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Ucapan Alu-Aluan Yang Berbahagia Dr. Abu Bakar Bin Jaafar, KMN  
Ketua Pengarah Alam Sekitar Di Bengkel " National Workshop On  
Safety And Control Of Toxic And Hazardous Waste " Di Hotel  
Grand Continental, Kuala Lumpur Pada Hari Isnin  
10 Jun 1991 Jam 9.00 Pagi.

Yg. Bhg. Dato' Mohd Noordin Bin Hassan,  
Ketua Setiausaha Kementerian Sains, Teknologi  
Dan Alam Sekitar

Dr Paul Guo

Tetamu-Tetamu dan peserta bengkel yang dihormati

Tuan-tuan dan Puan-puan sekalian,

Bagi pihak Jabatan Alam Sekitar, saya dengan sukacitanya mengucapkan selamat datang kepada semua peserta-peserta dari agensi-agensi Kerajaan, badan-badan berkanun, pusat-pusat pengajian tinggi, wakil-wakil industri dan persatuan-persatuan sukarela.

Tidak ketinggalan juga saya ingin mengucapkan setinggi-tinggi penghargaan kepada pihak WHO / PEPAS / UNDP kerana telah sudi membiayai segala kos perbelanjaan untuk bengkel ini serta juga pegawai-pegawai dan kakitangan dari Jabatan Alam Sekitar yang bertungkus lumus membuat persiapan bagi menjayakan bengkel ini.

Oleh kerana terdapatnya sebahagian daripada penceramah-penceramah dan juga peserta-peserta yang mungkin tidak dapat memahami Bahasa Malaysia, izinkan saya meneruskan kata-kata aluan saya dalam Bahasa Inggeris.

It is with great pleasure that I welcome all of you especially our distinguished participants from the various

Government Agencies, including the State Government, non-Government Organisations, the industry and universities to the official opening of this four day WHO / UNDP / DOE Workshop on Safety and Control of Toxic Chemical and Hazardous Waste.

I would like to record my appreciation to Yg. Bhg. Dato' Mohd Noordin Bin Hassan, Secretary-General, Ministry of Science, Technology and the Environment for being with us this morning. I would also like to express my sincere thanks and deep appreciation to WHO and UNDP for their Contributing towards the holding of this workshop. As we know, both WHO and UNDP have been providing invaluable technical inputs through consultancy services and seminars to various Departments including the Department of Environment. In the case of DOE, there has been collaboration in the field like hazardous waste management, EIA, air and water quality monitoring, solid waste management and data processing. Let me take this opportunity to record our deep gratitude for their continuous support and assistance in programmes related to environmental protection in Malaysia.

Ladies and Gentlemen,

Before concluding, let me once again thank to the Yg. Bhg. Dato' Mohd Noordin Bin Hassan for his gracious presence here this morning. I do hope that this Workshop will be both stimulating and beneficial to all the participants. Thank you.

30/1/84

" CLEAN LIVING "

PRESIDEN, KELAB ROTARY PUDU,  
TETAMU-TETAMU DAN SETERUSNYA RAKAN-RAKAN  
AHLI KELAB TORARY.

TERLEBIH DAHULU SAYA INGIN MERAKAMKAN PENGHARGAAN  
SAYA KERANA DIBERI PELUANG INI UNTUK BERUCAP ATAS  
TAJUK YANG BEGITU TOPIKAL.

AS I WAS SAYING, I AM GRATEFUL TO HAVE THIS  
OPPORTUNITY TO SHARE SOME THOUGHTS ON SO TOPICAL  
A SUBJECT.

TO JOHN WESLEY (1703 - 1791) IS ATTRIBUTED THE  
OFT-QUOTED MAXIM:

"CLEANLINESS IS, INDEED, NEXT TO GODLINESS"  
(SERMONS, NO. XCiii ON DRESS)

TURNING TO THE SPECIFICALLY MALAYSIAN CONTEXT,  
ALTHOUGH BELIEF IN GOD IS NUMBERED AS ONE AMONG  
THE FIVE PRECEPTS OF THE RUKUNEGARA IT IS SOMEHOW  
SILENT ON THE MATTER OF CLEAN LIVING, OR FOR THAT  
MATTER CLEANLINESS. PERHAPS THE RATIONALE FOR  
THAT OMISSION IS THAT IT IS SO FUNDAMENTAL TO NEED  
EXPLICIT CITING.

BE THAT AS IT MAY, WILLIAM SHAKESPEARE ("THE BARD")  
IN HIS TIME SEEMS TO HAVE ANTICIPATED TODAY'S TOPIC  
FOR HE HAS IT IN KING HENRY IV PART II.

"I'LL PURGE, AND LEAVE SACK, AND LIVE  
CLEANLY AS A NOBLEMAN SHOULD DO"

AN INTERESTING POINT IS THAT HE WAS NOT SHORT ON  
IDEAS ON LIVING SUCH AS IN:

"CRABBED AGE AND YOUTH CANNOT LIVE TOGETHER,  
YOUTH IS FULL OF PLEASURE, AGE IS FULL OF  
CARE. ("THE PASSIONATE PILGIM")

TODAY THE CHALLENGE TO US - MALAYSIANS IN GENERAL AND KUALA LUMPIANS IN PARTICULAR - IS TO INTEGRATE CLEANLINESS INTO OUR LIFESTYLE AND VALUE SYSTEM. THE GOVERNMENT, FOR ITS PART, HAS STIMULATED PUBLIC AWARENESS OF THIS CRYING NEED THROUGH THE LAUNCHING ON A NATION-WIDE BASIS OF KEMPEN KEBERSIHAN SELURUH NEGARA FROM 2ND OCTOBER TO 6TH NOVEMBER, 1983.

EDITORIAL COMMENT FROM THE PRESS HAS BEEN BOTH CONSTRUCTIVE AND STIMULATING. FOR EXAMPLE, "NEW SUNDAY TIMES" THIS MONTH ALONE FEATURED TWO EDITORIALS ON NEW YEAR'S DAY AND YESTERDAY (29 JANUARY, '84) CAPTIONED "TOWARDS A CLEAN ENVIRONMENT" AND "GREENING OF A CITY" RESPECTIVELY, BOTH WELL-INFORMED AND REFLECTING A POSITIVE ATTITUDE TOWARDS UPGRADING THE QUALITY OF LIFE.

IT WAS NOT SO LONG AGO THAT WE IN MALAYSIA  
COULD BE SAID TO TAKE FOR GRANTED THE ABUNDANCE  
OF NATURE, AND THE RICHNESS AND VARIETY OF OUR  
PLANT AND ANIMAL LIFE. OF LATE, THERE ARE SIGNS  
THAT THIS INDIFFERENT ATTITUDE TO NATURE WHICH  
CAN BE CHARACTERISED AS ONE OF THE NEGATIVE  
ASPECTS OF WHAT IS TAKEN FOR PROGRESS IS GIVING WAY  
TO A REALISATION THAT QUALITY OF LIFE CAN SUFFER  
THROUGH POPULATION PRESSURE ON NATURAL RESOURCES.

ROTARIANS WOULD FIND INTERESTING THIS TRANSLATION FROM  
FROM THE VEDIC VERSES DESCRIBING THE CREATION OF  
WOMAN FOR ITS OVERTONES OF PREOCCUPATION WITH THE  
WORLD OF NATURE:

"THE GREAT ARTIFICER TOOK THE ROTUNDITY  
OF THE MOON AND THE CURVES OF CREEPERS, AND THE  
CLINGING OF TENDRILS, AND THE TREMBLING OF  
GRASS, AND THE SLENDERNESS OF THE REED,

AND THE BLOOM OF FLOWERS, AND THE LIGHTNESS  
OF LEAVES, AND THE TAPERING OF THE ELEPHANT'S  
TRUNK, AND THE GLANCES OF DEER, AND THE  
CLUSTERING OF ROWS OF BEES, AND THE JOYOUS  
GAIETY OF SUNBEAMS, AND THE WEERING OF CLOUDS,  
AND THE FICKLENESS OF THE WINDS, AND THE  
TIMIDITY OF THE HARE, AND THE VANITY OF THE  
PEACOCK, AND THE SOFTNESS OF THE PARROT'S  
BOSOM, AND THE HARDNESS OF A DAMANT, AND THE  
SWEETNESS OF HONEY, AND THE CURELTY OF THE  
TIGER, AND THE WARM FLOW OF THE FIRE, AND THE  
COLDNESS OF SNOW, AND THE CHATTERING OF JAYS,  
AND THE COOING OF THE CUCKOO AND THE HYPOCRISY  
OF THE CRANE, AND THE FIDELITY OF THE BRAHMANY  
DUCK, AND COMPOUNDING ALL THESE TOGETHER, HE  
MADE WOMAN, AND GAVE HER TO MAN."

MOVING TO THE K.L. OF TODAY, THE KL DRAFT STRUCTURE PLAN PUTS FORTH AS ONE OF ITS GOALS AS BEING "TO SECURE THE MOST FEASIBLE ENVIRONMENTAL STANDARDS THROUGH A JUDICIOUS BALANCE BETWEEN DEVELOPMENT, ECOLOGY AND NATIONAL HERITAGE". AND IT GOES ON TO IDENTIFY A "DECLINING ENVIRONMENTAL QUALITY" AS ONE OF THE MAJOR ISSUES CURRENTLY TROUBLING OUR CAPITAL CITY. IN SPECIFIC FIELDS FOR EXAMPLE IN HOUSING, IT SPELLS OUT THE NEED TO PROMOTE AND ENCOURAGE HIGH STANDARDS OF RESIDENTIAL ENVIRONMENT AND IN TRANSPORTATION "TO IMPROVE THE QUALITY OF LIFE IN THE FEDERAL TERRITORY THROUGH PROTECTION AND ENHANCEMENT OF URBAN ENVIRONMENT". WHEN THE MASTER PLAN IS ANNOUNCED IN DUE COURSE, WE CAN EXPECT ELABORATION ON THESE AND OTHER ISSUES PERTINENT TO CLEAN LIVING.

TO HELP IN THIS TASK, THE DEPARTMENT OF ENVIRONMENT (DOE) HAS IDENTIFIED MORE THAN TEN MAJOR ENVIRONMENTAL ISSUES IN THE FEDERAL CAPITAL ENCOMPASSING SOLID WASTE MANAGEMENT, BEAUTIFICATION, RECREATION INCLUDING PARKS AND OPEN SPACES, ZONED DEVELOPMENT ACTIVITIES, SILTATION, REHABILITATION OF DISUSED MINING LAND, SEWAGE/SEWERAGE, FLOOD CONTROL AND DRAINAGE, AIR POLLUTION CONTROL AND NOISE CONTROL AND PUBLIC PARTICIPATION.

NO LESS THAN ABOUT 80 SEPARATE ACTIVITIES HAVE BEEN IDENTIFIED FOR ALL CONCERNED PARTIES TO ACT IN A CO-ORDINATED AND CONCERTED FASHION OVER THE NEXT 10 YEARS, WITH APPROXIMATELY ONE-THIRD CAPABLE OF BEING IMPLEMENTED IN THE NEXT 2 YEARS.

PUBLIC PARTICIPATION IS AN ESSENTIAL PRE-REQUISITE TO SUCCESS ON ALL FRONTS. THE CRITICAL SIGNIFICANCE OF THIS FACTOR IS UNDERSCORED WHEN ONE CONSIDERS THAT

LITTERING AND VANDALISM ARE STILL RAMPANT. AMONG THE FEEDBACK INFORMATION FROM THE RECENT NATIONAL CLEAN-UP CAMPAIGN IS THAT NO SIGNIFICANT DENT HAS BEEN MADE ON THE PROPENSITY TO LITTER. SIMILAR CONSIDERATIONS APPLY REGARDING THE INCIDENCE OF VANDALISM WHEN EVEN PLANTS WHICH ARE PART OF BEAUTIFICATION EFFORTS GET VANDALISED. NOTHING LESS THAN AN ALL-OUT SUSTAINED PUBLIC AWARENESS PROGRAMME WITH THE FULL INVOLVEMENT OF THE MASS MEDIA IS CALLED FOR AND THE DOE IS WILLING TO CONTRIBUTE TO THIS EFFORT.

#### LEGISLATION

TURNING TO LEGISLATION, THERE ARE NO LESS THAN 8 PIECES OF FEDERAL LEGISLATION AND 18 PIECES OF STATE LEGISLATION IN MALAYSIA WHICH CAN BE CHARACTERISED AS ENVIRONMENT-RELATED AND HAVING A BEARING ON CLEAN AND HEALTHY LIVING. IT IS EMINENTLY DESIRABLE THAT THE IMPROVED PUBLIC AWARENESS PROGRAMME MUST BE ACCOMPANIED BY INTENSIFIED ENFORCEMENT ACTIVITIES SO THAT THOSE WHO WILFULLY FLOUT THE LAW CAN BE BROUGHT TO BOOK AND THE COURTS PASS TRULY DETERRENT SENTENCES

THE ADVANCES OF SCIENCE AND TECHNOLOGY CAN BE HARNESSSED TO MAKE CLEAN AND HEALTHY LIVING A REALITY IN MALAYSIA IN THE 1980'S AND 1990'S, GIVEN THE WILL TO ACT RESOLUTELY.

IN SHORT, WE HAVE TO DEVELOP AN ETHOS WITH A BUILT-IN AFFINITY TO THE NATURAL WORLD SO THAT WE CONTINUE TO DEVELOP AND PROSPER BUT WITHOUT DESTRUCTION, DAMAGE AND DISRUPTION. THAT IS A CHALLENGE WE CANNOT BUT MEET AND TACKLE VIGOROUSLY IF WE ARE NOT TO BE JUDGED HARSHLY BY SUCCEEDING GENERATIONS.

FOR MY PART, I COULD PERHAPS ECHO THESE LINES OF WALTER POPE (1630 - 1714) WHO IN THIS "THE OLD MAN'S WISH" SAYS:

"IF I LIVE TO BE OLD, FOR I FIND I GO DOWN,  
LET THIS BE MY FATE IN A COUNTRY TOWN,  
MAY I HAVE A WARM HOUSE WITH A STONE AT THE  
GATE,  
AND A CLEANLY YOUNG GIRL TO RUB MY BALD PATE  
..."

3

PERPUSTAKAAN  
JABATAN ALAM SEKITAR

Yang Berusaha En. Goh Kiam Seng,  
Pemangku Ketua Pengarah Alam Sekitar;

Yang Berbahagia Datuj Haji Mohd. Ishak bin Haji Arif  
Ketua Pengarah Perancang Bandar dan Desa;

Ahli-Ahli Majlis Kualiti Alam Sekekliling;

Ahli-Ahli Majlis Kebangsaan Kawalan Bunyi Bising;

Dif-Dif Kehormat;

Tuan-Tuan dan Puan-Puan yang dihormati sekalian.

UCAPAN OLEH Y.B. EN. LAW HIENG DING, TIMBALAN MENTERI  
SAINS TEKNOLOGI DAN ALAM SEKITAR DI MAJLIS  
PELANCARAN UNIT BERGERAK PENGAWASAN BUNYI BISING  
JABATAN ALAM SEKITAR, PADA HARI SABTU, 10 JUN 1989  
DI BILIK GERAKAN TINGKAT 13, WISMA SIME DARBY JAM 10.30 PAGI.

Saya berasa amat sukacita kerana dapat bersama-sama dengan tuan-tuan dan puan-puan untuk merasmikan Majlis Pelancaran Unit Bergerak Pengawasan Bunyi Bising, Jabatan Alam Sekitar yang merupakan unit pertama seumpama ini di Malaysia.

Tuan-tuan dan Puan-puan,

Negara kita Malaysia sejak kebelakangan ini telah mengalami pembangunan pesat dalam sektor ekonomi yang telah membawa kepada antara lainnya, perkembangan tenaga manusia, pembangunan tanah, proses perbandaran dan infrastruktur. Peningkatan taraf hidup rakyat, sebagai kesan utama dari pembangunan tersebut, telah menyedarkan masyarakat kepada kehendak-kehendak yang lebih sofistikated dan moden.

Bagaimanapun, pembangunan seperti ini telah mengakibatkan kesan-kesan sampingan terutamanya pemusnahan alam sekitar yang menyebabkan kemerosotan kualiti kehidupan masyarakat di mana pencemaran bunyi bising merupakan salah satu daripadanya.

Tuan-tuan dan Puan-puan,

Pencemaran bunyi bising dari punca-punca tertentu seperti kenderaan, industri, kerja-kerja binaan dan komuniti didapati semakin hari semakin menjadi masalah yang mengancam kesejahteraan kehidupan seharian.

Bunyi Bising yang ditakrifkan secara subjektif sebagai bunyi yang tidak diinginkan bukan saja merupakan sejenis kacau ganggu tetapi juga boleh mengancam kesihatan manusia. Kajian-kajian perubatan telah menunjukkan bahawa pendedahan kepada bunyi bising yang berlebihan boleh menyebabkan kesan psikologi, fizikal dan sosial kepada masyarakat dan seterusnya kemerosotan nilai hartanah pada sesuatu kawasan.

Secara amnya, keadaan pencemaran bunyi bising di Malaysia tidaklah sebegitu serius jika dibandingkan dengan negara-negara maju, tetapi sekiranya langkah-langkah awal dan rapi tidak dipertimbangkan mulai sekarang ini, negara kita akan menghadapi masalah pencemaran bunyi bising dan akan memerlukan pengawalan dengan kos yang besar.

Adanya aduan-aduan orangramai mengenai masalah tersebut melalui liputan akhbar, Biro Pengaduan Awam, Jabatan Alam Sekitar dan sebagainya membuktikan bahawa kesedaran terhadap masalah ini telah wujud di kalangan orang ramai. Jumlah aduan yang diterima oleh Jabatan Alam Sekitar didapati meningkat dari 67 kes pada tahun 1986 ke 84 kes pada tahun 1987 dan seterusnya 98 kes pada tahun 1988.

Sejak tahun 1979 terdapat satu trend yang sama dari segi bilangan mengikut punca . Bunyi bising dari industri merupakan punca bunyi bising utama yang diadu dan diikuti oleh bunyi bising komuniti. 55% dari jumlah aduan bunyi bising yang diterima bagi tahun 1988 adalah aduan berkenaan bunyi bising industri ,70% pada pada tahun 1987 dan 63 % pada tahun 1986. Peratusan bunyi bising komuniti pula ialah 34% dari jumlah aduan bunyi bising yang diterima bagi tahun 1988 , 17 % bagi tahun 1987 dan 28% bagi tahun 1986.

Jabatan Alam Sekitar di bawah Kementerian Sains, Teknologi dan Alam Sekitar telah mendapati bahawa kebanyakan aduan-aduan ini selalunya disebabkan oleh kedudukan atau penggunaan tanah yang tidak bersesuaian. Sebagai contoh, terdapatnya kawasan perumahan yang dibina terlalu hampir dengan kawasan perindustrian atau jalan raya -jalan raya dan sebaliknya.

Sehubungan dengan ini, Jabatan Alam Sekitar dengan adanya peruntukan undang-undang di bawah Akta Kualiti Alam Sekitar 1974 berhubung dengan kawalan pencemaran bunyi bising telah merangka satu program pengawalan bunyi bising dari pelbagai punca. Program pengawalan bunyi bising ini bertujuan menentukan supaya didalam usaha kerajaan untuk meningkatkan kemajuan ekonomi, kualiti alam sekitar dari segi masalah bunyi bising perlu dikawal dengan rapi demi kesejahteraan hidup rakyat.

Untuk mencapai matlamat ini, lima aktiviti utama telah dikenalpasti iaitu:-

1. Mengawasi dan menentukan status pencemaran bunyi bising berdasarkan data-data yang representatif dan sahih bagi menilai keadaan alam sekitar dari masa kesemasa ;
2. Mengetahui kesan dan tindakbalas atau reaksi masyarakat terhadap pencemaran bunyi bising ;
3. Mengkaji dan mengenalpasti perkembangan-perkembangan teknologi baru dalam sistem pengawalan pencemaran bunyi bising untuk digunakan oleh pengusaha-pengusaha projek, perancang-perancang pembangunan dan sebagainya ;
4. Menggubal dan menguatkuasakan peraturan-peraturan bagi mengawal pengeluaran bunyi bising oleh punca-punca tertentu ; dan
5. Menyedia dan menyebarkan maklumat serta garis panduan kepada semua pihak yang terlibat didalam merancang sesuatu projek pembangunan atau pembangunan bagi sesuatu kawasan supaya mengikuti satu prosedur yang boleh mengelak atau mengurang masalah bunyi bising akibat pembangunan tersebut.

Mulai dari tahun 1978, beberapa program pengawasan bunyi bising telah dijalankan. Ini termasuklah pengukuran bunyi bising komuniti iaitu di tempat-tempat awam seperti hospital dan bunyi bising yang berpunca dari industri, kapalterbang, kerja-kerja binaan dan kenderaan bermotor.

