35

SEMINAR ON ENVIRONMENTAL ISSUES AND CHALLENGES IN THE 80s
17TH MARCH, 1983, BALLROOM, HOTEL EQUATORIAL, KUALA LUMPUR

Keynote Address
by
S.T.Sundram
Director-General of Environment

Terlebih dahulu saya ingin menyampaikan penghargaan kepada Malaysian Organisation for Human Settlements (M.O.H.S.) pada amnya dan Jawatankuasa Pengelola Seminar ini khasnya kerana jemputan kepada saya menyampaikan 'Keynote Address' atas satu topik yang begitu topikal dan mendesak.

Since the turn of the century, an increasingly noticeable phenomenon has been the harnessing of advances in science and technology in terms of accelerated development to meet human needs of the world's population expected to grow to 6 billion by the year 2000. The convenience and comfort of modern housing, transportation and communications, the creation and expansion of sizeable productive capacity in industry and agriculture, prevention and cure of many chronic diseases which once dictated shorter life expectancy can all be attributed to gains through application of science and technology.

The progress and development made possible through scientific and technological advances has perforce exerted a heavy demand on resources including that used up to satisfy energy demands not as a pre-requisite of development but as a consequence. Man's increasing capacity to adversely influence the environment in a sense implies that the problems of today have no parallel in history. The needs

../2..

of environmental protection, of ensuring adequate supplies of energy, fuel and food; the due investigation and rational use of the resources of the world's oceans, and of combatting squalor, poverty malnutrition and disease all bear on society's interaction with the environment. Fortunately, some of the advances in science and technology can be applied effectively in the interests of environmental protection and rational resource use, given the will to do so. Given the present advanced stall of development and pressures for intensification, Man has little margin for error but to take due account of the deleterious effects of his innovations, and not continue to bank indefinitely on the carrying capacity of nature. In this sense, environmental pollution today, be it of air, land or water, reflects failure to use and manage science in ways that fragile ecosystems are not impoverished or imperilled.

It therefore becomes increasingly necessary for society to operate in harmony with the environment on the basis of strategies integrating environmental concerns into socio-economic developments. In this respect, the performance indicators of economic development should place a premium on economic growth in the framework of a high quality environment and rational resource management. Only then can the true requirements of Man and society be said to be realised in terms of people's aspirations to a life of material well-being, spiritual harmony and oneness with nature as the focus of development. Let me now turn to deal with the environmental issues and challenges we in Malaysia face in the eighties.

ENVIRONMENTAL ISSUES & CHALLENGES

The problems of degradation and pollution of the environment are complex problems for in the final analysis environmental problems

../3...

are part of a complex web linked to population growth, resource availability and pace of urbanisation and industrialisation, whether in manufacturing industry or in agriculture-based industries or extractive ones like mining and development of infrastructure facilities.

Seventy percent of Malaysia's population is in a predominantly rural setting where a good proportion have to contend with problems of inadequate water supplies and sanitation, housing and problems of nutritional deficiency. Therefore, accelerated development continues apace on a national scale to help generate the resources for sustained developments.

In the urban centres, the pressure of population and development on resources and provision of basic needs has been compounded by the so-called urban-rural drift. This is an understandable phenomenon in that economic activities and outlets for social and cultural pursuits are not so developed in the rural areas which impels a good proportion of the younger and more educated sections of the population to take a chance on migrating to the urban centres in search of job openings and advancement. Needless to add it exacerbates congestion and adds to the strains. Such a tendency exerts enormous pressures on transportation, sanitation and other basic services. They tend to impose demands that can at times strain severely the resource capacity of any area, as in the case of public water supply. This can aggravate pollution, strain recreational facilities, putpad to open spaces and render it difficult for the restorative capacity of nature to be at work in an optimum fashion. Yet recognise we must that, for the most part, the movement of people to the urban centres has been impelled by natural human aspirations, for better jobs, schools, medical and health services, cultural outlets and that peculiar sense of excitement that have come to be associated with urban life.

If the aspirations which have drawn our people in the first instance to the city and subsequently from the city core to the suburbs are often proving illusory, the solution does not lie in seeking escapism from the negative aspects of urban life through resort to dadah, for example. The challenge is to find ways to promote the quality of life in the midst of urban development; in short to make urban life more fulfilling and wholesome rather than frustrating. Along with the essentials of jobs and housing, we must also provide open spaces and outdoor recreation opportunities, maintain acceptable levels of air and water quality, reduce unhealthy noise and litter and develop a skyline and environment that delights the eye and uplifts the spirit at the same time so that truly our urban environment can be called a city of man.

By the same token, more positively we should aim at making rural life itself more attractive, thus encouraging orderly growth in rural areas. The creation of greater economic, social, cultural, and recreational opportunities in rural parts of the country that will lead to the strengthening of small cities and towns, contributing to the establishment of new growth centres in strategic locations throughout the nation.

Malaysia as a developing country has no choice but to forge ahead with economic growth to meet the aspirations of the people for an acceptable standard of living. In the process, problems of damage and disruption to the human environment have emerged and would assume serious proportions if modern scientific and technological progress fails to take into account the paramount need to gear ourselves to the attainment of social and

../5..

cultural goals as part of the development process; in short to find ways and means of fulfilling the people's right to a clean, healthy and safe environment.

The various water resources studies to date point to a scenario where the availability of sufficient water of appropriate quality could become a critical factor constraining future growth. Given the inexorable pressures for intensified urbanisation and accelerated industrial development, adequate measures to protect and manage our water resources become a compelling need of our times.

Coastal areas and estuaries which are the most productive of ocean areas and the most at risk from sewage, agriculture chemicals, industrial discharges and contamination by heavy metals are threatened by commercial development - dredging for sand and gravel, for example - and by oil spills from off-shore drilling tanker accidents and normal tanker operations.

Specific Threats

Specific threats of increasing concern to the atmosphere are:-

(i) increased emissions of oxides of sulphur and nitrogen produced by the combustion of fossil fuel (coal, which is increasingly regarded as the most likely substitute for oil, often has high sulphur content) leading to acid rain and photochemical smog,

(ii) depletion of the ozone layer and accompanying threat of increased ultraviolet radiation at the earth's surface,

(iii) increased concentration of carbon dioxide and the possibility of unpredictable changes in climate due to the "greenhouse effect" and

(iv) increase in fallout of trace metals, potentially toxic in small amounts to humans and other organisms due to industrial activities and the large number of organic micropollutants being transported long distances and deposited along with acid rain, toxic metals and other pollutants.

The high rate of clearing of forest land for agriculture, roads, human settlements and a welter of infrastructure projects point to the possible effects on the carbon cycle and the subsequent impact on the climate, loss of genetic resources, plant and animal species. Indiscriminate land clearing has already caused soil degradation and erosion leading to siltation of rivers and flash floods on an unprecedented scale. The point to make here is that these occurrences are not acts of God preordained to occur but the end-result of neglect and human failure to take timely action not to transgress the outer limits .

The use of agricultural chemicals such as the fertilizers, herbicides and pesticides has increased steadily year by year contributing to contamination of water with serious effects on man, wildlife and flora. Given the need for increased food and agricultural crop production, the use of these chemicals will probably continue to increase but surely the time has come for greater control on the whole range of these chemicals in use and to educate those handling them on proper and safe usage.

Population growth poses an urgent problem in that the partic

impact of any given level of population growth depends in large measure on patterns of land use. Throughout the country, there is a critical need for more effective land-use planning, and for better controls over use of the land and the living systems that depend on it. Throughout history, Man's greatest resource has been his land. Our land has sustained us. But all too often we have treated land as if it were a limitless resource. Today it is increasingly dawning on us that our land is finite, while our population is growing. The uses to which any one generation puts the land can either expand or severely limit the options open to succeeding generations. The time has come when we must accept the principle that none of us has a right to abuse the land, and that on the contrary society as a whole has a legitimate interest in proper land use. Knowledge and technology needed to do things right is already available. What is needed is the will to act on a sustained basis.

The problems of urbanisation, and of land and water use generally can only be met by comprehensive approaches which take into account the full spectrum of social, economic and ecological concerns. We must work toward development of a National Land Use Policy to be put into effect through an effective partnership of Federal, State and Local Authorities acting in concert and, where appropriate, with new institutional arrangements mutually agreed upon.

Recycling

The prospect of population pressures vis-a-vis resources adds urgency to the need for greater emphasis on recycling of 'waste' products. Increase in numbers taken together with changing lifestyles in the context of rising expectations spells greater consumption leading to pressure

available resources; also greater consumption means more 'wastes' to be disposed of, whether in the form of solid wastes, or of the pollutants that befoul our air and water.

Yet much of this waste is strictly unnecessary. Essentially, waste is an arbitrary human creation and essentially a misplaced resource. Natural systems are generally closed systems. Energy is transformed into vegetation, vegetation in turn into animal life, and the latter returns to the air and soil to be recycled once again. Man on the other hand has developed 'open' systems - leading all too often in an open sewer or an open dump which end up contaminating Man's own environment so that he is affected by his own muck.

No longer can we afford the indiscriminate waste and spoilation of our natural resources. Neither can we accept as inevitable the mounting costs of waste removal. We must move increasingly toward closed systems that recycle materials now considered as wastes back into useful and productive items. In this respect, Malaysia can proudly point to significant efforts in this direction under way in the palm oil industry. Of great potential is the whole area of creating non-waste and low-waste technologies reducing significantly or excluding altogether harmful effects on the biosphere. These pose a major challenge - and a major opportunity - for our scientists and research and development personnel.

APPROACH TO ENVIRONMENT AND DEVELOPMENT

A distinctive feature of the past decade had been the recognition by the developing countries that the once fashionable concepts of environment and development had serious weaknesses. The developed countries in the past considered the environment as largely concerned, with pol[illegible]

and conservation and that taking environment into account in making production and consumption oriented decisions served only to add to the costs of development.

The environmental policies of developing countries, on the other hand, must necessarily address themselves to effectively cope with both categories of problems, namely, the lack of development as well as the disruption and degradation arising out of the process of haphazard and ill-planned development. There is, therefore, a need for the harmonisation of goals and policies of economic development with those of environmental protection and improvement. Developing countries today have the opportunity - and in some cases the resources - for better allocation of their environmental resources which their counterparts in the developed countries have foregone in the past and are at present paying a high price to restore and enhance environmental quality. Environmental protection is one of those aspects where the developing countries have the potential of maximising their social benefits for the present and future generations by sound planning and policy formulation.

This has, in recent years, led to some serious rethinking among the developed and developing countries alike about the direction in which future course of development should proceed. The view which has been gaining ground in the developing countries considers environment decisions as organically linked to development decisions. While pollution and conservation are not unimportant from the point of view of environmental management, its major concern is with optimal resource use, resource maintenance and enhancement. Indeed development with efficient environmental management can help to generate the resources and the means for

sustainable development, given rational use and application of advances in science and technology.

It is important, therefore, that environmental policy aims at sound management of both renewable and non-renewable resources so that exploitation of these resources does not adversely impinge on the environment. The capacity of the environment to produce essential renewable resources must be maintained, restored or improved, as otherwise counter-productive side-effects on the environment will result with realised benefits from development being significantly less than hoped for.

It is, therefore, imperative that environmental factors are integrated into development planning and regarded as part and parcel of the overall framework of economic and social planning. Environmental concerns should be integrated as yet another dimension of accelerated development in the developing countries and not viewed separately or in isolation from overall development.

In the Malaysian context, it can be said that the objectives of environmental management in developing countries perforce have to be pursued within the context of generating economic growth and employment opportunities and a fairer distribution of income to all within the framework of improving the quality of life. In the past the major thrust of most projects has been economic growth, and assessments of ranking order in terms of desirability have centered mostly on comparisons of the economic costs and measurable benefits expected.

There has been a rapid evolution of methods to evaluate such costs and benefits, and choices have no doubt improved as a result. With greater experience, more thorough investigation of past projects and increased understanding of natural systems, it is now apparent that many development projects can and do have significant, and often unanticipated, effects on the natural environment and the use made of it, and that these effects can add to the real costs or real benefits of the undertaking. In this sense, integrating environmental concerns can result in smoother implementation and optimisation of flow of benefits from investment outlays.

Increasingly, it is now being recognised that, even if the direct and measurable economic costs and benefits or projects remain of prime importance for the majority of proposals, the effects on the natural environment which are not included in the economic sums cannot be ignored if allocative efficiency is to be maximised. It is, therefore, crucial for developing countries to protect the source of their wealth, both that currently available and of the future on the principle that renewable resources can best be extracted from a healthy environment. In addition, these countries must be constantly aware that because of their limited size their most basic resources are finite and thus farsighted resource husbandry is of paramount importance. It is also important for developing countries to pay particular attention to social costs of development.

In the light of this concept of environment and development, Malaysia has adopted an environmental management strategy involving an integrated approach consisting of both preventive and restorative measures through a combination of proper environmental planning and pollution control.

../12..

PRIORITY TASK

The Environmental Quality Act, 1974 has now been in force for seven years. Its provisions are rather wide in scope and hence a strategy providing for systematic and selective implementation has been adopted. The environmental mandate has progressively become more acceptable to all concerned, for in the final analysis, it is geared towards improving the quality of life of our people in line with Government's policy. Since the environment is complex and Man's activities both influence and are influenced by the environment, inter-disciplinary action on a broad front is required to cope effectively with environmental problems. To be effective such inter-disciplinary endeavours need the closest rapport among all actors on the environmental scene. There are encouraging signs that this is steadily being achieved through the stimulating experience of working together in defence of an environment we share in common and will in time bequeath to our children.

A priority task has been to contain and deal with environmental problems that had accumulated over the years through restorative measures backed by systematic enforcement of the various Regulations under the Environmental Quality Act, 1974 while developing strategies to forestall future problems.

Logically it would be sensible to work out a proper environmental plan to be carried out within the general 'planning' framework before any pollution control work is carried out. However, in the Malaysian context, having due regard to the necessary lead time required to evolve a sound plan (data collection, resources, trained manpower etc.) and the urgency of enforcing anti-pollution measures, immediate action was called for

../13..

In this sense, pollution control has become the 'punch-line' activity in the Environment Division's programme for environmental conservation and enhancement of environmental quality. Important as they are for controlling existing and future environmental problems, these measures have been planned and designed within the framework of the growth targets incorporated in successive development plans, and take into account administrative procedures at both Federal and State levels.

Priority was given to controlling the most chronic sources of water pollution from agro-based industries, primarily palm oil and rubber. On the advice of the Environmental Quality Countil, two important Regulations were made - Environmental Quality (Prescribed Premises)(Crude Palm Oil) Regulations, 1977 and Environmental Quality (Prescribed Premises)(Raw Natural Rubber) Regulations, 1978, both aimed at controlling the discharge of effluents from industries which account for some 90% of the pollution load from industries.

Similarly, effluent discharges from other industries such as food, textile , chemicals etc, and domestic discharges are controlled by the Environmental Quality (Sewage and Industrial Effluent Regulations) 1979. About 60% of the 6,000 industrial premises in the country i.e. about 3,600 factories are subject to this Regulations, it is estimated that B.O.D. load discharged to watercourses has been reduced to about 50 tonnes per day. To date a total of 36 factories have been prosecuted in court for non-compliance with the Regulations.

As regards sewage discharge, the control depends on the provision of water-borne sewerage system which in turn is dependent on the go

of financial allocation from public funds. Given the definite commitment by the Government to implement sewerage projects in the major urban centres of the country considerable reduction in the pollution load can be expected. Under the Fourth Malaysia Plan, a sum of $200 million has been allocated for sewerage projects, $100 million for the Federal Territory and the balance including $15 million for Penang Island and $12 million for Prai and the other major towns.

Control of discharges from other industries and sewage has been rather slow for a variety of reasons. Indeed the pollution load from sewage will increase in future if sewerage development lags behind. Similarly, control of silt from the tin mining activities has been far from satisfactory on environmental grounds and calls for a thorough review with a view to more stringent control.

In coping with the problem posed by marine pollution problems, the Environment Division has relied upon the following strategy as a matter of priority:-

(i) The National Contingency Plan for Mitigation and Control of Oil Spills the allocation for which under the Fourth Malaysia Plan is increased from $23 million to $35 million.

(ii) Traffic Separation Scheme.

(iii) Control of pollution from sea-based sources.

(iv) Control of pollution from land-based sources.

(v) Monitoring and Surveillance.

../15.

Air pollution in the main town centres and suburbs has been a widespread phenomenon through smoke, dust and gaseous emissions from factories, industrial activities generally and from the fast-growing motor vehicle population. Environmental Quality (Clean Air) Regulations 1978 and Motor Vehicles (Control of Smoke and Gas Emission) Rules 1977 have been enforced to alleviate these problems.

Another landmark is the enactment by Parliament of the National Parks Act, 1980, providing for the establishment and control of additional national park in Peninsular Malaysia over and above the existing National Park which continues to attract many visitors, both locally and from overseas.

CHALLENGES IN THE 80s

The accomplishments to date in terms of measures for overcoming environmental problems do not by any means represent the complete answer in tackling the whole gamut of environmental issues in Malaysia.

