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NATIONAL POLICY ON THE ENVIRONMENT

The National Policy on the Environment aims at continued economic, social, and cultural progress of Malaysia and enhancement of the quality of life of its people, through environmentally sound and sustainable development. The nation's growth has unquestionably drawn from nature and its natural resources. As it moves towards attaining developed-nation status, Vision 2020 envisages that the land should remain productive and fertile, rich in natural diversity, the air clear and clean, the water unpolluted. These resources will assume an even more important role as sources of wealth creation, as essential support systems for the uniquely diverse Malaysian culture, as manifestations of natural heritage, and as symbols of national pride.

In exercising her sovereign right over her natural resources, Malaysia will develop and utilize them sustainably. Malaysia recognizes that indiscriminate resource utilisation, over-consumption, and other unsustainable development practices will erode the bases of success of the nation, and could jeopardise its continued progress.

This policy statement sets out the principles and strategies necessary to ensure that the environment remains productive, both ecologically and economically.

PRINCIPLES

The National Policy on the Environment is based on eight principles that harmonise economic development goals with environmental imperatives. These inter-related and mutually supporting principles are:

FIRST – Stewardship of the Environment

Exercise respect and care for the environment in accordance with the highest moral and ethical standards.

SECOND – Conservation of Nature's Vitality and Diversity

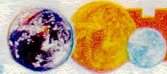
Conserve natural ecosystems to ensure integrity of biodiversity and life support systems.

THIRD – Continuous Improvement in the Quality of the Environment

Ensure continuous improvement in the productivity and quality of the environment while pursuing economic growth and human development objectives.

FOURTH – Sustainable Use of Natural Resources

Manage natural resource utilisation to sustain the resource base and prevent degradation of the environment.



FROM THE DG'S DESK



The National Policy on the Environment was approved by the government on the 2nd October 2002 and launched by the Minister of Science, Technology and the Environment on 14th November 2002. The policy aims at continued economic, social and cultural progress of Malaysia and enhancement of quality of life of its people, through environmentally sound and sustainable development. The national policy on the environment is based on eight principles that harmonize economic development goals with environmental imperatives. These inter-related and mutually supporting principles has been explained under the topics: stewardship of the environment; conservation of nature's validity and diversity; continuous improvement in the quality of the environment; sustainable use for natural resources; integrated decision – making; role of the private sector; commitment and accountability; and active participation in the international community.

In essence, this Policy will provide guidance to all federal and state agencies, industrial sector, local community and other stakeholders in ensuring that the environment is clean, safe, healthy and productive.

In implementing this Policy, strategies have been formulated to ensure that the efforts taken by all stakeholders are carried out in an integrated manner. This would strengthen our effort to achieve sustainable development in the most optimal manner.

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FIFTH – Integrated Decision-Making

Integrate environmental dimensions in the planning and implementation in the planning and implementation of the policies, objectives and mandates of all sectors to protect the environment.

SIX – Role of the Private Sector

Strengthen the role of the private sector in environmental protection and management.

SEVENTH – Commitment and Accountability

Ensure the highest commitment to environmental protection and accountability by all decision-makers in the public and private sectors, resource users, non-governmental organisations and the general public, in formulating, planning and implementing their activities.

EIGHT – Active participation in the International Community

Participate actively and effectively in regional and global efforts towards environmental conservation and enhancement.

MALAYSIA'S GREEN STRATEGIES

The National Policy on the Environment seeks to integrate environmental considerations into development activities and it all related decision-making processes, to foster long-term economic growth and human development and to protect and enhance the environment. It complements and enhances the environmental dimension of other existing national policies, such as those on forestry and industry and takes cognizance of international conventions on global concerns.

A broad-based strategic approach is adopted to promote environmental soundness through research and development, economic efficiency, social equity, responsibility and accountability. The Policy aims at developing a broad foundation to support its implementation and further development, involving all sectors of society and including government, business and industry, academia, non-governmental organisations, the community and the family.

Malaysia' Green Strategies will be directed towards the following key areas:

i. EDUCATION AND AWARENESS

To achieve a deeper and better understanding of the con-

cepts of environmentally sound and sustainable development, and a caring attitude towards nature, environmental education and awareness will be promoted across the board, incorporating information dissemination and training, in line with the recommendations of Agenda 21.

ii. EFFECTIVE MANAGEMENT OF NATURAL RESOURCES AND THE ENVIRONMENT

Measures will be taken to protect and conserve the environment and natural resources to meet the needs and aspirations of the country's population, particularly with regard to the productive capacity of resources such as land, forests, biodiversity and water.

iii. INTEGRATED DEVELOPMENT PLANNING AND IMPLEMENTATION

Environmental considerations will be integrated into all stages of development, programme planning and implementation and all aspects of policy making.

