

ENVIRONMENTAL POLICIES & MEDIA REPORTING IN MALAYSIA

By
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INTRODUCTION

Everytime the Malaysian environment is being discussed internationally, the picture that is usually painted is of wanton felling of trees with scant respect for the ecology and the environment as well as her own indigenous people. The mass media of developed nations have aggravated this picture of Malaysia.

This allegation is refuted vigorously by the Government of Malaysia. To such an extent, that Prime Minister Datuk Seri Dr. Mahathir Mohammad, had said that his country will not attend the Earth Summit or the United Nations Conference on Environment and Development (UNCED) in Brazil in June 1992 if these accusations persist. He even proposed that a separate environmental summit be held so that developing nations are not subjected to "double standard" by the industrialized countries with regard to environmental protection.

However, knowing the importance of the UNCED meeting, the Prime Minister of Malaysia did attend the Summit and Malaysia somehow was rather successful to point out that the country do give serious consideration to its environment including the state of her forest.

Is Malaysia really neglecting its environment? According to Mr. Law Hieng Ding, Minister of Science, Technology and Environment, Malaysia, at the Second World Climate Conference, Geneva in November 1990 "The Government of Malaysia subscribes to the concept of sustainable development. As early as 1975, the Department of Environment was established for the purpose of protecting and enhancing the quality of the environment. A year later, the Government incorporated, in its Five-Year Development Plan, the concept of environmental impact assessment (EIA) to ensure development projects are implemented, taking into account the likely impacts on the environment and optimising the benefits in environmental as well as socio economic aspects" (*Berita EIA*, Jan - June 1991, 5).

A year earlier, the Malaysian Federal Government had introduced the Environmental Quality Act of 1974. The Division of Environment which was set up in 1975 was placed within the newly formed Ministry of Science, Technology and Environment.

Further, the Federal Government's policy on environment matters was made explicit in the Third Malaysia Plan (1976-1980). In a chapter entitled 'Development and Environment', it was suggested that:

“It is vital that the objectives of development and environmental conservation be kept in balance, so that the benefits of development are not negated by the costs of environmental damage”. (Third Malaysia Plan 1976, 218).

However, before delving further into Malaysian environmental policy and its implementation, there should be a better understanding of the situation by providing the political background of the country as well as its physical features.

Physical Features

Malaysia covers an area of about 330,307.1 sq. kms. It comprises the Malay Peninsular and the states of Sabah and Sarawak in the north-western coastal area of Borneo Island. The two regions are separated by about 531 kms of the South China Sea.

Malaysia, located just north of the Equator is blessed with abundant sunshine and rainfall, averaging about 254 cm a year. Constant high temperatures, varying from 21 C to 32 C as well as high humidity and high rainfall have provided excellent conditions for growth of ever-green tropical rain forests and swamp forest, both mangrove and fresh-water. About four-fifths of Malaysia is covered by forests and swamps.

It is estimated that out of a total land area of 32.86 million hectares, some 20.10 million ha or about 61 percent are under forest cover. Another 4.19 million hectares have been planted with tree crops, bringing the total area under forest and trees crops to 24.29 million ha or 74 percent of the total land area of Malaysia.

Tropical rain forest, in its most luxuriant form, is found on the lowlands and hills of Malaysia. It has a closed canopy at about 120 to 150 feet, consisting of the crowns of large trees closely fitted together, and supported on stout, straight, pillar-like trunks.

Lianes, the opportunists of the tropical rain forests climb over other plants until they can bask in the full sun on the canopy. The most useful lianes are those of the palm family. Their slender, flexible and tough stems make attractive rattan furniture and Melaka canes.

Of flowering plants, there are about 8,000 species; 3,000 species are trees, 1,000 are orchids and 300 are palms. There are over 500 species of ferns, 60 species of bamboos and innumerable lower plants. It is estimated that more species of plants are found in Malaysia than in any other tropical part of the world of a comparable land area.

Over 1,300 plant species in Malaysia have been identified as having potential pharmaceutical value. Some of these are being used as herbal medicine.

Malaysia has also a very rich and diverse animal life. Its forests are home to countless number of insects, more than a 1,000 species of butterflies, 600 species of birds, 310 species of reptiles, 280 species of freshwater fishes and 147 species of amphibian. An unknown but most probably a very great number of species (mainly invertebrates) remain to be discovered and named.

The felling of large tracts of forest for development resulted in the disappearance of much wildlife. To the rapidly changing environmental conditions, only a few species have managed to adapt themselves (*Malaysia Official Year Book 1987*, 2).

To avoid the drastic depletion of forest as well protecting the wildlife, Malaysia has embarked on policies and plans to manage the forests as a renewable resource. The objective of these policies is to balance the needs for ecological conservation and economic development, based on rational land use and detailed resource assessment (*New Straits Times*, 18/10/1989).

Political Structure

Malaysia is a federation of 13 states. Parliamentary democracy is practice. She is ruled as a Constitutional Monarchy, with the Yang di-Pertuan Agong as the head of state.

The Federal Constitution of Malaysia clearly divides the authority of the Federation into its legislative authority, judicial authority and executive authority. This division of authority applies both at federal and state levels. This is in keeping with the concept of federalism, which form the basis of government administration.

Ministries are the highest bodies in the federal administrative machinery. At federal level, the task of coordinating the ministries is conducted through numerous ways, one of which is through the Cabinet and Cabinet Committees. The Cabinet is assisted by three Councils. They are the National Action Council (MTN), National Economic Council (MEN) and the National Security Council (MKN).

The MTN is the highest council responsible for coordinating development projects and programmes. Respectively, the MEN and MKN are responsible for economic and security matters. The Prime Minister chairs all three councils.

At official level, the National Development Planning Committee (NDPC) is formed to evaluate and consider all the programmes of the departments from various ministries. These are channelled through the Economic Planning Unit (EPU) and the Treasury, before being submitted to the National Economic Council. Besides the NDPC, other important committees at official level are Federal and State Governments' Liaison Committee and the Meeting of Secretary-Generals. The three committees are chaired by the Chief Secretary to the Government.

Each state has its own administrative machinery, with similar organisational structure, except for Sabah and Sarawak. They also have similar functions and roles.

In the Peninsular, administration of the states are conducted at state, district, mukim and *kampung* levels. For Sabah, administration is divided into three levels, namely state, district and *kampung*. In Sarawak there are five levels of administration, i.e. state, division, district, sub-district and *kampung*.

The lowest administrative level is the *kampung*. Each *kampung* is headed by a *Ketua Kampung* or Village Head who is appointed by the State Government. They are assisted by the Village Development and Security Committees (JKKK).

In Malaysia, the Local Government consists of local authorities such as City Halls and Town Councils in the cities and major towns and the District Councils in the outskirts of cities and major towns. The local authorities are established in accordance to the Local Government Act and is provided with adequate authority to operate independently.

The federal system in Malaysia has created some problems in the formulation of a comprehensive environmental protection policy and its effective implementation. This is despite the concentration of powers in the centre. To date, crucial matters relevance to environmental management remain in the states hands.

The People

The people of Malaysia is multi-racial, multi-cultural, multi-religious and multi-lingual. As such, Malaysia is rich in socio-culture.

All socio-culture development services in Malaysia including education, health and social services, information and broadcasting, conservation of the environment and wildlife, tourism, youth and sports development, housing and others takes into consideration the objectives of establishing the national culture (*Malaysia Official Year Book 1987*, 163). This is towards the strengthening of national unity.