It must also be borne in mind that the Fourth Malaysia Plan through various development programmes under the Plan has the potential to pose additional challenges for environmental management. The scope is both vast and complex as development of land and natural resources is currently being carried out in Malaysia both at Federal and State levels by the various resource development agencies. The difficulty is compounded by the fact that Malaysia has a three-tier system of Government - Federal Government, State Government and Local Authorities with each level having legislative and administrative competence in specific fields, and, through their action and sometimes even inaction, with potential to pollute. This

.../11

implies taking into account division of responsibilities among the three levels of Governments in our approach to solving environmental problems through effective co-ordination and willing co-operation so that available resources of manpower and funds are deployed to good purpose, avoiding both duplication of efforts and resources being spread too thinly to be effective. In this respect, the 26 environment-related pieces of legislation in force in Malaysia containing suitable provisions for dealing with specific environmental issues could be resorted to principally through existing Federal or State institutions in dealing with the environmental problems of development with the help of appropriate guidelines developed from time to time by the Environment Division.

The environmental problems of development can only be overcome through an integrated approach entailing advance or forward planning in the whole spectrum of environmentally-related activities. To this end, it is important to ensure that imperatives of sound environmental management are integrated into development projects to avoid environmental degradation and costly and time-consuming remedial measures and in the process to optimise the pay-off from such projects.

The machinery and commitment to planning already exist both at the Federal and State levels and what is needed is the development of an enlarged planning methodology so that the environmental dimension can be incorporated in a systematic way into development planning right from the start. Integration of the environmental dimension in resource management would entail a broader elaboration of development goals encompassing qualitative aspects as well rather than mere increases in gross national product from year to year. Generally speaking the optimal development process should be one which sets, as one of its main objectives

.../

the satisfaction by present and future generations of their basic requirements without transgressing the outer limits of the biosphere's tolerance of man's activities. There is a delicate balance here and it demands very careful consideration.

For such rational management to be achieved, methods must be developed to deal more adequately with the full social and environmental and not just economic - costs and benefits of development-related activities. It is necessary to find techniques for quantifying the impacts, both favourable and unfavourable, of development projects or environment, so that society can choose projects with a fuller knowledge of their social costs and benefits from an increased range of options generated. All too lften the social costs of various projects are ignored or receive short shrift in the initial appraisal especially in a liasser-faire economy so that society's recognition for what they are of many of the environmental disruptions resulting from these projects comes at too late a stage to permit of effective and timely remedial action. It is important that the social costs should be ascertained in advance to the maximum extent possible before undertaking development projects, so that society can carefully assess whether they are still worthwhile, whether some of the costs could not be minimised through careful design of the project, and whether some of the costs could not be avoided or at least deferred through adoption of alternatives.

In this context, the Environment Division under the Ministry of Science, Technology and Environment has undertaken the leadership role in providing the necessary means of control. It has responded to this task positively by preparing several guidelines which are intended to

help State Governments and other agencies to incorporate environmental considerations into their development plans. Among the more important guidelines are:-

(a) Guidelines for zoning and siting of industries;

(b) Guidelines for environmental impact assessment;

(c) Guidelines for selection of sites for solid waste disposal and management of site; and

(d) Guidelines for prevention of erosion and siltation.

The usefulness of zoning is self-evident and hence the publication of the Kuala Lumpur Structure Plan is a welcome development. Without such a Master Plan environmental problems can assume unmanageable proportions. The main advantages can be summarised as follows:-

(i) Isolation of residual pollutants and their impact

The Malaysian approach in regulatory control on pollution is largely based on the best practicable means (B.P.M.) concept with provisions for gradual integration with air quality management concept. The B.P.M. draws its strength from technical feasibility and economically viability considerations. The installation of in-plant control equipment and adoption of control measures would limit the discharge of pollutants to a certain level but not necessarily totally eliminate it, and as much as 5% to 10% of the "residual pollutants" may still be discharged into the environment from each polluting source. The provision of buffer zones would fulfil the purpose of separating the people from impact areas.

../19-.

(ii) Reduced cost of control measures

As the degree of control becomes more stringent, the cost increases exponentially. If the polluting source could be located well away from populated areas, control measures need not be as stringent as would otherwise be necessary. In the ultimate analysis, pollution control costs would be borne by the consumers, hence the reduction of control cost would reduce the burden on the people and the country as a whole.

(iii) More efficient and effective infrastructure planning

The provision of various zones for housing, buffer and compatible industries would help to lower the overall cost of infrastructure facilities such as commuting routes, sanitary services, centralised treatment system for industries, water and electricity supplies, water recycling plant, etc.

Under the proposed Environmental Impact Assessment Procedure currently being refined by the Division of Environment for submission to the Cabinet Committee on Investment, projects with high potential impact would be required to have an assessment done and submitted to the Ministry for review. Initiators of the project will be required to submit the various environmental and pollution impacts which can be foreseen and quantified so that steps may be taken in advance to plan and control or mitigate their environmental consequences.

The advantages of Environmental Impact Assessment are self-evident. While environmental impact assessment focuses on the impact of a project on the surrounding environment, it also serves the following purposes:-

(i) The findings of an impact assessment may be utilised in selecting site for a project, where the resulting adverse environmental impact and the associated cost of implementing control measures to reduce the impact will be minimised, and the hoped-for benefits maximised.

(ii) With regard to existing facility, the EIA will help to determine the actual need and the extent of control required.

(iii) The disclosure of environmental consequences of an activity to government agencies, and the public, if and when necessary.

The Guidelines for selection of sites for solid wastes disposal and management of site are intended to help the various local authorities to avoid haphazard selection and management of waste disposal sites without taking environmental factors into consideration.

Malaysia has in recent years undergone rapid growth in the manufacturing sector and is continuing to attract new industries to the country. As a result of new Federal laws enacted to protect public health and environment and stepped up enforcement of the Environmental Quality Act, 1974 and Regulations thereunder, increasing quantities of sludges and pollution treatment residues are being created, with a significant proportion of them containing toxic and hazardous wastes.

The existing facilities for waste disposal in Malaysia are unsuitable for handling the types of wastes identified as potentially toxic or hazardous. Existing management and disposal practices are unsatisfactory with many wastes being disposed of indiscriminately pose long-term environmental hazards.

../21..

In this respect the above guidelines are particularly useful for the disposal of toxic and hazardous wastes which can be expected to become increasingly significant in the course of the Fourth Malaysia Plan.

The problems of soil erosion and siltation can only be overcome by employing suitable controls and preventive measures especially at the planning stage of a project whether for agriculture, mining, housing, highway construction or logging. The guidelines for prevention of erosion and siltation specify useful preventive measures to control siltation such as silt traps and other appropriate control structures.

Three additional units have been established in the Environment Division to help promote wider application of integrated development strategies, namely:-

(i) Resource Management Monitoring Unit;

(ii) Environmental Impact Assessment Unit; and

(iii) Environmental Information and Education Unit.

The Resource Management Unit has been responsible for providing necessary environmental inputs to the national and several regional water resources studies, sewerage master plan studies, transport studies vis-a-vis mater plans (such as the K.L. Master Plan) and structural plans in conjunction with urban and regional development.

The Environmental Impact Assessment (EIA) Unit functions as the secretariat to the Review Panel on environmental impact assessment. A number of development projects have already been subjected to EIA studies which include Trengganu Crude Oil Terminal, Sabah Pulp and Paper Mill,

../22..

Port Kelang Power Station, Malaysia Liquified Natural Gas, Petronas Oil Reginery Trengganu, and the Dolomite Quarry in the new location at Sg. Long.

Experience so far has shown environmental impact assessment to be a noteworthy response in terms of coming up with an alert to project proponents so that environmental values are taken into account along with other more tangible impacts. An additional bonus is that alternative options get generated for consideration.

The Environmental Information and Education Unit is entrusted with the task of development of a comprehensive environmental information system in addition bring about environmental literacy and awareness generally. Decision-makers and planners form a key target group. The choice of environmentally sound development strategies can only become a reality if credible and logically thought-out alternatives are available to the decision-maker. Crucial to national decision-making is reliable, relevant and up-to-date information. Sound environmental management, in the final analysis, is largely a matter of making the best of nature's resources to meet man's basic needs without destroying the ecological basis for sustained and balanced development.

CONCLUSION

The Laws, Regulations and Guidelines are, of course, important for environmental management. What is urgently needed is a change in the traditional methodology and approach of project evaluation adopted by development planners and decision-makers. To this end, it is important that environmental consciousness pervades the planners and decision-makers

../23..

in both the public and private sectors. Environmental education assumes critical significance in this respect. Accordingly, the Environment Division is making all-out efforts to get the message across to target groups. The quarterly magazine 'SEKITAR' and the annual reports on environmental quality published by the Environment Division assume significance in terms of our strategy to promote environmental education.

As time passes by and as the problems become more complex, improved concepts and techniques and even more comprehensive approaches will need to be developed. Among others the following areas are important:-

(a) Studies on Costs and Benefits of environmental protection.

(b) Establishment of Criteria for resource management.

(c) Generation of possible alternative patterns of development and lifestyles which are environmentally sound.

(d) Development of appropriate technology - low-waste and non-waste technology.

and

(e) Research into Waste Utilisation.

BAHAGIAN ALAM SEKITAR,
KEMENTERIAN SAINS, TEKNOLOGI DAN ALAM SEKITAR

Mac, 1983.

SEMINAR ON ENVIRONMENTAL ISSUES AND CHALLENGES IN THE 80s
17TH MARCH, 1983, BALLROOM, HOTEL EQUATORIAL, KUALA LUMPUR

Keynote Address
by
S.T.Sundram
Director-General of Environment

Terlebih dahulu saya ingin menyampaikan penghargaan kepada Malaysian Organisation for Human Settlements (M.O.H.S.) pada amnya dan Jawatankuasa Pengelola Seminar ini khasnya kerana jemputan kepada saya menyampaikan 'Keynote Address' atas satu topik yang begitu topikal dan mendesak.

Since the turn of the century, an increasingly noticeable phenomenon has been the harnessing of advances in science and technology in terms of accelerated development to meet human needs of the world's population expected to grow to 6 billion by the year 2000. The convenience and comfort of modern housing, transportation and communications, the creation and expansion of sizeable productive capacity in industry and agriculture, prevention and cure of many chronic diseases which once dictated shorter life expectancy can all be attributed to gains through application of science and technology.

The progress and development made possible through scientific and technological advances has perforce exerted a heavy demand on resources including that used up to satisfy energy demands not as a pre-requisite of development but as a consequence. Man's increasing capacity to adversely influence the environment in a sense implies that the problems of today have no parallel in history. The needs

../2..

of environmental protection, of ensuring adequate supplies of energy, fuel and food; the due investigation and rational use of the resources of the world's oceans, and of combatting squalor, poverty malnutrition and disease all bear on society's interaction with the environment. Fortunately, some of the advances in science and technology can be applied effectively in the interests of environmental protection and rational resource use, given the will to do so. Given the present advanced stall of development and pressures for intensification, Man has little margin for error but to take due account of the deleterious effects of his innovations, and not continue to bank indefinitely on the carrying capacity of nature. In this sense, environmental pollution today, be it of air, land or water, reflects failure to use and manage science in ways that fragile ecosystems are not impoverished or imperilled.

It therefore becomes increasingly necessary for society to operate in harmony with the environment on the basis of strategies integrating environmental concerns into socio-economic developments. In this respect, the performance indicators of economic development should place a premium on economic growth in the framework of a high quality environment and rational resource management. Only then can the true requirements of Man and society be said to be realised in terms of people's aspirations to a life of material well-being, spiritual harmony and oneness with nature as the focus of development. Let me now turn to deal with the environmental issues and challenges we in Malaysia face in the eighties.

ENVIRONMENTAL ISSUES & CHALLENGES

The problems of degradation and pollution of the environment are complex problems for in the final analysis environmental problems

../3..

are part of a complex web linked to population growth, resource availability and pace of urbanisation and industrialisation, whether in manufacturing industry or in agriculture-based industries or extractive ones like mining and development of infrastructure facilities.

Seventy percent of Malaysia's population is in a predominantly rural setting where a good proportion have to contend with problems of inadequate water supplies and sanitation, housing and problems of nutritional deficiency. Therefore, accelerated development continues apace on a national scale to help generate the resources for sustained developments.

In the urban centres, the pressure of population and development on resources and provision of basic needs has been compounded by the so-called urban-rural drift. This is an understandable phenomenon in that economic activities and outlets for social and cultural pursuits are not so developed in the rural areas which impels a good proportion of the younger and more educated sections of the population to take a chance on migrating to the urban centres in search of job openings and advancement. Needless to add it exacerbates congestion and adds to the strains. Such a tendency exerts enormous pressures on transportation, sanitation and other basic services. They tend to impose demands that can at times strain severely the resource capacity of any area, as in the case of public water supply. This can aggravate pollution, strain recreational facilities, putpad to open spaces and render it difficult for the restorative capacity of nature to be at work in an optimum fashion. Yet recognise we must that, for the most part, the movement of people to the urban centres has been impelled by natural human aspirations, for better jobs, schools, medical and health services, cultural outlets and that peculiar sense of excitement that have come to be associated with urban life.

../4..

If the aspirations which have drawn our people in the first instance to the city and subsequently from the city core to the suburbs are often proving illusory, the solution does not lie in seeking escapism from the negative aspects of urban life through resort to dadah, for example. The challenge is to find ways to promote the quality of life in the midst of urban development; in short to make urban life more fulfilling and wholesome rather than frustrating. Along with the essentials of jobs and housing, we must also provide open spaces and outdoor recreation opportunities, maintain acceptable levels of air and water quality, reduce unhealthy noise and litter and develop a skyline and environment that delights the eye and uplifts the spirit at the same time so that truly our urban environment can be called a city of man.

By the same token, more positively we should aim at making rural life itself more attractive, thus encouraging orderly growth in rural areas. The creation of greater economic, social, cultural, and recreational opportunities in rural parts of the country that will lead to the strengthening of small cities and towns, contributing to the establishment of new growth centres in strategic locations throughout the nation.

Malaysia as a developing country has no choice but to forge ahead with economic growth to meet the aspirations of the people for an acceptable standard of living. In the process, problems of damage and disruption to the human environment have emerged and would assume serious proportions if modern scientific and technological progress fails to take into account the paramount need to gear ourselves to the attainment of social and

.../5...

cultural goals as part of the development process; in short to find ways and means of fulfilling the people's right to a clean, healthy and safe environment.

The various water resources studies to date point to a scenario where the availability of sufficient water of appropriate quality could become a critical factor constraining future growth. Given the inexorable pressures for intensified urbanisation and accelerated industrial development, adequate measures to protect and manage our water resources become a compelling need of our times.

Coastal areas and estuaries which are the most productive of ocean areas and the most at risk from sewage, agriculture chemicals, industrial discharges and contamination by heavy metals are threatened by commercial development - dredging for sand and gravel, for example - and by oil spills from off-shore drilling tanker accidents and normal tanker operations.

Specific Threats

Specific threats of increasing concern to the atmosphere are:-

(i) increased emissions of oxides of sulphur and nitrogen produced by the combustion of fossil fuel (coal, which is increasingly regarded as the most likely substitute for oil, often has high sulphur content) leading to acid rain and photochemical smog,

(ii) depletion of the ozone layer and accompanying threat of increased ultraviolet radiation at the earth's surface,

(iii) increased concentration of carbon dioxide and the possibility of unpredictable changes in climate due to the "greenhouse effect" and

(iv) increase in fallout of trace metals, potentially toxic in small amounts to humans and other organisms due to industrial activities and the large number of organic micropollutants being transported long distances and deposited along with acid rain, toxic metals and other pollutants.

The high rate of clearing of forest land for agriculture, roads, human settlements and a welter of infrastructure projects point to the possible effects on the carbon cycle and the subsequent impact on the climate, loss of genetic resources, plant and animal species. Indiscriminate land clearing has already caused soil degradation and erosion leading to siltation of rivers and flash floods on an unprecedented scale. The point to make here is that these occurrences are not acts of God preordained to occur but the end-result of neglect and human failure to take timely action not to transgress the outer limits .

The use of agricultural chemicals such as the fertilizers, herbicides and pesticides has increased steadily year by year contributing to contamination of water with serious effects on man, wildlife and flora. Given the need for increased food and agricultural crop production, the use of these chemicals will probably continue to increase but surely the time has come for greater control on the whole range of these chemicals in use and to educate those handling them on proper and safe usage.

Population growth poses an urgent problem in that the partic[illegible]

impact of any given level of population growth depends in large measure on patterns of land use. Throughout the country, there is a critical need for more effective land-use planning, and for better controls over use of the land and the living systems that depend on it. Throughout history, Man's greatest resource has been his land. Our land has sustained us. But all too often we have treated land as if it were a limitless resource. Today it is increasingly dawning on us that our land is finite, while our population is growing. The uses to which any one generation puts the land can either expand or severely limit the options open to succeeding generations. The time has come when we must accept the principle that none of us has a right to abuse the land, and that on the contrary society as a whole has a legitimate interest in proper land use. Knowledge and technology needed to do things right is already available. What is needed is the will to act on a sustained basis.

The problems of urbanisation, and of land and water use generally can only be met by comprehensive approaches which take into account the full spectrum of social, economic and ecological concerns. We must move toward development of a National Land Use Policy to be put into effect through an effective partnership of Federal, State and Local Authorities acting in concert and, where appropriate, with new institutional arrangements mutually agreed upon.

Recycling

The prospect of population pressures vis-a-vis resources adds urgency to the need for greater emphasis on recycling of 'waste' products. Increase in numbers taken together with changing lifestyles in the context of rising expectations spells greater consumption leading to pressure

available resources; also greater consumption means more 'wastes' to be disposed of, whether in the form of solid wastes, or of the pollutants that befoul our air and water.