iv. PREVENTION AND CONTROL OF POLLUTION AND ENVIRONMENTAL DEGRADATION

Pollution and other adverse environmental impacts arising from development activities shall be minimised.

v. STRENGTHENING ADMINISTRATIVE AND INSTITUTIONAL MECHANISMS

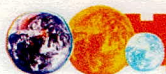
Integrated and effective cooperation and coordination among government sectors and between government and other sectors, shall be enhanced in order to achieve efficient environmental management and protection.

vi. PROACTIVE APPROACH TO REGIONAL AND GLOBAL ENVIRONMENTAL ISSUES

Malaysia will cooperate actively with other countries, particularly the ASEAN community of nations, and with relevant regional and international organisations, on global environmental concerns.

vii. FORMULATION AND IMPLEMENTATION OF ACTION PLANS

Action Plans, with adequate resource support for their implementation, will be formulated. The implementation of this Policy and its Strategies will be monitored and reviewed by the National Development Council.



ENSURING COMPLIANCE – THE INDUSTRIAL WASTEWATER TREATMENT PLANT OPERATORS CERTIFICATION SCHEME

By:

Ir. Shamsudin Haji Ab. Latif

Deputy Directory General

Department of Environment Malaysia

Introduction

Continued economic development of Malaysia depends on several factors including the provisions of adequate supply of water acceptable quality. But, the quality of our river water continues to be threatened by pollution cause by sewage, industrial discharges, animal farming and land-development activities. The industries are required by law to treat their wastewaters to comply with the relevant discharge standards before the wastewaters are discharged into the water courses. The wastewater treatment plants are managed by the individual factory owners. But, experience shows that many of these treatment plants are not operated by adequately trained operators resulting in frequent breakdown and malfunctioning of the treatments plants. Millions of ringgit spent on the design and construction of treatment plants do not result in satisfactory plant performance and regulatory compliance. The need for regulating the competency of treatment plant operators is obvious. The Department of Environment is empowered by section 51(w) of the Environmental Quality Act, 1974 to regulate the competency of wastewater treatment plant operators.

Typical Scenario

Oftentimes, during enforcement inspections the inspectors were informed that the pH or dissolved oxygen meter has been 'down' for a few weeks and nobody seemed to have taken any prompt action. The aerator or pump might have also broken and have been sent for repairs and it might take a couple of weeks before they were back in operation.

Sludge wasting from the secondary clarifier was last carried out a week ago and performance monitoring activities were never made the daily chores of the treatment plant operator. Lab facilities for conducting simple calibrations and measurements might not be available on the premise. In such a scenario, how would one then expert to operate and maintain a treatment plant to ensure optimal performance?

The Industrial Wastewater Treatment Plant Certification Scheme

Many developed countries have put in place an established scheme for certifying treatment plants operators. A number of Asian countries such as Indonesia and Thailand have also started some preliminary work to introduce similar scheme to regulate the competency of treatment plants operators. The scheme normally encompasses both theoretical and practical field experience to ensure only an 'all-rounder' treatment plant operator is certified through the scheme. The proposed scheme for Malaysia is described below.

The students would have to undergo training in basic courses and speciality tracks relevant to the process (es) that they will be working with at the actual treatment plant. The courses are:

Compulsory Courses

- ☉ Basic course for industrial wastewater treatment plant operators]

- ☛ Performance monitoring – Process Control Labortary Course

Skill Training Courses/Specially Tracks

- ☛ Activated sludge
- ☛ Heavy metals removal
- ☛ Tricking Filters
- ☛ Rotating Biological Contractors
- ☛ Sequencing Batch Reactors
- ☛ Waste Stabilization Ponds
- ☛ Physical/Chemical Treatment
- ☛ Practical Experience/Field Training

At the end of each course in the 'Compulsory Courses' stage the students will sit for a written examination and will have to successfully pass it before being allowed to advance to the 'skill Training Courses/Speciality Tracks' stage. Again, here the students will have to pass a written examination at the end of the course. After undergoing field training, the students will be required to submit a report on a standardized format to the DOE to illustrate their competence in the specially track that they have chosen. Additionally, an applicant to be certified as a competent treatment operator may be required to attend an interview.

In general it can summarized that the training emphasizes the following aspects:

- (a) theoretical understanding of the various treatment plant processes
- (b) the social and legal responsibilities of treatment plant operators
- (c) performance monitoring activities which form the daily chores of a treatment plant operator
- (d) record-keeping and reporting requirements

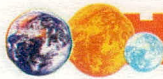
Conclusion

Overall, the industrial wastewater treatment plant operators certification scheme provides due recognition to the

profession of treatment plant operators. Wastewater field is a responsible and highly skilled profession which requires a knowledge of chemistry, microbiology, hydraulics and other related subjects. The scheme also improves self-image and self-esteem of the operators and the responsibilities of the treatment plant operators to society cannot be underestimated. Additionally, it is envisaged that the scheme will promote improved regulatory compliance.