In fact, all government policies of Malaysia are geared towards creating and enhancing national unity. For example, since 1971, after the traumatic racial incident of May 13, the main objective of its development (economic) policy is to create national unity by reducing the economical, social, cultural and other differences. Development projects are planned and implemented by means of a two-prong strategy, i.e. to reduce and eradicate poverty irrespective of race and to restructure society to eliminate the identification of race with economic functions.

The move to eliminate racial identification with types of employment and economic result has shown result is also important in formulating environmental protection policies and its implementations. Otherwise, the Chinese who are predominantly in business would be seen as the chief polluters while the Malays and other indigenous people (*bumiputras*) who are mainly farmers and fishermen would be seen as the victims of pollution.

The estimated population for Malaysia in 1993 is about 18 million. The three major races are Malays and other bumiputras, Chinese and Indians. Among the ASEAN nations, Malaysia is the fourth highest in population growth. This estimate is based on the population growth rate of 2.6 percent in the country.

Currently, Malaysia's population policy is more towards development of the population rather than inhibiting it. The rational behind this thinking is that Malaysia can afford to have the growth and that it would create a big captive market for Malaysian products. However, this policy is not consistent with the protection of the environment which is done by limiting population growth.

Malaysia, with a per capita income of RM2,400 annually is highest among the ASEAN nations aside from Brunei and Singapore. The growing affluent leading to conspicuous consumption could also effect the environment adversely.

Further, Malaysia with a literacy level of more than 70 percent and with increasing number of Malaysians are better educated, the concern towards the environment and rapidly growing. According to Rachagan and Bahrin (1983, 12) increasing public concern over environmental matters is evident from letters to the newspapers and from the activities of a number of environment and conservation groups, many of which are of relatively recent origin. The Malayan Nature Society has long advocated the need for conservation (Wyatt-Smith, J., 1961, Soepadmo and Singh, 1973). In recent years it has been joined by groups such as the consumers' associations of the various states and environmental protection societies. However, these groups are basically urban-based.

Further, according to a 1991 survey, Malaysians are uneasy with the state of the earth - nearly two out of three Malaysians considered the threat to the environment real (*Star*, 11/8/1991, 9).

The findings was based on interviews of 1,500 adults in Peninsular Malaysia in all major towns as well as rural areas, using the random sample method during April 1991.

Further, the survey found that younger people were more worried about the environment than their parents. Three out of four of those in the 18 to 24 age group said

the environment was under threat compared to 55 percent for those above 55 years.

Also, the survey concluded that education dictated concern - 85 percent of university or college graduates and 83 percent of those still studying said the threat to the environment was real. For those who only completed secondary education or less, the figures stood at 65 percent and 55 percent respectively.

The survey also showed that Malaysians take the environment seriously and were willing to sacrifice development for its sake. This was particularly so among the younger and more educated Malaysians.

Also, the survey revealed that most Malaysians perceived chemical emissions as the greatest environmental problem. This was especially so by the urban folks. People living in market centres (Kuala Lumpur, Penang, Ipoh, Johor Bahru) were the most bothered about the emissions, (41 percent rated this as the worst problem). Interestingly, the most debated environmental issue about Malaysia internationally - deforestation - was not that significant an issue among Malaysians.

With regard to environmentally-friendly products, 41 percent of the respondents felt that the products cost the same as other products while a third said that they "always" or "usually" buy them. The survey showed that at least a third of shoppers have a positive view of environmentally-friendly products.

Environmental Policy

As mentioned, Malaysia's policy on environmental matters was made explicit in the Third Malaysia Plan (1976-1980) in a chapter entitled 'Development and Environment'.

However, the Fourth Malaysia Plan (1981-1985) omitted the whole section on 'Development and Environment'. This aroused fears that the Government will not make any progress towards environmental protection.

The Fifth Malaysia Plan (1986-1990), remedied this lack of environmental protection emphasis. Its environmental policy objectives provide the guiding principles for the formulation and realization of national efforts to eradicate poverty and to provide the necessary amenities for meeting basic human needs, including clean air, safe drinking water, hygienic and nutritious food, decent clothing, and adequate housing (Environmental Quality Report 1989, 3).

Environmental programmes in the Fifth Plan comprised pollution control, environmental planning, and conservation of resources. Priority under these programmes was on conservation through the strengthening of the regulatory machinery and promoting greater coordination between policy formulation and programme implementation. The future thrust will continue to emphasize prevention and conservation measures as well as the creation of a well-informed public through the National Action Plan on Environmental Education aimed at achieving sustainable development (*Mid-Term Review of the Fifth Malaysia Plan 1986-1990*, 285).

As such, under the Fifth Malaysia Plan, the overall objectives of environmental management is based on the following environmental policy objectives:

1. to maintain a clean and healthy environment;
2. to maintain the quality of the environment relative to the needs of the growing population;

3. to minimise the impact of the growing population and human activities relating to mineral exploration, deforestation, agriculture, urbanisation, tourism, and the development of other resources on the environment;
4. to balance the goals for socio-economic development and the need to bring the benefits of development to a wide spectrum of the population against the maintenance of sound environmental conditions;
5. to place more emphasis on prevention through conservation rather than on curative measure, *inter alia* by preserving the country's unique and diverse cultural and natural heritage;
6. to incorporate an environmental dimension in project planning and implementation, *inter alia* by determining the implication of the proposed projects and the costs of the required environmental mitigation measures through the conduct of Environmental Impact Assessment studies; and
7. to promote greater co-operation and increased co-ordination among relevant Federal and State authorities, the non-governmental organizations as well as among the ASEAN Governments.

The ultimate aim of the Malaysian Federal Government National Environmental Policy Objectives under the Fifth Plan was to ensure as far as possible that all human activities are in balance with the environment. To enhance the success of these objectives the Federal Government realized that it must work closely with the State Governments as well as the non-governmental bodies.

The Malaysian Federal Government also recognizes that environmental problems transcends national boundaries. Ergo, it had resolved to cooperate with Foreign Governments either directly or through competent regional and international organizations to solve any occurring environmental issues. It is further trying to strengthen such cooperative efforts by having a good neighbour policy.

Presently, at the regional level, Malaysia works closely with other ASEAN nations. The ASEAN Experts Groups on the Environment implements an ASEAN Environmental Programme (ASEP) which is now at its Third Phase from 1988 to 1992. Projects formulated under this programme are implemented regionally.

This regional cooperation had resulted in Malaysia adopting and signing a number of declarations, resolutions and agreements such as The Manila Declaration on the ASEAN Environment; The ASEAN Declaration on Heritage Parks and Reserves; The Bangkok Declaration on the ASEAN Environment; The Agreement on the Conservation of Nature and Natural Resources; The Resolution on Policy Guidelines for Implementations; and The Jakarta Resolution on Sustainable Development.

At the Manila Third ASEAN Summit in December 1987, Malaysia together with other ASEAN nations adopted the principle of sustainable development. It declared that in the area of environment, ASEAN shall cooperate in promoting the principle of sustainable development and systematically integrating it into all aspects of development and focusing on the need for policy guidelines to protect ASEAN's common resources and environment.

Further, Malaysia subscribes to the growing trend among agencies, such as the UNDP and multi-lateral funding agencies like the World Bank that financing is only provided to projects that is planned according to the sustainable development principle. Currently, many countries having bilateral technical cooperation programmes with Malaysia have included environment as a component of their technical assistance programmes.