Objektif program pengawasan dijalankan adalah di antaranya untuk:-

1. Mendapatkan maklumat yang sahih dan representatif untuk faedah perancangan jangka panjang termasuklah penggubalan peraturan-peraturan kawalan bunyi bising dan kegunaan tanah ;
2. Menyediakan maklumat asas kualiti alam sekitar tentang status bunyi bising bagi sesuatu kawasan untuk pengurusan dan perancangan pembangunan ;
3. Mengenalpasti sumber-sumber utama dan baru pencemaran bunyi bising ; dan
4. Menilai keberkesanan program penguatkuasaan kawalan bunyi bising.

Tahap penerimaan gangguan dari bunyi bising bagi seseorang adalah bergantung pada beberapa faktor seperti kesedaran terhadap pencemaran bunyi bising, sikap individu, punca bunyi dan sebagainya. Oleh itu satu kajian soal selidik telah dijalankan di bandar-bandar besar di Semenanjung pada tahun 1983. Dari kajian ini, 80% dari orang ramai yang ditemui berpendapat bahawa perlunya kawalan bunyi bising di kawasan-kawasan sensitif seperti sekolah-sekolah dan tempat - tempat kediaman.

Bagi memastikan bahawa pengurusan alam sekitar dari aspek kawalan bunyi bising dikendalikan selaras dengan matlamat pembangunan negara dan amalan pentadbiran dan undang-undang di kedua-dua peringkat Persekutuan dan Negeri, Jabatan Alam Sekitar telah mengamalkan dua kaedah kawalan bunyi bising alam sekitar iaitu:-

- i. Kaedah Kawalan Mengikut Undang-Undang ; dan
- ii. Kaedah Kawalan Secara Bukan Undang-Undang

Saya gembira kerana perlaksanaan Peraturan Kualiti Alam Sekeliling ( Bunyi Bising dari Kenderaan Motor) 1987 yang telah dikuatkuasakan pada 1 Januari 1988 telah mendapat sokongan dan kerjasama yang baik dari pihak pengeluar motosikal dan kenderaan-kenderaan beroda empat dan lebih.

Selaras dengan pendekatan 'pencegahan' , perhatian telah ditumpukan kepada ujian pada peringkat 'pembuatan dan pemasangan'. Hasil ujian telah menunjukkan semua motosikal, kereta dan trak ringan mematuhi kehendak undang-undang. Bagi kenderaan berat dimana pengubahsuaian tempatan sistem 'muffler' telah diadakan , pihak pemasang kenderaan masih berusaha untuk mengatasinya. Dalam hal ini juga , untuk memberi kesan kepada kempen penguatkuasaan, orang ramai adalah digalakkan untuk berhubung dengan mana-mana Pejabat Wilayah Jabatan Alam Sekitar kiranya kenderaan tertentu didapati menyebabkan gangguan bunyi bising . Dengan kerjasama ini, Jabatan Alam Sekitar akan dapat mengesan kenderaan berkenaan untuk tindakan selanjutnya.

Konsep pencegahan pencemaran dari peringkat perancangan diberi penekanan bilamana Perintah Kualiti Alam Sekeliling (Aktiviti Yang Ditetapkan) (Penilaian Kesan Kepada Alam Sekeliling) 1987 dikuatkuasakan. Penilaian kesesuaian kedudukan sesuatu projek akan dipertimbangkan dengan secara lebih sistematik pada peringkat awal lagi demi mengelakkan sebarang masalah pencemaran yang serius apabila projek telah terlaksana. Faktor-faktor yang diambilkira semasa penilaian ini diantara lain ialah masalah pencemaran bunyi bising.

Di samping itu, bagi kaedah kawalan secara bukan undang-undang, Jabatan Alam Sekitar telahpun menyediakan sebuah garis panduan yang bertajuk 'Garis panduan-Garis panduan bagi penempatan dan pengezonan industri-industri'. Kaedah ini bertujuan supaya pertimbangan ke atas kesan-kesan alam sekitar dapat digabungkan dalam rancangan pembangunan yang dilaksanakan oleh pihak Berkuasa Negeri dan Tempatan.

Dalam usaha-usaha untuk mempertingkatkan kualiti hidup rakyat disamping mengimbangi pembangunan dan pengurusan alam sekitar, Jabatan Alam Sekitar akan terus menyediakan garis panduan-garis panduan dan peraturan-peraturan yang diperlukan dari masa kesemasa. Bagi mencapai tujuan ini, sebagaimana yang telah saya nyatakan tadi, maklumat-maklumat yang sahih dan representatif perlu diperolehi.

Oleh yang demikian, Jabatan Alam Sekitar telah pun memperolehi sebuah Unit Bergerak Pengawasan Bunyi Bising baru-baru ini. Unit yang berharga lebih kurang \$0.2 juta ini telah dilengkapi dengan peralatan-peralatan moden untuk mengukur, merekod dan dapat menganalisa bunyi secara 'in-situ'. Selain dari pengumpulan data asas, satu program komprehensif telah pun dirancang. Program ini melibatkan diantaranya, penyiasatan bagi kes-kes aduan, program kajian khas dan seterusnya pemetaan garis kontour bunyi bising bagi tujuan perancangan penggunaan tanah.

Selain daripada ini, data yang terkumpul ini boleh digunakan untuk penggubalan peraturan-peraturan kawalan bunyi bising. Dengan adanya data jenis ini konsep kawalan bunyi bising melalui zonazone boleh dilaksanakan oleh pihak berkuasa tempatan.

Walaupun bagaimanapun kita haruslah sedar bahawa kawalan pencemaran bunyi bising tidaklah seharusnya menjadi tanggungjawab satu pihak sahaja. Penglibatan dan kerjasama secara menyeluruh dari agensi-agensi perancangan, sektor swasta dan orang ramai di samping pengetahuan teknologi yang mencukupi adalah perlu bagi mencapai hasrat murni ini.

Tuan-tuan dan Puan-puan,

Dengan ini, saya dengan sukacitanya merasmikan pelancaran Unit Bergerak Pengawasan Bunyi Bising, Jabatan Alam Sekitar.

Bekian, terima kasih.

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Sixth Meeting of the Parties  
to the Montreal Protocol  
6-7 October 1994  
Nairobi, Kenya

CHECK AGAINST DELIVERY

STATEMENT

BY

HIS EXCELLENCY, HON. PETER CHIN FAH KUI  
THE DEPUTY MINISTER  
FOR SCIENCE, TECHNOLOGY AND THE ENVIRONMENT  
MALAYSIA

Mr. President,

The Malaysian delegation extends its warmest greeting to the Government and people of Kenya, and deep appreciation to UNEP for organising the 6th Meeting of the Parties. We are grateful for the hospitality given.

To you, Mr. President, I would like to congratulate you on your election to the responsible but difficult office. We assure you of our fullest co-operation in your conduct of this meeting. I am certain that with your able guidance, the meeting will fulfill the aspirations of the Parties present.

I am aware that some parties consider Malaysia to be a hard-liner on Substances that Destroy the Ozone Layer. We think otherwise. We consider ourselves second to none in our effort in implementing Ozone Layer Protection measures - we may be cautious and prudent in our approach since we believe more in action than in words and we do not make promises that we cannot keep. I am happy to report that out of the 12 global ODS phase out projects under the Multilateral Fund that have been completed, 4 of them are from Malaysia, and we expect another 10 to be completed by the end of the year. We have to date eliminated 60 percent of CFCs consumption in Malaysia. This

alone speaks for Malaysian government's commitment to global cooperation in environmental protection efforts.

Malaysia is continuing with her efforts to improve data collection and reporting and with the recent implementation of the Import Approval Permit System, the flow of ODS would be under better surveillance and control. We understand that such measures impose heavy administrative burdens to many developing countries, and there are numerous technical difficulties yet to be overcome such as harmonized custom codes. I hope parties in their zest in wanting to collect information would not burden us with more academic and bureaucratic requirements without looking into practical measures to overcome present difficulties.

Mr. President

We have heard the report of the Chairman of the Executive Committee on the alarming arrears in the Fund and the effort by the Treasurer to urge contributions to be made as early as possible. We are sympathetic to countries which are genuinely encountering economic problems, but not to those countries that are able but choose not to pay. You may like to know that a member of the G7 economic superpowers has not paid a single cent until now! These countries, while not fulfilling their own obligations, are shamelessly pressing for control measures against others.

Mr. President,

We have here the application of double standards in non-compliance procedures and collusion to condone such practice. On the one hand, when there was occurrence of incomplete reporting of data under Article 7, the Article 5 countries were pulled up and threatened with Non Compliance Procedures; indeed three years ago right here in Nairobi, certain non-Article 5 countries had insisted on proceeding against one Article 5 country. Mr. President, yet, on the other hand, some non-Article 5 countries, though blatantly disregarding Article 10 para 6 requiring contributions to finance the Multilateral Fund, could continue to enjoy all the benefits as a party! And it has even been suggested that the Meeting of Parties should not do anything about it. If this is not double standards, Mr. President, please tell me what it is. To me it smacks of environmental colonialism or environmental exploitation!

Therefore, I like to urge the Parties to adopt concrete and effective measures to overcome this problem. This delegation could support the imposition of interest on arrears, barring attendance to working groups, expert panels and Meeting of

Parties. We could even support that the unpaid arrears be borne by those non Article 5 countries which say that non-payment is not in contravention of Article 10.

On talks to introduce more stringent control measures on HCFCs and Methyl Bromide, I wish to remind the parties again on the agreement reached in Meeting of Parties in Copenhargen which is now part of the Article 5 para 1:

i.e. any further amendment to the Amendments and Adjustments adopted at the 2nd Meeting of Parties in London shall apply to Article 5 countries only after the **Para 8 Review** has taken place and should be based on the conclusion of the review.

This Delegation would resist any move or any back-door measures to indirectly change this agreement. We note that there are various attempts to give mandate to expert panels, working groups etc. to do just that. Such moves are not ethical and are wasting our scarce resources.

On methyl bromide, this delegation once again wishes to state its position clearly. We need first to be convinced that man-made sources are indeed the cause of ozone depletion; secondly, what will be the economic implications to the Article 5 countries? Finally, what new and additional resources are to be committed to assist Article 5 countries to assist them in compliance? Unless we are assured of the financial and technological commitments, it would be suicidal for developing countries to agree to these additional control measures.

On the recent activities by some quarters in wanting to limit the use of HCFCs and HFCs as viable alternatives, Malaysia believes this will ultimately lead to confusion and retard efforts to phase out CFCs which is the first priority. HCFCs clearly is playing a significant role in the economic development of the developing countries. HCFCs is an important transitional substances in the CFCs phasing out especially in the air conditioning and refrigeration sectors. It is an important tool in the economic development of Article 5 (1) countries. Our goal is to achieve sustainable development while fulfilling our commitment in protecting the environment. In that regard, Parties must ensure that the Fund is available for HCFCs as well as HFCs projects to accelerate CFCs phase out. We always believe that the spirit of the Montreal Protocol must provide long term stability and confidence. We must resist any tendency to micro-manage the transitional process or the technology development process.

Industries in many developing countries have invested substantially in HFC technologies in their proactive effort to protect the ozone layer. Such investments was based on

technically and scientifically proven HFC technology. We are aware that there are new ozone friendly generic being proposed and Malaysia is not against the uses of such new technologies. However the parties must ensure the change-over process is not too abrupt or it would be counter-productive, destroy confidence and will ultimately disrupt the global CFC phase out programmes.

On the Review of Article 5 Paragraph 8 and the Financial Mechanism Study by Decision IV/18, my delegation welcome the work being undertaken and is satisfied with the excellent progress achieved by the Executive Committee. We believe that the studies would reveal the real progress in financial and technological cooperation and pinpoint weaknesses so that improvement and adjustment could be made to move all of us forward, especially with regards to the London and Copenhagen Amendments and Adjustments. On the other hand, we are concerned about talks to use the studies to propagate attempt to switch the funding mechanism, or as a leverage to introduce additional control measures. I would urge all parties to heed the call of the Chairman of the Executive Committee, that is all of us must be sincere and honest in our approach and not do anything that could frustrate the process so that the work is truthful and the findings are balanced.

Mr. President,

While I congratulate the Executive Committee on the excellent achievement in project application approval and policy guidelines development, I am seriously concerned about the growing tendency by some members of the Executive Committee to narrowly and restrictively interpret the Terms of Reference of the Executive Committee. Their intention is daylight clear - to reduce outflow of fund and therefore inflow or contributions by them can be reduced. Such interpretation is seriously impeding the implementation of ODS phase-out projects crucial to the economies of Article 5-1 countries. The most recent case relating to project having export component is a clear example. My Government views this as contrary to the spirit of the agreement reached in London, and if allow to continue, may lead to similar back-tracking by Art.5 countries. This would be detrimental to the cooperative effort to reduce ODS consumption. Parties should strike down such underhand practice wherever occurs.

Last year, I have brought to the attention of the Meeting the multitudes of claims on ozone benign alternatives and substitutes and the problems faced by developing countries in

firstly to appraise the truth and secondly, be assured that such products have environmental safety guarantee and product liability; I believe several other colleagues have expressed similar concerns. The Secretariat has apparently not brought this matter of concern to the attention of the responsible working group, expert panel or implementation agency. Once again, Mr. President I request that this matter be formally put to the Meeting for follow-up action. It is my considered view that UNEP could also play a useful role in examining and disseminate the correct information, while at the same time work towards the establishment of a legal regime for verification, product liability and compensation. I earnestly hope there would be progress by next year and I do not have to repeat our concerns.

Mr. President,

We are entering into the tenth year of the Vienna Convention which bring about all the activities relating to the elimination of ODS substances. Malaysia has been at times critical on the approaches adopted by certain quarters when these measures are extreme and do not provide adequate time period and sufficient means for developing countries to implement phase-out measures. On the other hand, we deeply appreciate the understanding, cooperative spirit and constructive role played by many others and the strong support they have given to the Multilateral Fund. USA, Canada, Australia, Denmark and other Nordic countries are exemplary. This time around again we put forward our concerns with a view to ensure the Parties have balanced and implementable decisions and I would like to thank you all for the patience and forbearance in the dealing of the various issues before us. My government is responsive to reasonable request and I assure you our continued cooperation in our effort to protect the ozone layer.

Mr. President,

Once again may I say I am grateful for the opportunity given to elaborate on Malaysia's effort, commitment and concerns.

Thank you.



MALAYSIAN INSTITUTE OF  
THERMAL ENGINEERING AND SCIENCES (MITES)

KEYNOTE ADDRESS

BY

HJ. ISMAIL HJ. HASHIM

SENIOR VICE PRESIDENT  
(REFINING & MARKETING SECTOR)  
PETRONAS

22nd July 1992

OPENING REMARKS

Mr. Chairman, distinguished guests, Ladies and Gentleman. I am pleased and indeed honoured to be invited by the Malaysian Institute of Thermal Engineers (MITES) to this seminar on "CLEAN AUTOMOTIVE FUEL TECHNOLOGY". First of all, may I congratulate the organizers for the foresight to address one of the most important issues in the energy industry today. As I understand it, this is a very "technical" seminar and as a non-technical man you will excuse me if this keynote address does not jive in with the technical flavour of this gathering. My keynote address Mr. Chairman, is entitled **Energy and the Environment.**

## ENERGY AND THE ENVIRONMENT

### 1. INTRODUCTION

Let me begin by saying Some materials regarded as atmospheric pollutants have a natural occurrence. The interactions between living organisms do not only involve destruction, conflict, competition, degradations and plunder but also interdependence, solidarity and complementary. We also know that ecosystem and biosphere have a history of disrupted and restored balance of disorganisation and reorganisation. It is therefore hard to believe that nature requires a kind of ideal static balance which had to be restored by mankind.

Even the primitive life of our forefathers did create pollution. Their level of human activity however, posed no danger to the environment for it did not disturb the concept of nature as an ecosystem - the natural ecosystem which is self-generating, self-regulating and self-organizing. And it is not wrong to conclude that our forefathers had lived in harmony with their environment.

*ENERGY AND THE ENVIRONMENT (CONT'D)*

1. INTRODUCTION CONT'D

We left that primitive life ages ago. How come we, the homo-sapiens of today, only in this decade start to think about the environment? May be we now feel bullied, oppressed, overwhelmed by an artificial and abstract modern world; or have we developed all over again the romantic ideas about nature that we had easily sacrificed in the pursuit of modern-living. Whatever the reasons may be the pollutant materials generated and added to the atmosphere by activities of modern man are now matters of serious concern.

Our modern world has been created through advancement in Science and Technology. Could it be that we have failed to harness with care the use of technology for it is now perceived to have caused deterioration of the environment. Nonetheless we do know that technology can also offer solutions to our environmental problems. Is there an equation that must be consciously observed and balanced? If so, must we now start to calculate the net balance between technology and pollution produced and between technology and pollution avoided since all of us seek "green" growth; the type of growth which can only be achieved by returning to a way of life that introduces dialogue and confrontation between man and nature and make it possible to take steps which are advantageous to both sides.

## 2. ENVIRONMENTAL ISSUES

Ladies and gentlemen, in recent decades, the exponential growth of energy consumption has caused increasingly serious damage to the environment. Thus environmental issues are today a major and growing concern among the public at large. Governments and politicians are responding at the perceived threats to the environment with national and international control measures. This will undoubtedly become more stringent by the year 2000. Since fuel processing and combustion processes are the largest source of atmospheric pollutions, the energy industries world-wide are among the most affected by environmental protection measures. Carbon and other pollutants emitted from the combustion of fossil fuels must be reduced. As I see it the main answer to this is energy conservation and the main instrument to use is the price of energy products along with direct regulatory control aimed at reducing harmful emissions.

Sadly, we have also seen environmental control measures being formulated not to protect the environment as such but mainly for ensuring the economic well-being of regional groupings or national interests. The introduction of Carbon Tax in some countries implemented by giving exemptions to the use of coal, which has a more severe pollutant emissions, simply because coal is produced locally, is one good example of this sad story.

3. THE MALAYSIAN CONTEXT

The rate of industrial development in Malaysia for the past decade has been commendable. At the same time Malaysia also experienced a tremendous increase in the use of motor vehicles. Both of these rapid developments had created incidences of prolonged smog over our major cities and this seems to be more serious with time. Therefore with each passing year, the Malaysian public too attach increasing value to health and environmental protection.

In the Malaysian energy sector we have also seen regulations aimed at reducing pollutants emitted by internal combustion engines becoming more and more stringent. As an example the lead content in motor gasoline has been specified to be reduced from 0.4gm per litre to 0.15gm per litre. Our government is also encouraging the use of unleaded gasoline. It is a matter of time before restrictions on the presence of other pollutants in motor gasoline e.g. benzene will be strictly controlled too.

3. THE MALAYSIAN CONTEXT (CONT'D)

Responding effectively to society's heightened expectations has therefore become not only a condition of doing business in Malaysia but is equally expected out of all institutions that provide public service to Malaysians. The force of these expectations will also flow in one direction only - towards more and more stringent regulation for all to adhere to - unless we improve our ability to deal with social and political realities.

Besides researching into enhanced productivity and manufacturing efficiency the Malaysian business community must now promote the search for economic solutions to environmental health and safety concerns with regard to our products, product distribution and production facilities so as to safeguard our business viability. We have to exhibit socially conscious leadership and demonstrate exemplary safety, fire, health and environmental performance. We must also find ways to continue conserving natural resources by careful management of emissions and discharges and by eliminating unnecessary waste generation. This also includes wise use of energy not only by us in our operations but also by our consumers when they purchase and use our products and services. The search for such economic solution is a critical requirement for our long-term survival.

4. POLLUTION FROM AUTOMOTIVE TRANSPORTATION

Ladies and Gentlemen, let me now touch on the pollution from Automotive transportation, a subject matter most relevant to this seminar. We are all aware that the combustion of automotive fuel leads to the formation of pollutants emitted through the vehicles' exhaust system. As I see it, the adverse impact of the motor vehicle emissions on the quality of the environment can be minimized by instituting controls in four areas:-

**Firstly** by controlling the quality of fuel feeds to the combustion chamber. I am sure there is going to be lengthy discussions on this at this seminar; we do know that the energy industry has been carrying out research for some years now on physical properties of oil product quality. The challenge is in satisfying future market requirements on fuels that meet the environmental goals in a cost-effective manner. Stringent quality specifications will call for massive investment in new refinery installations; the question is will such investment be allowed to yield a reasonable return?

**Secondly** by intervention in the combustion process. Direct intervention in the combustion process inside the engine e.g. the air to fuel ratio can limit the formation of pollutants. Ways and means however must be found to eliminate the loss of engine power resulting from such intervention.

**Thirdly** by recycling or purifying the exhaust gas emissions; the use of catalytic converters is a good example of this, and

**Fourthly** by using alternative fuel; the use of compressed natural gas (CNG) should be encouraged. PETRONAS offered this possibility to the Malaysian Public at the beginning of this year by launching its CNG market seeding programme.