The views presented here are not representing the views and policies of the Department of the Environment, Malaysia.



ENFORCEMENT FROM A DISTANCE

By:

Ir. Shamsudin Haji Ab. Latif

Deputy Directory General

Department of Environment Malaysia

Introduction

The primary objective of enforcement is to ensure compliance with the legal provisions and standards stipulated in the various legislation (Act; regulations, order, etc) enforced by the enforcement agency. The final goal is to ascertain the maintenance of an acceptable environmental quality that safeguards human health and well-being. Enforcement and court actions are the not ends but rather the means of achieving the desired goal.

Apart from traditional approaches to enforcement, novel approaches that can be utilized to enforce the legislation should be explored especially if they have the potential to reduce enforcement cost and manpower requirement, promote self-regulation, etc.

Typical understanding of what enforcement is, is the act of going to the field and collecting evidence of non compliances with stipulated regulations. Similarly, in the enforcement of environmental regulations, many understand that enforcement is synonymous with conducting factory inspections, taking samples and finally bringing offenders to court. Most environmental and pollution control regulations have been promulgated with this under-



standing as the premise. While this notion of what enforcement is acceptable, enforcement may actually take several different forms. One such form is the 'distance enforcement' which is discussed in this paper.

'Distance Enforcement'

the approach of 'distance enforcement' to the conduct of enforcement function is a broad-based concept comprising procedural arrangement (the 'software') and the use of modern technology (the 'hardware') to complement traditional enforcement activities.

Take the case of a factory that has been given the directive to install or repair a control equipment of consult an effluent treatment system or upgrade it. The enforcement

of this directive should be thoroughly followed through to ensure its effectiveness. This can be accomplished from a distance/remotely through regular submission of reports substantiated by photographs depicting the stage of physical development taking place at the site.

Another example is the use of continuous emission monitoring systems (CEMs) to monitor and record discharges of pollutants to the environment, particularly to the atmosphere. Nowadays technologies have made available to provide emission data 'on-line' and on a later date. In many countries evidence obtained from CEMs can be used for enforcement action and are admissible in court.

Conclusion

The 'distance enforcement' approach shifts the burden of proving compliance to the sources instead of on the enforcement agency. This approach is also in consonance with the approach of self-regulation where the sources are shouldering the responsibility to ensure that all measures are taken to keep them in compliance all the time. The approach could also capitalize the use of information technology (IT) in environmental pollution control. Additionally, the 'distance enforcement' approach reduces the cost of enforcement because less field inspections are conducted. Inspections are made only selectively on the sources which are suspected to be non-complying or for quality assurance/quality control reasons.

The approach has the potential to produce more efficient



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enforcement results as well as reduction in the cost of doing enforcement. However, a shift in the paradigm of amendment of regulations may be necessary to enable the approach to be used effectively and legitimately for enforcement of environmental regulations. **IMPAK**



PANDUAN KEPADA SEMUA PEMANDU DAN TUAN PUNYA KENDERAAN DIESEL

Oleh Shazly Ab. Rahim

PENGENALAN

Pencemaran udara berlaku disebabkan oleh pelbagai punca. Antara punca-punca pencemaran udara yang dikenal pasti ialah pelepasan asap yang berlebihan dari premis industri, asap ekzos kenderaan, kebakaran hutan, pembakaran terbuka daripada aktiviti-aktiviti pertanian, pembinaan dan domestik serta pencemaran udara rentas sempadan (trans boundry air pollution).

Asap dan gas kenderaan diesel adalah salah satu punca pencemaran udara yang serius. Bagi tujuan mengawal pencemaran udara yang berpunca daripada asap ekzos kenderaan diesel, satu peraturan telah diperkenalkan dan dikuatkuasakan di negara ini iaitu:-

Peraturan-Peraturan Kualiti Alam Sekeliling (Kawalan Pelepasan Daripada Enjin Diesel) 1996.

Peraturan ini menggariskan standard – standard pelepasan tertentu yang perlu dipatuhi oleh kenderaan-kenderaan baru (di kilang pemasangan) dan kenderaan diesel yang sedang beroperasi di jalan raya.

STANDARD ATAU HAD PELEPASAN ASAP YANG DIBENARKAN BAGI KENDERAAN DIESEL

Had pelepasan asap yang dibenarkan dari pelepasan asap kenderaan diesel yang sedang beroperasi di jalan raya adalah tidak melebihi 50 Unit Asap Hartidge (HSU) atau 50% kekaburan (opacity).