Further, at the international level, Malaysia continues to participate actively in programmes which represent a concerted global effort towards sustainable development. It notes with satisfaction that the sustainable development principle is being incorporated into programmes such as saving the ozone layer, controlling the transboundary movement of hazardous wastes, industrial risk assessment and management, the greenhouse effect and climatic change, and biological diversity.

However, Malaysia feels that for the principle of sustainable development to be successfully implemented world-wide, it is essential that all technologies relating to it be shared with or made available to developing countries. Also, the developed nations to help with fundings for the developing nations.

At the country level, Malaysia "In the light of the Langkawi Declaration on Environment (The Commonwealth Heads of Government, at their meeting in Malaysia in October 1990 adopted it.) and to meet the aspirations of the Declaration, the Department of Environment, with inputs from government and non-government organisations would intensify its efforts towards the necessary formulation of national environment policy that meets environmental challenges to the year 2000 and beyond (*Environmental Quality Report 1989*, 6).

Nevertheless, for the Sixth Malaysia Plan (1991-1995), environmentalists and consumerists lamented its omission of the importance of a National Environment Policy while acknowledging that it has given considerable attention to a wide area of environmental issues. It is felt that a definite National Environment Policy is necessary as present plans are on ad hoc basic and apply only to the next five years. With a national policy it is hoped that there will be a long-term framework within which the government can address itself to the various and increasingly challenging environmental issues. Otherwise, it would be a real pity that all the talk about the Langkawi Declaration fails to be translated into a Policy which also meshes in with those dealing with energy, transport, agriculture, health and economics.

Nonetheless, as said, the Sixth Malaysia Plan provide considerable attention to wide areas of environmental issues. It has outlined numerous programmes with regard to the conservation and protection of the environment. They include promoting the development of waste disposal facilities for industries; sustaining 12.73 million hectares of land area as permanent forests and 1.16 million hectares as national parks, nature reserves and wildlife sanctuaries; minimising the adverse impacts of pollution, erosion and sedimentation from development activities and enforcing fully the Environmental Impact Assessment (EIA) requirement for projects which have potential of damaging the environment. It is noted that the Plan has clearly stated that future development efforts will emphasise the impact of development on the environment to ensure that environmental quality is sustained.

As deforestation is closely associated with environmental degradation of a global proportion and it is a very sensitive issue in Malaysia, it must be mentioned that the country has a specific national forestry policy. This is vital because in Malaysia, the

State Governments have jurisdiction over their forest resources with the Federal Government guiding management and development, undertaking research and development, and promoting industrialization and marketing.

Malaysia's National Forestry Policy, formulated in 1978, is an integrated approach to ensure:

1. the sound climatic and physical condition of the country;
2. the safeguarding of water supplies and soil fertility; and the minimising of damage by floods and erosion to rivers and agricultural land;
3. the continuous supply at reasonable rates of forest produce for further processing, manufacturing and export; and
4. the conservation of adequate forest areas for recreation, education, research and protection of the country's flora fauna.

Environmental Laws

Laws that can be applied to environmental protection and management in Malaysia can be simply categorised into three segments - the common law, statute law and the comprehensive Environmental Quality Act, 1974 (EQA). Generally, the laws in Malaysia being a former member of the British Empire subscribes to the English and Roman laws.

Enforcement and authority for these laws range from civil action to local government, state government and the federal government. These are not mutually exclusive and have cause limitations to effective environmental management and protection.

Environmental protection under the common law relates to four cause of action - trespass to land, nuisance, negligence and the rule in *Rylands v Fletcher*. It is enforced by civil suit. They are two remedies under common law - damages to compensate the loss suffered and/or on injunction to restraint the offending party from causing any further damage or loss.

However, a limitation of the common law is that an injunction is granted at the absolute discretion of the Court. Injunctions may be temporary or permanent, depending on the complaint and the circumstances governing it.

The common law sources of action and the principles evolved can if administered by a judiciary intent on maintaining the quality of the environment be a fertile source of environmental protection. However, the dominant view in the judiciary appears to be that any expansion or change in the law should be the prerogative of the legislature. Consequently, the full developments of it are unlikely to be realised (Rachagan, 1985, 42).

With regard to statute law relating to environmental protection and management, there are more than 30 pieces of such legislation dating back to 1920. Principally, these statutes aim to regulate land-use, the exploitation of natural resources such as water, forest and minerals, and the use of products and hazardous substances, or aim at public health and safety. The provisions of many of these statutes are phrased in a manner to

allow for substantial environmental protection. However, with the exception of the Environmental Quality Act, none were directed exclusively to environmental quality.

Some of the pertinent statutes are "The Penal Code (F.M.S. Cap. 45); the Criminal Procedure Code (F.M.S. Cap. 6); The Local Government Act, 1976 (Act 171); The Mining Enactment (F.M.S. Cap. 147); Land Conservation Act, 1960; National Land Code, 1965; Protection of Wildlife Act, 1972; Street, Drainage and Building Act, 1974; Town and Country Planning Act, 1976; National Parks Act; and National Forestry Act, 1984.

As for the Penal Code in Malaysia its Chapter XIV deals with offences affecting public health, safety, convenience, decency and moral. It converts into a statute - crime in many other countries remains a matter for the common law. An important environment related provision of the Chapter XIV is that its Section 268 defines a public nuisance and makes its commission a crime.

Other important sections of Chapter XIV related to environment protection and management and the sanction for their breach are as follows:

Section 269 - Negligent act like to spread infection of any disease dangerous to life (up to six months imprisonment and / or fine).

Section 277 - Fouling the water of a public spring or resevoir (up to 13 months imprisonment and/or RM250 fine).

Section 278 - Making atmosphere noxious to health (fine up to RM250).

Section 284 - Negligent conduct with respect to any poisonous substance (up to six months imprisonment and/or RM500 fine).

Section 285 - Negligent conduct with respect to any fine or combustible matter (six months imprisonment and/or RM500 fine).

Under current condition the penalties impose under the Penal Code is negligible. It needs to be substantially increased to serve as a deterrent to today's erring parties. Another weakness of the Penal Code is that it does not make provision for the prevention of the continuance of the offence. To cater for this shortcoming, Chapter IX of the Criminal Procedure Code makes provision for a magistrate to grant an injunction to restrain a party from committing or continuing the action complained of.

Generally an injunction is a civil remedy and not available for criminal offences. However, in this case, a public nuisance is regarded as a quasi-criminal matter where it is recognised that an injunction is required to prevent the party continuing the nuisance. Hence, in accordance with the Criminal Procedure Code section 89, a magistrate upon receiving a police report or other information with sufficient evidence may grant an injunction or other suitable orders.

In Malaysia local authorities can play an effective role in environmental management. Two parts of The Local Government Act, 1976, deals with the environment. Part VIII deals with the pollution of streams and Part IX deals with the abatement of 'public nuisances'. The Act defines public nuisance as "any act, omission or thing occasioning or likely to occasion injury, annoyance, offence, harm, danger or damage to the sense of sight, smell or hearing which is or is likely to be injurious or dangerous to health or property or which affects the safety or rights of the inhabitants at large."

A vital aspect of Part IX of the Act is that it is mandatory for the local authority to take steps to remove, and abate all nuisance of a public nature within its area regardless

of whether the nuisance is a public or private premises. Further, Section 69 of the Act provides that any person who commits a nuisance or deposits any filth in or upon the bank of any stream, channel, public drain or other water-course within the local authority area is guilty of an offence.