Yet much of this waste is strictly unnecessary. Essentially, waste is an arbitrary human creation and essentially a misplaced resource. Natural systems are generally closed systems. Energy is transformed into vegetation, vegetation in turn into animal life, and the latter returns to the air and soil to be recycled once again. Man on the other hand has developed 'open' systems - leading all too often in an open sewer or an open dump which end up contaminating Man's own environment so that he is affected by his own muck.

No longer can we afford the indiscriminate waste and spoilation of our natural resources. Neither can we accept as inevitable the mounting costs of waste removal. We must move increasingly toward closed systems that recycle materials now considered as wastes back into useful and productive items. In this respect, Malaysia can proudly point to significant efforts in this direction under way in the palm oil industry. Of great potential is the whole area of creating non-waste and low-waste technologies reducing significantly or excluding altogether harmful effects on the biosphere. These pose a major challenge - and a major opportunity - for our scientists and research and development personnel.

APPROACH TO ENVIRONMENT AND DEVELOPMENT

A distinctive feature of the past decade had been the recognition by the developing countries that the once fashionable concepts of environment and development had serious weaknesses. The developed countries in the past considered the environment as largely concerned, with pollution

and conservation and that taking environment into account in making production and consumption oriented decisions served only to add to the costs of development.

The environmental policies of developing countries, on the other hand, must necessarily address themselves to effectively cope with both categories of problems, namely, the lack of development as well as the disruption and degradation arising out of the process of haphazard and ill-planned development. There is, therefore, a need for the harmonisation of goals and policies of economic development with those of environmental protection and improvement. Developing countries today have the opportunity - and in some cases the resources - for better allocation of their environmental resources which their counterparts in the developed countries have foregone in the past and are at present paying a high price to restore and enhance environmental quality. Environmental protection is one of those aspects where the developing countries have the potential of maximising their social benefits for the present and future generations by sound planning and policy formulation.

This has, in recent years, led to some serious rethinking among the developed and developing countries alike about the direction in which future course of development should proceed. The view which has been gaining ground in the developing countries considers environment decisions as organically linked to development decisions. While pollution and conservation are not unimportant from the point of view of environmental management, its major concern is with optimal resource use, resource maintenance and enhancement. Indeed development with efficient environmental management can help to generate the resources and the means

sustainable development, given rational use and application of advances in science and technology.

It is important, therefore, that environmental policy aims at sound management of both renewable and non-renewable resources so that exploitation of these resources does not adversely impinge on the environment. The capacity of the environment to produce essential renewable resources must be maintained, restored or improved, as otherwise counter-productive side-effects on the environment will result with realised benefits from development being significantly less than hoped for.

It is, therefore, imperative that environmental factors are integrated into development planning and regarded as part and parcel of the overall framework of economic and social planning. Environmental concerns should be integrated as yet another dimension of accelerated development in the developing countries and not viewed separately or in isolation from overall development.

In the Malaysian context, it can be said that the objectives of environmental management in developing countries perforce have to be pursued within the context of generating economic growth and employment opportunities and a fairer distribution of income to all within the framework of improving the quality of life. In the past the major thrust of most projects has been economic growth, and assessments of ranking order in terms of desirability have centered mostly on comparisons of the economic costs and measurable benefits expected.

.../11

There has been a rapid evolution of methods to evaluate such costs and benefits, and choices have no doubt improved as a result. With greater experience, more thorough investigation of past projects and increased understanding of natural systems, it is now apparent that many development projects can and do have significant, and often unanticipated, effects on the natural environment and the use made of it, and that these effects can add to the real costs or real benefits of the undertaking. In this sense, integrating environmental concerns can result in smoother implementation and optimisation of flow of benefits from investment outlays.

Increasingly, it is now being recognised that, even if the direct and measurable economic costs and benefits or projects remain of prime importance for the majority of proposals, the effects on the natural environment which are not included in the economic sums cannot be ignored if allocative efficiency is to be maximised. It is, therefore, crucial for developing countries to protect the source of their wealth, both that currently available and of the future on the principle that renewable resources can best be extracted from a healthy environment. In addition, these countries must be constantly aware that because of their limited size their most basic resources are finite and thus farsighted resource husbandry is of paramount importance. It is also important for developing countries to pay particular attention to social costs of development.

In the light of this concept of environment and development, Malaysia has adopted an environmental management strategy involving an integrated approach consisting of both preventive and restorative measures through a combination of proper environmental planning and pollution control.

../12..

PRIORITY TASK

The Environmental Quality Act, 1974 has now been in force for seven years. Its provisions are rather wide in scope and hence a strategy providing for systematic and selective implementation has been adopted. The environmental mandate has progressively become more acceptable to all concerned, for in the final analysis, it is geared towards improving the quality of life of our people in line with Government's policy. Since the environment is complex and Man's activities both influence and are influenced by the environment, inter-disciplinary action on a broad front is required to cope effectively with environmental problems. To be effective such inter-disciplinary endeavours need the closest rapport among all actors on the environmental scene. There are encouraging signs that this is steadily being achieved through the stimulating experience of working together in defence of an environment we share in common and will in time bequeath to our children.

A priority task has been to contain and deal with environmental problems that had accumulated over the years through restorative measures backed by systematic enforcement of the various Regulations under the Environmental Quality Act, 1974 while developing strategies to forestall future problems.

Logically it would be sensible to work out a proper environmental plan to be carried out within the general 'planning' framework before any pollution control work is carried out. However, in the Malaysian context, having due regard to the necessary lead time required to evolve a sound plan (data collection, resources, trained manpower etc.) and the urgency of enforcing anti-pollution measures, immediate action was called for

.../13..

In this sense, pollution control has become the 'punch-line' activity in the Environment Division's programme for environmental conservation and enhancement of environmental quality. Important as they are for controlling existing and future environmental problems, these measures have been planned and designed within the framework of the growth targets incorporated in successive development plans, and take into account administrative procedures at both Federal and State levels.

Priority was given to controlling the most chronic sources of water pollution from agro-based industries, primarily palm oil and rubber. On the advice of the Environmental Quality Countil, two important Regulations were made - Environmental Quality (Prescribed Premises)(Crude Palm Oil) Regulations, 1977 and Environmental Quality (Prescribed Premises)(Raw Natural Rubber) Regulations, 1978, both aimed at controlling the discharge of effluents from industries which account for some 90% of the pollution load from industries.

Similarly, effluent discharges from other industries such as food, textile , chemicals etc. and domestic discharges are controlled by the Environmental Quality (Sewage and Industrial Effluent Regulations) 1979. About 60% of the 6,000 industrial premises in the country i.e. about 3,600 factories are subject to this Regulations, it is estimated that B.O.D. load discharged to watercourses has been reduced to about 50 tonnes per day. To date a total of 36 factories have been prosecuted in court for non-compliance with the Regulations.

As regards sewage discharge, the control depends on the provision of water-borne sewerage system which in turn is dependent on the ge[illegible]

of financial allocation from public funds. Given the definite commitment by the Government to implement sewerage projects in the major urban centres of the country considerable reduction in the pollution load can be expected. Under the Fourth Malaysia Plan, a sum of $200 million has been allocated for sewerage projects, $100 million for the Federal Territory and the balance including $15 million for Penang Island and $12 million for Prai and the other major towns.

Control of discharges from other industries and sewage has been rather slow for a variety of reasons. Indeed the pollution load from sewage will increase in future if sewerage development lags behind. Similarly, control of silt from the tin mining activities has been far from satisfactory on environmental grounds and calls for a thorough review with a view to more stringent control.

In coping with the problem posed by marine pollution problems, the Environment Division has relied upon the following strategy as a matter of priority:-

(i) The National Contingency Plan for Mitigation and Control of Oil Spills the allocation for which under the Fourth Malaysia Plan is increased from $23 million to $35 million.

(ii) Traffic Separation Scheme.

(iii) Control of pollution from sea-based sources.

(iv) Control of pollution from land-based sources.

(v) Monitoring and Surveillance.

../15..

Air pollution in the main town centres and suburbs has been a widespread phenomenon through smoke, dust and gaseous emissions from factories, industrial activities generally and from the fast-growing motor vehicle population. Environmental Quality (Clean Air) Regulations 1978 and Motor Vehicles (Control of Smoke and Gas Emission) Rules 1977 have been enforced to alleviate these problems.

Another landmark is the enactment by Parliament of the National Parks Act, 1980, providing for the establishment and control of additional national park in Peninsular Malaysia over and above the existing National Park which continues to attract many visitors, both locally and from overseas.

CHALLENGES IN THE 80s

The accomplishments to date in terms of measures for overcoming environmental problems do not by any means represent the complete answer in tackling the whole gamut of environmental issues in Malaysia.

It must also be borne in mind that the Fourth Malaysia Plan through various development programmes under the Plan has the potential to pose additional challenges for environmental management. The scope is both vast and complex as development of land and natural resources is currently being carried out in Malaysia both at Federal and State levels by the various resource development agencies. The difficulty is compounded by the fact that Malaysia has a three-tier system of Government - Federal Government, State Government and Local Authorities with each level having legislative and administrative competence in specific fields, and, through their action and sometimes even inaction, with potential to pollute. This

implies taking into account division of responsibilities among the three levels of Governments in our approach to solving environmental problems through effective co-ordination and willing co-operation so that available resources of manpower and funds are deployed to good purpose, avoiding both duplication of efforts and resources being spread too thinly to be effective. In this respect, the 26 environment-related pieces of legislation in force in Malaysia containing suitable provisions for dealing with specific environmental issues could be resorted to principally through existing Federal or State institutions in dealing with the environmental problems of development with the help of appropriate guidelines developed from time to time by the Environment Division.

The environmental problems of development can only be overcome through an integrated approach entailing advance or forward planning in the whole spectrum of environmentally-related activities. To this end, it is important to ensure that imperatives of sound environmental management are integrated into development projects to avoid environmental degradation and costly and time-consuming remedial measures and in the process to optimise the pay-off from such projects.

The machinery and commitment to planning already exist both at the Federal and State levels and what is needed is the development of an enlarged planning methodology so that the environmental dimension can be incorporated in a systematic way into development planning right from the start. Integration of the environmental dimension in resource management would entail a broader elaboration of development goals encompassing qualitative aspects as well rather than mere increases in gross national product from year to year. Generally speaking the environmental development process should be one which sets, as one of its main objectives

./

the satisfaction by present and future generations of their basic requirements without transgressing the outer limits of the biosphere's tolerance of man's activities. There is a delicate balance here and it demands very careful consideration.

For such rational management to be achieved, methods must be developed to deal more adequately with the full social and environmental and not just economic - costs and benefits of development-related activities. It is necessary to find techniques for quantifying the impacts, both favourable and unfavourable, of development projects or environment, so that society can choose projects with a fuller knowledge of their social costs and benefits from an increased range of options generated. All too often the social costs of various projects are ignored or receive short shrift in the initial appraisal especially in a liasser-faire economy so that society's recognition for what they are of many of the environmental disruptions resulting from these projects comes at too late a stage to permit of effective and timely remedial action. It is important that the social costs should be ascertained in advance to the maximum extent possible before undertaking development projects, so that society can carefully assess whether they are still worthwhile, whether some of the costs could not be minimised through careful design of the project, and whether some of the costs could not be avoided or at least deferred through adoption of alternatives.

In this context, the Environment Division under the Ministry of Science, Technology and Environment has undertaken the leadership role in providing the necessary means of control. It has responded to this task positively by preparing several guidelines which are intended to

help State Governments and other agencies to incorporate environmental considerations into their development plans. Among the more important guidelines are:-

(a) Guidelines for zoning and siting of industries;

(b) Guidelines for environmental impact assessment;

(c) Guidelines for selection of sites for solid waste disposal and management of site; and

(d) Guidelines for prevention of erosion and siltation.

The usefulness of zoning is self-evident and hence the publication of the Kuala Lumpur Structure Plan is a welcome development. Without such a Master Plan environmental problems can assume unmanageable proportions. The main advantages can be summarised as follows:-

(i) Isolation of residual pollutants and their impact

The Malaysian approach in regulatory control on pollution is largely based on the best practicable means (B.P.M.) concept with provisions for gradual integration with air quality management concept. The B.P.M. draws its strength from technical feasibility and economically viability considerations. The installation of in-plant control equipment and adoption of control measures would limit the discharge of pollutants to a certain level but not necessarily totally eliminate it, and as much as 5% to 10% of the "residual pollutants" may still be discharged into the environment from each polluting source. The provision of buffer zones would fulfil the purpose of separating the people from impact [illegible]

(ii) Reduced cost of control measures

As the degree of control becomes more stringent, the cost increases exponentially. If the polluting source could be located well away from populated areas, control measures need not be as stringent as would otherwise be necessary. In the ultimate analysis, pollution control costs would be borne by the consumers, hence the reduction of control cost would reduce the burden on the people and the country as a whole.

(iii) More efficient and effective infrastructure planning

The provision of various zones for housing, buffer and compatible industries would help to lower the overall cost of infrastructure facilities such as commuting routes, sanitary services, centralised treatment system for industries, water and electricity supplies, water recycling plant, etc.

Under the proposed Environmental Impact Assessment Procedure currently being refined by the Division of Environment for submission to the Cabinet Committee on Investment, projects with high potential impact would be required to have an assessment done and submitted to the Ministry for review. Initiators of the project will be required to submit the various environmental and pollution impacts which can be foreseen and quantified so that steps may be taken in advance to plan and control or mitigate their environmental consequences.

The advantages of Environmental Impact Assessment are self-evident. While environmental impact assessment focuses on the impact of a project on the surrounding environment, it also serves the following purposes:-

../20..

(i) The findings of an impact assessment may be utilised in selecting site for a project, where the resulting adverse environmental impact and the associated cost of implementing control measures to reduce the impact will be minimised, and the hoped-for benefits maximised.

(ii) With regard to existing facility, the EIA will help to determine the actual need and the extent of control required.

(iii) The disclosure of environmental consequences of an activity to government agencies, and the public, if and when necessary.

The Guidelines for selection of sites for solid wastes disposal and management of site are intended to help the various local authorities to avoid haphazard selection and management of waste disposal sites without taking environmental factors into consideration.

Malaysia has in recent years undergone rapid growth in the manufacturing sector and is continuing to attract new industries to the country. As a result of new Federal laws enacted to protect public health and environment and stepped up enforcement of the Environmental Quality Act, 1974 and Regulations thereunder, increasing quantities of sludges and pollution treatment residues are being created, with a significant proportion of them containing toxic and hazardous wastes.

The existing facilities for waste disposal in Malaysia are unsuitable for handling the types of wastes identified as potentially toxic or hazardous. Existing management and disposal practices are unsatisfactory with many wastes being disposed of indiscriminately as long-term environmental hazards.

../21..

In this respect the above guidelines are particularly useful for the disposal of toxic and hazardous wastes which can be expected to become increasingly significant in the course of the Fourth Malaysia Plan.

The problems of soil erosion and siltation can only be overcome by employing suitable controls and preventive measures especially at the planning stage of a project whether for agriculture, mining, housing, highway construction or logging. The guidelines for prevention of erosion and siltation specify useful preventive measures to control siltation such as silt traps and other appropriate control structures.

Three additional units have been established in the Environment Division to help promote wider application of integrated development strategies, namely:-

(i) Resource Management Monitoring Unit;

(ii) Environmental Impact Assessment Unit; and

(iii) Environmental Information and Education Unit.

The Resource Management Unit has been responsible for providing necessary environmental inputs to the national and several regional water resources studies, sewerage master plan studies, transport studies vis-a-vis mater plans (such as the K.L. Master Plan) and structural plans in conjunction with urban and regional development.

The Environmental Impact Assessment (EIA) Unit functions as the secretariat to the Review Panel on environmental impact assessment. A number of development projects have already been subjected to EIA studies which include Trengganu Crude Oil Terminal, Sabah Pulp and Paper Mill,

../22..

SEMINAR ON ENVIRONMENTAL ISSUES AND CHALLENGES IN THE 80s
17TH MARCH, 1983, BALLROOM, HOTEL EQUATORIAL, KUALA LUMPUR

Keynote Address
by
S.T.Sundram
Director-General of Environment

Terlebih dahulu saya ingin menyampaikan penghargaan kepada Malaysian Organisation for Human Settlements (M.O.H.S.) pada amnya dan Jawatankuasa Pengelola Seminar ini khasnya kerana jemputan kepada saya menyampaikan 'Keynote Address' atas satu topik yang begitu topikal dan mendesak.

Since the turn of the century, an increasingly noticeable phenomenon has been the harnessing of advances in science and technology in terms of accelerated development to meet human needs of the world's population expected to grow to 6 billion by the year 2000. The convenience and comfort of modern housing, transportation and communications, the creation and expansion of sizeable productive capacity in industry and agriculture, prevention and cure of many chronic diseases which once dictated shorter life expectancy can all be attributed to gains through application of science and technology.

The progress and development made possible through scientific and technological advances has perforce exerted a heavy demand on resources including that used up to satisfy energy demands not as a pre-requisite of development but as a consequence. Man's increasing capacity to adversely influence the environment in a sense implies that the problems of today have no parallel in history. The needs

../2...

of environmental protection, of ensuring adequate supplies of energy, fuel and food; the due investigation and rational use of the resources of the world's oceans, and of combatting squalor, poverty malnutrition and disease all bear on society's interaction with the environment. Fortunately, some of the advances in science and technology can be applied effectively in the interests of environmental protection and rational resource use, given the will to do so. Given the present advanced stall of development and pressures for intensification, Man has little margin for error but to take due account of the deleterious effects of his innovations, and not continue to bank indefinitely on the carrying capacity of nature. In this sense, environmental pollution today, be it of air, land or water, reflects failure to use and manage science in ways that fragile ecosystems are not impoverished or imperilled.