The above outlined the areas of attention required to support our efforts towards reducing pollutants generated and emitted to the atmosphere by motor vehicles. They are the areas that we need direct discussions with researchers, is the area of Applied R & D i.e. the use and adaptation of scientific knowledge and technology to reduce the emission of pollutants in combustion processes. There are other human activities that emit pollutant materials to the atmosphere that we breathe in. I am sure that technologists present in this seminar can be more specific on this matter. Such activities must also be properly and intelligently scrutinized by all of us.

5. WHO BEARS THE COST?

Ladies and Gentleman,

The overall Energy-Environment relationship must improve in terms of quality and efficiency and I am convinced that the petroleum industry here has shown sufficient awareness in its approach to this relationship. Nothing in this world is free. Along with direct regulatory controls aimed at reducing harmful emissions there is a necessity to take steps to ensure that energy prices fully reflect the relative social costs so as to bring about energy conservations and the environmental protection that we want. We must now translate this concept into the necessary measures to combat and contain the deterioration of our environment. For Malaysia the issue of compatibility between economic development and protection of the environment is a key problem since it is impossible to consider limiting the economic growth that we have now achieved for we are a developing nation.

*ENERGY AND THE ENVIRONMENT (CONT'D)*

5. WHO BEARS THE COST? (CONT'D)

In terms of the fundamentals, the energy-environmental relationship is above all an international issue: the greenhouse effect, thinning of the ozone layer, acid rains and deforestation are all problems that know no national boundaries. In this sense all are required to contribute be it the rich or the poor, the North or the South the East or the West. But above all, the initiative must come from the industrialized nations which are fundamentally and primarily responsible for the current stress on the environment.

**6. THE PETRONAS COMMITMENT**

We in PETRONAS, are determined to conduct our business in a socially responsible and ethical manner that protects safety, health and the environment. Our goal is to be a leader in the industry by emphasizing innovation and encouraging creative solutions, both of which will improve our competitive position. As the National Oil Company we intend to move ahead of legislation or public pressure. When we launched PRIMAS, the unleaded gasoline, in July 1990 and promote the usage of compressed natural gas (CNG) in Jan 1992, we have put into practice what we believe in. These pro-environment fuels have captured the imagination of many Malaysians whilst at the same time drawing their attention to the fact that we do care for the quality of life of Malaysians when we go about developing the petroleum industry for nation building purposes.

6. THE PETRONAS COMMITMENT (CONT'D)

We will of course continue to offer Malaysian consumers, products friendly to the environment produced from facilities that will also be friendly to the environment. All our projects henceforth, when completed and commissioned will attest to this belief of ours. It is our duty to identify environmental problems and commit resources to solving them before some regulatory authority mandates a solution. This approach requires taking the initiative now and find cost-effective solutions, before a compliance problem develops later. In pursuance of this stand, we insist on an integration of environmental issues into our business decision-making process. Our business decisions will continue to make not only economic sense, but social, political and environmental sense as well. We will continue to conduct and periodically update training and research programmes to help our employees understand how the social, political and legal aspects of society's environmental values affect our business.

7. CONCLUSION

Ladies and gentlemen, we do know that thus far the intervention in the environmental field has always been retrospective, i.e. after the damage was done. It is becoming increasingly evident that we have to intervene beforehand on matters relating to the safeguard of our environment.

Since the Malaysian society is not prepared to accept pollution in the name of a higher standard of living; a mere allocation of resources to research activities with the hope that one day it will lead into "clean" growth for the future, is just not good enough! Both government and private sectors in Malaysia will have to put for immediate use a substantial portion of their revenue into the speedy provisions of products and services friendly to the environment; produced or derived out of facilities built and configured to have minimum impact on the environment, by its emissions, discharges and waste generation. Whilst doing this, economic growth must be sustained and will still remain a priority for even in the highly industrialized societies it could hardly be imagined that all problems are already solved, once and for all, and there will be no need for economic growth!

7. CONCLUSION (CONT'D)

A way must therefore be found for researchers and institutions of higher learning to work with the business communities to rationalize the relationship between energy, environment and economic development. In this context the role of institutions or organizations like MITES is to be catalyst and enhance the interactions. There has to be a national plan for "environmental protection" drawn up the Malaysian way which will not impede any of our development programme but instead steer it towards environmentally compatible forms. Such National Plan must allow for the need of Malaysian business entities to remain competitive in their marketing of environmentally friendly goods and services produced from their equally environmentally friendly production facilities. With this unity of purpose we shall move forward towards achieving "VISION 2020".

Mr. Chairman with this concluding remarks may I wish those involved here a successful and fruitful seminar on "Clean Automotive Fuel Technology".

Thank you.

With Compliments

Ketua Pengarah.

Jbt. Alam Sekitar

Kem. Sains.

Tingket. 12/13,

Wisma Sime Darby,

Jln. Raja Laut.

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# Press Release



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Immediate: 20 March 1992

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14/92

## LR'S ENVIRONMENTAL ROLE IN MERGERS AND ACQUISITIONS

Environmental responsibility - including the issue of liability - has become an important issue for companies following pressure from insurers, financial institutions, legislation, particularly the Environmental Protection Act 1990 - and, increasingly, employees and customers.

This especially applies to those organisations involved in mergers and acquisitions, that frequently need to identify environmental problems and risks at the pre-contract stage. This need has been recognised by Lloyd's Register, whose Environmental Assurance services are already well-known to industry.

LR Environmental Assurance services have now been tailored to meet the needs of companies involved in mergers and acquisitions - specifically through pre-acquisition audits. Such audits can be invaluable in assessing past and present site impact and giving a clearer picture of potential environmental liabilities.

LR's pre-acquisition audit consists of a number of key elements, which can be used singly or combined. These include a site survey which aims to identify potential and actual sources of pollution which may have arisen due to accidents, on-site activities or the activities of third parties unknown at the time of the survey. Other key elements include an environmental review to assess management systems and structures and an operational assessment to examine technical aspects from an environmental perspective. The service is flexible and can be adapted to meet clients' individual requirements.

US-style 'Due Diligence' investigations and compliance reviews based on UK and EC legislation involving contact with local and national authorities also form part of the service.

Following an audit, the findings are analysed and presented to the client with the appropriate recommendations. Clients' legal representatives are then invited to discuss LR's findings and matters of potential liability under statute, allowing them to make the necessary legal recommendations.

(ends)

Jones  
Jeanette Jones, Press & PR

Note to editors:

The environmental responsibilities affecting site owners are reflected in increased legislation governing this area; for example, the Environmental Protection Act 1990 which covers a range of topics including Duty of Care for waste, air pollution and contaminated land. EC Directives, including draft Directive 89/282 on Strict Civil Liability for Damage Caused by Waste, also potentially affect companies.

**UCAPAN KETUA PENGARAH ALAM SEKITAR  
SEMPENA PEMBUKAAN KURSUS PENGUATKUASAAN  
PERATURAN KAWALAN ASAP DAN BUNYI BISING KENDERAAN  
PADA 9HB OGOS 1989**

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Selamat pagi dan selamat datang saya ucapkan kepada semua peserta-peserta yang akan mengikuti kursus Penguatkuasaan Peraturan Kawalan Asap Dan Bunyi Bising Kenderaan yang akan diadakan pada hari ini.

Tujuan kursus ini diadakan adalah untuk mempertringkatkan lagi kecekapan dan kemahiran pegawai-pegawai yang terlibat dalam perlaksanaan kerja-kerja penguatkuasaan kawalan asap hitam dan bunyi bising dari kenderaan bermotor dan seterusnya menyeragamkan kaedah atau prosedur pengukuran dan ujian bagi semua pejabat-pejabat wilayah Alam Sekitar semasa menjalankan operasi-operasi penguatkuasaan di wilayah masing-masing.

Tuan-tuan dan puan-puan sekalian,

Pencemaran udara yang berpunca daripada pelepasan ekzos kenderaan bermotor adalah merupakan salah satu daripada ancaman kepada kesihatan awam yang serius dan tidak boleh dipandang ringan, terutamanya di kawasan-kawasan perbandaran yang sentiasa penuh sesak dengan kenderaan bermotor. Keadaan pencemaran yang telah sedia ada ini telah ditambah pula dengan gangguan-gangguan bunyi bising yang berlebihan, terutamanya dari motosikal dan lain-lain kenderaan yang sistem ekzosnya tidak dijaga atau diselenggarakan sebagaimana sepatutnya.

Pengawalan pencemaran-pencemaran di atas adalah perlu untuk pengekalan atau untuk menjamin kebherishan kualiti udara dan keadaan di sekeliling kita. Pengekalan serta keberishan kualiti alam sekeliling terutamanya di sekitar bandar-bandar di seluruh negara adalah merupakan salah satu daripada sumbangan Jabatan ini kepada persiapan-persiapan Kerajaan untuk menyambut para-para perserta, deligasi dan pelancung-pelancung yang menghadiri dan menyertai Sukan SEA ke 15 pada bulan ini, Persidangan Ketua-Ketua Negara Komanwel (CHOGM) (pada bulan Oktober ini) dan juga tahun 1990 yang merupakan 'Tahun Melawat Malaysia (Visit Malaysia Year)'.  
'

Saya percaya bahawa tuan-tuan/puan-puan telah pun melihat sendiri dan memaklumi akan status atau keadaan kenderaan dan udara di sekitar bandar-bandar besar sekarang ini dan saya rasa perkara ini tidaklah perlu diperjelaskan di sini. Walau bagaimana pun, keadaan di atas adalah dirasakan masih boleh diperbaiki.

Tuan-tuan dan puan-puan,

Di antara penglibatan Jabatan Alam Sekitar (sebagai salah satu daripada agensi-agensi penguatkuasaan Kerajaan) dalam hal kawalan pencemaran udara dan bunyi bising dari kenderaan-kenderaan ini ialah dengan cara kawalan melalui kuatkuasa undang-undang yang berkaitan, ia itu:

- i) Kaedah-kaedah Kereta Motor (Kawalan Pelepasan Asap dan Gas) 1977 - bagi mengawal pelepasan asap hitam yang berlebihan daripada kenderaan-kenderaan disel,
- ii) Peraturan-Peraturan Kualiti Alam Sekeliling (Bunyi Bising Kenderaan Motor) 1987 - bagi pengawalan bunyi bising dari kenderaan.

Jadi untuk peringkat kita, iaitu peringkat kerja-kerja penguatkuasaan, terserahlah kepada kita untuk mengurus dan menjalankan kempen-kempen atau operasi-operasi penguatkuasaan dalam memastikan objektif Jabatan khususnya dan kehendak-kehendak orang ramai amnya yang mahukan suasana dan keadaan udara dan persekitaran yang bersih, terutamanya di sekitar kawasan bandar, dapat dicapai.

Tuan-tuan dan puan-puan,

Kursus ini akan memberikan kesempatan kepada tuan-tuan dan puan-puan untuk bertukar-tukar pendapat serta berbincang dan seterusnya mempelajari teknik-teknik operasi penguatkuasaan serta konsep kerja berpasukan (team work) melalui input-input hasil dari pengalaman-pengalaman pegawai atau pasukan semasa menjalani operasi-operasi penguatkuasaan pada masa-masa yang lalu. Di samping itu juga, kursus-kursus seperti ini akan dapat merapatkan lagi hubungan yang telah sedia terjalin di antara pegawai-pegawai dan kakitangan semua pejabat-pejabat wilayah Alam Sekitar.

Sebagai mengakhiri ucapan ini, saya berharap agar tuan-tuan dan puan-puan dapat memberikan konsentrasi yang sepenuhnya semasa menjalani kursus ini dan dapat melaksanakan teknik-teknik atau pengajaran-pengajaran yang diperolehi dari kursus ini apabila menjalankan operasi-operasi penguatkuasaan di wilayah masing-masing.

Sekianlah sahaja ucapan saya dan kepada tuan-tuan dan puan-puan saya ucapkan selamat berkursus dan selamat maju jaya.

Terima kasih.

AJ/na1  
(KURSUS(58))

**UCAPAN KETUA PENGARAH ALAM SEKITAR  
SEMPENA PEMBUKAAN KURSUS PENGUATKUASAAN  
PERATURAN KAWALAN ASAP DAN BUNYI BISING KENDERAAN  
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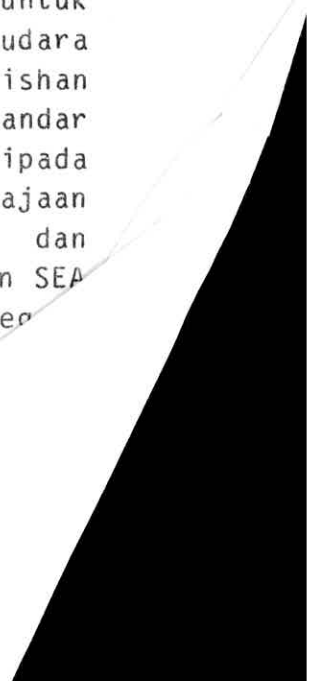
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- i) Kaedah-kaedah Kereta Motor (Kawalan Pelepasan Asap dan Gas) 1977 - bagi mengawal pelepasan asap hitam yang berlebihan daripada kenderaan-kenderaan disel,
- ii) Peraturan-Peraturan Kualiti Alam Sekeliling (Bunyi Bising Kenderaan Motor) 1987 - bagi pengawalan bunyi bising dari kenderaan.

Jadi untuk peringkat kita, iaitu peringkat kerja-kerja penguatkuasaan, terserahlah kepada kita untuk mengurus dan menjalankan kempen-kempen atau operasi-operasi penguatkuasaan dalam memastikan objektif Jabatan khususnya dan kehendak-kehendak orang ramai amnya yang mahukan suasana dan keadaan udara dan persekitaran yang bersih, terutamanya di sekitar kawasan bandar, dapat dicapai.

Tuan-tuan dan puan-puan,

Kursus ini akan memberikan kesempatan kepada tuan-tuan dan puan-puan untuk bertukar-tukar pendapat serta berbincang dan seterusnya mempelajari teknik-teknik operasi penguatkuasaan serta konsep kerja berpasukan (team work) melalui input-input hasil dari pengalaman-pengalaman pegawai atau pasukan semasa menjalani operasi-operasi penguatkuasaan pada masa-masa yang lalu. Di samping itu juga, kursus-kursus seperti ini akan dapat merapatkan lagi hubungan yang telah sedia terjalin di antara pegawai-pegawai dan kakitangan semua pejabat-pejabat wilayah Alam Sekitar.

Sebagai mengakhiri ucapan ini, saya berharap agar tuan-tuan dan puan-puan dapat memberikan konsentrasi yang sepenuhnya semasa menjalani kursus ini dan dapat melaksanakan teknik-teknik atau pengajaran-pengajaran yang diperolehi dari kursus ini apabila menjalankan operasi-operasi penguatkuasaan di wilayah masing-masing.

Sekianlah sahaja ucapan saya dan kepada tuan-tuan dan puan-puan saya ucapkan selamat berkursus dan selamat maju jaya.

Terima kasih.

AJ/na1  
(KURSUS(58))

RESPONSE TO PRESS  
*al* INQUIRIES (NST, 9 NOV 1988)  
 ON SCIENTIFIC ASPECTS OF  
 THE GLOBAL PHENOMENON:  
 OZONE-LAYER DEPLETION

80

altitude ←

1. The ozone layer about 20 km thick, found lying in the ~~latitude~~ altitude 15 to 50 km, is quite evenly distributed in the upper atmosphere. However, its abundance varies slightly throughout the year; it is slightly more abundant in winter than in summer months.

2. Ozone, itself is a pungent smelling and slightly bluish gas, consisting of a total of three oxygen atoms. It is formed when oxygen gas (O<sub>2</sub>) or its molecules absorb part of the sun's ultraviolet radiation, and split apart into two oxygen atoms. These separated atoms then combine with other oxygen molecules to form Ozone (O<sub>3</sub>).

3. In the upper atmosphere, ultraviolet light also breaks off a chlorine atom from a chlorofluorocarbon molecule, or a bromine atom from a halon. The Chlorine or Bromine atom attacks on ozone molecule, breaking it apart:



An ordinary oxygen molecule and a molecule of chlorine monoxide are formed. A free oxygen atom is released to form another molecule of ordinary oxygen, and to free the same chlorine atom which continues to attack the next ozone molecule available.

4. Should the ozone layer be further depleted, more of the sun's damaging rays would penetrate to the earth's surface. Every one per cent depletion would increase exposure to damaging ultraviolet radiation by 1.5-to-2 per cent.

5. The projected effects of the continuing trend would include the following:

- (i) increased incidents of skin cancers;
- (ii) suppression of the human immune response system;

- (iii) increased cases of eye cataracts;
- (iv) damage to crops;
- (v) damage to aquatic or marine organisms;
- (vi) increases in ground level of pollution and smog formation; and
- (vii) increased global warming.

6. In Malaysia, like in other parts of the world, similar general effects would be experienced. However, the atmospheric conditions in the tropics, such as the presence of widespread cloud cover, may in itself provide additional protection against excessive exposure to sunlight radiation. Nonetheless, the public need be encouraged not to expose themselves too much under direct sunlight.

7. Malaysia has yet to attribute directly the few cases of skin cancer to the emerging problem.

8. The process of ozone depletion due to the persistent attacks of free chlorine atom in the upper atmosphere cannot in itself be reversed. It is because the residence time of free Chlorine atom in the stratosphere is known to be so long over 70 to 100 years that it could easily destroy over 10,000 more molecules of ozone before it would finally cease its life-span or "sink" in the system. ←

9. Other than carbon dioxide, the CFCs and Halons are also known to have contributed to the present global warming phenomenon that could result in rise in sea-level. It is anticipated that the low-lying parts of the world including those of Malaysia will be subject to coastal flooding. ←

10. Rise in sea-level due to global warming and melting of the ice is a global phenomenon. It does affect not only a particular place, country, or region but the whole world.

11. The build-up of CO<sub>2</sub> is not linked to ozone depletion. But both CO<sub>2</sub> and ozone depleting gases such as Chlorine and Bromine have been identified to have contributed to the greenhouse effects, global warming, or to the rising sea-level.

12. Among the eight chemicals subject to international control, Halon-1301 has been determined to be the most damaging of all to the ozone layer. The developed countries account for 70 per cent of the total world production of these chemicals. The USA alone accounts for 29 per cent compared to only 16 per cent by all developing nations including China and India. The USSR and East Bloc countries account for the remaining 14 per cent.

13. Malaysia does not produce any of these chemicals. However, Malaysia does import and use these chemicals on average 0.14 kg/capita to 0.30 kg/capita per year.

14. There are no other known agents to have contributed so significantly to the depletion of the ozone layer. Although the meteorological factors do not in anywhere affect the concentration of ozone in the upper atmosphere, they do however set-up the unnecessary conditions for the chemical attacks on the ozone molecules.

15. The rate of regeneration of ozone is so slow to offset the rapid rate of the chemical destruction. There is no way that we could generate sufficient ozone in greater quantities in order to make up for the destroyed amount. Ozone generated at ground level would not reach the stratosphere, as it gets disassociated <sup>itself</sup> into gaseous O<sub>2</sub> and free Oxygen atom on the way up. ←

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KEYNOTE ADDRESS

REGIONAL COOPERATION AND THE  
FREEDOM OF MARINE SCIENTIFIC RESEARCH<sup>1</sup>

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Introduction

The "freedom of marine scientific research" is a somewhat recent notion of the old doctrine of the freedom of the seas published in 1609 by Hugh de Gruto (or popularly known as Grotius) in his famous work Mare Liberum. It is a concept conceived by researching-States, as a response to the widespread unilateral extensions of national jurisdiction up to 200 nautical miles (nm) or more from shore. This worldwide sea enclosure movement has virtually changed the legal status of one-third of the "high seas" and related resources and activities therein, from the subject of the commons to the control of individual coastal States or nations<sup>2</sup>. As reflected in the UN Convention on the Law of the Sea of 1982,

"coastal States may ...withhold their consent to the conduct of a marine scientific research project of another State or competent international organization in the exclusive economic zone or on the continental shelf of the coastal State if that project:

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<sup>1</sup> The views expressed herein do not necessarily reflect those of the Department of Environment, or the Government of Malaysia.

<sup>2</sup> The first attempt to restrict the "freedom of the seas" was in fact made between Portugal and Spain in 1494 by the Treaty of Tordesillas, and later endorsed by the Pope in Rome in 1506. Later in 1635, John Selden published his work Mare Clausum and this could be taken as the beginning of the "creeping" maritime jurisdictions.

- (a) is a direct significance for the exploration and exploitation of natural resources, whether living or non-living;
- (b) involves drilling into the continental shelf, the use of explosives or the introduction of harmful substances into the marine environment;
- (c) involves the construction, operation or use of artificial islands, installations and structures referred to in Articles 60 and 80; and
- (d) contains information ... regarding the nature and objectives of the project which is inaccurate or if the researching State or competent international organization has outstanding obligations to the coastal State from a prior research project." (Article 246(5)).