Furthermore, Section 70 of the Act deals with the pollution of the water-course. Specifically, this Section is directed to pollution by manufacturers, quarry operators, laundry operators and others who may discharge sewage or other effluents. In recognition of the fact that the amount of discharge from any one polluting source may be difficult to measure the Section provides that a person is liable when the pollution is caused " ... either singly or combination with other acts of the same or any other person ...". The offence carries a penalty of a fine not exceeding RM5,000 or a term of imprisonment not exceeding two years or both.

Under this Act any citizens aware of the nuisance can report to the local authority. The concerned authority, if satisfied of the existence of nuisance, then serve a notice on the offender. If the offender fails to take remedial action, the local authority itself can perform the task and then recover the cost from the offender. Any offender failing to comply with an abatement notice is liable to a fine not exceeding RM1,000 or a jail sentence not more than six months or both.

It is not known how the Courts will rule where a citizen sues his local authority for failing to act in a public nuisance case. However, it has been suggested that an order of *mandamus* compelling the local authority to perform its statutory duty will be in order.

Further, the Street, Drainage and Building Act, 1974, empowers local authorities to regulate and control the development, building and construction and proper maintenance of streets, drainage systems and buildings. Also, this Act has specific provisions on pollution control. For example, the Act obliged owner or occupier of houses abutting private streets to clear rubbish, dust, ash and filth of any sorts; it prohibits the discharge of any industrial effluents into rivers, canals, streams, lakes or the sea.

Another law, the Town and Country Planning Act, 1976, imposes a statutory obligation on the local planning authority to ensure that the physical and environmental characteristics of any area are considered in planning and execution of projects. Also, the Act requires the local authority to adhere to the "current policies in respect of the social and economic planning and development and the environmental protection of the state and the nation."

To conserve lands on the hills, prevent soil erosion and the accumulation of silt, the Land Conservation Act, 1960, was passed. This Act prohibits the earth, mud, silt or stone from a piece of land to cause damage to other land. Also, the Act prohibits interference of any water course, whether natural or artificial through cultivation. The owner of land likely to cause silting and erosion is required to build dams, retaining holds, drains and water courses.

Further, to standardise and strengthen legislation relating to administration, management, conservation and development of forests in the Malaysian states, the National Forestry Act was enacted in 1984. This Act complements the National Land Conservation Act of 1960, the National Land Code of 1965, the Protection of Wildlife Act of 1972, the National Parks Act of 1980 and the Environmental Quality Act of 1974.

Comprehensive legislation plus the establishment of an agency to control pollution and enhance the environment in Malaysia had to wait until the Environmental Quality Act, 1974. It must be noted that none of the other statutes in force were revoked and

their provisions still apply. The provisions in the other statutes pertaining to environmental management have been overlapping in nature, delegate powers of enforcement to a range of authorities and lack any rational scale of penalties. The public and even government officials of the relevant agencies remain bewildered by these numerous enactments. Also, they are seldom enforced.

Hence, it is to the Environmental Quality Act, 1974, (Amendment 1985) (EQA) and the Department of Environment that Malaysians must increasingly look to for the protection and enhancement of their environment. The EQA is a Federal law while other environment-related legislations are either enforced by other Federal Ministries/Departments and/or State Governments and Local Authorities. Thus, the task of environmental protection and management is shared between Federal and State Governments (and Local Authorities under the State Governments) and has to be coordinated effectively.

The EQA as stated in its preamble is an enabling legislation. It relates to the prevention, abatement, control of pollution and enhancement of the environment, and for purposes connected to it. The Act comprises of six parts.

Part 1 deals with definitions. Among the important terms defined are "environment, beneficial use, pollutant, pollution and waste". For examples, environment means the physical factors surrounding human beings including land, water, atmosphere, climate, sound, odour, taste and the biological factor of aesthetics. Pollution means any direct or indirect alterations of the physical, thermal, chemical, biological or radio active properties by any part of the environment by discharging, emitting, or depositing wastes so as to affect any beneficial use adversely, to cause a condition which is hazardous to public health, safety, or welfare or to animals, birds, wild life, fish or aquatic life or to plants or to cause a contravention of any condition, limitation, or restriction to which a licence under this Act is subject.

Part II of the Act provides for the appointment of a Director-General of Environment Quality. Section three of Part Two exhaustively enumerated the duties of the Director-General. These duties cover a wide range of activities.

The Director-General is responsible for the administration of the Act and regulations; for the coordination of all efforts to prevent pollution; for recommending to the Minister concerned the environmental protection policy and other measures that have to be adopted and to control the issue of licenses provided for by the Act. Also, the Director-General is required to coordinate research work and surveys, collect and disseminate information to the public to educate them.

Further, the EQA enables the Director-General to recommend to the Minister concerned any amendments to the Act.

The EQA also provides that the Minister may appoint any number of Deputy Director-Generals vital to implement the Act.

Furthermore, Section Four of Part Two provides for the establishment of an Environmental Quality Council (EQC). However, the duties of the EQC are purely advisory. Originally, the Council as envisaged comprise only of representatives from relevant government agencies, the manufacturing industry and the academic community. However, an amendment to the Act allows for two representatives from environmental groups.

Part III of the EQA provides that the Director-General shall be the licencing authority. The issue of licenses is subject to the Director-General's discretion as are the

conditions attached to the licence. However, before doing so, the Director-General must consider the practicability of existing equipment being adapted to conform to the new varied conditions, the life expectancy of existing equipments, the quality or degree of cutback of emission, waste or deposit to be achieved by varied conditions, the cost of meeting with these varied conditions and the size of the trade and industry concerned.

The life of the licence shall generally last for one calendar year, after which it be renewable. As it is, the licensing machinery has been and still is the most popular device in Malaysia for controlling and regulating industrial and economic activities. Earlier enactments placed great reliance on this device and the EQA adopts similar approach.

Part IV of the EQA deals with prohibition and control of pollution. The technique adopted for pollution control is based on the concepts of "prescribed premises" and "acceptable conditions" of emission, discharge or deposit of wastes or the emission of noise into the environment.

Hence, Section 18 provides that the Minister concerned after consultation with the Environmental Quality Council may by order prescribe the premises, the occupation or use of which without a licence shall be an offence. This allows for the Council to deal with each industry stage by stage.

Further, Section 21 provides that the Minister may, after consultation with the Council specify the acceptable conditions or standards for the emission of noise or effluents. Also, a flexible approach is provided allowing for a varying standard after considering the type of area, industry, number of polluting sources and the technology available (Section 23, 24, 25 & 33).

However, the main instrument of pollution control are the EQA's Regulations. It incorporates suitable standards for effluent discharges and emissions. Some of these Regulations are:

1. Environment Quality (Prescribed Premises) (Crude Palm Oil) Regulations 1977.
2. Environmental Quality (Licensing) Regulations 1977.
3. Environmental Quality (Clean Air) Regulations 1978.
4. Environmental Quality (Compounding of Offences) Rules 1978.
5. Environmental Quality (Prescribed Premise) (Raw Natural Rubber) Regulations 1978.
6. Environmental Quality (Sewage and Industrial Effluents) Regulations 1979.
7. The Motor Vehicles (Control of Smoke and Gas Emission) Rules 1979. Enforced jointly by the Department of Environment. Department of Transport and Traffic Police.

Further, Sections 26, 27 and 30 deal with the discharge and spillage of oil into Malaysian waters or into areas outside the Malaysian territorial waters if such discharge result in the oil being washed into Malaysian water.