It therefore becomes increasingly necessary for society to operate in harmony with the environment on the basis of strategies integrating environmental concerns into socio-economic developments. In this respect, the performance indicators of economic development should place a premium on economic growth in the framework of a high quality environment and rational resource management. Only then can the true requirements of Man and society be said to be realised in terms of people's aspirations to a life of material well-being, spiritual harmony and oneness with nature as the focus of development. Let me now turn to deal with the environmental issues and challenges we in Malaysia face in the eighties.

ENVIRONMENTAL ISSUES & CHALLENGES

The problems of degradation and pollution of the environment are complex problems for in the final analysis environmental problems

../3..

are part of a complex web linked to population growth, resource availability and pace of urbanisation and industrialisation, whether in manufacturing industry or in agriculture-based industries or extractive ones like mining and development of infrastructure faciiities.

Seventy percent of Malaysia's population is in a predominantly rural setting where a good proportion have to contend with problems of inadequate water supplies and sanitation, housing and problems of nutritional deficiency. Therefore, accelerated development continues apace on a national scale to help generate the resources for sustained developments.

In the urban centres, the pressure of population and development on resources and provision of basic needs has been compounded by the so-called urban-rural drift. This is an understandable phenomenon in that economic activities and outlets for social and cultural pursuits are not so developed in the rural areas which impels a good proportion of the younger and more educated sections of the population to take a chance on migrating to the urban centres in search of job openings and advancement. Needless to add it exacerbates congestion and adds to the strains. Such a tendency exerts enormous pressures on transportation, sanitation and other basic services. They tend to impose demands that can at times strain severely the resource capacity of any area, as in the case of public water supply. This can aggravate pollution, strain recreational facilities, putpad to open spaces and render it difficult for the restorative capacity of nature to be at work in an optimum fashion. Yet recognise we must that, for the most part, the movement of people to the urban centres has been impelled by natural human aspirations, for better jobs, schools, medical and health services, cultural outlets and that peculiar sense of excitement that have come to be associated with urban life.

../4..

If the aspirations which have drawn our people in the first instance to the city and subsequently from the city core to the suburbs are often proving illusory, the solution does not lie in seeking escapism from the negative aspects of urban life through resort to dadah, for example. The challenge is to find ways to promote the quality of life in the midst of urban development; in short to make urban life more fulfilling and wholesome rather than frustrating. Along with the essentials of jobs and housing, we must also provide open spaces and outdoor recreation opportunities, maintain acceptable levels of air and water quality, reduce unhealthy noise and litter and develop a skyline and environment that delights the eye and uplifts the spirit at the same time so that truly our urban environment can be called a city of man.

By the same token, more positively we should aim at making rural life itself more attractive, thus encouraging orderly growth in rural areas. The creation of greater economic, social, cultural, and recreational opportunities in rural parts of the country that will lead to the strengthening of small cities and towns, contributing to the establishment of new growth centres in strategic locations throughout the nation.

Malaysia as a developing country has no choice but to forge ahead with economic growth to meet the aspirations of the people for an acceptable standard of living. In the process, problems of damage and disruption to the human environment have emerged and would assume serious proportions if modern scientific and technological progress fails to take into account the paramount need to gear ourselves to the attainment of social and

../5..

cultural goals as part of the development process; in short to find ways and means of fulfilling the people's right to a clean, healthy and safe environment.

The various water resources studies to date point to a scenario where the availability of sufficient water of appropriate quality could become a critical factor constraining future growth. Given the inexorable pressures for intensified urbanisation and accelerated industrial development, adequate measures to protect and manage our water resources become a compelling need of our times.

Coastal areas and estuaries which are the most productive of ocean areas and the most at risk from sewage, agriculture chemicals, industrial discharges and contamination by heavy metals are threatened by commercial development - dredging for sand and gravel, for example - and by oil spills from off-shore drilling tanker accidents and normal tanker operations.

Specific Threats

Specific threats of increasing concern to the atmosphere are:-

(i) increased emissions of oxides of sulphur and nitrogen produced by the combustion of fossil fuel (coal, which is increasingly regarded as the most likely substitute for oil, often has high sulphur content) leading to acid rain and photochemical smog,

(ii) depletion of the ozone layer and accompanying threat of increased ultraviolet radiation at the earth's surface,

../...

(iii) increased concentration of carbon dioxide and the possibility of unpredictable changes in climate due to the "greenhouse effect" and

(iv) increase in fallout of trace metals, potentially toxic in small amounts to humans and other organisms due to industrial activities and the large number of organic micropollutants being transported long distances and deposited along with acid rain, toxic metals and other pollutants.

The high rate of clearing of forest land for agriculture, roads, human settlements and a welter of infrastructure projects point to the possible effects on the carbon cycle and the subsequent impact on the climate, loss of genetic resources, plant and animal species. Indiscriminate land clearing has already caused soil degradation and erosion leading to siltation of rivers and flash floods on an unprecedented scale. The point to make here is that these occurrences are not acts of God preordained to occur but the end-result of neglect and human failure to take timely action not to transgress the outer limits .

The use of agricultural chemicals such as the fertilizers, herbicides and pesticides has increased steadily year by year contributing to contamination of water with serious effects on man, wildlife and flora. Given the need for increased food and agricultural crop production, the use of these chemicals will probably continue to increase but surely the time has come for greater control on the whole range of these chemicals in use and to educate those handling them on proper and safe usage.

Population growth poses an urgent problem in that the particular

impact of any given level of population growth depends in large measure on patterns of land use. Throughout the country, there is a critical need for more effective land-use planning, and for better controls over use of the land and the living systems that depend on it. Throughout history, Man's greatest resource has been his land. Our land has sustained us. But all too often we have treated land as if it were a limitless resource. Today it is increasingly dawning on us that our land is finite, while our population is growing. The uses to which any one generation puts the land can either expand or severely limit the options open to succeeding generations. The time has come when we must accept the principle that none of us has a right to abuse the land, and that on the contrary society as a whole has a legitimate interest in proper land use. Knowledge and technology needed to do things right is already available. What is needed is the will to act on a sustained basis.

The problems of urbanisation, and of land and water use generally can only be met by comprehensive approaches which take into account the full spectrum of social, economic and ecological concerns. We must work toward development of a National Land Use Policy to be put into effect through an effective partnership of Federal, State and Local Authorities acting in concert and, where appropriate, with new institutional arrangements mutually agreed upon.

Recycling

The prospect of population pressures vis-a-vis resources adds urgency to the need for greater emphasis on recycling of 'waste' products. Increase in numbers taken together with changing lifestyles in the context of rising expectations spells greater consumption leading to pressure

available resources; also greater consumption means more 'wastes' to be disposed of, whether in the form of solid wastes, or of the pollutants that befoul our air and water.

Yet much of this waste is strictly unnecessary. Essentially, waste is an arbitrary human creation and essentially a misplaced resource. Natural systems are generally closed systems. Energy is transformed into vegetation, vegetation in turn into animal life, and the latter returns to the air and soil to be recycled once again. Man on the other hand has developed 'open' systems - leading all too often in an open sewer or an open dump which end up contaminating Man's own environment so that he is affected by his own muck.

No longer can we afford the indiscriminate waste and spoilation of our natural resources. Neither can we accept as inevitable the mounting costs of waste removal. We must move increasingly toward closed systems that recycle materials now considered as wastes back into useful and productive items. In this respect, Malaysia can proudly point to significant efforts in this direction under way in the palm oil industry. Of great potential is the whole area of creating non-waste and low-waste technologies reducing significantly or excluding altogether harmful effects on the biosphere. These pose a major challenge - and a major opportunity - for our scientists and research and development personnel.

APPROACH TO ENVIRONMENT AND DEVELOPMENT

A distinctive feature of the past decade had been the recognition by the developing countries that the once fashionable concepts of environment and development had serious weaknesses. The developed countries in the past considered the environment as largely concerned, with pol[illegible]

and conservation and that taking environment into account in making production and consumption oriented decisions served only to add to the costs of development.

The environmental policies of developing countries, on the other hand, must necessarily address themselves to effectively cope with both categories of problems, namely, the lack of development as well as the disruption and degradation arising out of the process of haphazard and ill-planned development. There is, therefore, a need for the harmonisation of goals and policies of economic development with those of environmental protection and improvement. Developing countries today have the opportunity - and in some cases the resources - for better allocation of their environmental resources which their counterparts in the developed countries have foregone in the past and are at present paying a high price to restore and enhance environmental quality. Environmental protection is one of those aspects where the developing countries have the potential of maximising their social benefits for the present and future generations by sound planning and policy formulation.

This has, in recent years, led to some serious rethinking among the developed and developing countries alike about the direction in which future course of development should proceed. The view which has been gaining ground in the developing countries considers environment decisions as organically linked to development decisions. While pollution and conservation are not unimportant from the point of view of environmental management, its major concern is with optimal resource use, resource maintenance and enhancement. Indeed development with efficient environmental management can help to generate the resources and the means for

sustainable development, given rational use and application of advances in science and technology.

It is important, therefore, that environmental policy aims at sound management of both renewable and non-renewable resources so that exploitation of these resources does not adversely impinge on the environment. The capacity of the environment to produce essential renewable resources must be maintained, restored or improved, as otherwise counter-productive side-effects on the environment will result with realised benefits from development being significantly less than hoped for.

It is, therefore, imperative that environmental factors are integrated into development planning and regarded as part and parcel of the overall framework of economic and social planning. Environmental concerns should be integrated as yet another dimension of accelerated development in the developing countries and not viewed separately or in isolation from overall development.

In the Malaysian context, it can be said that the objectives of environmental management in developing countries perforce have to be pursued within the context of generating economic growth and employment opportunities and a fairer distribution of income to all within the framework of improving the quality of life. In the past the major thrust of most projects has been economic growth, and assessments of ranking order in terms of desirability have centered mostly on comparisons of the economic costs and measurable benefits expected.

There has been a rapid evolution of methods to evaluate such costs and benefits, and choices have no doubt improved as a result. With greater experience, more thorough investigation of past projects and increased understanding of natural systems, it is now apparent that many development projects can and do have significant, and often unanticipated, effects on the natural environment and the use made of it, and that these effects can add to the real costs or real benefits of the undertaking. In this sense, integrating environmental concerns can result in smoother implementation and optimisation of flow of benefits from investment outlays.

Increasingly, it is now being recognised that, even if the direct and measurable economic costs and benefits or projects remain of prime importance for the majority of proposals, the effects on the natural environment which are not included in the economic sums cannot be ignored if allocative efficiency is to be maximised. It is, therefore, crucial for developing countries to protect the source of their wealth, both that currently available and of the future on the principle that renewable resources can best be extracted from a healthy environment. In addition, these countries must be constantly aware that because of their limited size their most basic resources are finite and thus farsighted resource husbandry is of paramount importance. It is also important for developing countries to pay particular attention to social costs of development.

In the light of this concept of environment and development, Malaysia has adopted an environmental management strategy involving an integrated approach consisting of both preventive and restorative measures through a combination of proper environmental planning and pollution control.

../12..

PRIORITY TASK

The Environmental Quality Act, 1974 has now been in force for seven years. Its provisions are rather wide in scope and hence a strategy providing for systematic and selective implementation has been adopted. The environmental mandate has progressively become more acceptable to all concerned, for in the final analysis, it is geared towards improving the quality of life of our people in line with Government's policy. Since the environment is complex and Man's activities both influence and are influenced by the environment, inter-disciplinary action on a broad front is required to cope effectively with environmental problems. To be effective such inter-disciplinary endeavours need the closest rapport among all actors on the environmental scene. There are encouraging signs that this is steadily being achieved through the stimulating experience of working together in defence of an environment we share in common and will in time bequeath to our children.

A priority task has been to contain and deal with environmental problems that had accumulated over the years through restorative measures backed by systematic enforcement of the various Regulations under the Environmental Quality Act, 1974 while developing strategies to forestall future problems.

Logically it would be sensible to work out a proper environmental plan to be carried out within the general 'planning' framework before any pollution control work is carried out. However, in the Malaysian context, having due regard to the necessary lead time required to evolve a sound plan (data collection, resources, trained manpower etc.) and the urgency of enforcing anti-pollution measures, immediate action was called for

../13.

In this sense, pollution control has become the 'punch-line' activity in the Environment Division's programme for environmental conservation and enhancement of environmental quality. Important as they are for controlling existing and future environmental problems, these measures have been planned and designed within the framework of the growth targets incorporated in successive development plans, and take into account administrative procedures at both Federal and State levels.

Priority was given to controlling the most chronic sources of water pollution from agro-based industries, primarily palm oil and rubber. On the advice of the Environmental Quality Countil, two important Regulations were made - Environmental Quality (Prescribed Premises)(Crude Palm Oil) Regulations, 1977 and Environmental Quality (Prescribed Premises)(Raw Natural Rubber) Regulations, 1978, both aimed at controlling the discharge of effluents from industries which account for some 90% of the pollution load from industries.

Similarly, effluent discharges from other industries such as food, textile , chemicals etc. and domestic discharges are controlled by the Environmental Quality (Sewage and Industrial Effluent Regulations) 1979. About 60% of the 6,000 industrial premises in the country i.e. about 3,600 factories are subject to this Regulations, it is estimated that B.O.D. load discharged to watercourses has been reduced to about 50 tonnes per day. To date a total of 36 factories have been prosecuted in court for non-compliance with the Regulations.

As regards sewage discharge, the control depends on the provision of water-borne sewerage system which in turn is dependent on the ...

of financial allocation from public funds. Given the definite commitment by the Government to implement sewerage projects in the major urban centres of the country considerable reduction in the pollution load can be expected. Under the Fourth Malaysia Plan, a sum of $200 million has been allocated for sewerage projects, $100 million for the Federal Territory and the balance including $15 million for Penang Island and $12 million for Prai and the other major towns.

Control of discharges from other industries and sewage has been rather slow for a variety of reasons. Indeed the pollution load from sewage will increase in future if sewerage development lags behind. Similarly, control of silt from the tin mining activities has been far from satisfactory on environmental grounds and calls for a thorough review with a view to more stringent control.

In coping with the problem posed by marine pollution problems, the Environment Division has relied upon the following strategy as a matter of priority:-

(i) The National Contingency Plan for Mitigation and Control of Oil Spills the allocation for which under the Fourth Malaysia Plan is increased from $23 million to $35 million.

(ii) Traffic Separation Scheme.

(iii) Control of pollution from sea-based sources.

(iv) Control of pollution from land-based sources.

(v) Monitoring and Surveillance.

../15...

Air pollution in the main town centres and suburbs has been a widespread phenomenon through smoke, dust and gaseous emissions from factories, industrial activities generally and from the fast-growing motor vehicle population. Environmental Quality (Clean Air) Regulations 1978 and Motor Vehicles (Control of Smoke and Gas Emission) Rules 1977 have been enforced to alleviate these problems.

Another landmark is the enactment by Parliament of the National Parks Act, 1980, providing for the establishment and control of additional national park in Peninsular Malaysia over and above the existing National Park which continues to attract many visitors, both locally and from overseas.

CHALLENGES IN THE 80s

The accomplishments to date in terms of measures for overcoming environmental problems do not by any means represent the complete answer in tackling the whole gamut of environmental issues in Malaysia.

It must also be borne in mind that the Fourth Malaysia Plan through various development programmes under the Plan has the potential to pose additional challenges for environmental management. The scope is both vast and complex as development of land and natural resources is currently being carried out in Malaysia both at Federal and State levels by the various resource development agencies. The difficulty is compounded by the fact that Malaysia has a three-tier system of Government - Federal Government, State Government and Local Authorities with each level having legislative and administrative competence in specific fields, and, through their action and sometimes even inaction, with potential to pollute. This

implies taking into account division of responsibilities among the three levels of Governments in our approach to solving environmental problems through effective co-ordination and willing co-operation so that available resources of manpower and funds are deployed to good purpose, avoiding both duplication of efforts and resources being spread too thinly to be effective. In this respect, the 26 environment-related pieces of legislation in force in Malaysia containing suitable provisions for dealing with specific environmental issues could be resorted to principally through existing Federal or State institutions in dealing with the environmental problems of development with the help of appropriate guidelines developed from time to time by the Environment Division.

The environmental problems of development can only be overcome through an integrated approach entailing advance or forward planning in the whole spectrum of environmentally-related activities. To this end, it is important to ensure that imperatives of sound environmental management are integrated into development projects to avoid environmental degradation and costly and time-consuming remedial measures and in the process to optimise the pay-off from such projects.

The machinery and commitment to planning already exist both at the Federal and State levels and what is needed is the development of an enlarged planning methodology so that the environmental dimension can be incorporated in a systematic way into development planning right from the start. Integration of the environmental dimension in resource management would entail a broader elaboration of development goals encompassing qualitative aspects as well rather than mere increases in gross national product from year to year. Generally speaking the optimal development process should be one which sets, as one of its main objectives

../-

the satisfaction by present and future generations of their basic requirements without transgressing the outer limits of the biosphere's tolerance of man's activities. There is a delicate balance here and it demands very careful consideration.

For such rational management to be achieved, methods must be developed to deal more adequately with the full social and environmental and not just economic - costs and benefits of development-related activities. It is necessary to find techniques for quantifying the impacts, both favourable and unfavourable, of development projects or environment, so that society can choose projects with a fuller knowledge of their social costs and benefits from an increased range of options generated. All too often the social costs of various projects are ignored or receive short shrift in the initial appraisal especially in a liasser-faire economy so that society's recognition for what they are of many of the environmental disruptions resulting from these projects comes at too late a stage to permit of effective and timely remedial action. It is important that the social costs should be ascertained in advance to the maximum extent possible before undertaking development projects, so that society can carefully assess whether they are still worthwhile, whether some of the costs could not be minimised through careful design of the project, and whether some of the costs could not be avoided or at least deferred through adoption of alternatives.