2. The purpose of this paper is to outline the emerging trend in the pursuit of marine scientific excellence largely through cooperative programmes at regional level, a trend that is fast-becoming a subject of virtually no legal control over marine scientific research activities by all participating States. It is also the purpose of this paper to highlight at least one of the two major cooperative programmes: one is the UNEP Regional Seas Programme, and another, ASEAN Cooperative Programmes on Marine Science.

### The Issue

3. The researching States, largely the maritime powers, perceive that the right of coastal States to regulate marine scientific research activities in the latters' maritime jurisdictions is a threat to their previously unfettered freedom of research. Data or information will no longer be subject to ownership. The marine scientists can no longer assume that the data they have gathered from the field can be exclusively used for their own careers, income, prestige, and professional lives. Furthermore, the regulation likely to be introduced by coastal States will be so restrictive that it may manifest itself in numerous inconvenient ways: the requirement of prior authorization and passive participation by coastal States; too much supervisory power; greater access to raw data; evergrowing demand for assistance in data analysis, assessment and interpretation; too much documentation, very regular publication and untimely demand for immediate

release of results. On the practical level, further restrictions may occur through refusal of coastal State authorization, debilitating preconditions, including participation, access and supervisory powers onerous enough to deter research projects; refusal of logistical and port facilities and opposition of any proposal on global data acquisition systems. But the unity of oceanic systems necessitates research work that cuts across political boundaries.

4. On the contrary, the developing coastal States feel that they have been had all this while. The motivating factor that generates demands from coastal States, largely developing nations, for regulating scientific freedom is the perception of potentially exploitable ocean wealth. The ocean resources constitute a "common heritage of mankind, and therefore, must be protected from appropriation by the high-capability "haves" of the world. The "have nots" feel that they must jealously safeguard present and potential appropriation and exploitation solely for the benefit of the "haves". Furthermore, the past abuses of scientific immunity include resource exploitation by distant water fleets or offshore companies immediately after the discovery of rich grounds by special interest groups under the guise of purely scientific research. Likewise, under the pretext of innocent scientific research, the security of developing coastal States could easily be undermined by the major maritime powers.

#### The Response

5. Ever since the UN Convention on the Law of the Sea has been adopted in December 1982 in Montego Bay, Jamaica, neither coastal States nor researching States have concerned themselves too much over the issue. Instead, greater global and regional cooperation programmes have developed and have outgrown the individual States' programmes. Indeed,

"States and competent international organizations ..., in accordance with the principle of respect for sovereignty and jurisdiction and on the basis of mutual benefit, promote international cooperation in marine scientific research for peaceful purposes." (Article 242).

6. In Southeast Asia, our region for instance, all coastal States have extended their maritime jurisdictions formally and unilaterally, leaving almost no marine area left unclaimed or under the legal regime of "high seas".

The major incentive for extending their respective maritime jurisdiction, and in many areas where claims do overlap, is the expectation of enlarged resource bases. Thus, the region is recognised as one of the regional Seas under the UNEP Action Plan to protect and preserve the marine environment. At ASEAN level too, the seas are regarded not only as a natural linkage that unifies the diverse region but also as the common frontier for political and socio-economic development of the coastal populace.

#### ASEAN Cooperation On Marine Science

7. ASEAN cooperation in Marine Science has been strengthened ever since the ASEAN Working Group on Marine Science convened its first meeting in Jakarta, June 1979. The cooperation particularly among individual scientists and their respective institutions is further strengthened through the financial and technical support of ASEAN dialogue partners, namely, Australia, Canada, and USA.

8. Regional cooperation, particularly in marine scientific research, has also been very much pursued by both coastal and researching States, the latter being largely the developed countries ever since many coastal States extended their respective national jurisdictions beyond the territorial waters to 200 nautical miles limit of the exclusive economic zone. Regional cooperation is inevitable especially in the common seas of neighbouring countries. Developing coastal States including ASEAN are certainly short of the required resources in order to conduct as well as to promote such an important activity themselves, whereas developed researching States may find the new international legal regime at sea is so restrictive and uncertain that virtually it is no longer possible to continue carrying out their research activities alone and without the participation of scientists from other concerned States.

9. The changing legal status of the common seas is not the only but certainly a major factor that improves the prospects for further regional and international cooperation in marine science as well as in the development and transfer of marine-related technology. There are, of course, other factors that determine the nature and extent of cooperation between ASEAN and its concerned dialogue partners and that include geo-political proximity, trade and investment, and global concern in the protection and preservation of the marine environment as 70 percent of the earth surface is the common seas.

## Benefits

10. In Marine Science, three major cooperative programmes have emerged, namely, ASEAN Australian Projects on Tides and Tidal Phenomena and on Living Coastal Resources, ASEAN-US AID Project on Coastal Resource Management, and ASEAN-Canada Programme on Development and Management of Living Marine Resources. ASEAN countries have indeed benefited, directly and indirectly, throughout the implementation period of these projects or programmes. The direct benefits are as follows:

- (i) enhanced development of our limited human resources, particularly in the marine-related science, largely through training at various levels from the conduct of training workshops, seminars, study-tour to post graduate studies;
- (ii) increased technical assistance through the provisions of advisory and consultancy services given by international experts in specific fields or projects;
- (iii) direct supply of new equipments for both research and training; and
- (iv) regular and rapid exchange of information through publication, seminars and workshops.

11. The indirect benefits are hard to quantify. Nonetheless, the regional programmes have strengthened national programmes as a result of improved coordination at both national and regional level.

12. The programmes have also brought about greater awareness among scientists as to the need to focus their unfailing efforts toward a common goal as well as to respond readily to the most pressing problems facing the country and the region. A growing number of our scientists, lecturers, and students have developed an interest in this field. However, interest alone without such programme support will not translate itself to meaningful and substantial research. Nevertheless, it is yet too early to determine the extent to which the programmes have contributed toward the development of our marine resources.

## Project Coordination and Implementation

13. Each programme has its own style of management, and

there is no single pattern of project management which proves to be more effective than another. All programmes have indeed been effectively coordinated, and executed by participating countries and their respective national institutions. Such an effectiveness is as much a reflection of the structure of the ASEAN Working Group on Marine Science itself as the way by which each programme is formulated.

14. The Working Group meets at every opportunity in order to receive new project proposals, if there is any, to review the progress of the ongoing projects and to formulate policy recommendations for consideration by ASEAN-COST. The implementation of the projects, however, is supervised by Project Steering or Management Committees, and the Chairman of each Committee who comes from the lead country effectively assumes the responsibility of project coordination within ASEAN and between ASEAN and the particular dialogue partner or its designated executing agency. The lead countries for the ongoing marine science programmes are as follows:

<u>Programme</u>	<u>Lead Country</u>	<u>Financial Support</u> (million)
ASEAN	Indonesia	In kind
Australia		
- Tides & Tidal Phenomena	Singapore	A\$4.0
- Living Coastal Resources	Thailand	
Canada	Malaysia	C\$0.9
USA	The Philippines	US\$5.0

15. The various Project Steering Committees (PSCs) meet regularly, at least once a year. The purpose of the meeting is inter alia to review the progress of project implementation, and to work out technical details and other institutional arrangements, and to rework out the remaining budget allocation and other financial arrangements. In all cases, the attendance of ASEAN Country representatives at such Meetings is fully supported under the programme.

16. The structure of cooperative project coordination and implementation varies greatly from completely ASEAN affairs to almost the affairs of the donor countries. The ASEAN-Australia Cooperative Programme on Marine Science is implemented virtually without any participation from Australia. It is strictly an ASEAN matter.

17. The budget allocated for the programme is practically spent within ASEAN and for ASEAN as major recipients. It is not quite so in the case of ASEAN-Canada nor that of ASEAN-US AID. Over 60 percent of the total budget allocated for these programmes are required in order to support the donor 'Countries' respective executing agency or designated institutions. In short, the size of the budget does not necessarily reflect the full extent of support for ASEAN institutions or scientists only. The ASEAN-US AID programme in particular, is quite indistinguishable from a simple summation of all bilateral assistance to every ASEAN country, or from that of its own research institution in the region.

18. The extent of direct participation by the donor country's designated agency in the management of the project in question, on the other hand, ensures th greater success of the project particularly in the project formulating, programming, and budgeting.

#### Conclusion And Recommendations

19. The new legal regime that is emerging since the adoption of the UN Convention on the Law of the Sea of 1982 is not an obstacle to the progress of marine scientific research and development, within or outside national maritime jurisdictions. To sustain regional and international cooperation in marine scientific research as well as in the development and management of common marine resources and related technology, a revolving fund ought to be set-up, and contributors to the fund should be able to participate in the management of such a fund.

20. For cost-effectiveness, the budget size for the ongoing and future programmes should be large enough to cover the scope of the programmes. This is also to ensure that the outcome of the programmes is substantial for the effort that is required initially and needed subsequently throughout the life of the project.

21. The completed projects should be sustained through national or other arrangements, since follow-up action at national and local level is as necessary as initiating new programmes or proposals.

22. There should be full-time project coordinators for every ongoing programme or project. This is to help ensure that such project be implemented according to the prescribed schedule and budget lines.

STATEMENT BY THE LEADER OF THE MALAYSIAN  
DELEGATION TO THE TWELFTH SESSION OF THE  
UNITED NATIONS ENVIRONMENT PROGRAMME

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Mr. President,

Thank you for giving me the floor.

2. First and foremost, I would like to take this opportunity to convey, on behalf of the Malaysian delegation, our congratulations over your unanimous election to the distinguished office of President and the election of the other members of the Bureau.

3. At the outset Mr. President, may I say, too, that it is an honour indeed for Malaysia to be reelected a member of the Governing Council for a fourth term.

4. Mr. President, my delegation, as indeed most of those in the region, attaches great importance to the subject of the International Development Strategy for the Third United Nations Development Decade. The review of its implementation at this Session is apt and most timely particularly in relation to the environmental management strategies of the developing countries. As you are aware, these countries are still at the stage where the most important concern of development is of attaining a certain level of satisfaction of the basic needs of the poorer sections of society. These countries have come to regard the environment both as their natural milieu as well as an

actual and potential source of wealth. However, it is now being increasingly recognised that even if the direct and measurable economic costs and benefits of projects remain of prime importance, the effects on natural environment which are not included in the economic sums cannot be ignored if allocative efficiency is to be maximised. In the light of this concept, Malaysia and other countries of the region have begun to adopt an environmental management strategy integrating environment into the process of socio-economic development consisting of both preventive and restorative measures through a combination of proper environmental planning and pollution control. Our government recognises these serious environmental problems and is positively committed to try to address these problems as best it can.

5. Mr. President, I am sure that my delegation as well as those from most developing countries welcome the programme of action initiated in respect of environmental education and training, as well as information dissemination to target groups in the Asia and the Pacific region. The Laws, Regulations and Guidelines, are of course, important for environmental management but they do not constitute the complete answer to deal with the gamut of complex and wide-ranging environmental problems that are emerging continuously. What is urgently needed is a basic reform in the way our society looks at problems and make decisions. It is vital that our entire society develop a new

understanding and a new awareness of man's relation to his environment. Our educational system has a key role to play in bringing about this reform.

6. Although it is encouraging that efforts in this direction have borne success to a certain extent, there is definite imbalance and inadequacy of UNEP's information thrust to this region. Developing countries still find it difficult to make a breakthrough in the traditional methodology of project evaluation adopted by development planners and decision-makers. The lack of systematic studies to demonstrate comprehensive and quantitative assessment of benefits accruing from environmental measures and the constraints of competing policy priorities and claims on resources have led to the situation of ignoring the environmental dimension in development planning. In this respect, it is heartening to note that UNEP in implementing Decision 11/1, Section VII, has recommended an increase in the production of environmental information materials for the NGOs and called for stronger regional mechanisms to be made available to the NGOs. It is most important that closer co-operation be sought with NGOs to secure their support in promoting actions in the field of environmental awareness and education. My government strongly supports such a move.

7. Another area of importance to our region is an effective information system. 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 rational decision making is reliable, relevant and up-to-date information which is the key to sound environmental management. All too often, government planners, decision-makers, even scientists - particularly from the developing countries are hampered by the lack of adequate information on a growing cluster of environmental issues. Choices are more often than not have to be based on inadequate information and insufficient understanding - leading to less than optimum pay-off from development efforts, even when not accompanied by disastrous effects on man and his surroundings.

8. In this respect, the efforts initiated by UNEP to revamp INFOTERRA through the establishment of an advisory committee together with the implementation of most of its recommendations is most reassuring. In addition attempts to make wider dissemination of UNEP publications and reports to as many appropriate national scientific institutions and non-governmental organisations is most welcome. My government, therefore, supports the proposals contained in document no. UNEP/GC.12/11/Add.2 pertaining to decision 11/1,II paragraph 7. Mr. President, the Malaysian delegation has been on record at almost every session of the Governing Council categorically affirming its firm conviction in achieving the environment objectives through a

sub-regional approach. In this case, the Association of Southeast Asian Nations (ASEAN) and we are indeed happy to announce that this has now become a reality. At the recent meeting of the ASEAN Experts Group on the Environment, in Kuala Lumpur, 1984, the member countries reaffirmed their exemplary spirit of co-operation and reviewed the progress of implementation of the second phase of the Environment Programme ASEP II, which is designed to be action-oriented and with emphasis in solving immediate needs of the region. The catalytic role played by UNEP Regional office in Bangkok has contributed considerably to the success of this programme which accords well with the view of the Malaysian delegation of the felt need for regional offices to have more positive involvement rather than act as mere co-ordinating organs. It is our fervent hope that the pace of implementation will not be hampered by the lack of funds. In this respect we in Malaysia are happy to note that the clearing-house is a successful catalytic device and an effective and innovative financial mechanism.

9. The Malaysian delegation joins the other delegations in expressing its appreciation to the governments of the Federal Republic of Germany, the Netherlands, Sweden, the Arab Gulf Fund for United Nations Development Agencies and the Government of Argentina for their support to this clearing-house mechanism. We call upon the Executive Director to initiate all actions proposed in document UNEP/GC. 12/4. Mr. President, I am happy to

announce that the government of Malaysia is now in a position to offer training facilities in the field of pollution control technology in the palm oil and rubber industries. We are ready to share our expertise with other developing countries under the Malaysian Technical Cooperation Programme.

10. We are appreciative of the Executive Director's report on the State of the Environment 1984 and wish to call upon UNEP to update the list of emerging environmental issues and take these into consideration in the preparation of the biennial programme budgets within the system-wide medium-term environment programme. All proposed actions in document UNEP/GC.12/11/Add.1 should be encouraged.

11. Mr. President,

It is most disheartening to note that the proposed programme budget for the first biennium budgeted at \$70 million may have to be curtailed to a smaller programme due to the lack of funds available to UNEP. We, in Malaysia, hope that this truncated programme would not be resorted to and call upon governments who could afford it to increase their pledges to the Environment Fund and at the same time initiate bolder commitments to the cause of the environment. Malaysia still believes that the original \$70 million proposal should be adhered to as far as possible. At the current level even, few regional seas action plans have been given the intended financial support. For example, UNEP has decided to cut the

allocation to the budget of the East Asian Seas Action Plan by some 40 percent. We would therefore urge UNEP to maintain the level of the original programme presented to the Governing Council as well as make an all-out effort to assist COBSEA to secure the funding needed to implement the new projects identified at the Third COBSEA Meeting from third party sources.

12. Mr. President,

My delegation would like to congratulate UNEP for having prepared the document "The Environment in the Dialogue Between and Among Developed and Developing Countries". It is indeed timely that attempts must now be made to come up with a plan of action leading to common benefits or to addressing common disadvantages. While continuing economic difficulties throughout the world have imposed constraints on environmental programmes, we must all try our best to strike a balance between economic and social priorities. We must preserve our limited natural resources at least for the purpose of sustained development. Malaysia supports UNEP's suggestion to devote a greater share of international development assistance to the improvement of institutional arrangements within and between countries, the training of manpower and the transfer of knowledge and appropriate technologies to deal with environmental problems.

13. Mr. President,

It is very heartening to note that the World Industry

Conference on Environment Management is scheduled for November, 1984. It is most timely and apt as in most developing countries the manufacturing sector is poised to make a bigger impact on their economic development. This conference will be a pace setter to a greater rapport between the government and industry. We in Malaysia are most honoured and privileged to have been chosen as one of the three countries in Asia to present our point of view at this conference and we look forward to the positive outcome of this conference which will help considerably in the formulation of strategies of environmental management in the industrial development process.

14. Finally, Mr. President, I wish you all success in your onerous task as President. It is my firm belief that through your able leadership you would steer this meeting to a successful conclusion.







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actual and potential source of wealth. However, it is now being increasingly recognised that even if the direct and measurable economic costs and benefits of projects remain of prime importance, the effects on natural environment which are not included in the economic sums cannot be ignored if allocative efficiency is to be maximised. In the light of this concept, Malaysia and other countries of the region have begun to adopt an environmental management strategy integrating environment into the process of socio-economic development consisting of both preventive and restorative measures through a combination of proper environmental planning and pollution control. Our government recognises these serious environmental problems and is positively committed to try to address these problems as best it can.

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understanding and a new awareness of man's relation to his environment. Our educational system has a key role to play in bringing about this reform.

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8. In this respect, the efforts initiated by UNEP to revamp INFOTERRA through the establishment of an advisory committee together with the implementation of most of its recommendations is most reassuring. In addition attempts to make wider dissemination of UNEP publications and reports to as many appropriate national scientific institutions and non-governmental organisations is most welcome. My government, therefore, supports the proposals contained in document no. UNEP/GC.12/11/Add.2 pertaining to decision 11/1,II paragraph 7. Mr. President, the Malaysian delegation has been on record at almost every session of the Governing Council categorically affirming its firm conviction in achieving the environment objectives through a

sub-regional approach. In this case, the Association of Southeast Asian Nations (ASEAN) and we are indeed happy to announce that this has now become a reality. At the recent meeting of the ASEAN Experts Group on the Environment, in Kuala Lumpur, 1984, the member countries reaffirmed their exemplary spirit of co-operation and reviewed the progress of implementation of the second phase of the Environment Programme ASEP II, which is designed to be action-oriented and with emphasis in solving immediate needs of the region. The catalytic role played by UNEP Regional office in Bangkok has contributed considerably to the success of this programme which accords well with the view of the Malaysian delegation of the felt need for regional offices to have more positive involvement rather than act as mere co-ordinating organs. It is our fervent hope that the pace of implementation will not be hampered by the lack of funds. In this respect we in Malaysia are happy to note that the clearing-house is a successful catalytic device and an effective and innovative financial mechanism.

9. The Malaysian delegation joins the other delegations in expressing its appreciation to the governments of the Federal Republic of Germany, the Netherlands, Sweden, the Arab Gulf Fund for United Nations Development Agencies and the Government of Argentina for their support to this clearing-house mechanism. We call upon the Executive Director to initiate all actions proposed in document UNEP/GC. 12/4. Mr. President, I am happy to

announce that the government of Malaysia is now in a position to offer training facilities in the field of pollution control technology in the palm oil and rubber industries. We are ready to share our expertise with other developing countries under the Malaysian Technical Cooperation Programme.

10. We are appreciative of the Executive Director's report on the State of the Environment 1984 and wish to call upon UNEP to update the list of emerging environmental issues and take these into consideration in the preparation of the biennial programme budgets within the system-wide medium-term environment programme. All proposed actions in document UNEP/GC.12/11/Add.1 should be encouraged.

11. Mr. President,

It is most disheartening to note that the proposed programme budget for the first biennium budgeted at \$70 million may have to be curtailed to a smaller programme due to the lack of funds available to UNEP. We, in Malaysia, hope that this truncated programme would not be resorted to and call upon governments who could afford it to increase their pledges to the Environment Fund and at the same time initiate bolder commitments to the cause of the environment. Malaysia still believes that the original \$70 million proposal should be adhered to as far as possible. At the current level even, few regional seas action plans have been given the intended financial support. For example, UNEP has decided to cut the

allocation to the budget of the East Asian Seas Action Plan by some 40 percent. We would therefore urge UNEP to maintain the level of the original programme presented to the Governing Council as well as make an all-out effort to assist COBSEA to secure the funding needed to implement the new projects identified at the Third COBSEA Meeting from third party sources.

12. Mr. President,

My delegation would like to congratulate UNEP for having prepared the document "The Environment in the Dialogue Between and Among Developed and Developing Countries". It is indeed timely that attempts must now be made to come up with a plan of action leading to common benefits or to addressing common disadvantages. While continuing economic difficulties throughout the world have imposed constraints on environmental programmes, we must all try our best to strike a balance between economic and social priorities. We must preserve our limited natural resources at least for the purpose of sustained development. Malaysia supports UNEP's suggestion to devote a greater share of international development assistance to the improvement of institutional arrangements within and between countries, the training of manpower and the transfer of knowledge and appropriate technologies to deal with environmental problems.