In Malaysia rapid industrialisation and the use of large quantities of chemicals to increase agricultural productivity during the three decades have given rise to public concern on adverse effects of these chemicals on human health and the environment. In particular, uncontrolled disposal of toxic wastes has created environmental issues that require immediate attention. Indiscriminate dumping of such wastes is mainly due to lack of suitable disposal facilities which are environmentally acceptable. To remedy

this situation, the EQA introduced new regulatory requirements to control the management and disposal of toxic and hazardous wastes.

The requirements are formulated in two sets of Regulations and an Order. They are to complement existing Regulations which are inadequate to control the new and emerging environmental problems arising from the generation, storage, treatment, transportation and disposal of toxic and hazardous wastes. The control strategy is based on the "cradle-to-grave" concept of waste management. It begins when the waste is generated and ends at the disposal site.

The Department of Environment, in the management of toxic and hazardous waste favours the reduction of the problem at source. This strategy is essential since there is a severe shortage of treatment and disposal facilities to receive the various types of toxic and hazardous wastes generated in Malaysia. As such, manufacturers in Malaysia are requested to have good house-keeping practices in production processes as well as waste reutilisation to minimise waste generated which require disposal.

Part V deals with provisions for appeal against the decision of the Authority set up under Part II. Finally, Part VI deals with penalties and prosecution.

Environmental Impact Assessment

In addition, in order to mitigate the environmental impacts that arise from natural resources and infrastructural development, the EQA was amended in 1985 and provision for Environmental Impact Assessment (EIA) requirement was included. To implement the mandatory provision, the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 was gazetted on the 5 November 1987. The Department of Environment enforced the Environmental Impact Assessment Order 1987 with effect on 1 April 1988. The Order required project proponents for 19 categories of prescribed activities to submit an EIA report to the Department of Environment (DOE) for approval before implementing the projects. The 19 categories of prescribed activities are agriculture, airport, drainage and irrigation, land reclamation, fishery, forestry, housing, industry, infrastructure, port, mining, petroleum, power generation, quarry, railway, transportation, resort and recreational development, waste treatment and water supply.

As a general guide to project proponents, *A Handbook of Environmental Impact Assessment Guidelines* was launched by the Minister of Science, Technology and Environment on 30th. November, 1987. It must be said that efforts to formalise EIA in Malaysia began in 1977. An EIA procedure was first proposed at the National Seminar on Environmental Impact Assessment in September 1977. The proposed procedure was examined and reviewed by an adhoc panel set up in the then Division of Environment. In 1978 it was submitted with its implementation plan, to the National Development Planning Council (NDPC) for its approval.

The NDPC gave its approval subjected to the preparation of a set of guidelines. A draft Handbook on EIA Procedure and Guidelines was prepared and approved in 1979 by the Environmental Quality Council. The Procedure was implemented through administrative arrangements in the absence of statutory provisions for its implementation within the EQA, 1974.

However, despite the EIA procedure has become law in Malaysia, it still suffers from ineffective enforcement. This is especially seen in the failure of project approving

authorities (state governments) to respect the EIA procedure. According to a joint press statement by the Centre for Environment, Technology & Development Malaysia (CETDEM), Environmental Protection Society Malaysia (EPSM), Federation of Malaysia Consumers Associations (FOMCA), Selangor & FT Consumers Association (SCA) and Selangor Graduates Society (SGS) (1991) very few state government seem to be respecting the EIA procedure. Examples they gave were: work of Pulau Redang began even before the EIA decision had been made by the DOE and no EIAs have been stipulated by the Sarawak government before approving massive logging activities.

Thus, although EIAs have started to be implemented by a number of industries and agencies, forestry managers in Malaysia continue to ignore this requirements. Even the mild recommendations of the International Tropical Timber Organisation Mission have yet to be implemented by the Sarawak State Government (EPSM, 11/1/91).

A recent controversy (1991) regarding the enforcing of EIA is the proposed LOST HORIZON project of Golf and Residential Resort to be sited in the upper reaches of the Klang Valley in the state of Selangor. Although the approving authority (in this case the Selangor State Government) has the final power of approval, it should not make any public decisions until the DOE has submitted its decision on the preliminary EIA report, which it still seems to be processing in this particular case. In this regard, no less than the Prime Minister of Malaysia, Datuk Seri Dr. Mahathir Mohammad, had asked approving authorities to observe the EIA Procedure for the current as well as future projects.

As such, the environmental and consumer groups like EPSM, FOMCA and SCA, in Malaysia have urged the DOE to improve its administration of the EIA procedure, especially along the lines of transparency and accountability. Also, to ensure that all approving authorities and project proponents to comply with the EIA procedure meaningfully.

Recently, public accountability and participation saw some improvement with two EIA Reports being made available for public comment as well as NGOs representation on various EIA Ad Hoc Review Panels.

Environmental Management Strategies

In order to achieve the national environmental policies and objectives, the DOE adopted a three-pronged environmental management strategy. They are:

1. pollution control and prevention;
2. the integration of environmental factors in project planning and implementation; and
3. environmental inputs into resource and regional development planning.

The three-pronged strategy is translated into corresponding environmental management programmes. Namely, pollution control, environmental impact assessment and comprehensive land-use planning. These programmes are supported by other environmental activities such as environmental monitoring, environmental education, information and training, environmental research and development, inter-agency and federal-state cooperation and coordination, as well as bilateral, regional and international cooperation.

In response to the World Commission on Environment and Development recommendation that certain structural changes are needed to integrate environmental and economic decisions both in Government and in business, Malaysia has established an Inter-Agency Participatory Groups or IAPG. The IAPG comprises most government agencies at the federal level including the DOE is coordinated by the Economic Planning Unit (EPU) in the Prime Minister Department. During IAPG meetings, issues relating to environment and development goals and targets are set. Also, actions required to achieve these objectives are spelt out and taken into consideration in the formulation of sectoral economic development plans.

Further, Malaysia through DOE promotes the sustainable development concept through a coordination and cooperation programme. For example, the State Governments are requested to establish State Environment Committees consisting of planning and development agencies. The committees are chaired by State Ministers or State Executive Councillors in charge of environmental matters at the State level. These environmental committees are advised and supported by the DOE. Among other matters, these committees deliberate on environment and development issues as well as coordinate and monitor the implementation of the principle of sustainable development in economic activities at the state level.

To further enhance coordination on environmental matters among the states a half-yearly Meeting of Ministers and State Executive in Charge of Environmental Affairs was instituted in January 1989. The main function of the Meeting is to exchange views on problems of environment and development and how they could be solved.

Also, the DOE is trying to create greater awareness and commitment among the people - government, industries, and the community on the need to integrate environmental protection principles into the various economic activities in order to ensure that resources are sustained for development efforts. In this respect, State and Local Governments, the industries and the community are urged to play a more active role by spending more money and time to help the country achieve its overall objectives of sustainable development. The mass media is also called upon to play its part to educate the people on the importance of environmental protection.

To further protect the environment, by the end of 1989, the lead content of motor gasoline was reduced from 0.4 gm/litre to 0.15 gm/litre. In 1991 the use of unleaded petrol was being popularised in Malaysia by the oil companies. The Government provides suitable incentives like subsidy to lower the price of unleaded petrol than the leaded. Also, the Government is trying to promote the use of natural gas which is also environment friendly by subsidising the price so that it would cost half that of the unleaded petrol. However, the prices of converters to enable motorists, particularly those having old vehicle, to use these environment friendly products are still considered high.