Kenderaan yang didapati melepaskan asap yang mempunyai ketumpatan melebihi standard yang dibenarkan seperti yang dinyatakan di atas, boleh dikampaun tidak melebihi RM2000.00 (Ringgit Malaysia: Dua Ribu Sahaja).

Sekiranya kes ini dihadapkan ke mahkamah dan sabit kesalahannya, denda maksimum yang boleh dikenakan ialah sebanyak RM 100,000.00 (Ringgit Malaysia: Satu Ratus Ribu Sahaja) atau dikenakan hukuman penjara tidak melebihi 5 tahun penjara; atau kedua-duanya sekali.

Perintah larangan menggunakan kenderaan boleh juga dikeluarkan sekiranya didapati kenderaan yang telah diuji mengeluarkan asap hitam melebihi 70 HSU atau 70%.

Kenderaan yang dikenakan perintah larangan tidak boleh beroperasi di jalan raya sehingga kerosakannya telah diperbaiki dan lulus ujian asap semula oleh Jabatan Alam Sekitar.

PROSEDUR UJIAN PELEPASAN ASAP HITAM DARIPADA KENDERAAN DIESEL YANG DILAKSANAKAN OLEH JABATAN ALAM SEKITAR

- a) Sebelum memulakan ujian, meterasap hendaklah dipanaskan (warm-up) sekurang-kurangnya 10 minit untuk menstabilkan litar elektrik meter berkenaan.
- b) Memastikan enjin kenderaan yang hendak diuji telah mencapai keadaan operasi yang normal (enjin telah dipanaskan secukupnya) iaitu enjin telah dipanaskan (warm-up) selama lebih kurang 15 minit; atau kenderaan tersebut telah beroperasi sejauh 5 km.
- c) Cara pengujian asap.
Ujian pelepasan asap adalah dilaksanakan melalui kaedah ujian pecutan bebas (free acceleration test) di mana pedal minyak kenderaan ditekan dari 'idle speed' ke tahap 'maximum speed' dengan kadar yang laju. Pada kelajuan 'maximum speed' berkenaan, pegang selama 2 saat atau mengikut

tempoh (arahan) yang ditunjukkan oleh meterasap dan kemudian lepaskan (angkat) pedal minyak. Bacaan yang tertinggi yang ditunjukkan oleh meterasap adalah dikira sebagai had pelepasan asap bagi kenderaan ini.

- d) Selepas enjin mencapai keadaan normal (lebih kurang 10 saat), pengujian yang berikutnya boleh dijalankan mengikut prosedur di peranggan (c).
- e) Ujian hendaklah dijalankan sebanyak 2 kali. Purata daripada kedua-dua ujian tersebut akan dikira sebagai ujian asap bagi sesebuah kenderaan yang diuji.

SEBAB-SEBAB UTAMA BERLAKUNYA PELEPASAN ASAP HITAM YANG BERLEBIHAN

- a) Pam minyak – yang diubahsuai tidak mengikut spesifikasi pembuat enjin kenderaan semasa penyelenggaraan/servis dijalankan menyebabkan pam minyak memberi minyak yang berlebihan ke dalam enjin.
- b) Injektor – yang tidak diservis/selenggara dengan sempurna, injector yang rosak atau tersumbat akan menjejaskan kehalusan semburan minyak diesel ke dalam enjin.
- c) Penapis Udara – penapis udara yang tersumbat menyekat udara masuk ke enjin. Manakala penapis udara yang bocor akan membenarkan angin yang kotor masuk ke enjin.

- d) Blok Enjin – kesan dari penggunaan berterusan menyebabkan kehilangan tekanan kuasa dan menjejaskan kaedah pembakaran.
- e) Paip Ekzos – kotoran dan jelaga hitam yang berselaput di paip ekzos akan keluar bersama gas ekzos jika tidak dibersihkan.
- f) Membawa muatan yang lebih akan memberi tekanan berlebihan kepada enjin.
- g) Penggunaan kenderaan yang salah iaitu menyeret enjin kenderaan dengan keras di mana pemandu lambat untuk menukar gear dan menyebabkan lebih minyak masuk ke dalam enjin.

Salah satu atau kombinasi sebab-sebab di atas akan mengakibatkan nisbah udara-minyak yang tidak betul dan seterusnya menghasilkan pembakaran minyak yang tidak sempurna. Keadaan ini menyebabkan berlakunya pelepasan asap hitam yang berlebihan.