13. Mr. President,

It is very heartening to note that the World Industry

Conference on Environment Management is scheduled for November, 1984. It is most timely and apt as in most developing countries the manufacturing sector is poised to make a bigger impact on their economic development. This conference will be a pace setter to a greater rapport between the government and industry. We in Malaysia are most honoured and privileged to have been chosen as one of the three countries in Asia to present our point of view at this conference and we look forward to the positive outcome of this conference which will help considerably in the formulation of strategies of environmental management in the industrial development process.

14. Finally, Mr. President, I wish you all success in your onerous task as President. It is my firm belief that through your able leadership you would steer this meeting to a successful conclusion.

11 Perpustakaan

PERPUSTAKAAN  
JABATAN ALAM SEKITAR

**Welcome Address**  
by  
**Ir. Goh Kiam Seng,**  
Director General of Environment,  
Ministry of Science, Technology and the Environment,  
Malaysia at the ASEAN-US Policy Workshop  
on Coastal Area Management  
at 09:15, October 25, 1988,  
Holiday Inn, Johore Bahru, Malaysia.

Yang Amat Berhormat,  
Tan Sri Haji Muhyiddin bin Haji Mohd Yassin  
Chief Minister of Johore

Yang Berhormat  
Datuk Amar Stephen K.T. Yong  
Minister of Science, Technology and the Environment,  
Malaysia

His Excellency  
Mr. Thomas C. Hubbard  
Deputy Chief Mission, The US Embassy in Kuala Lumpur

Yang Amat Berbahagia  
Dato' Haji Abd. Rahim bin Haji Ramli  
State Secretary of Johore

Yang Berhormat-Yang Berhormat, Tan Sri-Tan Sri,  
Datuk-Datuk, Distinguished Participants and Resource  
Speakers,

Ladies and Gentlemen,

It gives me great honour, on behalf of the Secretary-General, Ministry of Science, Technology and the Environment, to welcome all of you to the ASEAN-US Policy Workshop on Coastal Area Management. May I wish you in the traditional Malaysian way, 'SELAMAT DATANG' particularly to our visitors, from USA and all our ASEAN neighbours.

We are indeed grateful and honoured by the gracious presence of Yang Amat Berhormat, Tan Sri Haji Muhyiddin Haji Mohd Yassin, the Chief Minister of Johore, who despite a tight schedule and other important functions to attend to in Johore, has agreed to be with us this morning and to officiate the Opening of this Workshop.

We are also equally honoured to have with us Y.B. Datuk Amar Stephen K.T. Yong, Minister of Science Technology and the Environment, Malaysia who is sparing his invaluable time to be with us not only at this opening ceremony but also later during the Plenary Session of the Workshop.

It is also our pleasure to have with us His Excellency Mr. Thomas C. Hubbard, the Deputy Chief Mission, of the US Embassy in Kuala Lumpur, who has kindly consented to give an address at the Opening of this Workshop on behalf of the US Ambassador to Malaysia.

My gratitude is also extended to our honourable ASEAN participants, as well as resource speakers from the ASEAN region and the United States of America,

whose keen interest in deliberating common issues will result in a significant contribution to the success of Coastal Resource Management Project, which is being executed under the purview of the ASEAN Committee of Science and Technology or ASEAN COST.

Ladies and Gentleman,

I am pleased to highlight the ASEAN/US Coastal Resource Management Project which is now moving toward the formulation and development of Coastal Resources Management Plans for its six pilot sites within the ASEAN region, and for Malaysia, the southern coast of Johore has been chosen to be the pilot site.

This Workshop is one of the activities under the CRM Project with the purpose to create awareness among the decision-makers and resource managers within this region to ensure that plans for the six pilot sites can be successfully implemented in the ASEAN countries through their full support, endorsement as well as participation.

I am happy to acknowledge that we're going to have a very successful workshop. Participating in the workshop are His Excellencies Mr. Joachim Ortega, Governor of the Province of Ilocos Norte, from the Philippines; Congressman Oscar Orbos, also from the Philippines; Capt. Yongyuth Bunyawat, Governor of Phangsa, Dr. Bunterng SriJanthagapan, Vice Provincial

Governor of Krabi Province and Mr. Jainsvit Sitthidamrong, Vice Provincial Governor of Surat Thani Province, all from Thailand, Senior Officials from Brunei Darussalam, Indonesia, the Philippines, Singapore, Thailand, and Malaysia; and distinguished resource speakers from the ASEAN countries, the USA, and ICLARM.

Before concluding, on behalf of the ASEAN-COST, I would like to thank Y.A.B. Tan Sri Haji Muhyiddin Haji Yassin and Y.B. Datuk Amar Stephen K.T. Yong, for their gracious presence. I am grateful to Dr. Chua Lia Eng, ASEAN-US CRM Project Coordinator, members of ASEAN-US Project Management Committee, as well as the members of organising committee namely, Yang Berbahagia Dato' Ishak Mohd Yusof, Tuan Haji Karim Hassan, and Encik Mohd Radzuan Yusof for having made the necessary arrangements for the success of this Workshop.

I wish all the participants and resource speakers particularly from the ASEAN countries and USA a pleasant stay in Johor Bahru. We do hope you will find Johore Bahru a conducive environment for productive and fruitful deliberations. We are proud of our modest town and we hope that you will find some time during your stay to visit some of the scenic spots in and around Johor Bahru.

Thank you.

WELCOME (G2)

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② Keynote

12  
PERPUSTAKAAN  
JABATAN ALAM SEKITAR

Key Note Address

by

Dr. Peter Wangersky

Chief Executive Agent

at the Opening Ceremony of

ASEAN-Canada Workshop on

Pollution and Other Ecological Factors in Relation

to Living Marine Resources

Kata Thani Hotel, Phuket

Tuesday, June 23, 1987.

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Mr. Arthorn Suphapodok, Deputy Secretary-General, Dr. Bakar, Participants in the ASEAN-Canada Workshop on Pollution and Other Ecological Factors in Relation to Living Marine Resources:

We are gathered here, in the second year of the ASEAN-Canada Programme in Marine Science, to conduct an important component of that programme, the workshop on pollution and other ecological factors in the environment. It is especially fitting that the workshop be conducted here in Phuket, where the beauty of the beaches gives evidence of the still unspoiled nature of the region, while the evidence of increasing construction suggests that without careful planning this loveliness could vanish, as it has in many parts of the world.

(vi)

Wise planning can lead to development without diminution of the natural beauties, but such development needs safeguards; the planners must know how the changes they make are affecting the natural environment. It would be of little use to develop a tourist industry in a region, for example, if that industry brought about the destruction of the very things so attractive to the tourists. Development of industry, agriculture, aquaculture, and fisheries can proceed in conjunction with each other and with the development of tourism, but only if safeguards are set in place and enforced. I might add that no nation, including Canada, has a spotless record in this respect.

One of the purposes of this Workshop is to discuss the setting up of such safeguards, and the operation of the system of monitoring which ensures that the criteria for the quality of the environment are being met. We are not concerned at this meeting with setting uniform criteria in the whole region; these criteria are ultimately set by the several governments, and are usually a compromise between what ideally would be desired and what realistically can be achieved. We are concerned with the mechanism of setting up such criteria, and the requirements which any regulating laboratory must meet in order that their measurements have some meaning.

We are not discussing rigid standardization of methods, but rather a baseline. Some laboratories will be more demanding of their personnel and techniques, but none can be less demanding and turn out

useful information. It can be dangerous to the environment and the living resources therein if the testing laboratory does not detect chronically high levels of some pollutants. It can be crippling to local industry if faulty sampling or laboratory contamination results in false high values.

While much of any monitoring programme must be involved with man's contributions to the environment, such as heavy metals, pesticides, hydrocarbons and organic wastes, we must not neglect the natural disasters such as Red Tides, plankton overblooms, and fish kills. Man's role in the inception of these phenomena, through eutrophication, is still under investigation, but the phenomena occurred long before industrialization and still occur in regions where man's influence is minimal. These incidents can result in hospitalization and even death. We have as yet no way of preventing the happenings, but education and monitoring can make them less deadly.

The ASEAN region is vast, and the monitoring agencies are few and sparsely distributed. We must look to the possibilities of remote sensing, at least as a guide to where the sampling effort should be made. This area of study is truly the oceanography of the future, and we must understand its strengths and its weaknesses if we are to develop it effectively. There must be close cooperation between the specialists in remote sensing and the people in the field who need the information.

This is only one of many ASEAN - Canada projects, and not one of the biggest. Canada has worked with the regional group for a number of years, and has recently shown its intention to increase its regional programme. In the Sunday edition of the local newspaper I saw an article on the announcement by the Hon. Joseph Clark, Secretary of State for External Affairs, of a 1.3 million dollar addition to the budget of CIDA for use in ASEAN regional programmes, focussing on human resources development.

I do not know in which form this increase will come. That is within the jurisdiction of the policy makers, not of the executing agents. However it is certainly evidence of Canada's continuing interest in the development of this region, and also of the close relationship of our countries.

On this note I will close, looking forward to a good workshop, with discussion sessions as hot and spicy and full of good things as a bowl of tomyum-soup. Thank you.

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13

WELCOME SPEECH BY THE ASCOPE SECRETARY-IN-CHARGE  
AT THE OPENING CEREMONY OF THE MEETING OF EXPERTS  
ON THE CONTROL OF OIL POLLUTION  
IN THE EAST ASIAN SEAS REGION  
DENPASAR, INDONESIA, OCTOBER 19, 1987

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H.E. The Governor of Bali,  
Dr. Reza Amini representing the Executive Director of  
the UN Environment Programme,  
Dr. Herman Haeruman representing the Indonesian State  
Department of Population & Environmental Protection,  
Distinguished participants of this meeting, Ladies and  
Gentlemen,

First of all, on behalf of the ASEAN Council on Petroleum (ASCOPE) which consists of national oil companies in the ASEAN Region or the polluters as most people call us, if you like, and as one of the three co-hosts of this meeting let me bid you a warm welcome to Bali, especially to those of you who have come from overseas.

ASCOPE is particularly pleased to be given the opportunity to attend this meeting, because prevention and containment of all pollution have always been a subject of discussions and study in ASCOPE Technical Meetings.

While the scientific aspects of the support programme for oil spill contingency planning in East Asian Seas Region has been more thoroughly discussed in past meetings of the experts of that programme, I believe that the technical aspects that is the preventive and the combative aspects of it will get enough opportunity to be discussed thoroughly in this meeting as well.

As you are already aware, there are already at least three contingency plannings operational within the Southeast Asian Seas, not counting other plannings now being formulated. Although probably it would be too much to ask that ideally there should be only one well-coordinated and integrated contingency planning for the Southeast Asian Seas, what this meeting could at least achieve before adjournment is to identify conflicting or missing actions in the existing plans and propose corrective actions to be undertaken by member-countries.

If this meeting can achieve more, then we may look forward with optimism to the day when the Southeast Asian countries will have their own ASEAN Convention for Oil Spill Contingency Planning. Their experiences in developing this convention will then be very useful in expanding the coverage of this meeting of experts to eventually include all countries in the East Asian Seas Region without exception.

I would like to especially thank representatives from IPIECA, E&P Forum and NECOR for their presence at these meeting, with which organizations ASCOPE or individual members of ASCOPE have established a close cooperation for some years. Their experience in dealing directly with the upstream and downstream sectors of the oil industry will certainly be useful in the technical deliberations generated in this meeting.

I also thank representatives from ASCOPE Malaysia, ASCOPE Thailand, ASCOPE Philippines and ASCOPE Indonesia for their attendance in this meeting.

Finally, let me wish you a fruitful meeting and a happy stay in this island of enchantment, Bali.

Thank you.

**KATA-KATA ALUAN  
MAJLIS PELANCARAN BUKU-BUKU**

**“MALAYSIA : AGENDA 21 – VERSI KANAK-KANAK”,  
“ALAM SEKITAR ANUGERAH TUHAN”  
DAN  
PROJEK “WIRA ALAM”**

**Oleh**

**KETUA PENGARAH  
JABATAN ALAM SEKITAR**

Terima kasih Tuan Pengerusi Majlis,

Yang Berhormat Menteri Sains, Teknologi dan Alam Sekitar,  
Datuk Law Hieng Ding,

Yang Berhormat Menteri Pendidikan,  
Dato’ Sri Najib Tun Hj. Abdul Razak

Y.M. Tan Sri Dato’ Seri (Dr) Ahmad Sarji Abdul Hamid  
Pengerusi Institut Kefahaman Islam Malaysia (IKIM)

Yang Berbahagia Dato’ Dr. Ismail bin Hj. Ibrahim,  
Ketua Pengarah IKIM

Ketua-Ketua Jabatan,

Dif-dif Kehormat,

Tuan-tuan dan Puan-puan yang dihormati serta Anak-anak  
yang saya kasihi sekalian,

Assalamualaikum dan selamat sejahtera. Saya bagi pihak Jabatan Alam Sekitar mengalu-alukan kehadiran semua yang berada di dalam dewan ini ke Majlis Pelancaran buku-buku terbitan Jabatan Alam Sekitar pada pagi yang berbahagia ini. Saya amat berterima kasih kepada Y.B. Datuk Law

Hieng Ding dan Y.B. Dato' Sri Najib Tun Hj. Abdul Razak kerana sudi meluangkan masa untuk bersama-sama kami bagi memeriah dan menjayakan majlis ini.

Jabatan Alam Sekitar adalah merupakan salah sebuah agensi penguatkuasaan yang dipertanggungjawabkan khusus untuk mengawal pencemaran dan sekaligus memastikan alam sekitar kita sentiasa dilindungi dan terpelihara serta menjamin kesejahteraan dan kesejahteraan hidup.

Namun begitu, berdasarkan pengalaman tindakan penguatkuasaan semata-mata tidak memadai sepanjang tempoh lebih dua dekad wujudnya Jabatan Alam Sekitar tanpa kerjasama dan komitmen semua pihak lebih-lebih lagi di kalangan generasi muda kita yang bakal mewarisi apa yang kita ada pada hari ini. Aspek kesedaran dan pendidikan alam sekitar amat perlu diutamakan dan dilaksanakan seiring dengan program-program penguatkuasaan undang-undang. Ianya akan dapat memberi kesan positif untuk satu jangkamasa yang panjang dan lebih berketerusan. Program kesedaran dan pendidikan alam sekitar diibaratkan sebagai satu pelaburan yang sangat menguntungkan kita semua; lebih-lebih lagi bagi sebuah negara yang pesat membangun seperti negara kita kini. Sebarang tindak tanduk kita pada hari ini tidak seharusnya menjejaskan kualiti hidup di masa yang akan datang. Kegawatan ekonomi juga tidak boleh dijadikan alasan untuk kita melewa-lewakan pengurusan baik bagi alam sekitar kita, malah ia seharusnya menjadi alasan yang lebih kukuh untuk kita berusaha dengan lebih giat lagi terutama sekali dalam menjimatkan penggunaan bahan-bahan mentah yang ada di negara ini yang merupakan sumber utama

pendapatan negara. Konsep 'sustainable development' perlu dihayati dan dipraktikkan sepenuhnya.

Atas kepercayaan itulah Jabatan Alam Sekitar telah mengambil satu lagi inisiatif dan kali ini bekerjasama dengan Institut Kefahaman Islam Malaysia (IKIM) dan Persatuan Pencinta Alam Malaysia untuk menerbitkan buku-buku bertemakan pendidikan dan kesedaran alam sekitar yang akan dilancarkan sebentar lagi, khas untuk anak-anak muda kita. Kami berharap usaha ini akan dapat meningkatkan lagi kecintaan mereka dan menambahkan kesedaran dan kefahaman betapa pentingnya alam sekitar dipelihara dan dilindungi yang bakal mereka warisi tidak berapa lama lagi.

Di sini ingin saya merakamkan setinggi-tinggi penghargaan kepada pihak-pihak yang telah memberi sumbangan yang cemerlang dalam penerbitan buku-buku tersebut:-

- Institut Kefahaman Islam Malaysia (IKIM) untuk terbitan Buku "Alam Sekitar Anugerah Tuhan"
- Persatuan Pencinta Alam Malaysia untuk Projek "Wira Alam" yang merangkumi Buku Panduan dan Buku Aktiviti untuk tiga peringkat iaitu Wira Diri, Wira Komuniti dan akhirnya Wira Alam

- Tidak ketinggalan kepada pegawai-pegawai JAS sendiri yang telah bertungkus lumus menerbitkan Buku “Agenda 21- Versi Kanak-Kanak”

Akhir kata, sekali lagi saya ingin mengucapkan setinggi-tinggi terima kasih kepada Y.B. Datuk Law Hieng Ding dan Y.B. Dato’ Sri Najib atas kesudian Y.B. melancarkan buku-buku alam sekitar kami pada pagi ini.

Kepada Tan Sri, Dato’-Dato’, tuan-tuan, puan-puan serta para jemputan sekalian, setinggi-tinggi penghargaan atas sokongan dan kehadiran pada pagi yang bersejarah ini.

Sekian. Terima kasih.

① Speech "welcome"

14

Welcome Address

Dr. Abu Bakar Jaafar, Project Coordinator

ASEAN-Canada Cooperative Programme on Marine Science  
At the ASEAN-Canada Workshop on Pollution and Other  
Ecological Factors in Relation to Living Marine Resources

Kata Thani Hotel, Phuket, Thailand

23 June 1987

09:00 Hours

Khun Arthorn Suphapodok, Deputy Secretary General, National Environment  
Board, Thailand

Miss Sansaney Kosiya, Programme Officer, Canadian Embassy, Bangkok

Prof. Peter Wangersky, Canadian Executing Agent, Dalhousie University,  
Canada

Distinguished Guests,

Distinguished Participants and Consultants

Ladies and Gentlemen

It is my great pleasure to welcome you all to the ASEAN-Canada Workshop on Pollution and Other Ecological Factors in Relation to Living Marine Resources. We are indeed grateful and honoured by the presence of Khun Arthorn Suphapodok, the Deputy Secretary-General National Environment Board, Thailand, who despite a tight schedule and other important functions to attend to in Phuket, has agreed to be with us this morning and to declare this Workshop officially launched.

In addition the Deputy Secretary-General has also given us the opportunity to hold our Workshop in this beautiful holiday resort, the Kata Beach. The Deputy Secretary-General has further given us excellent support with his officers and staff without whom the hosting of this Workshop would not have been possible.

My gratitude is also extended to all members of the ASEAN-Canada Project Steering Committee as well as our consultants and other participants and observers, from Canada, the Netherlands, and Thailand who have spared invaluable time to be with us and together to make this workshop a success. I have no doubt that our activities will continue to receive your full support and cooperation.

Ladies and Gentlemen,

May I take this opportunity to highlight the activities planned and implemented under the ASEAN-Canada Cooperative Programme on Marine Science. The subject of cooperation between ASEAN and Canada in the field of Marine Science and in many other related fields was taken up at the First Meeting of Canada-ASEAN Joint Consultative Committee in Ottawa, Canada, on 26-27 April, 1983. It was followed by two special meetings of ASEAN-Canada Working Group on Marine Science in June 1983 and later in January 1984. The memorandum of understanding between ASEAN and Canada on Cooperative Programme on Marine Science was signed on 21 December 1984 by Indonesia on behalf of ASEAN.

The first Meeting of ASEAN-Canada Project Steering Committee was held on 29-31 October 1985 in Jakarta. The Meeting Planned and agreed on five major activities :

1. Postgraduate Training;
2. ASEAN Study Tour to Canada;
3. Canadian Advisory Service to ASEAN;
4. Regional Workshop; and
5. Practical Attachment of ASEAN Marine Scientists or Technicians in Canada;

Other activities under the Programme include both the annual or rather the prescheduled meetings of the ASEAN-Canada Project Steering Committee and the necessary preparation of detailed project proposals, review, and account.

I am happy to say that the first three components of the programme, namely postgraduate training, study tour and the advisory services, have already been successfully implemented in 1986. These activities were also reviewed at the Second Meeting of ASEAN-Canada Project Steering Committee held on 24-26 February 1987, early this year, in Sarawak, Malaysia. Indeed at the Second Meeting of the Committee, the theme for this week's Workshop has emerged that is "Pollution and Other Ecological Factors in Relation to Living Marine Resources".

I am glad to say again that all of us have managed to get together here in Phuket to strengthen our areas of cooperation. It is also the purpose of this workshop for us to provide greater vision and

to inject much richer substance to this framework. It is our hope that throughout this week of deliberations, we shall try our best to develop a detailed programme proposal for future activities in 1989 and beyond.

Our hope can be easily fulfilled, especially, we have before us six country reports. In addition, we have at our disposal a number of reports, on specially selected topics, prepared beforehand by our consultants. It will be our productive exchange of views, experience, and expertise that will help ensure the success of this workshop. Should there be any shortcomings, I hope we have your understanding and cooperation.