Impediments To Environmental Protection

As mentioned, a challenge to effective environmental protection in Malaysia is its political structure. This is because despite the concentration of political powers in the centre, crucial matters of relevance to environmental management remain state matters. This is particularly so for the state of Sabah and Sarawak. Appendix 1 lists the extracts from the Federal, State and Concurrent lists of the Ninth Schedule of the Constitution

specifying areas of Federal, State and Concurrent competence. Crucially, land, water, obnoxious trades and local government fall within the purview of the 13 States individually, whilst others concerning factories, machinery, medicine and health fall under Federal jurisdiction (Rachagan, 1985, 58).

The tax structure between the Federal and State Governments further complicate matters with regard to environmental protection. Under the Malaysian Constitution, all proceeds of revenues from taxation accrue to the Federal Government except those that are assigned to the States under Article 110 of the Constitution, and those that are collected by the local authorities and religious departments (Appendix 2). Thus, States revenues is limited. Given this financial constraint, State governments are ill disposed to curtail the granting of timber, mining or agricultural concessions especially where these yeild considerable financial returns, even though such concessions can be ecologically unsound. Thus, despite the various committees being established, one at the highest level, to ensure effective coordination between federal and state governments with regard to environmental protection, the problems persist.

Another impediment to environmental protection, according to Rachagan (1985, 61) is that by a peculiar twist of reasoning, politicians in Malaysia view development as a confrontation between economic growth and environmental management, and have attempted by legislative means to weight the equation to the advantage of economic growth.

Further, the position of the Ministry of Science, Technology and the Environment as compared to other senior ministries, often does not have the influence that is desired. Consequently, the environment get priorities over other things, particularly economics.

A well known example of this problem was the Endau-Rompin issue where a state government continued to allow logging on a forest reserve that was earmarked to be converted into a national part. Even despite the Ministry of Science, Technology and Environment being 'well aware and convinced of the seriousness of the problem' and 'making representation to the Pahang Government' logging of the core area was continued and, indeed, speeded up (*The New Straits Times*, 10 August, 1978).

The Pahang State Secretary declared that the National Park would only be set up after the State had fully exploited its economic potential and that 'when it comes to choosing between human welfare and animal survival, the state had to opt for the former' (*The New Straits Times*, 12 May, 1977). This case raises the related issues of environmental protection, human welfare and economic growth; it also raises a need for a review of federal-state relations in the Malaysian federation (Rachagan, 1985, 61).

Also, as lamented by a former Minister of Science, Technology and the Environment, Datuk Amar Stephen Yong, "... the Department of Environment must have more equipment and manpower to carry out the mandate given to it under the Environmental Quality Act (*Sekitar*, Jan/Feb/Mac 1989, 2).

In this respect, the EPSM (*Alam Sekitar*, Vol. 15 No. 4, 4) remarked, "It will be interesting to evaluate the effectiveness of the environmental hotline recently started by DOE in terms of resolving public complaints. The enforcement credibility of the DOE is at stake! While it is going to get more staff (and hopefully more equipment as well), the Minister of Environment will have to take urgent measures to retain experienced staff."

As such, the DOE is having difficulties retaining experienced officers. The turn over rate of experienced staff could be alarming. This is because the private sectors,

particularly those who have environmental problems, are tempting these experienced and trained officers with salaries that are difficult to refuse. Temptations are generally offered to the more able and experienced officers.

Hence, the DOE is often saddled with the challenge of grooming new staff who on having the required competency and experienced are tempted away by the private sectors. To avoid these vicious cycle, the DOE should try to find the appropriate incentives to make them stay and to ensure that they are not confronted with their former staff who are now on the "other sides". Otherwise, the DOE will remain a training ground for the industry to have officers who knows the Ministry "too well".

Surely the time has come in Malaysia for environmental action to match the rhetoric (for a clean environment) which has even become common among the highest levels of Malaysian Government with the adoption of the Langkawi Declaration in October 1989. EPSM bemoans the lack of concrete action among all sectors, despite preparations for the UN Conference on Environment & Development, slotted for June 1992 in Brazil. There are environmental stresses aplenty - the spreading water shortages, recurrent incidents of haze, open burning, poor garbage collection, absence of toxic waste disposal site, poor logging practices, etc. (*Alam Sekitar* Vol. 15 No. 4, 5).

Role Of Media In Environmental Protection

For the mass media to play an important role in influencing policy and legislative action with regard to environmental protection it must have the freedom to do so. In Malaysia laws affecting communication and mass media can be considered numerous if not comprehensive. Communication, whether interpersonal or through the mass media is regulated by Article 10 of the Federal Constitution of Malaysia and more than 45 laws with a wide range of penalties including detention without trial (Mohd Hamdan, 1988, 1).

As such, a well known Malaysian environmentalist Gurmit Singh (1989, 18) lamented: "Putting aside the problems the mass media may have in handling news and views from environmental non-government organisations (NGOs), their coverage of the activities and positions of the Federal Government's own Department of Environment (DOE) is still unsatisfactory. Even during the last CHOGM (Commonwealth Heads of Government Meeting) meeting in Kuala Lumpur, both TV and the press were reporting foreign footage on global environmental issues like global warming with almost insignificant Malaysian examples. There has been no sustained campaign by the mass media to improve environmental awareness among the public or to publicise the virtues of EIAs (Environmental Impact Assessments), which become a legal requirement in early 1988."

Also, there are allegations that the Malaysian mass media tend to play down environmental issues, particularly when it affected the interest of the Federal Government who have the power to close them whenever they published anything displeasing to them. Certain environmental issues like the state of the forest can be very sensitive to the Government, especially when western environmental groups take them to task. When this occurred, there were cases when the mass media even badmouthed the local environmental groups for this affair and alleged that they are irresponsible.

As such, Gurmit Singh, President of EPSM lamented that less than 30 per cent of his statements get published. EPSM press statement (11.1.91) noted: "Public environ-

mental awareness increased only slightly with the mass media showing some enthusiasm especially on the issues of recycling. But periodic blackouts of local environmental groups' statements remained a norm."

Hence, Gurmit (*Alam Sekitar* Vol. 14 No. 3, 9) concluded "Public interest groups like EPSM cannot count on the Malaysian media to inform us correctly of the facts of issues (especially if the Government does not give the clearance) nor can it serve the vital role of supplying accurate feedback to the Government. This is a national tragedy as both people and Government will suffer in the end, since even public interest groups will not be able to provide meaningful evaluation and feedback to policy-makers."

Up to now, no media in Malaysia can claim that they have journalists or writers who are especially employed or trained to cover environmental issues. Special columns on the environment in the richer newspapers like the *New Straits Times*, *Malay Mail*, *Sunday Mail*, and *Star* are not so regular. That is, there columns are sustained only when the country is facing a serious environmental problems and disappear when such crisis abated.

A good case in point was when Malaysia was facing one of its worse haze in October 1991. Nearly all the media in Malaysia gave an extensive coverage about it. The richer newspapers not only provide lengthy and even serial articles about it but also presented colourful photographs, graphs and even cartoons depicting the haze problems. Many of the mass media even offered measures to take when pollution levels are high. It also called on "monitoring system of the effects of the haze needed". A number of experts were interviewed to talk about the haze.

The *New Straits Times* (NST) even retitled its "Lifestyle" section as "LIFESTYLE/Environment. It also assigned a team of its senior journalists to do write up on the haze. According to *New Straits Times* (17/10/91, 31) "The haze appears to be over - for now. But it will be back and it could be worse. Though not yet a permanent smog, the frequent incidence of haze calls for action. Will the people support harsh pollution-reducing measures in a crisis situation. The explores these questions in a three-part series."