Selain daripada mengikut jadual servis yang telah ditetapkan oleh pihak pengeluar kenderaan berikut adalah beberapa panduan pemeriksaan enjin yang digalakkan kepada pemandu kenderaan:-

- a) Pemeriksaan asap ekzos setiap kali perjalanan melebihi 5,000 km.
- b) Servis injector setiap kali perjalanan melebihi 20,000 km.
- c) Perbaiki enjin keseluruhan (overhaul) setiap kali perjalanan melebihi 100,000 km.

TUGAS ANDA SEBAGAI PEMUNYA/PEMANDU KENDERAAN DIESEL

Pastikan kenderaan anda menjalani servis dan penyelenggaraan yang sempurna dan berjadual. Untuk mendapatkan servis dan penyelenggaraan yang sempurna, adalah perlu menghantar kenderaan anda ke 'Kemudahan Yang Diluluskan', iaitu bengkel-bengkel kenderaan yang diluluskan oleh Jabatan Alam Sekitar untuk menjalankan ujian pelepasan asap dan





mengetahui tahap pelepasan asap dari kenderaan anda.

FAEDAH-FAEDAH DARIPADA PENJAGAAN ENJIN YANG SEMPURNA

Asap berlebihan daripada ekzos kenderaan diesel merupakan campuran gas pembakaran minyak diesel yang tidak terbakar dengan sempurna. Ini bermakna telah berlaku pembakaran dalaman (internal combustion) yang tidak sempurna serta penggunaan diesel yang tidak cekap atau merugikan. Penyelenggaraan kenderaan dengan sempurna dapat meningkatkan kecekapan ejin kenderaan yang sekali gus meningkatkan kecekapan penggunaan minyak diesel dan seterusnya menjimatkan kos penggunaan minyak diesel anda. Di samping itu, jangka hayat enjin kenderaan juga dapat ditingkatkan dan pelepasan asap berlebihan dapat dihindarkan. Ini sudah tentu akan membantu mengurangkan masalah pencemaran udara di negara kita.

KESAN DARI SEGI KESIHATAN

Terdapat pelbagai bahan merbahaya yang dilepaskan melalui ekzos kenderaan diesel yang boleh menjejaskan kesihatan kita seperti berikut:-

- a) Asap Hitam/Pertikulat
 - Mengganggu sistem pernafasan dan menyebabkan penyakit barah (cancer)
 - Mengganggu penglihatan

- b) Karbon Monosida

- Melembabkan otak/pening/pitam dan boleh membawa maut sekiranya dihidu dalam jumlah yang banyak

- c) Sulfur Dioksida

- Merosakkan sistem paru-paru
- Mengakibatkan terhasilnya hujan asid

- d) Hidrokarbon

- Memedihkan mata dan hidung

- e) Oksida Nitrogen

- Memedihkan mata dan tekak
- Mengganggu system pernafasan
- Merosakkan system paru-paru

PENUTUP

Penjagaan kenderaan yang sempurna adalah amat penting bagi memastikan kenderaan yang kita gunakan setiap hari tidak mengeluarkan asap hitam yang berlebihan. Sila pastikan kenderaan anda tidak mengeluarkan asap hitam bagi menjamin mutu kualiti udara yang bersih. Adalah menjadi tanggungjawab kita bersama untuk mengurangkan pencemaran udara kerana tanpa udara yang bersih sudah pasti tiada hidupan di bumi ini.



IMPAK

WORLD CONFERENCE AND EXHIBITION ON LAND AND FOREST FIRE HAZARDS 2002: *Reviewing Global Perspectives and Seeking Strategies for Future Challenges*

INTRODUCTION

The World Conference And Exhibition On Land and Forest Fire Hazards was held at the Putra World Trade Centre in Kuala Lumpur on 10 – 12 June 2002. The Conference was a follow-up to the decision made during the 8th ASEAN Environment Minister' Meeting in Kota Kinabalu, Sabah on 6 – 7 October 2000. The Meeting agreed that Malaysia would host and organize an international conference and exhibition as an effort to deal with current and on-going issues of land and forest fires hazards that had affected many countries around the world including the South East Asian region.

The Conference was hosted by the Ministry of Science, Technology and the Environment of Malaysia with a generous allocation from the Ministry of Finance Malaysia. The organizational work was executed by the Department of Environment Malaysia in collaboration with the Environment Division of the Bureau of Functional Cooperation of the ASEAN Secretariat. The Government of Japan through the Japan-ASEAN Exchange Projects Fund co-sponsored the event which included the cost of travel and accommodation for ASEAN delegates and the printing of the Conference Proceedings. Various Ministries and Government Agencies in Malaysia also supported the Conference, namely, the Ministry of Health, Agriculture, Primary Industries, Housing and Local Government, Finance and the Fire and Rescue Department.