Before concluding, I would like to thank you again, Khun Arthorn Suphapadok, for your gracious presence. I am grateful to Dr. Saksit Trideon, Chairman of the Workshop Organising Committee, and also to all members of his committee and staff, notably, Ms. Pornthip Puchardon, Ms. Krisana Chceypun, Ms. Jarupa U-Pool and Ms. Nirawan Chaosakul for having made the necessary arrangements for this workshop. My appreciation also goes to Ms. Lynn Burgess of Dalhousie University, Ms. Caroline Freeman of Canadian High Commission in Kuala Lumpur, and Ms. Muslina Sulaiman of Department of Environment, Malaysia, as well as to the ASEAN-Canada Programme on Marine Science generally.

To all of you who have made this workshop possible, once again many thanks for your help, participation and cooperation. I hope we will continue to have your support in this important endeavour in future. The sea has been and will always be our common frontier.

Thank you.

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**PRESS RELEASE BY THE MINISTER OF SCIENCE, TECHNOLOGY  
AND THE ENVIRONMENT ON THE SETTING UP OF A TASK FORCE  
TO CO-ORDINATE AIR QUALITY MONITORING ACTIVITIES IN  
MALAYSIA AND FORMATION OF A NATIONAL AIR QUALITY  
MONITORING NETWORK**

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OBJECTIVE

The Department of Environment, Ministry of Science, Technology and the Environment has recently established a Task Force on Air Quality Monitoring Activities in Malaysia with the objective of sharing resources and expertise available in the country as well as to avoid any duplication of efforts in air quality monitoring. The Task Force will work towards the formation of an efficient air quality monitoring network by standardizing objectives of monitoring and techniques of sampling as well as developing uniform methodology for data evaluation and interpretation. This will enable the sharing of manpower, monitoring stations and data. The Task Force is also charged with the responsibility of identification and interpretation of any pollution episodes in the country.

The establishment of the Task Force is in line with the austerity drive of the Government, particularly so when there are budgetary and manpower constraints in the Department of Environment - the implementing agency responsible for undertaking surveys and investigation as to the causes, nature and extent of pollution as provided for under the Environmental Quality Act, 1974.

ACTIVITIES OF THE TASK FORCE

The Task Force comprises of representatives from thirteen agencies:-

- Department of Environment
- Malaysian Meteorological Service
- Department of Chemistry
- Occupational and Industrial Health Unit, Ministry of Health.
- National Electricity Board
- Telecommunications Department
- Factories & Machinery Department, Ministry of Labour
- Universiti Kebangsaan Malaysia
- Universiti Pertanian Malaysia
- PETRONAS
- WHO/PEPAS (World Health Organization/Western Pacific Regional Centre for the Promotion of Environmental Planning & Applied Studies)
- Malaysian Medical Association
- Environmental Protection Society of Malaysia.

The Task Force at its meeting on 15th January 1985 drafted a plan of activities and identified some areas for indepth considerations:

- Objectives of air quality monitoring
- Siting criteria for monitoring stations
- Parameters required to be monitored
- Standardization of sampling and analytical techniques
- Standardization of data evaluation and interpretation methodology
- Air Quality Control Regions
- Air Quality Indices and Models for Environmental Planning
- Ambient Air Quality Standards.

Each relevant agencies was invited to document their air quality monitoring activities and submit them to the Task Force. The Department of Environmental Sciences of Universiti Pertanian Malaysia, a member of the Task Force,

has been quite involved in air quality monitoring over the past few years. The main emphasis is in the field of research and education. Several research projects related to air quality have been conducted over the years. Recently, Universiti Pertanian Malaysia has established three automatic air quality monitoring stations in the country. The stations continuously measure and record air pollutant concentration and meteorological parameters. The Department of Geography of Universiti Kebangsaan Malaysia is also involved in research and educational projects on air quality, particularly in the area of micro-climate and air pollution climatology. Currently, three stations have been maintained to monitor climatic conditions corresponding to various land-use categories such as rural, sub-urban and urban. Mobile surveys using portable equipment are also conducted for educational as well as research purposes. The Malaysian Meteorological Services in addition to monitoring meteorological parameters, conduct air quality monitoring at background and impact levels to determine the chemical and physical changes of the atmosphere caused by air pollution. Parameters measured are suspended dust levels and acid rain. Stations are located at selected principal and climatological stations. Both PETRONAS and the National Electricity Board have been conducting air quality monitoring around their major production plants at the Paka-Kerteh Development area and the NEB power station at Port Klang.

The Department of Environment began air quality monitoring since 1977 starting with only 2 stations monitoring suspended dust levels and sulphur dioxide. Since then, the monitoring network has expanded. Currently, the network consists of automatic, semi-automatic, and manually operated devices. The Department of Environment has recently carried out a review of its monitoring activities and reorganized its air quality monitoring network. In relation to the exercise, eleven permanent stations each with monitors to measure carbon monoxide, oxides of

nitrogen, ozone, sulphur dioxide, total suspended particulate and meteorological parameters have been proposed:-

- Shah Alam
- Damansara Utama, Petaling Jaya
- Titiwangsa
- Kuala Lumpur (Central Business District)
- Penang
- Butterworth
- Ipoh
- Johore Bahru
- Kuantan
- Kota Bahru
- Kuantan
- ~~Kota Kinabalu~~
- Kuching

To date, the objectives of the Air Quality Monitoring has been formulated and a Work Group has been formed to review the present monitoring network of all relevant agencies based on specific siting criteria.

#### CONCLUSION

In view of the technical complexity, budgetary requirements and manpower expertise involved in the operation of air quality monitoring stations, it is strongly felt that monitoring activities be co-ordinated among all the relevant agencies for the purpose of data exchange. Hence, saving valuable manpower and financial resources. In this respect, the agencies concerned have agreed to the following objectives in relation to air quality monitoring programmes :-

(a) Short and medium-term objectives

1. To determine the exposure of the broad mass of the pollution to air pollutants of concern and to assess the consequent risks to human health including epidemiological studies as well as other environmental effects, resulting from this exposure;
2. To provide a data base for the development and evaluation of a national air quality management policy, in particular the establishment of national ambient air quality standards of goals and their compliance with policy guidelines;
3. To measure the effectiveness of control measures;
4. To observe long-term trends in ambient air quality;
5. To provide input data to atmospheric dispersion models;
6. To provide data for land-use planning.

(b) Long-term objectives

1. To activate emergency/alert control procedures in the event of air pollution episodes;
2. To provide a real-time pollution assessment service, in particular the data base for the generation of indices;
3. To study and evaluate pollutants interactions, including acid rain and photo-chemical reactions, transport phenomena and impact on climatic changes.

10

MESSAGE BY HAAKON A. OERNS, REPRESENTATIVE FROM NECOR  
TO PARTICIPANTS ATTENDING THE CCOP/ASCOPE/NECOR ON REGIONAL  
CO-OPERATION ON OIL SPILL CONTINGENCY PLANNING AND RESPONSE  
AUGUST 4 - 7, 1986 KUALA LUMPUR, MALAYSIA

Over the years we all have experienced accidents of some kind, in some instances resulted in severe oil pollution damage.

Since Norway established a modern oil industry which started about 20 years ago, one had to face that new techniques some times were developed and introduced faster than acceptable safety measures were implemented.

This of course, resulted in accidents which have made the oil-companies, as well as Norwegian Authorities, aware of the wide range of factors which affects the security and emergency preparedness.

It was thus with great care and concern the Norwegian Government evaluated the potential threat that oil pollution particularly represented to birds and fish, to tourism and fisheries. It quickly became clear that even the stringent safety, certification and inspection rules could not fully safeguard against the occurrence of oil spills from blow outs, pipeline ruptures or ship collisions/groundings. It is therefore of great importance to have an effective and a well-trained preparedness organization to minimize oil spill damages to the environment, when oil spill happens.

One of the lessons learned from real accidents and from exercises held in Norway is undoubtedly not to accept hastily drawn conclusions where contingency plans are worked out to establish and maintain an optimal oil spill contingency preparedness system.

We are gathered here this week to discuss and exchange views on national oil spill contingency plans and response in order to reach effective cooperation in the prevention and control of oil spills among the ASEAN nations and hopefully also with other non-ASEAN nations.

On the behalf of the Norwegian Ministry for Development and Cooperation and NECOR, I wish you will have fruitful discussions under the excellent premises and arrangement provided by our host PETRONAS and co-sponsors, ASCOPE and UN-CCOP.

Yang Berbahagia Tuan Pengerusi Majlis.

Saya amat bersukacita dan ingin mengucapkan ribuan terima kasih di atas jemputan untuk merasmikan upacara menanam pokok pada pagi ini.

Setinggi-tinggi penghargaan dan tahniah saya ucapkan kepada pihak penganjur yang telah menunjukkan inisiatif dan usaha yang positif di dalam menjadikan negara kita negara yang bersih dan cantik. Usaha-usaha dan penglibatan masyarakat di dalam aktiviti-aktiviti seperti ini adalah digalakkan. Semoga upacara penanaman pokok seperti ini pada hari ini dapat menjadi contoh serta teladan di samping menimbulkan kesedaran dan tanggungjawab tentang pentingnya pokok-pokok terhadap masyarakat dari segi kehidupan dan kestabilan alam sekitar.

Tahun ini merupakan satu sejarah dalam pengurusan alam sekitar yang telah mencapai satu dekad pengurusannya dengan penubuhan Jabatan Alam Sekitar di bawah Kementerian saya pada tahun 1975. Di samping itu tahun ini juga telah diistiharkan sebagai Tahun Perhutanan Sedunia yang bertujuan untuk memperingati bahawa hutan adalah penting bagi kehidupan manusia. Maka adalah tepat masanya di mana kita harus sedar bahawa memelihara alam sekitar adalah penting bagi meninggikan kualiti kehidupan masyarakat di negara kita.

Ladies and gentlemen.

Man is shaped to a great extent by his surroundings. Our physical nature, our mental health, our culture and institutions, our opportunities for challenge and fulfillment, our very survival - all of these are directly related to and affected by the environment in which we live.

In fact, environmental deterioration is not a new phenomenon. But both the rate of deterioration and its critical impact have risen sharply due to rapid population increase, industrialisation, urbanization, the technology explosion and also economic growth. The eighties have been characterized as the decade of development of Malaysia's resource-based industries, including utilization of energy supplies into finished products and moving towards heavy industries. This means that the outlook is one of increasing pollution potential with its attendant risks, unless timely, systematic and positive measures are taken.

Ladies and gentlemen, in this context, indiscriminate logging and deforestation for forest products - development or may it be housing project is one of the factors that affects the ecological balance.

In the long term, indiscriminate felling without adequate reforestation and replanting could create an adverse effects on the environment. Studies have shown that deforestation and indiscriminate felling are causes of

desertification as what is happening to some of the African and Asian countries. They are also contributing factors to other problems such as flash floods, erosion, siltation of rivers and also a threat to our water resources. Thus, a healthy and sound environment depend upon the continued functioning of the natural system and balance between development and environmental protection for they are interdependent. The quality of environment in which we live, work and play affect the quality of life itself and there is an obvious interaction between the two.

Replanting of trees not only in deforested areas but also in cities, and residential areas helps towards attaining the ecological balance between development and nature and to ensure minimal negative impacts. "Green belts" in cities and residential areas not only helps to beautify the surrounding but also provides attractive recreational areas and shade which is important for us, in this hot tropical climate.

Trees in addition does help to minimise air pollution especially dust for it provides a screening effect.

The existence of a "green belt" is not a new concept. The Government has long gazetted forest reserves and parks. Not only does this contribute to the ecological balance but they also act as a genetic pool for flora and fauna.

Efforts to beautify cities and towns, to increase recreational areas and to plant more trees should be given more attention. Private sectors and housing developers are urged to plan and provide sufficient recreational facilities and as much greenery as possible particularly in the urban situation with a view to avoiding what may be termed a concrete jungle.

Ladies and gentlemen. The Government is fully aware of the need of environmental conservation and pollution control. In 1975, the Government has taken steps to formulate appropriate policies and programmes to ensure that economic development goes hand in hand with sound management of the environment. The Environmental Quality Act was passed with a view to pollution control and abatement.

The job of building a better environment is not one for the Government alone. It must engage the enthusiasm and commitment of our entire society. Enforcement of regulations alone cannot do the whole job without everybody's involvement and co-operation. We need to have the right perception and a positive attitude. It is only we who can determine the quality of our environment.

Active participation from non-governmental organizations, citizen groups or residential associations in organizing activities or campaign to involve the public in the cleaning and beautifying the environment is most essential. I once again would like to commend and congratulate the Bukit Bandaraya Residents Association in their active involvement and initiative in keeping the environment clean. This is a positive contribution as citizens of this country and should be an example to others.

This complements the action taken by the Government in protecting the environment and if every citizen could follow this example, then we can be assured of a healthy and wholesome environment in Malaysia with a high standard of living at the same time an enhance quality of life. It is my fervent hope that Bukit Bandaraya Residents Association would keep up this good work and make Bukit Bandaraya as a model environment.

Dengan ini saya dengan sukacitanya merasmikan upacara menanam pokok ini.

Sekian. Terima kasih.

4.6.1985

HHH/AM/sh.

NOTA TAKLIMAT KETUA PENGARAH ALAM SEKITAR,  
JABATAN ALAM SEKITAR, KEMENTERIAN SAINS,  
TEKNOLOGI DAN ALAM SEKITAR KEPADA YB MENTERI  
PEMBANGUNAN SUMBER SABAH DAN ROMBONGAN PADA  
20HB FEBRUARI, 1984

Terima kasih kepada Tuan Ketua Setiausaha, Kementerian Sains, Teknologi dan Alam Sekitar yang telah memberi peluang kepada saya untuk menerangkan sebarapa ringkas mengenai fungsi dan tanggungjawab Jabatan Alam Sekitar khasnya dalam kontek pengurusan alam sekitar di Negeri Sabah.

LATARBELAKANG

Negara kita telah mengalami pembangunan pesat dalam beberapa sektor ekonomi moden seperti pertanian, perindustrian, kemajuan tanah, perumahan, perhutanan, pengeluaran tenaga mahupun bagi projek-projek infrastruktur seperti lebuh raya, pelabuhan dan sebagainya. Pembangunan yang pesat ini telah menimbulkan masalah sampingan khasnya kerosakan-kerosakan kepada alam sekitar yang malangnya menjejaskan juga kualiti hidup dan mata pencarian beberapa suku kaum kepada rakyat jelata. Ianya menjadi lebih jelas dan ketara demi tahun ke setahun mengikut kepesatan pembangunan di kawasan-kawasan serta negeri-negeri tertentu di seluruh negara. Khasnya mulai tahun 1975 Kerajaan Pusat telah mengambil langkah merancang dasar-dasar dan program-program bagi memastikan pembangunan ekonomi berjalan selaras dan berseimbang dengan pengurusan alam sekitar. Akta Kualiti Alam Sekeliling telah diluluskan dalam bulan September, 1974 dan telah dilaksanakan pada pertengahan bulan April, 1975 dengan penubuhan satu agensi yang dinamakan Bahagian Alam Sekitar yang kini menjadi Jabatan Alam Sekitar di bawah Kementerian Sains, Teknologi dan Alam Sekitar. Jabatan ini telah berkembang dengan pesat sejak ianya ditubuhkan dengan pencapaian sumber tenaga pekerja daripada 45 orang dalam tahun 1977 kepada 370 orang pada tahun 1984 ini. Mulai 1 Januari, 1981 beberapa Pejabat Cawangan dibuka dan bagi Negeri Sabah ianya telah diwujudkan pada 1 Jun, 1981. Sejak 1 September, 1983 Bahagian ini telahpun dinaikkan taraf sebagai sebuah Jabatan Persekutuan.

The task of environmental management is both vast and complex that to accomplish it effectively, the responsibility must be shared. This is all the more necessary in the Malaysian context as 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. 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 the past, there has been a tendency to equate the development goal with the more narrowly conceived objective of economic growth as measured by the rise in gross national product. It is usually recognised today that high rates of economic growth, necessary and essential as they are, do not by themselves guarantee the easing or urgent social and human problems. Indeed in not a few countries high growth rates have been accompanied by increasing unemployment, rising disparities in incomes both between groups and between regions and the erosion of social and cultural values.

Obviously a developing country like Malaysia must give priority to economic and social development programmes to meet the basic needs of the population. Equally obvious is the consideration that it cannot afford to let pollution spoil the hoped-for gains through development via adverse side-effects on the quality of life or allow its resource regenerative capacity to be sapped and undermined by environmental mismanagement. Thus a sensible balance is needed.

To this end, it is important that environmental concerns are integrated into development planning and regarded as part and parcel of the overall framework of economic and social planning. Environmental concern should come to be regarded as yet another dimension of the process of development, not viewed separately or as an afterthought.

In summary, the current environmental problems facing Malaysia can be broadly categorised into two groups:-

- \* Those arising as a result of development of Malaysia's land and other natural resources, both renewable and non-renewable.
- \* Those arising from the discharge of undesirable wastes products or effluents into the environment as a result of industrialization and human settlement.

#### ENVIRONMENTAL LEGISLATION

.....  
Environmental consciousness in Malaysia can be said to date from as far back as the 1920s and 1930s when various Water Enactments and the Enactments in three East Coast States of Peninsular Malaysia establishing what has since become the National Park were passed. Currently there are 26 environmental-related legislations in force in Malaysia as shown in Appendix I. These pieces of legislation, while not necessarily devoted entirely to environmental matters, contain provisions or references that have to do with environmental control.

For example, the National Land Code 1965 divides land use into three categories:-

- i) agriculture
- ii) building
- iii) industry

The National Land Code, therefore, enables proper land use planning taking environmental factors into consideration as well as control of siltation.

The Land Conservation Act 1960 helps to control soil erosion and siltation:

The Waters Enactment 1920 prohibits the disruption of any river so as to interfere with the flow of water as well as restricting the discharge of specific substances detrimental to the beneficial uses of the river.

Similarly, the Factories & Machinery Act, 1967 deals with occupational safety and health in the working environment, the Mining Act controls discharges from mining activities into water courses, the Forest Enactment (1934) and Rules (1935) provide for the establishment of forest reserves as well as control of logging.

However, none of the above legislation has been or is capable of being applied towards the specific task of dealing with environmental problems in a comprehensive manner. In view of this, the Environmental Quality Act, 1974 was enacted as a substantive piece of legislation complementing existing ones.

#### STRATEGY FOR ENVIRONMENTAL MANAGEMENT

The Environmental Quality Act, 1974 and the various Regulations under it are directed principally towards the second group of environmental problems, namely, industrial pollution in the form of discharges and emissions and sewage from domestic sources which damage our common resources, namely, land, air and water. However, they represent by no means the complete answer in tackling the broad environmental issues of the first group emanating from the development of land and natural resources which are considered to present equally serious problems as compared to the second group. Nevertheless, these Regulations constitute positive steps towards the control of pollution from point sources.

The first group of problems can only be overcome through proper environmental planning and through measures taken right from the initial planning stage of a project or development.

Although the task of protecting the environment has been and continues to be given impetus by the Environment Department of the

Ministry of Science, Technology and Environment, it is not possible for it to be involved directly in the technical procedures and control mechanisms for coping with various environment-related matters (such as use of pesticides, solid waste disposal, control of mining discharges) and it could also be taken as undue encroachment into departmental jurisdictions of other agencies. It is, therefore, only logical for the implementing agencies themselves to incorporate environmental safeguards in the course of the implementation of their various programmes or activities.

The Environment Department, therefore, has adopted a two-pronged strategy for the protection and enhancement of the quality of the environment encompassing both statutory and non-statutory means.

The choice of these control measures and their application would depend significantly on the areas to be controlled. The statutory control is adopted in areas which are expressly within the competence of the Environmental Quality Act, 1974 or more precisely in those matters which are specified in the Federal or Concurrent Lists. The non-statutory control, on the other hand, is applied in areas where the existing responsibilities are shared by various government agencies and in those areas which are within the competence of the State Governments. It will be noted that matters such as land, agriculture, forestry, mining, soil erosion, solid waste disposal, drainage and irrigation etc. which are fundamentally important in environmental management are explicitly under the State and Concurrent Lists, and it is in these areas that the non-statutory control must be directed with great care to avoid unnecessary administrative conflicts and duplication of efforts.

The statutory means are being effectively instituted through the various Regulations in accordance with the Environmental Quality Act, 1974. They are, among others:-

- (i) Environmental Quality (Prescribed Premises) (Crude Palm Oil) Regulations, 1977 - P.U.(A) 342/1977

- (ii) Environmental Quality (Clean Air) Regulations, 1978 - P.U.(A) 280/1978.
- (iii) Environmental Quality (Prescribed Premises) (Raw Natural Rubber) Regulations, 1978 - P.U.(A) 338/1978.
- (iv) Environmental Quality (Sewage and Industrial Effluents) Regulations, 1979 - P.U.(A) 12/1979.
- (v) Motor Vehicles (Control of Smoke and Gas Emission) Rules 1977 - P.U.(A) 414/1977.