In this context, the Environment Division under the Ministry of Science, Technology and Environment has undertaken the leadership role in providing the necessary means of control. It has responded to this task positively by preparing several guidelines which are intended to

../..

help State Governments and other agencies to incorporate environmental considerations into their development plans. Among the more important guidelines are:-

(a) Guidelines for zoning and siting of industries;

(b) Guidelines for environmental impact assessment;

(c) Guidelines for selection of sites for solid waste disposal and management of site; and

(d) Guidelines for prevention of erosion and siltation.

The usefulness of zoning is self-evident and hence the publication of the Kuala Lumpur Structure Plan is a welcome development. Without such a Master Plan environmental problems can assume unmanageable proportions. The main advantages can be summarised as follows:-

(i) Isolation of residual pollutants and their impact

The Malaysian approach in regulatory control on pollution is largely based on the best practicable means (B.P.M.) concept with provisions for gradual integration with air quality management concept. The B.P.M. draws its strength from technical feasibility and economically viability considerations. The installation of in-plant control equipment and adoption of control measures would limit the discharge of pollutants to a certain level but not necessarily totally eliminate it, and as much as 5% to 10% of the "residual pollutants" may still be discharged into the environment from each polluting source. The provision of buffer zones would fulfil the purpose of separating the people from impact areas.

(ii) Reduced cost of control measures

As the degree of control becomes more stringent, the cost increases exponentially. If the polluting source could be located well away from populated areas, control measures need not be as stringent as would otherwise be necessary. In the ultimate analysis, pollution control costs would be borne by the consumers, hence the reduction of control cost would reduce the burden on the people and the country as a whole.

(iii) More efficient and effective infrastructure planning

The provision of various zones for housing, buffer and compatible industries would help to lower the overall cost of infrastructure facilities such as commuting routes, sanitary services, centralised treatment system for industries, water and electricity supplies, water recycling plant, etc.

Under the proposed Environmental Impact Assessment Procedure currently being refined by the Division of Environment for submission to the Cabinet Committee on Investment, projects with high potential impact would be required to have an assessment done and submitted to the Ministry for review. Initiators of the project will be required to submit the various environmental and pollution impacts which can be foreseen and quantified so that steps may be taken in advance to plan and control or mitigate their environmental consequences.

The advantages of Environmental Impact Assessment are self-evident. While environmental impact assessment focuses on the impact of a project on the surrounding environment, it also serves the following purposes:-

../20..

(i) The findings of an impact assessment may be utilised in selecting site for a project, where the resulting adverse environmental impact and the associated cost of implementing control measures to reduce the impact will be minimised, and the hoped-for benefits maximised.

(ii) With regard to existing facility, the EIA will help to determine the actual need and the extent of control required.

(iii) The disclosure of environmental consequences of an activity to government agencies, and the public, if and when necessary.

The Guidelines for selection of sites for solid wastes disposal and management of site are intended to help the various local authorities to avoid haphazard selection and management of waste disposal sites without taking environmental factors into consideration.

Malaysia has in recent years undergone rapid growth in the manufacturing sector and is continuing to attract new industries to the country. As a result of new Federal laws enacted to protect public health and environment and stepped up enforcement of the Environmental Quality Act, 1974 and Regulations thereunder, increasing quantities of sludges and pollution treatment residues are being created, with a significant proportion of them containing toxic and hazardous wastes.

The existing facilities for waste disposal in Malaysia are unsuitable for handling the types of wastes identified as potentially toxic or hazardous. Existing management and disposal practices are unsatisfactory with many wastes being disposed of indiscriminately and long-term environmental hazards.

../21..

In this respect the above guidelines are particularly useful for the disposal of toxic and hazardous wastes which can be expected to become increasingly significant in the course of the Fourth Malaysia Plan.

The problems of soil erosion and siltation can only be overcome by employing suitable controls and preventive measures especially at the planning stage of a project whether for agriculture, mining, housing, highway construction or logging. The guidelines for prevention of erosion and siltation specify useful preventive measures to control siltation such as silt traps and other appropriate control structures.

Three additional units have been established in the Environment Division to help promote wider application of integrated development strategies, namely:-

(i) Resource Management Monitoring Unit;

(ii) Environmental Impact Assessment Unit; and

(iii) Environmental Information and Education Unit.

The Resource Management Unit has been responsible for providing necessary environmental inputs to the national and several regional water resources studies, sewerage master plan studies, transport studies vis-a-vis water plans (such as the K.L. Master Plan) and structural plans in conjunction with urban and regional development.

The Environmental Impact Assessment (EIA) Unit functions as the secretariat to the Review Panel on environmental impact assessment. A number of development projects have already been subjected to EIA studies which include Trengganu Crude Oil Terminal, Sabah Pulp and Paper Mill,

../22..

Port Kelang Power Station, Malaysia Liquified Natural Gas, Petronas Oil Reginery Trengganu, and the Dolomite Quarry in the new location at Sg. Long.

Experience so far has shown environmental impact assessment to be a noteworthy response in terms of coming up with an alert to project proponents so that environmental values are taken into account along with other more tangible impacts. An additional bonus is that alternative options get generated for consideration.

The Environmental Information and Education Unit is entrusted with the task of development of a comprehensive environmental information system in addition bring about environmental literacy and awareness generally. Decision-makers and planners form a key target group. The choice of environmentally sound development strategies can only become a reality if credible and logically thought-out alternatives are available to the decision-maker. Crucial to national decision-making is reliable, relevant and up-to-date information. Sound environmental management, in the final analysis, is largely a matter of making the best of nature's resources to meet man's basic needs without destroying the ecological basis for sustained and balanced development.

CONCLUSION

The Laws, Regulations and Guidelines are, of course, important for environmental management. What is urgently needed is a change in the traditional methodology and approach of project evaluation adopted by development planners and decision-makers. To this end, it is important that environmental consciousness pervades the planners and decision-makers

../23..

in both the public and private sectors. Environmental education assumes critical significance in this respect. Accordingly, the Environment Division is making all-out efforts to get the message across to target groups. The quarterly magazine 'SEKITAR' and the annual reports on environmental quality published by the Environment Division assume significance in terms of our strategy to promote environmental education.

As time passes by and as the problems become more complex, improved concepts and techniques and even more comprehensive approaches will need to be developed. Among others the following areas are important:-

(a) Studies on Costs and Benefits of environmental protection.

(b) Establishment of Criteria for resource management.

(c) Generation of possible alternative patterns of development and lifestyles which are environmentally sound.

(d) Development of appropriate technology - low-waste and non-waste technology.

and

(e) Research into Waste Utilisation.

BAHAGIAN ALAM SEKITAR,
KEMENTERIAN SAINS, TEKNOLOGI DAN ALAM SEKITAR

Mac, 1983.

AM/SMS/sh.

Mesyuarat Ketua-Ketua Jabatan
Kementerian Sains, Teknologi dan Alam Sekitar

Laporan "Regional Conference On Environmental Education in ASEAN Universities and its Transfer"

Persidangan yang tersebut di atas telah diadakan di Universiti Pertanian Malaysia (U.P.M.) Serdang selama 4 hari dari 18-- 21hb. Ogos, 1981. Satu jawatankuasa telah ditubuhkan untuk menguruskan kerja-kerja persidangan yang dipengerusikan oleh Y.B. Prof. Tan Sri Datuk Dr. Mohd. Rashdan Hj. Baba, Naib Canselor U.P.M. dan dianggotai oleh agensi-agensi yang berkaitan seperti berikut:-

i) Bahagian Alam Sekitar, Kementerian Sains, Teknologi dan Alam Sekitar.

ii) Pusat Perkembangan Kurikulum, Kementerian Pelajaran.

iii) Suruhanjaya Kebangsaan UNESCO, Malaysia.

iv) 'Regional Institute of Higher Education and Development' (RIHED) yang beribu pejabat di-Singapura.

v) Kementerian Kesihatan.

vi) Persatuan Perchinta Alam (wakil tunggal 'Non-Governmental Organisations')

2. Bantuan kewangan utama bagi menjayakan persidangan ini telah disumbangkan oleh pihak UNESCO dan RIHED yang telah digunakan untuk membiayai perbelanjaan 25 orang peserta yang dijemput khas dari negara-negara ASEAN (Peserta-peserta tersebut menghadiri persidangan ini sebagai pembentang kertas kerja, penulis kertas latar dan pengerusi sessi-sessi). Selain daripada itu, sumbangan wang tunai telah diterima daripada Yayasan Sabah ($5,000) dan Sime Darby Berhad ($3,000).

2/..

Selain daripada peserta-peserta yang tersebut di atas, kira-kira 200 orang, kebanyakannya dari Malaysia juga telah menghadiri persidangan ini. Kebanyakannya terdiri daripada wakil agensi-agensi Kerajaan yang berkaitan dan universiti-universiti tempatan, manakala beberapa orang adalah pakar dalam bidang pendidikan alam sekitar dari Australia dan United Kingdom.

3. Persidangan ini telah dirasmikan oleh Y.A.B. Timbalan Perdana Menteri Malaysia Dato' Musa Hitam pada 18hb. Ogos, 1981. Di dalam ucapannya beliau telah menekankan bahawa di samping berusaha untuk mencapai kemajuan ekonomi dan mengurangkan kemiskinan, kita mestilah mengendalikan sumber-sumber alam semulajadi dengan baik. Beliau juga menegur sikap orang ramai yang tidak menghiraukan kebersihan dan keindahan alam sekeliling mereka dan berkata bahawa perkara-perkara yang berkaitan dengan alam sekitar adalah tanggungjawab bersama, Kerajaan, pihak swasta dan orang ramai.

4. Berkaitan dengan pendidikan alam sekitar, beliau berharap pihak media massa, sekolah-sekolah dan Jabatan Penerangan dapat memainkan peranan yang lebih penting di dalam mendapatkan kerjasama orang ramai di dalam melindungi kualiti alam sekeliling.

5. Sepanjang persidangan ini, berbagai-bagai perbincangan dan persoalan ditimbulkan dan pada penghujungnya peserta-peserta telah mencapai persetujuan mengemukakan resolusi-resolusi seperti berikut:-

1. That a National Coordinating Committee comprising representatives of existing environmental organisation interested in environmental education be established in every country in ASEAN to coordinate the diverse country activities and to link itself with the ASEAN Experts Group on the Environment.

2. That, because of the complexity of environmental problems, research for the solution of such problems be conducted where appropriate, by multidisciplinary teams.

3. That those involved in environmental education should emphasise that pollution control measures do not necessarily place an economic cost on industry and development. In some cases they may provide an economic gain. Educators should stress the industrial waste can be recycled and used for economic advantage.

4. That more frequent exchange of ideas and information among Environmental Educators in ASEAN be undertaken through Seminars, Workshops, Conferences and Exchange Programmes for staff and students, in order for them to keep abreast of Environmental Education developments in member countries.

5. That because environmental laws are often not adequately enforced, strategies should be devised to educate appropriate law enforcement agencies and personnel concerning the importance of environmental problems.

6. That Traditional "ecological wisdom" in Society be included as an important strategy in the transfer of knowledge in Environmental Education.

7. That in the area of Formal Transfer of Environmental Education:

   (i) That Curriculum Development Centres and other related agencies establish appropriate Environmental Education teaching-learning structures and disseminate the relevant materials to teachers and students either directly or indirectly through Resource Centres.

   (ii) That an ASEAN clearing house for Environmental Education materials for use in ASEAN countries

through the agencies already established in the region, such as UNESCO, UNEP and RIHED, be established as soon as possible to aid in more efficient transfer of informating in Environmental Education.

(iii) That help be sought from the ASEAN Experts Group on the Environment to look into the existing teaching-learning materials and the feasibility of low-cost mass-production of these materials.

(iv) That, because many types of university graduates have major roles to play in relation to the environment, it is urgent for effective transfer to find ways of incorporationg Environmental Education into their university programmes of study.

(v) That an ASEAN Workshop be held for the exchange of ideas and approaches to the Environmental Education in universities of all those students whose subsequent employment affects development and the environment.

8. That in the area of Non-Formal transfer of Environmental Education:

(i) That there is a pressing need to clearly define the term NON-FORMAL EDUCATION and its scope in regard to Environmental Education because of differing country viewpoints.

(ii) That Environmental Educators/researchers and the mass media should take every opportunity to interact in order to transfer accurate information to the general public.

(iii) That although the mass media is an effective instrument in creating awareness in the general public in environmental problems, other means must be found to substantively transfer information through personal contact, taking into account the culture and educational level of the target group.

(iv) That the mass media in the region must be encouraged to take on the role of educating apart from merely disseminating information on environmental matters, particularly in helping to form good environmentally conscious habits among the people and to encourage thereby awareness of all forms of environmental degradation by individuals and large organisations.

(v) That Non-Formal Educators should work closely with people who can influence the target group particularly housewives/mothers, religious workers, village elders, political figures, and other organisations such as youth clubs.

(vi) That Government or international agencies encourage NGO's with funds and/or general support to stimulate broad discussions of environmental matters and facilitate transfer of effective environmental information.

(vii) That the role of Government in Non-Formal Environmental Education should be one of encouraging its Agencies to work closely with NGO's in seeking solutions to environmental problems.

(viii) That research in current methodologies in non-formal Environmental Education in the region be appraised and further research and dissemination of findings be encouraged.

(ix) That a survey of transfer of tertiary Environmental Education to planners and decision-makers be made, and this survey should be carried out by UNESCO or UNEP, and a workshop of key Course Coordinators be organised as soon as possible to initiate this survey.

6. Persidangan telah ditutup dengan rasmi oleh Y.B. Tan Sri Ong Kee Hui, Menteri Sains, Teknologi dan Alam Sekitar pada 21hb. Ogos, 1981. Di dalam ucapannya beliau menegaskan bahawa perlindungan alam sekitar dan pembangunan ekonomi haruslah seimbang. Pendidikan Alam Sekitar pula perlulah dilaksanakan melalui cara-cara formal dan bukan formal. Melalui pendidikan formal adalah diharap 'Perancang dan Pengurus' alam sekitar dapat dilatih sementara pendidikan bukan formal pula, Y.B. Menteri menekankan patutlah dimulakan di rumah semasa kanak-kanak lagi.

Ulasan Ibu Pejabat Kementerian

Mesyuarat adalah diminta mengambil ingatan atas isi kandungan kertas kerja ini.

Bahagian Alam Sekitar,
Kementerian Sains, Teknologi dan Alam Sekitar.

HH/STS/ct

(8)

Mesyuarat Perbincangan Dengan Pihak Chemi.
Company of Malaysia (CCM) Shah Alam, Selango.

No. Fail : AS.35110/1

Tarikh : 25hb. Julai, 1983

Masa : 3.00 petang

Tempat : Bilik Mesyuarat CCM

Yang Hadir : Pihak Bahagian Alam Sekitar

1. En. S.T. Sundram, JSM (Ibu Pejabat)
2. En. A. Maheswaran, KMN(" ")
3. En. Goh Kiam Seng, KMN(" ")
4. En. Tan Meng Leng ((" ")
5. En. Godwin Singam (" ")
6. Puan Rosnani Ibrahim (" ")
7. En. Lee Heng Keng (Wilayah Tengah)
8. En. Himmat Singah (Kementerian)

Pihak CCM

1. En. S.S. SIDHU
2. En. Chin Wah Onn
3. En. Tan Leong Choy
4. En. Shamsuddin Jamil

Pendahuluan

En. S.S. Sidhu mengalu-alukan kedatangan Ketua Pengarah Alam Sekitar serta Pegawai-Pegawai Kanan yang lain ke kilang CCM. Ketua Pengarah Alam Sekitar berterima kasih dan seterusnya menyatakan tujuan lawatan pada hari tersebut.

Tujuan utama lawatan ialah sebagai tindakan lanjutan (follow-up) kepada dua sessi perjumpaan yang telah lalu. Pertama berupa sessi dialog di antara penduduk-penduduk kampong tempatan di sekitar kilang CCM dengan pihak pengurusan kilang yang telah diadakan pada 3hn. September, 1981. Sessi ini telah dipengerusikan oleh Y.B. Datuk Liew Sip Hon, Timbalan Menteri Perdagangan dan Perindustrian. Ketua Pengarah Alam Sekitar dan dua orang wakil dari Bahagian Alam Sekitar (Wilayah Tengah) juga turut hadir. Kedua ialah sessi lawatan rombongan Ketua Pengarah Alam Sekitar ke kilang CCM pada 10hb. Mach, 1982 yang membincangkan dengan teliti masalah-masalah yang berhubung dengan pelepasan effluen di kilang klorin. Pada kedua-dua sessi tersebut pihak CCM telah bersetuju

../2..

mengambil beberapa langkah tertentu bagi mengawal masalah pencemaran oleh kilang tersebut. Pada perbincangan kali ini Ketua Pengarah Alam Sekitar meminta pihak kilang menjelaskan tentang tindakan-tindakan yang telah diambil.

Tujuan lawatan yang kedua ialah bagi mendapat penjelasan tentang laporan akhbar 'The Star' bertarikh 17hb. Julai, 1983 yang bertajuk 'Danger in the Air'.