CONFERENCE OBJECTIVES

The objectives of the Conference were:

- ➊ To provide a forum for exchange of information and experiences on land and forest fire hazards that have affected various regions around the world;
- ➋ To bring international fire experts, senior government officials, researchers, industries, plantation companies, community leaders, international organizations, individuals and practitioners from around the world to deliberate on issues of land and forest fire hazards;
- ➌ To develop approaches and strategies to minimize of over-

come the hazards associated with land and forest fires including the resulting transboundary air pollution; and

- ➍ To recommend areas of cooperation between countries and international organizations, industries and communities to meet the present and future challenges of land and forest fire hazards.

Specific outputs of the Conference included approaches and strategies to address problems associated with land and forest fires, and recommendations for regional and international cooperation to prevent the recurrence of land and forest fires haze.

PROGRAMME

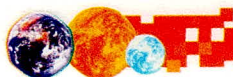
The programme of the Conference is shown on Appendix A.

PARTICIPATION

The Conference was attended by government officials, decision-makers, academicians, community leaders, international fire experts, representatives of international organizations, implementation/enforcement agencies, planners, individuals and practitioners. The number of registered participants totaled 483, comprising of 110 from ASEAN countries, 37 international participants, and 336 local Malaysian participants representing government agencies, the plantation sector, the industry group, members of Non-Government Organisations and other stakeholders.

CONFERENCE PAPERS

The Conference was specifically designed to cover all aspects of fire hazards management based on countries' and organizations' experiences and perspectives in the Plenary Sessions, and more specific approaches in the Parallel Sessions. A total of 36 papers were presented at the Conference. In the parallel sessions, three (3) discussion groups namely Prevention, Monitoring and Mitigation were formed in which 28 papers were deliberated.



PLENARY SESSION REPORT

From the eight (8) papers presented at the first Plenary Session, three (3) presentations discussed International Organisations' involvement and roles in forest fire management, while the other five (5) recounted experiences from the ASEAN region, Australia, Canada, Japan and USA. The session recognized the existence of several plans and legislative framework both at national and regional level, and called for a more concerted joint approach in managing fires through partnerships at the regional and global levels, as well as linking up the ASEAN region with other existing international organizations such as the United Nations' Global Wildland Fire Network.

ASEAN ENVIRONMENT MINISTERIAL FORUM

The principal objective of the Forum was to review the current ASEAN position in the prevention and control of forest and land fires, effectiveness of measures that had been taken and prospects and challenges ahead. The Ministers unanimously agreed that there was a need for a collaborative effort within ASEAN as well as outside the region to prevent haze arising from land and forest fires.

ASEAN AGREEMENT ON TRANSBOUNDARY HAZE POLLUTION

The historic signing of the ASEAN Agreement on Transboundary Haze Pollution took place on 10 June 2002. ASEAN Environment Ministers and authorized representatives signed the Agreement witnessed by the Right Honourable Dato' Seri Abdullah Ahmad Badawi, Deputy Prime Minister of Malaysia, H.E. Mr. Rodolfo C. Severino, Jr., Secretary-General of ASEAN, H.E. Dr. Klaus Topler, UNEP Executive Director and H.E. Kazuo Asakai, Ambassador for Global Environment and International Economic Affairs of Japan. The event marked a significant milestone for environmental cooperation among the ten ASEAN Member States. The main objective of the Agreement is to prevent, mitigate and monitor transboundary haze pollution arising from land and forest fires through concerted national efforts and intensified regional and international cooperation.

EXHIBITION

A trade exhibition was held in conjunction with the Conference. A total of 22 exhibitors representing both the public and private sectors took part to showcase their products and technologies ranging from the state-of-art fire suppression equipment, detection and alert systems and hazard management including air pollution monitoring equipment systems and services. Also on display were peat profiles, protective clothings, smokeless and odorless air burner systems and fire suppression technology using aircrafts.

TECHNICAL TOUR

A technical trip to the Golden Hope Oil Palm Plantations at Carey Island Selangor, Malaysia was arranged for participants to observe field demonstration of zero burning technique as an alternative to open burning. The technique was first employed on a trial basis by the Plantation Group in 1989, and had since been adopted as a standard practice. As the method could also be potential fire hazards during the dry spells, measures taken to prevent possible fires were also demonstrated.

