisers, industrial chemicals, pesticides, herbicides, pharmaceutical products, petroleum products, plastics, rubber products, synthetic resins, adhesives, paints and detergents. Some of these chemicals are even radioactive. A considerable amount of chemicals and chemical products are imported into the country and there are many other industries which use a variety of toxic chemicals in their manufacturing processes. The manufacturing, transport, handling, storage and use of these chemicals pose a hazard both to the workers as well as to the community at large as evidenced by such incidents like in Bhopal, Chernobyl and Basle.
There is no single agency/department which has jurisdiction over all activities related to chemical control. The Pesticides Board, under the Ministry of Agriculture controls the various aspects related to pesticides while the Ministry of Health controls the various aspects of poisons and the radioactive substances are controlled by the Atomic Energy Licensing Board in the Prime Minister's Department. Unfortunately many of the industrial chemicals are not regulated under any of these three Ministeries. The DOE had also initiated action to deal with information received on banned chemicals and severely restricted chemicals from the International Register of Potentially Toxic Chemicals (IRPTC). A committee comprising of representatives from the Ministry of Health, the Factories and Machinery Department and the DOE has been established to scrutinise these information and propose appropriate follow-up actions.

The DOE had also established a National Register of Potentially Toxic Chemicals. Representatives from relevant government and other agencies sit on a committee which coordinates the functioning of the National Register. The main objective in establishing the National Register is to provide a centralised data bank which stores pertinent and relevant information on potentially toxic chemicals of national importance and environmental significance and such information are to be readily available to interested parties upon request.

Actions are also being initiated to set up chemical emergency response system that can be triggered when a chemical spill or accident occurs. Considerations are
also being given to the need to incorporate risk assessment studies prior to the setting up of hazardous chemical installations or plants.

6. Noise Problems

The Department frequently receives complaints on noise especially industrial noise. In the urban environment, the public complain of high noise levels from commercial vehicles such as trucks, lorries, buses and motor cycles particularly the sports bikes and bikes that have modified exhaust silencer systems. Specifically for the control of motor vehicles noise, a set of motor vehicle noise regulations had been gazetted on 16 July 1987. A six-month grace period had been introduced to allow the public to be aware of the regulations and time given for the vehicle owners to equip their vehicles with proper silencers and ensure their proper maintenance at all times. As motor vehicle noise is also related to the volume of traffic, the traffic flow pattern and the adequacy of buffer zones between roads and residential houses, town and transportation planners should take these factors into consideration and incorporate them into their planning.

In the case of industrial and construction noise, guidelines which specify maximum permissible noise levels at the boundary of industrial and construction sites are being used by the DOE and the City Hall respectively in evaluating factory site applications and applications related to piling works.
As far as aircraft noise is concerned, the control strategy is one that emphasises on good land-use planning. In this respect, State Governments have been urged to exercise control of housing developments in potentially high-noise zones around airports.

As for community noise, much depends on the awareness of the public on the nature of noise pollution and how noise affects their health and well-being. To reduce the noise in a community, each of us must act with consideration and respect for our neighbours and make less noise ourselves. Public education and awareness can play a very important role here.

7. **Domestic and Commercial Solid Waste**

The management of domestic and commercial solid waste, a function of the Local Authorities is still a major issue in Malaysia. There is indiscriminate dumping of solid wastes into drains and river courses, at street corners, road sides and river banks as well as in the backyards. The solid waste collection service in Local Authorities is still much lacking. Furthermore, the disposal of solid wastes at the various dumping sites is far from satisfactory and has given rise to lots of complaints from the public particularly when the refuse is burned or when the refuse is not properly compacted and buried.

The problem of solid wastes management in Malaysia is due to the lack of money, equipment and skilled manpower in the local authorities. There is no lack of guidelines or codes of practice on solid waste management. Currently, the Ministry of Local Government and Housing
is preparing a national master plan on solid waste management which will hopefully help to overcome some of the problems faced by the Local Authorities. On the attitude of the public on matters relating to cleanliness in public places and littering, this is a subject for environmental education and awareness and requires the concerted efforts of all concerned. In this respect, cleanliness campaigns have been conducted at National, State and Local Government levels with the help of TV, Radio and the Print Media to heighten the importance of keeping the surroundings clean. Talks are also organised in schools to instill the concept of cleanliness in the young minds.

CONCLUSION

In conclusion, the Government is keeping close touch with the environmental issues in the country and is constantly working towards having more effective measures to prevent or overcome such problems.

In this respect, the strategy adopted by Malaysia in Environmental Management is three pronged. Firstly, it carries out pollution control with the help of legislative and non-legislative means. Secondary, it encourages the preparation of comprehensive land-use plans where environmental considerations are incorporated. Thirdly, it advocates the use of Environmental Impact Assessment (EIA) as a tool to incorporate environmental factors into project planning. These strategies are translated into concrete programs being implemented by DOE.
In addition, it conducts environmental monitoring, education and training, research and development activities to complement the above programmes.

To top it all, it promotes the cooperation between Federal, State and Local Governments in managing the environment.