The same concerned were showed by the Malaysian mass media when the country were facing some form of environmental problems caused by the eruptions of Mt. Pinatubo in the Philippines. A wide coverage was given on this subject and how people can protect themselves from any ill-effects.

However, in normal circumstances, the Malaysian mass media have yet to give full coverage with regard to environmental issues or even consistently maintained a regular column on the environment. The extend of coverage and advocacy usually depends on who were its perpetrators. They are especially sensitive when it involves the Federal Government interest or some very influential personalities.

Of course there are exceptions. For example, a special column in *Sunday Mail* called "Insight" has consistently published analytical and sometime advocative stories about the Malaysian environment.

Also, there were times when the Malaysian mass media by providing massive coverage to work of NGOs championing the cause of the environment have managed to convince the authority to change their plan for the betterment of the environment. Some notable examples include the campaigns to Save the Endau-Rompin National Park, Save the Batu Caves, Stop the Damming of the Tembeling River, Stop Illegal Logging in Hulu Klang, etc.

Further, the mass media in Malaysia has helped in the cause of the environment by exposing neglect by local authorities or even state governments. This is especially so in areas where the local community are active in championing their own rights. Two notable examples were the Papan people fight against radio active waste dumping in their area and the Sepang residents fight against dumping of toxic waste in their area.

The Malaysian mass media has also contributed towards the welfare of the environment through its "hotline or actionline" in the newspapers and the talkback programme in the electronic media, particularly the radio. A survey by FOMCA showed that a significant number of complaints through this media service has been related to the environment. Generally, the media has been successful in resolving these complaints.

Furthermore, the service columns like "opinion page" or "letters to editors" in the Malaysian mass media has provided opportunities for the people to vent their feelings and views regarding environmental protection. FOMCA's survey showed that the mass media is generous in allowing numerous letters regarding the environment to be published in their columns. Sometimes, these environmental letters did get support from other readers or even rebuttal and the "debate" continues until the editor put a stop to it. It is not known whether the authorities concerned were influenced to take the appropriate action or changes, but it did help to highlight the environmental issues that were of public interest. In some cases, it did clear up the "air" about the issue and forced the authorities concerned to do something regarding it.

Nevertheless, till today no Malaysian journalist can be identified as championing the environment or make a vocation of writing about the environment.

Malaysian NGOs like EPSM, FOMCA, MEJF (Malaysian Environmental Journalists Forum) and COMCON (Communicators for Conservation) have made numerous efforts to raise environmental awareness and commitment among Malaysian journalists by conducting appropriate courses and workshops. However, according to Gurmit (1989, 18): "Although the attendance (to the environmental courses and workshops) was fairly good, the impact was quite limited as almost none of the participants were assigned environmental beats after completing the courses (I gather only one small paper has introduced such a beat in the last couple of years). They (the course participants) kept on claiming that the gate-keepers (i.e. subs and editors) needed to be sensitised. Otherwise ordinary journalists were quite powerless. Where does the truth lie?"

Also, it was reported that the mass media in Malaysia did suffer from rivalry and sectoral interest with regard to environmental reporting. A case in point was the coverage of "The Malayan Heritage and Scientific Education to Endau - Rompin 1985 - 1986" organised by the Malayan Nature Society in conjunction with Star Publications. According to a report in *Sekitar* (1986, 34) "The expedition could had have better press coverage in the general press if not for press rivalry and sectoral interest of the vernacular press who saw the expedition as primarily of interest to the English educated.

As such, a preliminary study by FOMCA showed that in terms of volume the English language newspapers give the most coverage to environmental issues and education, followed by the Malay and then Chinese newspapers and finally the Indian newspapers.

Also, FOMCA's preliminary study showed that the environmental stories are

generally positive in nature. That is, it is informative and urging for a cleaner environment by helping to expose some areas that are experiencing environmental woes and getting the relevant authorities to do something about it.

Generally, it can be said that the Malaysian mass media are becoming more environment oriented. Not only the newspapers are giving more coverage to the environment but also the magazines, radio and television. In fact, in numerous occasions the television news and magazines programmes have given special coverage to environmental stories. This include special productions or programmes and features. Occasionally, it could be even be serial in nature. It is noted that one of TV Malaysia feature about abuse of pesticide in Malaysia entitled "Silent Poison" won an international award. Further, one of the nomination for the TV news national award for 1990 was about the ozone layer problem.

In terms of the quality of coverage, there also seem to be a marked improvement. This is reflected by the increasing number of soft news about environment as compared to before when most of environmental stories are hard news in nature. Also, there is now more local environmental stories which are of the soft news type, where else before these stories are taken from international news agencies or syndicates.

Further, more efforts are now been given to localise environmental issues and writing an in-depth stories of the environment.

However, with regard to gathering information about the environment, Gurmit (1989, 18) noted: "I have been amazed over the years when journalists expect us (EPSM and other NGOs) to provide them scientific facts to substantiate even stories that they have originated. Why do they not turn the screws on the relevant government departments and the giant private corporations instead?"

As it is, environmentalists in Malaysia have found that the prevailing attitude of fear and secrecy generated within the Malaysian society by the Official Secret Act (OSA) and other legislation like the Internal Security Act (ISA) and the Printing Presses & Publication Act, has made their work very difficult, to put it mildly. It must be said that these laws have made government officials very tight-lip while the private sectors have always been extremely secretive making journalists to depend more on NGOs who are normally very articulate and willing to take risk with regard to protecting the environment. To worsen matters even local academicians are generally tight-lip. This is expected as the universities in Malaysia are government owned.

Nevertheless, it must be said that the mass media in Malaysia has been partners to some worthy environmental education projects as well as community projects pertaining to environmental welfare. An example of the media becoming a partner to an environmental educational project is when the *Star* became involved in "The Malayan Heritage And Scientific Education To Endau - Rompin 1985 - 1986, organised by the Malayan Nature Society (MNS). The main objective of the expedition was to organise a scientific expedition to one of Malaysia's important conservation area.

According to MNS the initial arrangement with the *Star* as a partner for the expedition gave it the confidence to carry out the expedition. As such, the *Star* provided massive publicity to this campaign including full page advertisements about it. This excellent coverage by the *Star* allowed armchair participation by many interested member of the public (*Sekitar*, Vol. 4, 1986, 34).

As participants of the Endau-Rompin also comprised of other local media members from the newspapers, magazines, and television it was able to get a much wider

coverage. This include television documentaries from the government (RTM) and the private television station (TV3). According to MNS there was less radio reporting of the expedition owing to lack of contact.

The *Star* was also involved as a partner to a community project of recycling with a local government and an environmental NGO. The project though shortlived was a success. It did create the need for the public, particularly school children to be involved in recycling as one way to protect the environment.

Another example when the mass media was a partner with environmental groups was an effort to stop a project to built a road in a National Park. A newspaper provided free public service announcement or ad space. The project was stopped even before it started.

Here it must be said that environmental reporting in Malaysia is increasingly becoming a serious affair. Reporting about the environment now is not only reactive but also pro-active. For environmental reporting to be effective there need to be more of pro-active reporting than reactive reporting. This is because it is more effective to report on something that is going to be subjected to harm than something that is already harmed. After all, it is not easy or cheap to rehabilitate an affected environment if it can be done.