Butir-Butir Perbincangan

Ulasan-Ulasan pihak kilang :-

(i) Dari masa kesemasa pihak kilang mengadakan dialog dengan penduduk-penduduk kampong tetapi setakat ini pihak kilang belum pernah menerima aduan mengenai masalah kesihatan seperti yang dilaporkan di dalam akhbar.

(ii) Projek 'Neutraliser' yang akan dipasang di logi Ammonium Nitrate tergendala buat sementara waktu oleh kerana kilang sedang mengkaji ekonomi dan pasaran baja pada masa akan datang. Walau bagaimana pun mereka telah membelanja sebanyak $100,000 bagi perlesenan dan kajian awal, daripada peruntukan sebanyak $750,000/-.

(iii) Pengubahan chloro-alkali plant dari 'mercury cell' kepada 'membrane cell' telah diluluskan oleh MIDA dan dijangka akan dipasang sebelum penghujung tahun 1984.

Pihak kilang telah diberitahu bahawa keadaan disekeliling CCM akan menjadi lebih buruk jika langkah-langkah positif tidak diambil bagi mengawal semua pelepasan. Laporan-laporan akhbar seperti di atas juga akan memberi kesan negatif dan tekanan kepada pihak kilang. Oleh yang demikian pihak kilang dinasihatkan supaya membalas laporan akhbar tersebut dengan memberi keterangan mengenai langkah-langkah yang telah diambil dan juga keputusan dialog di antara kilang dengan orang-orang kampong.

../3..

Tindakan Yang Diperlui

1. Satu mesyuarat akan diatur bagi membincang dengan lebeh mendalam mengenai langkah-langkah tambahan bagi mengawal pelepasan dari kilang.

2. Buat sementara itu, CCM adalah dikehendaki mengemukakan perkara-perkara berikut :-

   (i) Ulasan berkenaan laporan akhbar 'The Star' bertarikh 17hb. Julai 1983 yang bertajuk 'Danger in the Air'.

   (ii) Kajian dan Strategi bagi mengawal pelepasan dari logi 'Ammonium Nitrate', logi 'Nitric Acid' dan logi 'Chlorine' termasuk jadual perlaksanaan.

   (iii) Kemungkinan memasang alat percontohan carobong (continuous stack-sampling equipment) dan merangka satu program pengawasan oleh kilang CCM secara tetap.

Perbincangan tamat pada pukul 4.00 petang.

AM/GKS/cls.

MESSAGE FROM THE HONOURABLE MINISTER OF SCIENCE, TECHNOLOGY AND THE ENVIRONMENT

It gives me great pleasure to write a message for the souvenier commemorating "A Decade of Environmental Management in Malaysia".

Since our Independence 27 years ago, Malaysia has progressed by leaps and bounds, from a primarily rural agricultural society into a modern progressive country. Industrial development has progressed to such an extent as to elevate Malaysia into a position among leading countries on top of a host of developing countries in the world. However, while our economic, industrial and social development have provided for an acceptable standard of living, they have also brought along numerous environmental problems.

As I look back over the last decade, it is encouraging that the Government has responded in a decisive manner to evolve appropriate policies and programmes to ensure that economic development goes hand in hand with sound management of the environment.

The Environmental Quality Act, 1974 has been in force for well over nine years and meanwhile five sets of environmental control regulations have been formulated and implemented. The sustained environmental improvement efforts have helped to overcome significantly the environmental problems posed especially by the industrial sector.

Consciousness of environmental changes and appreciation of their bearing on social and economic well-being have grown significantly. Formal education, technical training, mass media and non-governmental

../2..

organisations and citizen groups have all played a role in this process of building environmental awareness. There has also been some progress in terms of greater access to information and environmental problems and prospects, administrative and legislative means of organising and implementing action, methodological guidance in assessment and analysis of environmental changes and measures, training and technical co-operation to deal with environmental matters. Regional co-operation to deal with shared environmental problems has increased. Public involvement in environmental debate and action has increased.

The fact that much has been accomplished in a relatively short time does not mean that we can relax our vigilance. With the prospect of an enhanced economic development during the Fifth Malaysia Plan period (1986 - 1990), the environmental problems will be more complex. Therefore improved concepts and techniques and even more comprehensive approaches will need to be adopted for the management of the environment.

Competent environmental management can be achieved only by integrating the environmental dimension into the development planning and implementation processes exercised by economic development planning agencies and by the major governmental implementing ministries.

A salient feature of the new concept of development is the recognition that continuing economic productivity depends upon maintaining a sustained base of the natural resources utilised by economic activity, hence the need to guard against irrevocable using up of precious resources and instead to promote their wise use in order to meet both short-term

../3..

organisations and citizen groups have all played a role in this process of building environmental awareness. There has also been some progress in terms of greater access to information and environmental problems and prospects, administrative and legislative means of organising and implementing action, methodological guidance in assessment and analysis of environmental changes and measures, training and technical co-operation to deal with environmental matters. Regional co-operation to deal with shared environmental problems has increased. Public involvement in environmental debate and action has increased.

The fact that much has been accomplished in a relatively short time does not mean that we can relax our vigilance. With the prospect of an enhanced economic development during the Fifth Malaysia Plan period (1986 - 1990), the environmental problems will be more complex. Therefore improved concepts and techniques and even more comprehensive approaches will need to be adopted for the management of the environment.

Competent environmental management can be achieved only by integrating the environmental dimension into the development planning and implementation processes exercised by economic development planning agencies and by the major governmental implementing ministries.

A salient feature of the new concept of development is the recognition that continuing economic productivity depends upon maintaining a sustained base of the natural resources utilised by economic activity, hence the need to guard against irrevocable using up of precious resources and instead to promote their wise use in order to meet both short-term

../3..

and long-term economic needs. At the same time it is beginning to be understood that conservation of environmental resources is of great importance to the social and cultural values of the people and to their quality of life. Intangible as these values are, planners are beginning to appreciate that they must cope with them in overall economic development planning process.

It is therefore imperative that we should move towards more effective environmental management which means a process of reconciliation between human, social and industrial activities and the systems of the natural world. Within this process economic development must be conducted in a deliberate and sustainable manner. The integrity of natural systems should not be diminished through ignorance, and human life should be conducted in a world that retains its rich diversity of life and beauty.

AM/sh.

MESSAGE FROM THE HONOURABLE MINISTER OF SCIENCE, TECHNOLOGY AND THE ENVIRONMENT

It gives me great pleasure to write a message for the souvenier commemorating "A Decade of Environmental Management in Malaysia".

Since our Independence 27 years ago, Malaysia has progressed by leaps and bounds, from a primarily rural agricultural society into a modern progressive country. Industrial development has progressed to such an extent as to elevate Malaysia into a position among leading countries on top of a host of developing countries in the world. However, while our economic, industrial and social development have provided for an acceptable standard of living, they have also brought along numerous environmental problems.

As I look back over the last decade, it is encouraging that the Government has responded in a decisive manner to evolve appropriate policies and programmes to ensure that economic development goes hand in hand with sound management of the environment.

The Environmental Quality Act, 1974 has been in force for well over nine years and meanwhile five sets of environmental control regulations have been formulated and implemented. The sustained environmental improvement efforts have helped to overcome significantly the environmental problems posed especially by the industrial sector.

Consciousness of environmental changes and appreciation of their bearing on social and economic well-being have grown significantly. Formal education, technical training, mass media and non-governmental

../2..

organisations and citizen groups have all played a role in this process of building environmental awareness. There has also been some progress in terms of greater access to information and environmental problems and prospects, administrative and legislative means of organising and implementing action, methodological guidance in assessment and analysis of environmental changes and measures, training and technical co-operation to deal with environmental matters. Regional co-operation to deal with shared environmental problems has increased. Public involvement in environmental debate and action has increased.

The fact that much has been accomplished in a relatively short time does not mean that we can relax our vigilance. With the prospect of an enhanced economic development during the Fifth Malaysia Plan period (1986 - 1990), the environmental problems will be more complex. Therefore improved concepts and techniques and even more comprehensive approaches will need to be adopted for the management of the environment.

Competent environmental management can be achieved only by integrating the environmental dimension into the development planning and implementation processes exercised by economic development planning agencies and by the major governmental implementing ministries.

A salient feature of the new concept of development is the recognition that continuing economic productivity depends upon maintaining a sustained base of the natural resources utilised by economic activity, hence the need to guard against irrevocable using up of precious resources and instead to promote their wise use in order to meet both short-term

../3..

and long-term economic needs. At the same time it is beginning to be understood that conservation of environmental resources is of great importance to the social and cultural values of the people and to their quality of life. Intangible as these values are, planners are beginning to appreciate that they must cope with them in overall economic development planning process.

It is therefore imperative that we should move towards more effective environmental management which means a process of reconciliation between human, social and industrial activities and the systems of the natural world. Within this process economic development must be conducted in a deliberate and sustainable manner. The integrity of natural systems should not be diminished through ignorance, and human life should be conducted in a world that retains its rich diversity of life and beauty.

AM/sh.

OPENING STATEMENT BY THE LEADER OF THE MALAYSIAN DELEGATION AT THE SIXTH SESSION OF THE GOVERNING COUNCIL OF UNITED NATIONS ENVIRONMENTAL PROGRAMME (UNEP)

Mr. President,

Thank you for giving me the floor.

On behalf of the Malaysian delegation, first and foremost I would like to express my deep regret for not being able to be present at the auspicious Opening Session of the Sixth Governing Council Meeting yesterday, due to unavoidable commitments. However, I have since read your enlightening speech at the opening of this session as well as the equally enlightening Executive Director's introductory statement. May I take this opportunity to congratulate you on your election as President of the Sixth Governing Council.

Mr. President, may I say, too, that it is an honour indeed for Malaysia to be selected to serve in the Governing Council as a member for a second term. To begin with, my delegation would like to reiterate our support to the UNEP commitment towards system-wide environmental programme co-ordination. Though we have a long way to go in realising this objective, however, it is undeniable that the basis has been laid. Many countries and organisations, national, regional and international, have made substantial contributions to the UNEP success but on this occasion my delegation must give special recognition for the outstanding work of the Secretariat in improving the system of documentation, in particular the new series of "Report to the Governments" which we believe have assisted the respective governments considerably in following up and analysing the main policy issues and programmes on environmental co-ordination.

2/.....

Last year the Malaysian delegation to this meeting had highlighted the catalytic role performed by the UNEP regional office in Bangkok in furthering the objective of UNEP with regard to its world-wide programme implementation. Although initially it was thought that UNEP should concentrate only on global environmental issues, it has now became evident that such environmental problems are varied and not necessarily specific for each region. Even within a region, each country must assess its own problems, allocate its own resources, and choose its own set of solutions. What happens in other countries can at best provide guidelines.

It is for this purpose that my delegation firmly believes that the attainment of UNEP objectives could be achieved more effectively through a regional approach. At this stage, Mr. President, if I may cite an example, perhaps special mention should be made of the ASEAN/Sub-Regional Environmental Programme which has recently been formulated by UNEP office in Bangkok, in close consultation with the ASEAN countries. It is now for the five ASEAN countries themselves to hold an inter-governmental meeting for effective follow-up.

Mr. President, it is therefore our view that the functional and organisational framework of the regional offices calls for some review in the light of development throughout the regions. We have now come to the stage where there needs to be a more positive involvement of the Regional offices rather than as mere co-ordinating organs.

Though we may not be able to speak for the region as a whole, my delegation believes that what is required at this stage is a sustained effort on the part of the Regional Office in supporting and underpinning the regional as well as the country programmes. While seminars and conferences are certainly stimulating there is a greater need for more of a task-force type of organisation spearheaded by UNEP, along the lines of the UNDP Task Force on Human Settlements, to assist the national governments in formulating their respective

national environment policies, administration and regulations. Under this programme, training and technical assistance particularly for developing countries should continue to receive high priority.

In commenting on the future programme of UNEP, it is encouraging indeed for my delegation to note that UNEP is taking positive steps towards the implementation of the programme of action for the establishment of a New International Economic Order and the formulation of the new International Development Strategy for the 1980's. My delegation, as indeed those of most developing countries in our region, attach great importance to the subject as we realise that this is basic to the achievement of a sound environmental management policy. As you are aware, we in the developing countries are still at the stage where the most important concern of development is in attaining a certain level of satisfaction of the basic needs of the poorer sections of society. As a developing country, we have come to regard the environment both as our natural milieu as well as an actual and potential source of wealth. Therefore it is only prudent that we approach environmental management within the overall framework of a sound development strategy.

In Malaysia, for instance the Government has included a chapter on "Environment and Development" in the current Third Malaysia Plan which spells out a programme of action for incorporating environmental dimensions in the overall system of development planning and programming. For this purpose, the Ministry of Science, Technology and Environment has not only been involved in reactive enforcement against environmental problems but also in anticipatory planning, through such management tools as zoning guidelines and the development of a comprehensive Environmental Impact Assessment System. We believe that this trend is discernible among developing countries. Therefore the effort of UNEP to approach this problem on a global basis is commendable and compatible with system-wide environmental co-ordination.

My delegation does not intend to elaborate this point further other than to stress on the need for UNEP to approach this problem realistically taking into account the physical, economic, technological, political, societal and cultural aspects of environment, which will invariably determine the programme of action. It is therefore, imperative for the Task Force working on this programme to have adequate exposure on these problems on a region-to-region basis. Perhaps, the regional office could serve as an important catalytic link by organising Conferences and Seminars in the region to focus on problems in the setting. In organisational terms, this requires pulling together the United Nations agencies for a common purpose.

Mr. President, let me also touch on the activities under the Environmental Fund Programme. It is reassuring to note that a significant sum had been allocated to the developing countries, This is realistic in view of the growing awareness and the need among the developing countries as they embark upon the launching of their environmental programmes. It is in this light that my delegation would like to suggest that in the management of this Fund, the financial rules should provide for the unutilised commitment for any one project to be automatically carried on to another year until the completion of such project. This is particularly essential in the developing countries where environmental management is relatively new and environmental projects normally take some time between conceptualisation and the operational stage.

Mr. President, there is no doubt at the moment over the tremendous benefits of the International Referral System (IRS) and the International Register of Potentially Toxic Chemicals (IRPTC) to the user countries. Malaysia in particular has recognised the significant impact of these projects and is at the moment taking steps to be a member both of the IRS and the IRPTC. While on this point, I would like to stress that while conceptually we agree with the set-up of the IRS and the IRPTC, we are inclined to the view that

such a system could be more effectively tapped by a user country if the Regional Office were to function as the regional focal point, thereby strenghtening the link between countries in the region and the International focul point.

Mr. President, my country's report to this Council would not be complete if I do not touch on the subject of Marine Pollution which is yet another priority area in Malaysia, in particular, and in the ASEAN Region as a whole. I need not stress further on the importance that we attach to the Straits of Malacca since it has been highlighted by the Malaysian delegation at the previous session.

The point that I would like to prevail upon the Council is the scope for co-operative programme in our region where UNEP assistance would be desirable. While the countries in this region are actively building up capabilities for contingency planning to combat oil pollution; UNEP could certainly complement this role by assisting the countries in the research and monitoring programmes.

Turning to the Regional Seas Project, although the decision of the Fifth Governing Council envisaged such a programme for Asia, we note with disappointment that not much progress has been made. It is important that regional initiatives in this area be supported by UNEP rather than be left to peter out.

Finally, Mr. President, my congratulations to you and the other officers of the Bureau upon the election to the office at this Sixth Session of the Governing Council. My delegation is confident that with your distinguished leadership the session will proceed successfully. As a member of the UNEP, my delegation likes to join the other countries in extending our continuous support to UNEP in its endeavour to realise a world-wide environmental programme, in the interest of a better environment for tomorrow.

Thank you.

/r

From Ministry please get Text used in Press Conference 8/10/82

DRAFT

SULIT 40

JOINT PRESS RELEASE BY MST & E AND MINISTRY OF TRANSPORT

Hazy condition and its consequent reduction in visibility is a normal phenomenon during the South-West Monsoon in Malaysia. This is brought about by the subsidence, in the lower troposhere, due to the different air masses prevailing over this region. The subsidence traps the dust and particulate matter in the lower troposphere. When rain occurs, visibility improves with a wash-out effect.

The current widespread haze phenomenon in parts of Malaysia is accentuated by the ashes from the recent volcanic eruptions in West Java. The particulate matter and ashes get transported into neighbouring regions by the prevailing wind in the lower troposphere. Some areas in Malaysia are affected more than others by the haze resulting in reduced visibility - an effect which depends upon several meteorological factors among others wind-flow, subsidence and atmospheric stability.

Dense hazy conditions were first observed in the State of Sarawak and in the eastern part of State of Sabah in the second week of August 1982. This haze was largely contributed by the ashes that were ejected by the volcano which erupted in West Java. During that period the southeasterly wind over Java area carried the ashes toward the equator. This air stream then turned clockwise just north of equator (due to the rotational effect of the earth) and became southwesterly, thus bringing the ashes over the state of Sarawak. From 17 August 1982 onwards the general atmospheric flow over Sarawak and Java areas persisted and continued to bring the volcanic ashes into Sarawak, causing the widespread haze and reducing visibility to 2 - 3 Km.

During the same period, Peninsular Malaysia was, however, under the influence of a different air stream from the Indian Ocean area and thus not affected by the volcanic ashes.

2/...