PARALLEL SESSIONS: DISCUSSION GROUP REPORTS

The participants were divided into three discussion groups i.e. Prevention, Monitoring and Mitigation, each session running concurrently. The discussions are summarized as follows:-

Session 1 : Prevention Group

- i) The Prevention Group deliberated on issues and measures which had been applied to prevent land and forest fires such as land-use planning and management, legal and regulatory framework, law enforcement. Community-based fire management, public awareness and participation, initiatives taken as well as other practices, technique and alternatives in fire prevention, which also include land and forest fires originating from coal seam fire.
- ii) The Group noted that whilst certain preventive measures such as zero burning techniques were effectively implemented in oil palm plantations, such practices were not cost effective and could serve as a 'time bomb' in other industrial tree plantations, for example, *Acacia mangium* plantation. Similarly, in the case of subsistence farming activities like shifting cultivation, the Group agreed that prescribed burning with strict control could be adopted. In this regard, it was proposed that there was a need for collaborative research to develop technologies that would be more cost effective and practicable.
- iii) The Group also recognized the important role of local communities as well as land use planning to ensure effective fire management and practical prevention programmes especially in fire sensitive areas such as peat land. Establishment of buffer zones, maintenance of water level and planting alternative crops other than short term cash crops were also accepted as available options to avoid frequent burning in the area.

Session II : Monitoring Group

- i) The Monitoring Group was of the opinion that the present monitoring systems needed to be improved. The systems had to be affordable, timely, accurate, and given data had to be reliable. Monitoring systems that were able to give early warning would be an essential tool in assisting the management

team in decision making.

- ii) The Group discerned that forest fires were the major cause of transboundary haze. However, fire networking at regional and sub-regional levels was lacking, hence the ineffectiveness of monitoring systems.
- iii) The Group also noted that using all means of preventing forest fires would not solve the problem entirely unless the public could be made aware of the consequences. In this regard alternatives for agricultural practices relating to burning activities would need to be developed.

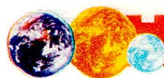
Session iii : Mitigation Group

- i) The Mitigation Group deliberated on the financial cost of fire and haze hazards in terms of their impact on soil, vegetation, health, and the economy. The Group agreed that sustainable development was hardly achievable if fire still remained a part of agricultural practices and hence posed a great challenge to forestland managers. More research on forest management would be needed to support planning and decision-making.
- ii) The Mitigation Group recognized that fire was a national security and defence issue which would require more effective, rational and systematic response for its management. Therefore, all relevant agencies would have to put in more effort to update information pertaining to fire cases especially on fire techniques and strategies for dissemination.
- iii) The Group also noted that certain mitigation for forest fire disasters could not be carried out due to various constraints which included lack of fire fighting facilities as well as the ability to operate the facilities. Therefore, sufficient fund should be allocated to solve this problem.

APPENDIX A

SUNDAY 9th June 2002

Time	Programme
	Arrival of participants
2.00 pm – 6.00 pm	Registration at Registration Counter. (Lobby, Pan Pacific Hotel)
6.00 pm – 7.30 pm	Welcome Reception (The Atrium, Level 4, Pan Pacific Hotel)
8.00 pm – 10.00 pm	Registration at Registration Counter (Lobby, Pan Pacific Hotel)
MONDAY 10th June 2002	
8.15 pm	Registration (Dewan Tun Hussein Onn A & B, Level 2, PWTC)
9.00 pm	LENARY SESSION:- Global Experiences and Perspectives (venue: Dewan Tun Hussein Onn A & B, Level 2, PWTC) Moderator: Y.Bhg. Dato' Leong Ah Hin, Secretary-General, Ministry of Science, Technology & the Environment, Malaysia
12.00 pm	Discussion
12.45 pm	Lunch
2.00 pm	*Opening Ceremony The Signing of ASEAN Agreement on Transboundary Haze Pollution by ASEAN Environment Ministers *Tour of Exhibition
3.30 pm	Refreshment Press Conference



4.00 – 5.00 pm	ASEAN Environment Ministerial Forum (venue: Dewan Tun Hussein Onn A & B, Level 2, PWTC) Moderator : H.E. Mr. Rodolfo V. Severino Jr., Secretary-General of ASEAN
5.00 pm	Closed door Session : ASOEN Haze Technical Task Force Meeting (venue: Dewan Tun Ismail B, Level 2, PWTC)
8.00 pm	Welcome Dinner hosted by the Honourable Dato' Seri Law Hieng Ding, Minister of Science, Technology & the Environment, Malaysia (venue: Legend Ballroom, 9 th Floor, Legend Hotel)
TUESDAY 11th June 2002	
9.00 am – 12.00 pm	Closed Door Session: ASEAN Ministerial Meeting on Haze (venue: Dewan Tun Ismail B, Level 2, PWTC)
9.00 am – 5.30 pm	PARALLEL SESSIONS Session 1 : Prevention Group (Dewan Tun Hussein Onn A, Level 2, PWTC) Moderator: Dr. Ir. Untung Iskandar S. Director General Forest Products Management Ministry of Forest Indonesia Session 2 : Monitoring Group (Dewan Tun Hussein Onn B, Level 2, PWTC) Moderator: Dr. Zulkifli Idris Director, Conservation and Environmental Management Division, Ministry of Science, Technology and the Environment Malaysia Session 3 : Mitigation Group (venue: Dewan Tun Ismail A, Level 2, PWTC) Moderator: Mr. Romeo T. Acosta Director, Forest Management Bureau Department of Environment and Natural Resources Philippines
WEDNESDAY 12th June 2002	
9.00 am – 10.30	PARALLEL SESSIONS
10.30 am	Refreshment
11.00 am	CLOSING SESSION (Dewan Tun Hussein Onn A, Level 2, PWTC) Moderator: Dr. Nirmal Andrews UNEP Regional Director and Representative for Asia and the Pacific Synthesis and Recommendations from · Session 1: Prevention · Session 2: Monitoring Group · Session 3: Mitigation Group
1.00 pm	Lunch
2.00 pm	City Tour (Optional) · Kuala Lumpur City Centre · Kuala Lumpur Heritage Trail · Kuala Lumpur Garden City Charms
THURSDAY 13TH June 2002	
Time	Programme
9.00 am – 12.00 pm	Technical Field Trip to Golden Hope Plantations, Carey Island Selangor Darul Ehsan Departure of Participants