While the first four are made under the Environmental Quality Act, 1974 and hence applicable to the whole of Malaysia, the last mentioned, having been made under the Road Transport Ordinance 1968, is applicable to Peninsular Malaysia only. Under these Regulations, the approach to control consists of the establishment of standards for the reduction of pollutants, enforced by both the legal and administrative methods including the levying of pollution charges. The rationale for the levying of pollution charges is to prod and bring home to industry the need to move in the direction of pollution control.

The non-statutory control would be in the form of guidelines intended to help the Government Agencies and State Governments to incorporate environmental considerations into their development plans. The Environment Department has already developed the following guidelines:-

- (a) the control and prevention of erosion and siltation;
- (b) the siting and zoning of industries;
- (c) environmental impact assessment; and
- (d) the selection and management of sites for the disposal of solid and hazardous wastes.

Basically, the problems of soil erosion and siltation result from the use of land. Therefore, this problem can only be overcome by employing suitable controls in line with the provisions of the National Land Code 1965 and Land Conservation Act 1960 and the practice

of preventive measures especially at the planning stage of a project whether for agriculture, mining, housing, road construction or logging. The guidelines supplement the existing legislation for soil conservation. As matters pertaining to land use fall within the purview of the State Authority, it is appropriate that control measures to prevent soil erosion be carried out by appropriate agencies within the legal framework of existing institutions.

The usefulness of zoning is self-evident. Without it, pollution problems can grow to unmanageable proportions. However, in order that zoning for various activities may be effective, the guidelines must be comprehensive and adhered to strictly, and co-ordination between Federal and State Authorities is required. As control over land use and siting of industries and housing rests with the State Governments and Local Authorities, these guidelines would help these agencies to integrate environmental considerations into development planning.

Under the proposed environmental impact assessment procedure, a number of scheduled projects with potential for significant impact would be required to have an assessment submitted to the Approving Authorities. 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 their environmental consequences.

The objectives of the guidelines for the selection of sites for the disposal of solid and hazardous wastes and their management is to meet the need for the selection of environmentally acceptable landfill sites and for their proper development and management on sound engineering principles so as to bring about improvements in disposal practices at relatively low cost as well as to reclaim land for useful future use.

Similarly, all the other environment-related legislation could be resorted to effectively through existing Federal and State Agencies for the protection and enhancement of the quality of the environment with the help of appropriate guidelines developed from time to time by the Department of Environment as a means of non-statutory control.

In order to help State Governments to effectively carry out this task of environmental protection and management, the Department of Environment has established Regional Offices in Seberang Prai, Kuala Lumpur, Kuantan, Johor Bharu, Kuching and Kota Kinabalu.

CO-OPERATION IN THE CONTROL OF POLLUTION ARISING AS A RESULT OF DISCHARGE OF SEWAGE AND INDUSTRIAL EFFLUENTS (PALM OIL AND RUBBER INDUSTRIES EXCLUDED) INTO WATERCOURSES AND EMISSION INTO THE ATMOSPHERE

The Environmental Quality (Sewage and Industrial Effluents) Regulations 1979 and the Environmental Quality (Clean Air) Regulations are directed principally towards the control of environmental pollution arising from the discharge of sewage and industrial effluents (other than palm oil and rubber effluents) and emissions which damage our common or shared resources, namely land, air and water. These Regulations are administered by the Environment Department as the enforcement authority.

As matters pertaining to land use such as housing development, sewerage, siting of industrial estates, location of industries and approval of industrial applications are fundamentally important in environmental management, fall explicitly under the jurisdiction of the State Governments either directly or through authorities subordinate to them such as Municipalities and other local authorities, have a definite role in ensuring the effective implementation of the Sewage and Industrial Effluents Regulations and the Clean Air Regulations.

The Environmental Quality (Sewage & Industrial Effluents) Regulations 1979 - P.U.(A) 12/79

These Regulations came into force on 1st January 1979 for industries that commenced operation on or after 1st January 1979 and on 1st January 1981 for industries that came into existence after 1st January 1979. Similarly the Regulations apply to discharge of effluent from municipal sewage treatment plants. The rationale for the somewhat more relaxed approach to existing industries is that they were established before the

coming into force of the relevant Regulations and time had to be given for the design and implementation of effluent treatment systems, where in some cases, the needed equipment having to be imported from developed countries.

The approach to pollution control under these Regulations involves both preventive measures through proper environmental planning as well as the imposition of acceptable conditions of discharge by way of effluent standards which the factories are required to meet prior to discharging their effluents into watercourses.

Regulation 4 requires that application should be made to the Director-General of Environmental Quality for permission to commence construction of any factory on any land and for carrying out any work in any premises which will result in an effluent discharge.

In approving such application, the Environment Department will carry out a presiting evaluation of the site to assess the suitability of the site on environmental grounds and ensure that all measures for the control of pollution, such as the treatment of the effluent, have been incorporated into the plans. Proper siting is of considerable importance as it helps both in the choice of effective control measures and reduces the cost of implementing such measures.

Therefore, as approving authorities for industrial applications, the State Governments and other authorities subordinate to them have an important role in ensuring that all such applications are referred to the Environment Department in good time.

This is all the more important since there is still a lack of technical know-how and skilled personnel to operate sophisticated treatment systems. In this respect it is advisable for Municipalities and other Local Authorities to adopt a policy of admitting the industrial wastes into public sewers for treatment of the wastes along with sewage at the Municipal treatment plants. In this way very effective control

can be exercised on pollution from industries. Industry in turn can be charged the appropriate fee for the treatment of their effluents at Municipal treatment plants.

Another area where the State Governments have an important role is in the control of sewage discharges from housing estates and commercial establishments. The present practice of permitting septic tanks as a control measure should be discarded in view of its ineffectiveness, as the effluent from septic tanks will not be able to meet the standards stipulated in the Sewage and Industrial Effluents Regulations.

In accordance with Paragraph 4(4) of the First Schedule of the Sewage & Industrial Effluents Regulations, sewage discharges from any housing or commercial development or both with more than 30 units should meet the discharge standards stipulated in the Regulations. Therefore, it is necessary to ensure that all housing and commercial developments or both with more than 30 units should be provided with a centralised sewage treatment system, the discharge from which should be capable of meeting the standards stipulated in the Regulations. This would not only help abate pollution from sewage but also would expedite the provision of modern sanitation.

Environmental Quality (Prescribed Premises)(Crude Palm Oil)  
Regulations, 1977, and  
Environmental Quality (Prescribed Premises)(Raw Natural Rubber)  
Regulations, 1978

The State Authority as a rule does not require conversion of land use from agriculture to industrial in the case of palm oil mills and rubber factories on the premise that it is ancillary to the operation of the palm oil or rubber estate.

Although the Environment Department, through licensing procedure, enforces appropriate conditions to safeguard the environment there is scope for closer co-operation between the State Governments and the Department of Environment by exchange of information on a regular basis.

On the matter of siting of palm oil mills and rubber factories, since these involve appropriate siting taking environmental factors into account as well as licensing, it will be necessary for all such applications for the establishment of new palm oil mills or rubber factories to be forwarded to the Environment Department for consideration in good time.

The Environmental Quality (Clean Air) Regulations, 1978  
P.U.(A) 280

The object of the Environmental Quality (Clean Air) Regulations, 1978 made under the Environmental Quality Act, 1974 and enforced on 1st October, 1978 is to control and abate air pollution by means of the following measures:-

- (a) Control the location of new industrial facilities (which are potentially polluting) with respect to residential areas;
- (b) Control the burning of wastes, particularly open-burning;
- (c) Control the emission of dark smoke from chimney stacks;
- (d) Control the installation of fuel-burning equipment;
- (e) Control the emission of air impurities.

In order to achieve the above objectives, full co-operation from Local Authorities is required.

Under the Clean Air Regulations, any new industrial undertaking within a residential area or housing estate or within 1000 meters of the nearest dwelling in a housing area requires prior written approval from the Director-General of Environmental Quality. It is a good practice, there, for Local Authorities to refer all such applications for comments/approval by the Environment Department. Likewise, for any proposed housing development within 1000 meters of an industrial area, Local Authorities are welcome to seek Environment Department's comments before approval is granted.

In general, it is a good practice for Local Authorities to refer all applications for new industries to the Environment Department for approval/comments in the interests of action to ensure that pollution abatement measures are incorporated into the planning and design of the industrial enterprises and avoid problems at a later stage.

When planning for industrial development, State Governments and Local Authorities should provide for the zoning of light, medium and heavy industries and for the provision of suitable buffer zones between industrial zones and residential areas. For this purpose, State Governments are advised to use 'The Guidelines for the Siting and Zoning of Industries' prepared by Environment Department. Also, the State Governments are advised **not** to condone the setting up of industries outside designated industrial zones unless they are resource-based industries. In addition, steps should be taken to resite some of the existing polluting industries which are situated adjacent to densely populated areas. However, before a final decision is made, the State Governments are encouraged to seek **Environment Department's** comments.

It is also a good practice for State Governments and Local Authorities to examine the compatibility of new projects e.g. townships, tourist development projects etc. vis-a-vis the existing industrial establishments/development in any given area to forestall environmental problems.

#### Control of Existing Industries

To achieve best results vis-a-vis existing industries, it is best that Local Authority enforcement officers familiarise themselves with pollution control requirements under the Clean Air Regulations. In the course of their duties, if they notice or observe any act contravening the requirements under the Regulations, e.g. installation of polluting facilities within 1000 meters of residential area without

prior written approval from the Director-General of Environmental Quality, emission of dark smoke or excessive smoke or offensive odour; open-burning of combustible materials; installation of fuel burning equipment such as boilers, furnaces, incinerators without prior written approval of the Director-General of Environmental Quality; they should report the violation to the Department of Environment Headquarters or its Office in Sabah for action. Such assistance is very much needed and appreciated for the successful implementation of the Clean Air Regulations.

In addition, it is advisable for Local Authorities to refer all proposals to resite or to renew the licence of any industry to the Environment Department so that appropriate conditions relating to provision of the polluting control measures can be recommended for adoption.

#### CONCLUSION

From the foregoing it is evident that the State Government of Sabah, in view of having legislative and administrative competence in specific fields, has a definite responsibility and a pivotal role to play in the enhancement and protection of the quality of the environment in the State of Sabah through proper environmental planning as well as through the application of appropriate environment-related legislation. To this end, the role and the potential for the State Ministry of Resource Development to spearhead this co-operation is self-evident.

JABATAN ALAM SEKITAR,  
KEMENTERIAN SAINS, TEKNOLOGI DAN ALAM SEKITAR,  
MALAYSIA,  
KUALA LUMPUR.

17 FEBRUARI 1984

Undang-Undang Yang Berkaitan Dengan  
Pemeliharaan dan Pengawalan Alam Sekitar

A. Undang-Undang Persekutuan

1. Local Government Act 1976
2. Streets, Drainage and Building Act 1974
3. Fisheries Act 1963 (Revised - 1978)
4. Land Conservation Act 1960
5. National Parks Act 1980
6. Protection of Wildlife Act 1972
7. Antiquities Act 1976
8. Environmental Quality Act 1974

B. Undang-Undang Negeri

1. Waters Enactment Cap 146 - FMS  
Waters Enactment Amendment No. 11/1973
2. Irrigation Areas Ordinance FMS No. 31/1953
3. Fauna Conservation Ordinance No. 11 of 1963 Sabah
4. Waters Enactment No. 66 - Johore  
Amendment - En. 14/71
5. Waters Enactment No. 129 - Kedah En. 17/71
6. Waters Enactment En. 2/1357 - Trengganu
7. Taman Negara Enactment - Pahang En. 2/1939
8. Taman Negara Enactment - Kelantan No. 14 of 1938
9. Taman Negara Enactment - Trengganu No. 6 of 1358
10. Forest Enactment - Cap 153 - FMS
11. Forest Enactment - Trengganu - Cap 63/1937
12. Forest Enactment - Kelantan - 4/1939
13. Forest Enactment - Johore - No. 58
14. Forest Enactment - Kedah - En. 5/1357
15. Forest Enactment - Perlis - En. 3/1370
16. Forest Enactment - Sabah - En. 2/1968
17. Forest Enactment - Sarawak  
Cap 126, Reprint 1972
18. Forest Enactment Straits Settlements Cap 147

STANDARD-STANDARD PELEPASAN EFFLUEN DI DALAM  
PERATURAN-PERATURAN KUALITI ALAM SEKELILING

Parameter **	PERATURAN-PERATURAN					
	Effluen Kelapa Sawit (1.1.1984)	Effluen Getah Asli Mentah			Effluen-Effluen Perindustrian & Kumbahan	
		Susu Getah Pekat (1.4.83 seterusnya)	Selain dari Susu Getah Pekat (1.4.81 seterusnya)		(A)	(B)
Suhu; °C	45			40	40	
Nilai pH	5.0-9.0	6.0-9.0	6.0-9.0	6.0-9.0	5.5-9.0	
BC pada 20°C	100	100 (50*)	250 (50)	20	50	
COD	-	400	250	50	100	
Pepejal Terampai	400	150 (100*)	150 (100*)	50	100	
Raksa				0.005	0.05	
Kadmium				0.01	0.02	
Kromium				0.05	0.05	
Kromium Heksavalensi				0.05	0.10	
Arsenium				0.05	0.10	
Sianid				0.10	0.5	
Pelambam				0.10	0.5	
Kromium Trivalensi				0.20	1.0	
Tembaga				0.20	1.0	
Manganam				0.20	1.0	
Nikel				0.20	1.0	
Timah				0.20	1.0	
Zing				0.20	1.0	
Boron				1.0	1.0	
Besi (Fe)				1.0	4.0	
Fenol				1.0	5.0	
Klorin Bebas				0.001	1.0	
Sulfid				1.0	2.0	
Minyak dan Geris	50'			0.50	0.50	
Jumlah Pepejal	-	150 (100*)		tak boleh 10.0 dikesan		
Amoniakal Nitrojan	150	300	40 <sup>+</sup>			
Jumlah Nitrojan	200	300	60 <sup>+</sup>			

\* Keputusan Nilai Purata

+ Cerakinan Ke Atas Contoh Yang Ditapis

\*\* Semua yunit dalam mg/l kecuali Nilai pH

ADDRESS BY MR. S.T.SUNDRAM, J.S.M., DIRECTOR-  
GENERAL OF ENVIRONMENT AT THE OFFICIAL OPENING  
OF THE COURSE ON "MANAGEMENT AND TREATMENT OF  
WASTES" ON 26TH MARCH, 1984 AT 8.15 A.M. AT  
THE RUBBER RESEARCH INSTITUTE OF MALAYSIA,  
KUALA LUMPUR

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Yang Berbahagia Tan Sri Dr. B.C.Sekhar,  
Yang Di Pertua,  
Institut Kimia Malaysia (IKM),

Dr. P.V.R. Subramaniam,  
Head, Industrial Wastes Division,  
National Environment Engineering Research Institute,

Distinguished Guests and Participants,

Ladies and Gentlemen.

It is indeed a great pleasure and singular honour for me to be in your midst this morning to officiate at the opening of this Course on "Management and Treatment of Wastes" jointly organised by the Federation of Asian Chemical Societies (FACS) and the Malaysian Institute of Chemistry (IKM) to dovetail into and form part of the Second Asian Chemistry Conference on "Priorities in Chemistry in the Development of Asia" (PRIOCHEM ASIA 1984).

The FACS Working Group on Chemistry and the Environment are to be heartily commended on this forward-look ahead and for taking the initiative in organising this Course for environmental managers and executives drawn from the Asian countries. I notice that the primary focus of the Course is on management and treatment of wastes and accordingly the papers presented will cover such subject areas as principles of waste management and treatment technology as well as waste utilisation and low or non-waste technology appropriate to the Asian situation. I must congratulate the organisers for their timely and praise-worthy efforts in bringing about this first ever comprehensive course on waste management which comes none too soon. The countries of the Asian region are poised to carry through an accelerated programme of industrialisation and modernisation with a number of them holding prospects of being regarded as developed nations before long while at the same time a dynamic movement is afoot to restore, protect and improve

our environment in the framework of making the optimal use of natural resources in the quest for a better quality of life for our peoples. In short, we must act resolutely today to build a better tomorrow for us and succeeding generations through sustainable development and sensitivity to the environment.

I understand that the basic thrust of the Course is towards providing those entrusted with responsibility for environmental management comprehensive information on waste management practices with a view to helping them to make correct choices and decisions in implementing waste treatment systems. As one numbered among those directly involved in environmental management I heartily welcome the holding of this Course which holds fair promise of proving to be of enduring benefit to participants.

I view this Course as something of a pacesetter in environmental cooperation among the Asian countries, providing yet another dimension of cohesion and solidarity. The wealth of experience and knowledge about the scientific, technical and economic aspects of waste management that will be exchanged at this Course leavened by the expertise of several eminent persons who have so readily agreed to contribute to the success of this Course by presenting papers will, I am confident, contribute positively to the continued development and progress of environmental management in the Asian region.

Ladies and Gentlemen, we in the developing countries have little choice but to forge ahead with rapid economic growth in order to provide for the material conditions of an acceptable standard of living for our peoples. In this respect industrialisation is of vital importance to nations seeking to improve the standard of living as it holds out promise of boosting incomes, employment, productivity and output. However, poorly planned or uncontrolled industrialisation or even the one-sided or haphazard application of technology can result in serious environmental problems as experience has proved all too often. We can ill afford to let the hoped-for gains from development to be eroded in this fashion given the limited resources at our disposal and the need to optimise returns.

It is a rather widely-held belief among all too many industrialists that expenditure **in** pollution control is non-productive, that it constitutes an investment without tangible return and it is at best **tieing** up scarce capital for no good reason, and at worst even a contributor to inflation. Industrial establishments, whether private or public, tend to regard pollution control all too often as a major financial burden to be avoided as long as possible and then only to be undertaken reluctantly in piece-meal fashion under pressure of public opinion or faced with the clout of the regulatory agencies. Hence the "too-little too-late" syndrome as though **wracked** by pains and costly delays, not counting the burden thrown on society.

On the contrary, investment in pollution **control** should be looked upon as analogous to outlays on research and development since it happens that new products and new processes often emerge when pollution control is viewed in its proper perspective and positive and constructive actions are taken in good time in line with such enlightened thinking.

The goal of industry should be to adopt a rational approach to pollution control with resolute steps taken firstly to minimise the amount of waste generated in any given industrial process through proper in-plant measures, then applications of resource conservation technology and through to enlightened waste utilisation practices. Of even greater significance is the need to develop non-waste and low-waste technologies which can help curb drastically wastes discharged into the environment and head off harmful effects on the biosphere. Even after all these approaches, it is still necessary to **treat** a waste prior to ultimate disposal, hence appropriate technology suitable to the local situation should be developed. The choice of **treatment** processes has great influence on costs of treatment and it is important to opt for those processes which minimise capital and maintenance costs and continuing reliance on sophisticated skills not readily available in developing country situation.

In the Malaysian context it can be said that positive efforts are being made by industries to shift from the conventional pollution-control approach to systems using oxidation ponds, and closed systems that recycle what was once considered wastes, into useful products, in short, resource recovery of sorts. In this respect, Malaysia can claim due credit by acknowledging the successful efforts of the palm oil and rubber industries in tackling vigorously and overcoming pollution problems and in the process shedding the once public image of being the worst polluters of the Malaysian environment.

However in the early days, the enforcement of control regulations in the palm oil and rubber industries was not without trials and tribulations caused by the lack of economically viable technology. The difficulty was further compounded by the fact that these twin industries which once constituted chronic sources of pollution are also important as being the mainstay of the Malaysian economy. Great care had to be taken, therefore, in the formulation of standards as these had to be **not** only environmentally sound but also sensible within the framework of economics and available technology. Hence the 4-year time span to develop economically viable technology to reduce the biochemical oxygen demand of palm oil mill effluent from 25,000 ppm to the current standard of 100 ppm.

Even after the technology had been developed there has been insufficient dissemination of knowledge of the technology and understanding of the functioning of the treatment systems at the level of plant operators and this has resulted in inefficient operation of the treatment systems leading to malfunction.

With the buoyant prospects for further industrialisation already on the horizon, so to speak, it is high time that the laggards among our industrial establishments do some soul-searching and set their sights firmly upon acting responsibly by harnessing the exciting findings of scientists and researchers into innovative approaches to waste treatment and environmental management. Resource recovery, reuse and recycling so that wastes are reduced to negligible proportions should be the order of the day.