Finally, it also must be said that for environmental reporting to be more effective in Malaysia there need to be a reasonable amount of media freedom in Malaysia. Environmental quality can best flourish in a society that practices participatory democracy and where the media is allowed to report any issues openly in the interest of the public.

Environmental Education and Information

Government

One of the best form of environmental protection is environmental education. In Malaysia, according to DOE, environmental education and dissemination of environmental information continue to play a major role in environmental management as long as the "preventive" as opposed to the "curative" approach, is still adhered to.

The Education and Information Unit of the DOE implements programmes, aimed at informing and educating not only the general public but the policy makers and implementors at the helm of state and federal government agencies responsible for development (Environmental Quality Report 1989, 173).

Activities of the Unit includes both scheduled (e.g. World Environment Day Celebrations and Malaysia Environment Day) and unscheduled (e.g. ad-hoc talks to schools, societies, exhibitions, etc.).

Further, the DOE is active in publications. It publishes environmental information kit comprising the *Sekitar* magazines, pamphlets and posters. Also, it publishes the Environmental Quality Annual Reports plus the "Investment Guide (Environmental Requirements)."

Also, the DOE has established a library service comprising of environmental books, journals, magazines, reports, working papers, brochures, video films, slides, etc. The library services is open to the public during working hours. It also distributes its bibliographies to relevant institutions.

Further, the DOE has developed an Integrated and Computerised Environmental Information System. The system consists of a super-mini computer, HP9000, model 825S which runs on UNIX operating system or HP-UX. It will also provide micro-to-main system link facilities that allow users to take full advantage of today's personal computers capabilities as well as giving access to the main database.

Also, the DOE has introduced other form of query-response services with its INFOTERA. In Addition it also has introduced a hotline service to receive complaints as well as queries. The DOE also organised Envirocamp with a local university with the sponsorship of ESSO Malaysia Berhad.

Also, the DOE produced environmental films and videos. It further assisted television stations in providing technical input and location hunting for documentary films on the environment.

It must also be mentioned that the Educational Radio and Television programme of Malaysia is also active in producing environmental films that are screened to school children. The quality of their environmental documentaries are commendable.

These environmental documentaries are in support of a primary school subject entitled "Human and the Environment." This means that primary school students in Malaysia are expose to environmental education as a special subject at an early age. Environmental studies are also incorporated in the secondary school curriculum. Also, environmental studies have been introduced in the higher institute of education since mid 1970s. At least two universities have offered it as an area of specialization. At Institut Teknologi Mara it is offered as a subject in the Schools Business and Management, School of Engineering and School of Mass Communication. In the teachers training colleges, environmental education has become part of the co-curriculum syllabus together with consumerism.

NGOs

The Malaysian NGOs believe that a broad mass education approach is essential in order to create awareness among different groups in the country. Expertise and skills from all fields of knowledge must be mobilised to defend the environment with a commitment.

In Malaysia, the conservation, environmental and consumer groups are very active in environmental education and information dissemination. They are active in producing environmental publications and reports. As noted by Claude Alvares (1991, 65), a known Indian writer, "India has also taken with great gusto to the production of citizens" reports on the environment, following the example of the Malaysian environment groups.

The MNS established in 1940 which is very active in conservation work has been increasingly very active in environmental education. It has published numerous publications and reports with regard to the Malaysian environment. This include the publication of the *Malayan Naturalists*. Also, it is actively trying to promote environmental clubs in schools. As mentioned it had successfully organised the Malayan Heritage and Scientific Education To Endau - Rompin. The target public of MNS is the general public including school children and policy makers.

The Technology Association of Malaysia (TAM) established in 1951 is also active in raising awareness among the people with regard to the impact of technological

changes upon the environment. It has produced numerous educational materials with regard to conservation and pollution. The World Wildlife Fund (WWF) Malaysia, established in 1972, has provided grants for conservation and education projects. It believes that developing interest in conservation values and environment ethics amongs young children as key factors in the future of life on earth. The WWF Malaysia education programme has developed steadily over the years. It has acquired and built up a library of resource materials - photographs, slides, paintings, films, wildlife sounds, etc., from which educational materials such as school room charts, posters and audi-visual programmes are prepared.

In addition, its Mobile Education Unit visits schools all over Malaysia. This provides an interesting 2-hour programme of films, audio-visual presentations, a quiz and question-and-answer session about Malaysia and its nature.

The EPSM which started its life as the Environmental Protection Society of Selangor in 1974 has also become increasingly active in environmental education. It is very active in conducting courses, seminars, workshops and other educational activities for all levels of society including the training of journalists for environmental reporting. Also, it is prolific in publications. Its official publication is the *Alam Sekitar* (Environment). Recently, it also tries to get to primary school children by publishing a book intended from them.

Sahabat Alam Malaysia (SAM) formed in 1977 is another NGO very active in environmental education. It conducts educational programmes and training services for students at all levels. Workshops are regularly organised for youth and women's organisations, residents' associations, workers' groups and trade unions. Other educational projects include the formation of environmental clubs, national poster and essay competitions, film festivals, exhibition and field trips to effected communities. The SAM is also very active in documentation work. Over 100 related subjects on environment and development have been documented. Its official organ is the bi-monthly *Suara SAM*. Other publications and reports are also published for general and specific public.

The consumer associations in Malaysia is another movement very active in environmental education. The consumer association of Penang (CAP) has been active in this field and has produced a film on the subject of "Environmental Crisis in Malaysia."

The Federation of Malaysian Consumers Association (FOMCA) and its affiliates is also very active in environmental education. It has work right down to kindergartens and up to universities in its effort to create awareness on the importance of a safe environment and the need to protect it. Also, it is involved in using traditional media in environmental education. It is conducting workshops, usually with the Malaysian Press Institute, to help train media professionals in environmental reporting. Annually, it make use of the Earth Day and Environmental Days (World and Malaysia) to conduct extra educational activities to raise awareness about the importance of saving our environment. Activities for these days would include /Environmental/Culture/Shows/Schools/Debates on the /Environment, exhibitions, talks on radio and television, essay writing contests, etc.

The Selangor and Federal Territory Consumer Association is also active in conducting environmental education workshops for teachers at all level. For these workshops it cooperate with the local universities.

The Malaysian Environmental & Conservation Network (MECN) comprising a number of conservation, environment and consumer organisations has also been involved in numerous environmental education activities.

Further, the Malaysian Environmental Journalist Forum (MEJF) is active in training media people to be more sensitive towards environmental issues. Also, to provide them knowledge and skills with regard to the environment and its reporting.

Also, MINSOC, an NGO management training body is also involved in sensitising and training other NGOs in environmental management.

Industry

A number of companies in Malaysia is also involved in providing environmental education, particularly to school children. They include a number of oil and pesticide companies. Further, a number of banks have also been supporting environmental education efforts.

Conclusion

Despite the many shortcomings we find that Malaysians are more aware of the need to protect the environment. Also, the need to have a good environmental education.

In terms of policy, what is needed is something written down that can be called a national environmental policy. The NGOs in Malaysia feels that it is best that Malaysia have a clearly define environmental policy rather than one that is stated all over the place. By having it, other policies can be ensured to observe it when implementing their developmental programmes.

Further, there is a need to enhance the enforcement ability of the DOE and other agencies involved in environmental protection. There is also a need to improve the state and local authorities compliance to the EIA.

As for the mass media, it could further be encouraged to upgrade their knowledge and skill with regard to environmental issues and reporting.

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