Trade and Environment: *Carrot or Stick*

By
Pauziah Hanum bt Hj. Abdul Ghani

As trade promotes greater efficiency in resource utilization, elevates standard of living, and income to finance development programs through international trade and trade liberalisation is undeniable. Trade expansion has also been seen as anti-environmental force driven by the desire to increased profits, jobs, consumption and production which irrevocably leads to detriment the environment. The issues is: is trade the culprit or is the quality of growth and how its benefit are distributed and the wealth is shared? Or are there common grounds for a better arrangement?

Due to different level of economic development and societal awareness the differing perspectives and priorities to environmental threat, often create conflict and dilemma in what is really needs to be done. Environmentalist viewed environmental threats is increasing due to the increase usage of non-renewable resources like fossil fuels, minerals, and exploit renewable resources like water, air and forests beyond their replenishment levels. While economist viewed trade as creating wealth. Looking at their conflicting views, how do we reconcile the issues?

Using trade to protect the environment is inconsistent with General Agreement on Tariff and Trade (GATT)

obligation, most developing countries fear that such policies might be used by powerful nations to impose their own environmental standards or preferences on other countries and as the danger of protectionism! Such practices are harmful to the already fragile world trading system.

To untangle the different view, lets look at the problem arises; environmental resources, unlike other factors of production such as labour and capital cost, are not priced at all in the markets. As such consumer do not bear the true cost of environmental resources, so they tend to over-exploit the resources. This ineffective pricing system can cause

- Market failure when resources may not have a market price at all e.g. soil erosion
- Over-exploitation due to non-compensatory pricing of resources e.g. government subsidy of fertilizer

To eliminate the environmental damages efficiently, the source of the problem should be identified and measures must be taken to internalise the environmental costs by getting the polluter to pay.



Sometimes carrot may work better than stick, using trade to elicit international environmental cooperation is much more likely to generate economic and environmental gains and overall improvement in welfare. The approach could be applied to broader spectrum of negotiations such as intellectual property rights, and issues of transboundary environmental protection. The non-discrimination principle of World Trade Organisation (WTO) should be upheld in pursuing the environmental objectives, which allows pragmatic environmental management policies in a country.

The approach we should adopt is between the developing countries and developed countries is to:-

Firstly, a level playing field must be established, as poor countries cannot compete with the developed countries, local company cannot compete with their multinational corporations.

Secondly, while foreign investment is needed to vibrant economy, there is great impact if there is no rules to monitor the movement.

Thirdly, a lot of decision made at the international level affect national policies. Each government need to have its own judgement to formulate its best policies for its citizens and not be confined with those which are not in line with national policies.

When trade is not the directly attributed to the environmental damages, trade restriction may create distortion in the market, counter productive, or have back-firing effect leading to more environmental damages. The compromise should be, seek cooperative solution through agreements backed by financial compensation and technology transfer, so that countries can adhere to the standard stipulated, than threatening with trade sanction. Trade restriction is the last resort to enforce an international agreement concerning transnational pollution, or if trade is the legitimate cause of the environmental damage.

IMPAK

CALENDAR of EVENTS

Date	Place	Events
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Oktober 2002

21

Ipoh

Mesyuarat MEXCOE

21 - 27

Ipoh

Perayaan Minggu Alam Sekitar Malaysia (MASM)

November 2002

5 - 7

Putrajaya

Mesyuarat Pengarah-Pengarah Jabatan Alam Sekitar

12

Putrajaya

Mesyuarat EQC Ke-83

14

Cyberlodge

Pelancaran Dasar Alam Sekitar Negara