In the first week of September, with the formation of a tropical storm, Irwing west of Luzon Island, the general wind flow over the southern Peninsular Malaysia and southern Sumatra changed to southerly bringing the ashes to Peninsular Malaysia. Visibility was first reduced to about 6 Km in Singapore and Johore on 6 September 1982. With increased penetration of the southerly air stream into the central parts of Peninsular Malaysia, the haze phenomenon aggravated and consequently there was a general reduction in visibility to 2 - 3 Km in several areas. Around this period, there was little rainfall to wash down the suspended particulate from the lower troposphere. On 11 September 1982, the hazy situation was as its worst. From the upper air data obtained at Petaling Jaya on 11th morning, a strong temperature inversion was observed. The reduction in solar radiation caused by the dense haze reduced convection. As a result, the pollutants were trapped in the lower part of the atmosphere. High volume air sampling carried out at the Meteorological Headquarters at Petaling Jaya at height of 20 metres by the Department of Meteorological reveals the peaking in the dust content in the atmosphere on the 11th September. In comparison with the mean, there was roughly a three fold increase in the total suspended particulate matter on this day.

However, high volume sampling at ground levels carried by DOE during this period in the Kelang Valley, and Johore showed no significant increase in suspended dust content when compared to previous readings taken over the past months. Chemical analysis carried out by the Chemistry Department on samples submitted for analysis also did not indicate any significant ~~substantial~~ increase in heavy metals or total acidity contents.

As the tropical storm Irving moved towards South China on 13 September, the wind flow over Peninsular Malaysia changed

3/...

west to southwest, after it originated from the Indian Ocean. This change in the wind system together with rain in several areas caused a general improvement in the visibility.

After 13 September, the air stream over Sarawak still remained southwesterly, thus bringing some ashes from the Java area. Low visibility continues to persist in the western Sarawak.

The wind system over the country is expected to change in October and with the consequent heavy thunderstroms, especially in the afternoons over the west coast and interior areas of the Peninsular Malaysia, it is anticipated that the haze would further reduce and visibility improves.

* * * * *

D E R A F

Press Release by Division of Environment, Ministry of Science, Technology and Environment.

61

A National Seminar on Environmental Impact Assessment will be held at the Holiday Inn, Kuala Lumpur from 26 - 28th Sept. 1977. The three-day Seminar is organised by the Environment Division, Ministry of Science, Technology and Environment.

The Seminar will be declared open by the Minister of Science, Technology and Environment, Y.B. Tan Sri Ong Kee Hui at 9.00 a.m. on 26th September, 1977. There will also be a closing speech by the Deputy Minister of Science, Technology and Environment at 3.30 p.m. on the 28th September, 1977. The Seminar will be participated by representatives from various Government Ministries, and Departments, State Governments, Local Authorities, the Universities, Industries, Professional Organisations and Societies, Consumers Associations as well as non-Governmental organisations concerned with the Environment.

The short-term objectives of the Seminar would be to examine the current trends, practices and methodology in environmental impact assessment, current procedure for project evaluation as well as guidelines for environmental impact assessment.

The long-term objectives of the Seminar would be to contribute background materials for the formulation and establishment of an Environmental Impact Assessment Procedure in Malaysia to enable impacts of major economic development and industrial projects on the environment to be assessed and evaluated.

../2...

The Seminar has gained the support of a number of International and U.N. agencies such as the Center for Education in International Management in Geneva, the WHO and the U.N.E.P. Speakers from these agencies as well as from the local Universities and Government Agencies will be presenting papers relating to the subject of Environmental Impact Assessment. A good turn out is ~~is~~ expected.

YB Tan Sri Ong C H M. of S. T & E will open a 3 day Sem on by the Env. Div of the M. of S. T. & E ~~on~~ from the 26-28 Septm 1977 at the Holiday Inn

2 The theme of the Sem is Environtal Impt. Ass, and speakers ~~from~~ at the Seminar include Dr M. G Roystn from Geneva Dr. Kisov from the W H O and Dr. Dhiza from the UNEP.

3. Over hundred and fifty participants from Govt. Ministry Departments State Govts, the Universities & the private sector will attending the Seminar.

4 Among the papers to be presented are ~~a paper on the~~ current procedure by Dr. Lee Peng Chong of the EPU PM's Dept and An environ imp. Study of the T. Hyd. Pr by Mr Ken Rubeli of ——

and ~~The~~ "Proposed E I A Process in Malaysia" by Mr Goh Kia Soo

5 The objective of the Seminar is to examine environmental impact assessment procedures and to familiarise decision makers with the techniques of forecasting pollution and taking steps to control it in ~~at~~ advance. It involves the incorporation of pollution control measures at the planning stages of projects, and should result in greater convenience and lower pollution control costs for project initiators.

6. The 3-day Seminar will be closed by the Deputy Min for STAE En Mustapha Ali. ~~Participants will be awarded~~

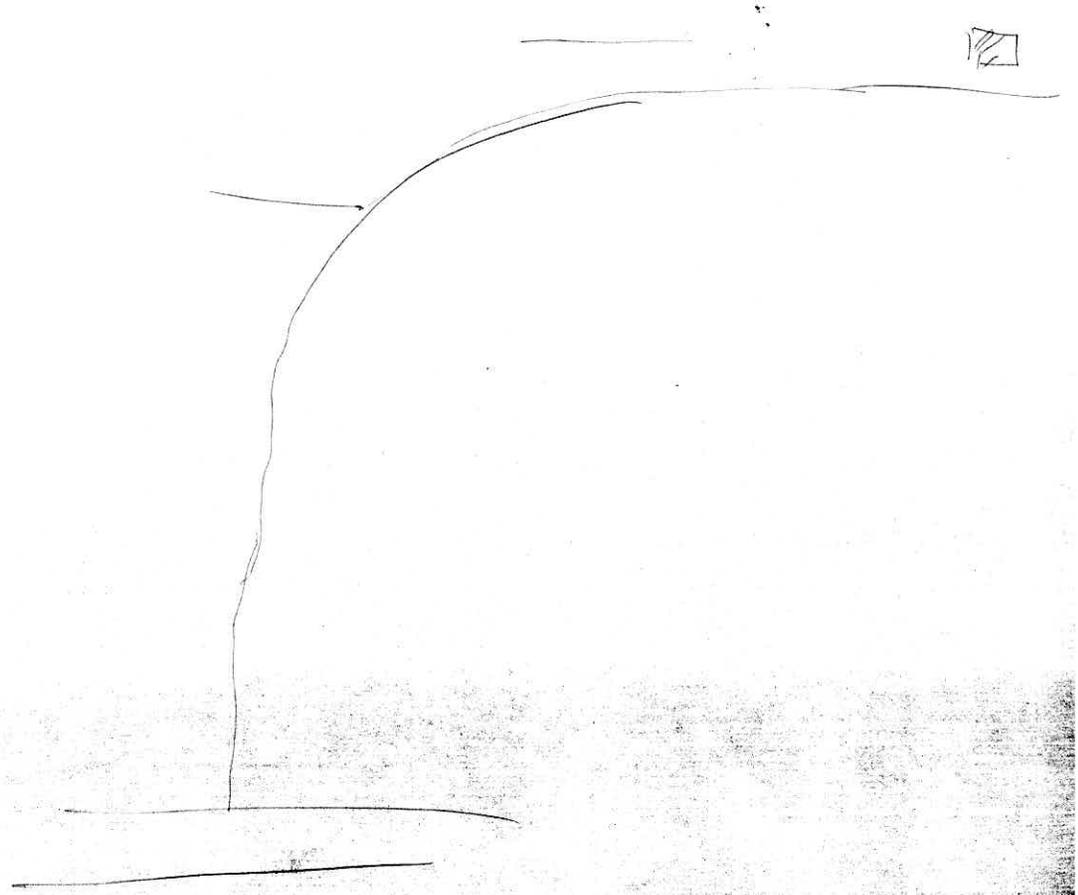
P R E S S R E L E A S E

ON

THE INTEGRATED INDUSTRIAL EFFLUENT TREATMENT

AND

FERTILIZER MANUFACTURING PLANT



Abstract

In many effluent treatment plant, emphasis is placed only on treating the effluent. Ajinomoto (Malaysia) Berhad has devised a complete system where we not only treat the effluent to the acceptable parameter standard but also recoup the product raw material from the raw effluent and convert it into a marketable product, namely granulated organic fertilizer. Using this system we are able to recycle about 53% of the BOD (Biochemical Oxygen Demand) from the original effluent into organic fertilizer. We treat the rest in a very high rate BOD digestor before passing it to a high efficiency activated sludge treatment tank. The discharge effluent will have a BOD of 50 milligrammes per litre, conforming to the stringent parameters standard set out by the Malaysian Environmental Quality Act 1974. Excess sludge is processed further and dried using solar energy. To minimise odour during the drying process, a deodorizer unit is installed.

1. Committed to Malaysia

Ajinomoto (Malaysia) Berhad is a Malaysian company with an international link. Our products respond not only to Malaysian but international needs. We strive to serve mankind. It is therefore our solemn policy to contribute to the welfare and economy of this country - a commitment we have proudly upheld for the past 20 years and will continue to do so. Our progress and expansion are the result of farsighted research - research that not only focus on consumer needs but also on efficient technology that can improve Malaysia's economy and environment.

Ajinomoto (Malaysia) Berhad is therefore committed to the credo of serving Malaysia, its people and its laws. We are happy to have spent a sum of $5,000,000 ($1.4m for the initial stage and $3.6m for the final phase) to develop and perfect this effluent treatment plant not only in support of the Malaysian government's emphasis on technology development but also as our moral and social responsibility towards the clean environment of this country.

2. Nature of Effluent

AJI-NO-MOTO in Malaysia is manufactured through fermentation of tapioca starch. The by-product of this fermentation is exhausted substrate, microbial cells and small quantities of other amino acids. These are the main source of BOD. It is rich in organic material and like the effluent of other food industries using fermentation process, it is very difficult to treat.

3. The Treatment Concept

The ideal concept has always been to incorporate product recycling in the treatment system whereby a sizeable portion of the BOD load is siphoned off from the effluent flow into a marketable product. The lean effluent is then treated to the acceptable standard before discharge. This concept helps keep down the cost of effluent treatment and at the same time, lesser BOD load is released into the environment.

4. Research on the treatment design

The above-mentioned concept was the framework of our treatment system design. Research for the design of this system started as early as 1977. First, we had to identify the marketable product which we could produce. Second was the research for the technology to produce the product. Finally the assembly of the various treatment technologies had to fit into a workable and compatible treatment system where the final discharge would conform to the stringent environment law of this country. The Malaysian Environmental Quality Act of 1974 has one of the most stringent parameters standards in the Asean region. In Japan for example, the BOD parameter standard for food industries using fermentation process is 80 milligrammes per litre. Here the Act sets the standard at 50 mg/l.

The development work for the integrated treatment system has therefore been an ordous task. First, the nature of our effluent

is a complex biological mass with BOD concentration of approximately 25,000 mg/l. This concentration is as high as the palm oil industry effluent. Second, our factory premises is located in an industrial built up area where land is very limited - thus extensive ponding system is not feasible. This land shortage also excludes using the more advanced activated sludge system by itself. Third, the technology to process the marketable product would have to be cost effective.

It took nearly five years before the final design was decided on. Within that span time, experts from various fields, both from our own parent company in Japan and local research institution and universities were consulted. Simultaneously the opinion of the Department of Environment were also solicited. Their research findings advice and opinion contributed positively towards the final design.

5. The Integrated Treatment System

Our system consist of four stages:-

(1) The physical alienation of organic material from which part of the fertilizer raw material is derived.

(2) Biological disgestion of organic matter to bring down the BOD concentration to an acceptable level for Activated Sludge Treatment.

(3) Activated Sludge Treatment to reduce the properties of the effluent to an acceptable standard for discharge

and dewatering of sludge which contributes to the fertilizer raw material.

(4) Blending of raw material for fertilizer and then solar drying to produce our complete granulated organic fertilizer.

Breakdown of treatment processes

Stage (1) utilizes a high speed centrifugation process to skim off the organic material. The light liquor of this centrifugation is passed on to stage (2).

In stage (2), a High Rate Biological Fermentor (H.R.B.) is used. This is an advanced treatment technology developed by our parent company in Japan. It is capable of BOD loading of the magnitude of up to 60 kg/m^3/D (cu.m. per day) with retention time of around six hours only. This technology enables the total system to function without the need of more land space. The working volume for the fermentor is only 30 cubic meters.

A high efficiency activated sludge treatment tank is employed in stage (3). Its BOD loading capacity is up to 2 kg/m^3/D. A roller press belt filter is used to dewater the excess sludge.

Stage (4) is the fertilizer processing using solar energy. It is an assortment of techniques developed through trials and observations conducted on site. The utilization of solar

energy for drying within an enclosed solar house is an innovative approach towards energy saving. The system that we use here is capable of evaporating 10 tons of moisture daily.

As a safeguard against unpleasant odour being released into the atmosphere during drying process, we installed a deodorizer system. This deodorizer system developed locally, utilizes soil and its microbe for neutralizing the smell.

NJ 23/6/82

43

EXECUTIVE BRIEF FOR THE CHAIRMAN OF THE SESSION

Arrival at the Pan Pacific Hotel

A Reception Committee comprising members of the Organizing Committee, selected senior officials of the IDB and Seminar Secretariat staff will receive and accompany the Session Chairman to the lounge outside the Kenanga Suite (above the Pan Pacific Ballroom). The Session Chairman will then be introduced to both the Presenter and the Commentator of the Working Paper to be discussed at that Session. After a brief introduction and exchange of pleasantries, he will be escorted to the Seminar room.

Introduction of Session Chairman to the Seminar Participants

As a preliminary, before the actual proceedings commence, the Chairman of the Organizing Committee, or his deputy, or a designated member of the Organizing Committee will proceed to call the delegates to order and introduce the Chairman to the Seminar participants. After the introduction, the Session Chairman is invited to preside over the proceedings of the Seminar for the period specified.

Suggested Procedures on the Conduct of the Seminar

(1) It is suggested that the Session Chairman confirm the title of paper under discussion and introduce both the Presenter as well as the Commentator of the Working Paper to the participants. (The curriculum vitae and relevant biodata would have been prepared and conveyed to the Session Chairman previous to the occasion.)

(2) The Session Chairman then invites the Presenter to read his paper. Approximately 30 - 40 minutes is allocated for the presentation.

(3) Upon completion of the presentation the Chairman proceeds to invite the Commentator to summarise his comments on the paper. The allocated time for this is 15 minutes only.

(4) It is advised that the Meeting subsequently be adjourned for 30 minutes tea/coffee break. The venue for this is the Foyer outside the Seminar room. The Chairman will have tea/coffee together with the participants.

(5) When the Seminar re-convenes the Chairman will invite participants to an Open Discussion. Perhaps the Chairman, as a prelude, could stimulate the discussion with some remarks guiding the course and direction of the discussion. It is to be noted here that participants should be encouraged if not persuaded to be actively involved in the discussion with a view to promote substantial resolutions at the end of the Seminar. Approximately 1½ hours is allocated for discussion.

(6) After the discussion the Writer of the Paper will be called upon to answer, rebut, comment on the various points and issues raised. He will be holding the floor uninterrupted for 15 minutes.

(7) The Chairman of the Session will then proceed to sum up the salient features of the paper presented, the issues discussed and informed opinions expressed.

Note : (The proceedings of the Seminar will be recorded by the Rapporteurs appointed from among the participants. The Rapporteurs will then submit their reports to the Rapporteur General who will then edit and consolidate all reports for presentation to the participants at the Final Session on the last day of the Seminar.)

Vote of Thanks to the Chairman of the Session

The Chairman of the Organizing Committee of the Seminar or a delegated senior member of the Committee will, with the permission of the Chair express a vote of thanks to the Chairman of the Session and also the participants present for their valuable contributions. The Chairman will then be escorted to his waiting car.

Ladies and Gentlemen,

It gives me great pleasure on behalf of the Government of Malaysia, to extend a warm "Selamat Datang" to all of you in particular our foreign guests who have come from far away to attend this National Workshop on Environmentally Sound Development organized by the Department of Environment, of my Ministry; the Economic Planning Unit of the Prime Minister's Department; Institute for Advanced Studies of University of Malaya and the United Nations Environment Programme or UNEP. Your participation to assist the Government to establish and strengthen the process of decision making and administration for environmentally sound development through this workshop is indeed very much appreciated. The focus of your deliberations over

the next two days is a matter of great concern to our Government.

Ladies and Gentlemen,

To maintain and improve the quality of life for Malaysians, the government has become increasingly concerned about the need for environmentally sound development. "ESD" or "Environmentally Sound Development" recognises that the environment is the fundamental resource on which the well-being of our society is built upon. As such it calls upon all Malaysians to ensure that patterns of overuse and environmental degradation that would jeopardize the national and global resource base are not practiced. Planning for ESD is clearly crucial to attainment of the goal of ESD, and consists of the development of tools and

strategies to respond to a number of broad requirements which include:

* integration of environment and development;
* satisfaction of basic human needs;
* achievement of equity and social justice; and
* maintenance of ecological integrity.

Such planning broadens the scope of conventional development planning to include decisions on long-term goals, desired values and institutional structures and ecologically-informed allocation of resources and priorities.

The development of appropriate tools and strategies for such planning is a difficult and lengthy process. In Malaysia this process has been

made more difficult by a number of factors.

Firstly, we have a system of government and administration which makes the task of identifying and applying suitable policies, methods, procedures and regulatory frameworks an immense undertaking, involving the collective efforts of a large number of institutions and bodies at national, state and local levels.

Another factor is that we are a developing country in which economic growth is a priority. Hence, although it is recognised that the environment, including natural resources, provides key input to the development process and environmental conditions constitute an essential component of national well-being, it has to compete

with many other sectoral considerations.