We live in exciting times yet we should not through inertia, wanton neglect and indifference forego opportunities which open up before our very eyes through the myriad advances of science and technology. We do have our own breed of scientists and researchers of calibre who, given encouragement incentives and the right environment, can truly serve as a tremendous reservoir of talent to set us securely on the path of sensible, sustainable and sensitive development.

To optimise our prospects, the need of the hour is for intensive interaction stimulated by pooling of experiences and expertise, including the establishment of suitable clearing house mechanisms. To this end, a meeting such as this can provide stimulus and function as a pacesetter.

As the countries of the Asian region get more and more involved in a whole gamut of industrial activities another area that has emerged fraught with serious consequences is the matter of safe disposal of toxic and hazardous wastes. Lack of appropriate technology and in depth expertise in this area has resulted all too often in the indiscriminate disposal of these wastes. In Malaysia alone, there are an estimated 600 industrial establishments who generate toxic and hazardous wastes and as a first step the Department of Environment is presently compiling a comprehensive register of such establishments with details of such wastes generated by them and how disposed of.

I am confident that this Course for managers and executives will serve admirably to update and upgrade the knowledge of technology for the treatment of wastes in Asian countries.

On this note, I once again record deep appreciation to FACS and the organising committee and it is my fervent hope that this Course will be but the forerunner of more courses in related fields not only here in Malaysia but also elsewhere in this region and declare this Course officially opened.

DEPARTMENT OF ENVIRONMENT,  
MINISTRY OF SCIENCE, TECHNOLOGY AND ENVIRONMENT.

MARCH, 1984.

DERAF UCAPAN BELANJAWAN 1984

PERPUSTAKAAN  
JABATAN ALAM SEKITAR

20

Dalam usaha meningkatkan lagi kemajuan dan kesedaran sains dan teknologi sebagai alat pembangunan, Kementerian Sains, Teknologi dan Alam Sekitar melalui Majlis Penyelidikan dan Kemajuan Sains Negara (MPKSN) akan terus berusaha untuk memperkenalkan dan memperluaskan peranan sains dan penyelidikan dalam pembangunan negara. MPKSN akan disusun semula dan diperkuatkan dengan tujuan hendak memperkemas dan melicinkan lagi sistem pengurusan sains dan teknologi selaras dengan rang Akta Sains dan Akta Akademi Sains yang telah siap dirangka.

Kementerian ini akan terus menggalak dan memperkenalkan (to popularise) sains dan teknologi melalui aktiviti-aktiviti seperti anugerah sains, kuiz sains dan kem komputer. Di bawah Akta Akademi Sains yang dicadangkan itu peruntukan juga telah dibuat untuk membolehkan para saintis mengambil bahagian dalam merangka sesuatu keputusan mengenai arah dan kemajuan sains bagi pembangunan negara.

Kementerian ini melalui Institut Piawaian dan Penyelidikan Perindustrian Malaysia (SIRIM) akan memainkan peranan yang lebih dinamis sebagai sebuah pusat teknologi yang akan membantu mempercepatkan lagi pembangunan teknologi di negara ini. Usaha-usaha dalam pembangunan teknologi logam dan foundri akan dipergiatkan supaya dapat membantu mengujudkan infrastruktur yang stabil untuk menyokong dasar Kerajaan ke arah perkembangan perindustrian berat. Selaras

dengan dasar Kerajaan untuk menggalakkan penggunaan barang-barang buatan tempatan, Institut ini akan mempergiatkan usaha-usaha meninggikan kualiti barang-barang tempatan khususnya dalam perusahaan elektrik, bahan-bahan binaan, otomotif dan tembikar. Disamping itu SIRIM juga akan mempergiatkan lagi rancangan-rancangan pemindahan dan penyebaran teknologi untuk perusahaan-perusahaan kecil yang kebanyakannya terdiri dari bumiputra. Langkah-langkah untuk mengembangkan lagi khidmat nasihat keseluruh negara telah pun diambil dengan menubuhkan beberapa cawangan di negeri-negeri.

Kementerian ini juga akan meningkatkan usaha untuk pencegahan dan pengawalan pencemaran alam sekitar serta membaiki kualiti alam sekeliling bagi faedah kenyamanan serta kesejahteraan kehidupan rakyat. Dalam tahun 1984 ini, Jabatan Alam Sekitar akan membesarkan rangkaian pejabat cawangan dengan mengadakan cawangan tambahan di Kuala Trengganu untuk meliputi kawasan-kawasan Negeri Kelantan dan Trengganu. Jabatan ini juga akan berusaha untuk bekerjasama lebih rapat dengan agensi-agensi lain di peringkat Persekutuan dan Negeri dalam bidang pengawasan dan penguatkuasaan bagi menentukan kekesanannya. Penyelidikan-penyelidikan dan kajian-kajian khas terus akan dijalankan untuk membentuk kriteria-kriteria kualiti air, kawalan pelepasan, sinaran bunyi bising dan udara.

Melalui Jabatan Perlindungan Hidupan Liar dan Taman Negara (PERHILITAN) Kementerian ini akan berusaha untuk memelihara dan melindungi kehidupan "flora dan fauna", taman-taman negara dan rezab hidupan liar ke arah pengabadian, dan melalui pemuliharaan serta penggunaannya untuk memajukan pendidikan, kesihatan dan rekreasi orang ramai. Dengan berkuatkuasanya Akta Taman Negara 1980 (Pindaan 1983) lebih banyak lagi kawasan-kawasan akan dijadikan rezab, 'sanctuary' dan seterusnya dimajukan untuk pengabadian dan rekreasi.

Perkhidmatan penganalisaan saintifik, penyiasatan dan nasihat kepada agensi-agensi Kerajaan dan sektor swasta akan terus diperbaiki dan diperluaskan bagi mencapai matlamat memberi perkhidmatan analisa kimia yang lebih cepat dengan mengeluarkan laporan dengan lebih lekas dari yang ada di masa ini bagi faedah agensi-agensi Kerajaan yang melaksanakan pengawalan terhadap mutu dan kualiti bahan-bahan perusahaan bagi perlindungan pengguna juga dalam aspek-aspek forensik, kesihatan dan alam sekitar. Kementerian ini akan cuba mengekalkan Perkhidmatan Kajicuaca yang cekap, berkesanggupan dan mempunyai piawai antarabangsa yang tinggi dan perkhidmatan kajicuaca dan geofizikal di negara ini sebagai sumbangan yang berkesan terhadap pembangunan. Perkhidmatan Kajicuaca akan terus berkembang dan maju selaras dengan kehendak pengguna selari dengan perkembangan di bidang penerbangan awam, perkapalan,

DERAF UCAPAN BELANJAWAN 1984

DEK. SAINS DAN  
TEKNOLOGI DAN ALAM SEKITAR

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dengan dasar Kerajaan untuk menggalakkan penggunaan barang-barang buatan tempatan, Institut ini akan mempergiatkan usaha-usaha meninggikan kualiti barang-barang tempatan khususnya dalam perusahaan elektrik, bahan-bahan binaan, otomotif dan tembikar. Disamping itu SIRIM juga akan mempergiatkan lagi rancangan-rancangan pemindahan dan penyebaran teknologi untuk perusahaan-perusahaan kecil yang kebanyakannya terdiri dari bumiputra. Langkah-langkah untuk mengembangkan lagi khidmat nasihat keseluruh negara telah pun diambil dengan menubuhkan beberapa cawangan di negeri-negeri.

Kementerian ini juga akan meningkatkan usaha untuk pencegahan dan pengawalan pencemaran alam sekitar serta membaiki kualiti alam sekeliling bagi faedah kenyamanan serta kesejahteraan kehidupan rakyat. Dalam tahun 1984 ini, Jabatan Alam Sekitar akan membesarkan rangkaian pejabat cawangan dengan mengadakan cawangan tambahan di Kuala Trengganu untuk meliputi kawasan-kawasan Negeri Kelantan dan Trengganu. Jabatan ini juga akan berusaha untuk bekerjasama lebih rapat dengan agensi-agensi lain di peringkat Persekutuan dan Negeri dalam bidang pengawasan dan penguatkuasaan bagi menentukan kekesanannya. Penyelidikan-penyelidikan dan kajian-kajian khas terus akan dijalankan untuk membentuk kriteria-kriteria kualiti air, kawalan pelepasan, sinaran bunyi bising dan udara.

Melalui Jabatan Perlindungan Hidupan Liar dan Taman Negara (PERHILITAN) Kementerian ini akan berusaha untuk memelihara dan melindungi kehidupan "flora dan fauna", taman-taman negara dan rezab hidupan liar ke arah pengabadian, dan melalui pemuliharaan serta penggunaannya untuk memajukan pendidikan, kesihatan dan rekreasi orang ramai. Dengan berkuatkuasanya Akta Taman Negara 1980 (Pindaan 1983) lebih banyak lagi kawasan-kawasan akan dijadikan rezab, 'sanctuary' dan seterusnya dimajukan untuk pengabadian dan rekreasi.

Perkhidmatan penganalisan saintifik, penyiasatan dan nasihat kepada agensi-agensi Kerajaan dan sektor swasta akan terus diperbaiki dan diperluaskan bagi mencapai matlamat memberi perkhidmatan analisa kimia yang lebih cepat dengan mengeluarkan laporan dengan lebih lekas dari yang ada di masa ini bagi faedah agensi-agensi Kerajaan yang melaksanakan pengawalan terhadap mutu dan kualiti bahan-bahan perusahaan bagi perlindungan pengguna juga dalam aspek-aspek forensik, kesihatan dan alam sekitar. Kementerian ini akan cuba mengekalkan Perkhidmatan Kajicuaca yang cekap, berkesanggupan dan mempunyai piawaian antarabangsa yang tinggi dan perkhidmatan kajicuaca dan geofizikal di negara ini sebagai sumbangan yang berkesan terhadap pembangunan. Perkhidmatan Kajicuaca akan terus berkembang dan maju selaras dengan kehendak pengguna selari dengan perkembangan di bidang penerbangan awam, perkapalan,

21

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

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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

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

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, put paid 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

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 development 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 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 of 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.

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

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 Council, 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 presence of water-borne sewerage system which in turn is dependent on the quality

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.

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 on 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 laissez-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:-

- (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 posing long-term environmental hazards.

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 master 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,

Port Kelang Power Station, Malaysia Liquefied Natural Gas, Petronas Oil Refinery 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

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/ATC/ER.

Teks Ucapan Oleh Encik S.T.Sundram, J.S.M.,  
Ketua Pengarah Alam Sekitar Malaysia Kepada  
Persatuan Perubatan Malaysia (Malaysian  
Medical Association) Cawangan KL/Selangor/  
Pahang Pada Hari Ahad, 30hb. Januari, 1983  
Jam 4.00 Petang Di Atas Tajuk "Environmental  
Issues In The Klang Valley"

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Yang Di Pertua  
Malaysian Medical Association  
Cawangan KL/Selangor/Pahang,

Para doktor, tuan-tuan dan puan-puan.

Terlebih dahulu saya ingin merakamkan rasa sukacita saya kerana dapat peluang ini membincangkan dengan para hadirin satu topik yang semasa iaitu 'Isu-Isu Alam Sekitar Di Lembah Kelang'.

As I was saying, I am delighted to share a few thoughts with you this afternoon on a topical subject namely "Environmental Issues In The Klang Valley". The timing is significant in that the 11th anniversary of the declaration of the Federal Territory is about to be observed. And only recently the enlightened Ruler of this State reiterated at an investiture ceremony in Petaling Jaya on 19th January, the need for His Royal Highness's subjects to act positively on environmental concerns.

"Unless the nations act decisively to alter present trends, the world during the rest of the century will grow less able to support human life", so reads the principal finding of "The Global 2000 Report" a comprehensive study prepared for then U.S. President Jimmy Carter and published in August 1980.

What indeed do we understand by the term "Environment". According to an informative article featured in the December 1981 issue of "The Rotarian" magazine, "The Global 2000 Report" gives two principal meanings. "First it signifies the world around us, which is projected to grow more polluted and ugly". An alternative

meaning has to do with the whole system of natural production following the 1935 interpretation by British Scientist, Arthur G. Tansley of air, land, water, sunlight and the interplay of living things as constituting a vast network of manufacture and life support which he termed as ecosystem. Today the ecosystem tends to be divided for convenience into four main groups: the waters, forests, grazing lands and farmlands.

Turning to the Klang Valley, understandably it continues to be the focus, indeed the hub of industry, commerce, transport, finance and banking, of Government and even of higher education with 4 out of 5 universities still located here. By the same token much like two sides of the same coin, most of these activities are accompanied by pressure on resources, noise, air and water pollution and other stressful situations.

The thrust of no less than eight pieces of Federal Legislations, numbered among which is the Environmental Quality Act, 1974 (which my Agency enforces) plus a range of State Legislation of an environment-related nature is to help ensure that Malaysia, including the Klang Valley, remains a livable place. The Environment Division of the Ministry of Science, Technology and Environment is relatively new in the machinery of Government, yet on any objective assessment must be reckoned as having made its mark on the scene, a force to be reckoned with by the polluters of the Malaysian environment.

In the context of the Klang Valley, for example, a sensible balance has to be struck so that development proceeds apace without destruction. That process incidentally is by no means an easy nor a simple one, more so in a dynamic setting with frequent changes in key variables. Striking a sensible balance thus calls for unremitting vigilance coupled with co-ordinated, imaginative and innovative actions as part of an overall strategy to help maintain the right balance between the seemingly conflicting demands of development and environmental protection/conservation.

In the final analysis, effective environmental management reduces largely to a matter of attitudes and values, taking a unified view of industry, environment and society. The true value of environment, it should come to be realised, does not lie in its exploitation for short-term gain accruing to sectional vested interests but in its sound management for sustained productivity for generations and generations.

To us in the Klang Valley, in common with the rest of Malaysia, diversification and growth remain important objectives, more so to help generate the resources needed for environmental protection and to make a success of the New Economic Policy which is premised on an ever expanding economy.

That the World Health Organization (WHO) has chosen the theme "Health for all by the year 2000: The Countdown has begun" for the observance of World Health Day 1983 on 7th April is testimony to the need to sensitise the whole world to live up to the pledge by the Member States of the WHO. Not only governments but people too have the right and duty to be active agents of the change of health, whether individual or community section.

Let me enumerate briefly the various environmental problems in the Klang Valley.

1) Discharge of effluents and obnoxious gases

Effluent discharges from industries such as palm oil, rubber, textiles, food processing, electronic and electro-plating industries, wood-based industries result in heavy loads of not only organic but of toxic elements including heavy metals.

2) Piggery Wastes

In the Klang Valley there are several areas of pig farming namely in Sg. Buloh, Kelang, Gombak and Petaling. However, the

pollution of waterways by piggery wastes are especially serious in the Mukim of Sg. Buloh where there are approximately 99 pig farms with a total standing pig population of 140,000. The waste water from these farms are discharged directly into the Sg. Hampar and Sg. Kedondong which ultimately join the Sg. Buloh. Further downstream there is a JKR Water Intake Point which is affected by these piggery wastes.

The Environment Division, Ministry of Science, Technology and Environment is well aware of this problem and had initiated a task force committee, among whom comprises of representatives from SIRIM, UPM, Veterinary Division to study the problem and to put forth recommendations to overcome the problem and towards this end, SIRIM proposes to set up an experimental treatment system at the State Veterinary Centre in Sg. Buloh to develop suitable and economical treatment technology. In the meantime, the JKR (Bekalan Air) has proposed to shift its Water Intake Point further upstream of Sg. Buloh so as to avoid taking in water polluted by piggery wastes.

### 3) Motor Vehicle Emissions

Emissions of various types of gaseous pollutants such as carbon monoxide, oxides of nitrogen, unburnt hydrocarbons and smoke and lead emissions considering that lead content in our petrol at 0.84 gms/litre among the highest in the world.

Motor vehicle population in Peninsular Malaysia rose from 729,000 in 1971 to nearly 2.8 million by mid 1982 of which some 25% move in the Klang Valley and grow at a rate of 13% per annum.

The substantial increase in motor vehicles especially in the urban areas aggravates the problem of air pollution with the emission of carbon monoxide, nitrogen oxide and hydrocarbons into the atmosphere which are hazardous to health. Under the Motor Vehicles (Control of

Smoke and Gas Emissions) Rules 1977, 1,516 vehicles in Peninsular Malaysia were issued with summons for emission of excessive dark smoke and compounded for a total of more than \$70,000 in 1981.

4) Huge Quantities Of Particulates

Gaseous pollutants such as sulphur dioxide from power stations and other fuel burning equipment and oxides of nitrogen are emitted.

The climatic and topographic character of an area can also cause high pollutant concentration. The Klang Valley is considered to have a very high pollution potential which is two to three times as high as that of some major US cities because of a combination of the following factors: Kuala Lumpur is nested within a bowl, surrounded by hills, and the heat pollutants are trapped within, thus the ability of the atmosphere to disperse pollutants is adversely affected. In addition, during the day winds from the sea carry pollutants from Port Klang to Klang, Shah Alam, Subang Jaya, Petaling Jaya and Kuala Lumpur, which are all within 40 kilometres of each other, while at night, pollutants from Kuala Lumpur are carried to Klang by inland breezes. Furthermore, the heat island within the city centre presents a health hazard by trapping high concentrations of pollutants.

By the third quarter of 1982, a total of 251 air quality monitoring stations was established by the Environment Division especially in the main industrial areas and town centres. There are 35 suspended particulate monitoring stations, 192 dust deposition gauges to monitor dustfall, one station for sampling sulphur dioxide and 7 stations for monitoring total acidity while 6 stations have been established for estimating sulphur dioxide, along with two carbon monoxide continuous monitors and two ozone continuous monitors, three sulphur dioxide continuous monitors and three oxides of nitrogen continuous monitors.

The monitoring results of the Environment Division in 1981 showed that the mean annual suspended particulate (TSP) levels in a typical residential area i.e. Damansara Utama was  $97 \text{ ug/m}^3$ . On the

other hand, the mean annual TSP levels over the Petaling Jaya industrial areas was  $196 \text{ ug/m}^3$ . Compared with the proposed Malaysian environmental quality standard for a 24-hour goal of  $100 \text{ ug/m}^3$  for an industrial area and of  $50 \text{ ug/m}^3$  for a non-industrial area, the reading for both Damansara Utama and Petaling Jaya therefore exceeded the proposed goals.

The monitoring results, however, showed that sulphur dioxide ( $\text{SO}_2$ ) levels in industrial areas were tolerable. Measurements conducted in six industrial areas throughout the country recorded  $\text{SO}_2$  levels of less than  $100 \text{ ug/m}^3$  while one or two stations near major fuel combustion sources registered levels ranging from  $100 \text{ ug/m}^3$  to  $170 \text{ ug/m}^3$ . For a specific residential area, namely Damansara Utama, the sulphur dioxide level was well below  $5 \text{ ug/m}^3$ . All these measurements are below the  $\text{SO}_2$  goal for ambient air envisaged in the proposed Malaysian environmental quality standard of  $200 \text{ ug/m}^3$  for an industrial zone and  $125 \text{ ug/m}^3$  for a non-industrial zone.

Pollution caused by quarry dust remains a major problem in Malaysia. Dust monitoring conducted at the Ampang Quarry area recorded dust loads of  $200 \text{ mg/m}^2/\text{day}$  and  $800 \text{ mg/m}^2/\text{day}$ .

#### 5) Siltation

In the light of intensive housing development and urbanization including building of highways, an example being the KL/Karak Highway non-compliance with laws and guidelines results in heavy siltation and occurrence of flash floods.

Also worthy of mention is logging activities in the watershed regions such as in Ampang.

#### Solid Wastes

Considerable quantities of solid wastes in the form of residues from processing operations as well as sludges from waste treatment plants are generated which in the past has been indiscriminately mixed with refuse and disposed or at various dumping sites.

In the Klang Valley alone, studies have shown that total industrial wastes generated from those sources is some 20 times greater than any other comparable area in Malaysia.

#### Noise

Noise from a variety of industrial sources especially those from wood-based plants continued to be of serious concern. Haphazard location, the lack of control measures and out-of-date machinery contributed to this state of affairs. A National Noise Control Committee is actively involved in studies of noise from industrial, traffic, community and airport sources and appropriate regulations for noise control are being developed. Meanwhile, zoning techniques are being applied and noise control specifications imposed on equipment and industrial buildings.

Since the Klang Valley is highly urbanised, it is susceptible to noise problems arising from heavy vehicular traffic, from industrial operations and construction activities, noise from civil aviation sources as well as community noise.

#### Traffic Congestion

Ad hoc, piecemeal and haphazard development in the past has resulted in traffic congestion problems.

Tackling these problems calls for co-ordinated and effective actions, not just among the authorities, but with active involvement of the public to help bring about a sound environment and key professional bodies such as yours and community-based organisations can play a useful role.

Thank you.

BAHAGIAN ALAM SEKITAR,  
KEMENTERIAN SAINS, TEKNOLOGI DAN ALAM SEKITAR.