A final reason is that although sophisticated approaches to development have been evolved recently, many external as well as internal constraints on development, cannot yet be satisfactorily taken into account in the planning models evolved so far.

Despite all these constraints we have made quite a satisfactory progress. It is hoped that this workshop will enable us to accelerate even more quickly towards ESD by providing the government with conclusions and recommendations on how the process of integrating environmental considerations in development decision making and administration can be further reinforced. Besides its

potential contribution to our development planning strategies, I am glad to learn too that the national workshop and its outcome will be useful to the United Nations which has been concerned about providing coordinated assistance to developing countries in planning for ESD.

To operationalise the guidelines to achieve the goal of sustainable development contained in various UN documents, UNEP has recognised that proposed adjustments, interventions, measures and programmes should be based on comprehensive information and analysis, and consultation with the government, the private sector, experts and NGOs. However such information and data are often scattered and incomplete. When available they are not adequately analysed in terms of relationships,

causes and effects, or from the standpoint of deriving conclusions for environmental planning and management in conjunction with development policy, planning and administration. Since it is necessary to draw as much as possible on available data and national expertise from countries, UNEP has endorsed the project on planning for ESD in a number of selected countries. We are proud that Malaysia has been chosen as one of the countries from which UNEP will broaden the global experience on planning for ESD.

I would like to stress that the Malaysian government on its part is fully committed to the goals of ESD and is constantly monitoring them. Our Sixth Malaysia Plan, for example provides a substantial discussion on the progress, with the

management of the environment and an account of the various programmes implemented to deal with water, air, marine, industrial and other pollution. The country's developmental goals and strategies contained in the Second Outline Perspective Plan (OPP2) for 1991-2000 and our Rt. Honourable Prime Minister's statement on Malaysia's Vision 2020 also emphasise the environmental dimension. The OPP2 outlined that "greater emphasis will be placed on achieving economic development that is ecologically sustainable and balanced" and strategies for environment protection as well as nature and natural resources conservation will be incorporated in all development plans and programmes". Our Prime Minister's statement reminds us that in the pursuit of economic development, Malaysia "must also ensure that our valuable natural resources are

not wasted. Our land must remain productive and fertile, our atmosphere clear and clean, our water unpolluted, our forest resources capable of regeneration, able to yield the needs of our national development. The beauty of our land must not be desecrated: for its own sake and for our economic advancement".

To meet this vision, the Federal Government intends to begin discussions with the state governments to explore greater sharing of financial responsibility of environmental-related projects so as to compensate for the potential loss of revenue resources of states and the cost of managing these proposed programmes and projects. Also, beginning with the Sixth Plan, all public institutions will be required to collaborate and cooperate with the

Department of Environment (DOE) and effectively integrate environmental considerations in the planning and implementation of their programmes and projects.

DOE will be strengthened to enable it to play a more vital developmental role as well as to be more effective in enforcement. These measures are to ensure that in the exercise of their respective designated functions, the environment is seen as an integral component of the strategies and programmes of public sector agencies. Finally to overcome the lack of coordination on environment-related policies, strategies and programes and to ensure that all public agencies give due priority to the maintenance of good environmental conditions, as well as promote sustainable development and minimize

environmental degradation, the Government has set up the National Council for the Environment (NCE) to coordinate the functioning of all agencies and advise the government on policies towards a more holistic approach to environmental management.

Ladies and Gentlemen,

I would like to stress that while we will put greater efforts in building a more sustainable future for our future generations, by prudent management of our national resources and environmental capacities, this will be within the framework of a equitable, balanced and comprehensive approach to the inter-related issues of environmental protection and economic development. Economic growth is a compelling necessity for the progress of the country and environmental considerations should not be used to introduce a new form of

conditionality in aid and development financing or as a pretext to creating unjustified barriers to trade.

I would like to take this opportunity to thank everyone who has contributed in one way or another towards ensuring the success of the workshop. I anticipate the outcome of your discussions and recommendations with great interest, and wish you a successful and fruitful deliberations.

On this note, I now have much pleasure in declaring this National Workshop on Environmentally Sound Development in Malaysia open.

Thank you for your kind attention.

VIDEO SCRIPT FOR 'INITIATIVE FOR THE GREENING OF THE WORLD'

This is our world.

Spectacular in its beauty.

Providing food and shelter for humankind and millions of plant and animal species.

And it is man, who in his unrelenting quest for material comforts, poses the greatest threat to the very existence of the Earth.

As a result, today our planet is in crisis. It is at risk as never before in its 46 hundred million years of existence.

Regardless, we continue to contaminate our land and rivers with poisons;

Desecrate beaches and oceans with massive spills of oil;

Disrupt the chemistry of the atmosphere on which life depends.

And pollution in all major cities is making air unfit to breathe

Clean air, clean water and food should be a basic human right but they are becoming increasingly scarse and more than one billion of the world's population still lives in abject poverty.

At a time when co-operation between the nations of the world is critical to the future of our planet, conflicting interests threaten to totally undermine global efforts to reverse the damage.

An insensitivity to the fundamental issues facing developing countries is driving a growing wedge between rich and poor nations.

Current global initiatives to protect the environment lack sincerity. Third World leaders therefore view these initiatives as meaningless exercises that smack of neo-colonialism.

Large scale damage to the Earth's environment began in Europe and America. The Industrial Revolution which promised unprecedented progress and an enhanced quality of life, instead contributed to the greatest degradation of the Earth.

Rivers, lakes and seas have become dumps for untreated chemicals and factory effluents.

Acid rain is seriously threatening forests and polluting lakes and rivers.

It has already affected vast stretches of forest in Europe and the United States ---

* Almost 67% of temperate forest in the United Kingdom

* 52% in Western Germany

* 43% in the Swiss Alps

- The Canadian maples and the conifer stands in the United States are also under serious threat.

- Almost half of Sweden's 90,000 lakes and one in five of those in the United States are known to be acidified.

Industrial activity which releases numerous pollutants including greenhouse gases and ozone-depleting substances into the atmosphere is causing rising concern.

And it is the developed world, home to 25% of the world's population which continues to be responsible for 75% of the global carbon dioxide emmissions. In Canada, Australia and the United States, per capita carbon dioxide exceeds 4 tonnes per year. In contrast, most developing countries produce less than half a tonne, and a large number produce less than 0.1 tonne per capita.

If we continue to pollute the atmosphere with these greenhouse gases, we can expect the earth to be between one to five degrees warmer in the 21st century.

This warming of the atmosphere will have disastrous effects on the ecological systems of our planet, placing lives and livelihood of millions in jeopardy. It is the poor who will be the most vulnerable.

We have to begin reducing our impact on the atmosphere now to ensure against the catastrophic disruption of the Earth's natural system.

Among these natural systems are the forests of the world. We have already lost 20 % of the Earth's forest cover.

Today, the heat continues to be on the woodlands that offer the greatest timber value. Vast tracts are being harvested by loggers. In the Pacific Northwest alone, nine-tenths of virgin woodland has been hauled to the mill.

In Europe, it is estimated that virtually all primary forest has disappeared.

The United States has only 15% left;

Australia - 5%

New Zealand - 24%

Overall, only 12.7% of the world's temperate forests remain, and we have lost more than 50% of its original boreal forests.

In contrast, many developing nations still have large tracts of primary forests.

Indonesia - 43%

Malaysia - 57%

Zaire - 56%

Brazil - 63%

Forest loss has been attributed mainly to man's need for fuel, building material and food production.

Logging of the world's remaining forests has become a highly emotive issue. Tropical timber has been subject to trade restrictions and bans.

Statistics show that western environmentalists are barking up the wrong tree:

* Only 25% of the world's log production comes from tropical forests. Temperate and Boreal forests continue to account for the remaining 75%.

* Only 9% of the global warming problem can be attributed to deforestation. The energy and transport sectors of developed countries are responsible for 57%.

* It is industrial pollution, and not the logging of tropical hardwoods, that is the primary threat to the environment. And the earth has been polluted, and continues to be polluted, by the developed countries.

On the other hand, tropical timber has provided the developing nations with a much needed resource . Timber revenues help pay for urgently needed development programmes ..

Yet these tropical timber producers are under tremendous pressure from developed countries and some NGOs to halt logging completely.

These groups choose to ignore the fact that environmental issues cannot be divorced from concerns in the developing world about basic human needs.

They need to understand that it is poverty which is hacking away the very root of environmental stability. It is driving people to cut down trees, adopt ecologically damaging short-cuts and lifestyles, to having larger families, moving in greater numbers into already overburdened cities.

The single largest cause of deforestation has been the burning and clearing of land for agriculture.

In Europe and the United States, forests made way for cattle ranches, railroads and cash crop farming.

Industry also took its toll of temperate and boreal forests. Huge quantities of wood were burnt to run the steam-powered machines which drove the Industrial Revolution in the eighteenth and nineteenth centuries.

However, where agriculture has been largely tree crop rather than cash crop plantations, as in countries such as Malaysia, the impact on the environment has been minimised.

Countries that have converted landuse from forests to tree crop plantation , have in fact managed to maintain tree cover at sustainable levels. These tree crop plantations continue to serve as important carbon sinks while growing.

Harvesting of forest resources must continue. To provide food for people, commodities for export and land for towns and industries.

But the loss of forests can be carefully and wisely managed. And man has the benefit of new and enlightened forestry techniques.

In Malaysia, forests have been systematically managed since the early 1900s.

Large tracts of virgin jungle covering some 12.7 million hectares have been designated as permanent forest estates and will remain a part of Malaysia's rich natural heritage.

Sustainable forests are ensured by a system of selective management which carefully regulates the rate of logging .

In addition Malaysia also currently has 2.74 million hectares of protective forests which remain wildlife sanctuaries and national parks.

Developing countries cannot be burdened with the responsibility of being the green lung of the world at the expense of their people.

Time is running out. Environmentalists predict that we have as little as 15 years to save the planet.

Governments and environmental protection movements around the world have to go beyond the rhetoric of concern and act in concert now to remedy the problems.

As pointed out in the Brundtland Report, our future well-being can only be ensured by adopting sustainable development to meet the needs of the present without compromising the ability of future generations to meet their own needs. A new era of economic growth is required, one based on policies that sustain and expand the environment resource base.

Sustainable development is a noble ideal. But that's all it will ever be unless the basic issues of poverty and equity are more honestly confronted by the affluent, developed nations.

The gross injustice of today's world economic order must be addressed and the living standards of the developing nations must be improved if the environment is to be effectively protected.

The resolution of the global debt problem must be given urgent attention.

It is estimated that even after subtracting the development aid spent by the governments of the industrialised nations, US$40 billion travels from the South to the North every year. The developed world must accept that its own future depends on its giving more in real terms to the developing world.

The industrialised countries have benefited most from the exploitation of the world's forest resources. The principle global environmental risks we face come from profligate, wasteful and indulgent patterns of consumption and production in these nations. They therefore bear the brunt of measures to rehabilitate and preserve the world's forests.

The agenda for action for the greening of the world should aim for action on four broad fronts:

1. Forests will continue to be a source of sustenance for humankind. But the key to sustainable use of the forests lies in recognising their full potential and their true economic value.

2. Worldwide funds must be made available for massive afforestation and reforestation programmes, particularly to replace inefficient agriculture and create effective carbon sinks.

   There is an urgent need for both industrialised and developing nations to set minimum levels of forests cover .

   A minimum forest cover of 50% has been suggested. Developed countries who possess the resources and technology to make this possible should lead the way.

3. Industrialised countries must make technology available at prices affordable by the developing nations of the world so that all can achieve a more equitable balance between development and conservation.

   This will help these countries make a quantum leap forward to bridge the gap that lies between them and the more affluent nations.

4. There must be world consensus to reject environmentally unsound practices.

   Industrialised countries should reduce their consumption of energy generated from fossil fuels.

In step with this framework, international trade agreements like GATT must have built-in mechanisms to ensure economic and social redress between rich and poor countries. Protectionism in all forms and guises should be dismantled to ensure improved market access.

They must also incorporate criteria for trade and investment which work towards a true balance between economic development and environmental protection.

In the final analysis, the initiative for the greening of the world lies in the hands of every one of us. In the words of E.F. Schumacher:

" Everywhere people ask: 'What can I actually do ?' The answer is simple as it is disconcerting: we can, each of us, work to put out own inner house in order. The guidance we need for this work can still be found in the traditional wisdom of mankind."

CAPITAL COMMUNICATIONS
4th December 1991 (Fifth Revision)

(46)

Closing Address By Y.B. En. Lau Heng Ding, Parliamentary Secretary, Ministry of Science, Technology and Environment

---

I am delighted to be in your midst to officiate at the closing of the ASEAN-EEC Seminar on "Water Resource Management - Problems and Prospects"which has been in progress for the past 5 days. I have followed the proceedings with keen interest and it is indeed an encouraging feature that the Seminar has progressed smoothly with active participation and interaction by all concerned. The technical support of the Commission for European Economic Communities (EEC) with expertise in the person of Mr. James R. Simpson as well as the expertise of key officials from ASEAN countries who are either directly or indirectly connected with water resources planning development and management has contributed in no small measure to the success of the seminar.

Ladies and Gentlemen, the people and countries in the ASEAN region are experiencing similar desires and difficulties in their social and economic development. The similarity is that development relies on a natural resource base which can sustain development only if it is properly used and managed. Development frequently means altering the style in which resources are used and the intensity of their use. This increases the need for management to avoid unnecessary degradation and depletion of natural resources and resultant loss in development potential.

The population growth in the ASEAN has placed consideration pressure on the natural resources upon which man relies for sustained living - food, shelter etc. and for improvement of quality of life by social and economic development. In many cases the population pressure or poorly managed and wasteful use of resources has led to degradation and depletion of key resources. With future population pressure and increased rates of national development, the demands on natural resources will increase and, unless exploitation is managed so that renewable resources are used on a sustained basis and non-renewable resources used wisely and conservatively, the natural resource base will be severely degraded. This has led to the enhanced recognition over the past few

../2..

years of the necessity to place greater emphasis on resource management by countries of the ASEAN region.

In this respect it can be said that this Seminar is of great significance and has rightly chosen the subject of water resource management and development for deliberation, a resource which, as pointed out by the Honourable Minister in his opening address, long viewed as Nature's free bounty has now become a precious natural resource in limited supply.

It is gratifying that the seminar has been comprehensive in scope and carefully designed to cover all aspects of water resource development and management as from Legislative, Institutional and Administrative Arrangement for Water Resource Management, Monitoring, Surveillance and Conservation of Water Resources, Training in Water Resource Management and finally to Research in Water Resource Management. A stimulating feature of the Seminar has been the technical field visit which has given the opportunity to participants to have some insight into Malaysia's technical and institutional programmes.

Over the past 5 days we have witnessed active particpation and lively deliberation and the goals and objectives as well as the strategies for achieving them have become clearer and made explicit for all concerned. The Seminar has indeed provided a welcome and timely opportunity for all those who share common interest and concern for water resources development and management to come together and interact for mutual benefit as well as gain some insight into the experience in the EEC through our expert Mr. James Simpson.

I am sure the Governments of the ASEAN Countries will look forward to receiving your findings and recommendations and give serious consideration to initiating action to the fullest extent possible as a matter of urgency.

In conclusion, I wish to congratulate the organising Committee for their sustained hard work and farsighted initiative.

.../3..

I now declare this Seminar officially closed following 5 days of intense and rewarding discussions with the stage set, as it were, for action on a broad front. The end of this Seminar marks, in a very real sense, the beginning of even more concerted and co-operative efforts on the part of the ASEAN Countries in water resource development and management.

(47)

PRESS RELEASE

MINISTRY OF SCIENCE, TECHNOLOGY AND ENVIRONMENT

The Quality of Rivers in Malaysia

Referring to the Bernama report on the Klang River which appeared in the various daily newspapers on 12 October 1987, my Ministry is pleased to inform you that the report does not reflect the present situation. Many of our rivers were grossly polluted ten years ago when various pollution control regulations were gazetted and enforced to curb pollution from various industries. To-day, the quality of rivers in Malaysia has improved immensely.

The Department of Environment has systematically carried out its monitoring programme since 1978. In terms of organic pollution, over 85 per cent of our rivers can now be considered to be in a satisfactory condition or better, except for rivers like Klang River, Perai River and Juru River. In terms of inorganic pollution that is largely attributed to soil erosion and river siltation, over 50 per cent of our rivers showed signs of recovery, although 80 per cent of which are still in poor condition.

Although the overall condition of the Klang River remains much to be desired, it has indeed improved in terms of inorganic pollution, namely silt load, at the annual rate of 10 percent. The condition can be further improved if adequate measures are taken to prevent soil erosion from road construction, housing development, agricultural development, logging and mining operations. In terms of organic pollution that is largely attributed to both partially treated and untreated sewage, the conditions therein have yet to improve, but the river "is not biologically dead".

...2/-

The Department has been monitoring at least once a month throughout the length of the river and its tributaries regularly at 22 places. Based on the most recent determination of ammoniacal nitrogen, an indicator of organic pollution largely by sewage, only the river at Zoo Negara has recovered since 1985. The remaining 95 per cent of the places monitored along the river and its tributaries have yet to recover in order to support fisheries and other aquatic life. The prospects for its recovery in terms of organic pollution will depend very much on the progress made in the provision of comprehen-sive sewerage and other urban services throughout the river basin.

As to the tons of rubbish and debris found in the Klang River, every individual must act responsibly by not disposing refuse, garbage, trash, trade, industrial or agricultural wastes into the drain, waterway or river or in a place or manner that permit the garbage or wastes to be washed into the river after a heavy shower.

Kuala Lumpur
14 October 1987