

Foreword

Globalization of economies in the late 20th century has led to inequality not only of wealth, but also of information. In order to correct this distortion and realize sustainable development at an international level, networks for sharing information among developing and industrialized countries, and regions are indispensable. Research institutes are expected to greatly contribute to the establishment and fosterage of such networks.

Playing an important role, the Institute for Global Environmental Strategies (IGES) has engaged in implementing strategic research, applying results to policy decisions and actions, training researchers and practitioners as well as disseminating and exchanging information.

In line with our above activities, IGES has gathered top environmental news in Asia and the Pacific region and compiled it to publish a booklet every year since 1998. The *2000 Top News on Environment in Asia* has just been compiled, including newly added reports from the United Nations Economic and Social Commission for Asia and the Pacific (UN/ESCAP), the Asian Development Bank (ADB), Russian Far East, Lao PDR, and Bangladesh. Coverage from sixteen countries and two international institutes is incorporated into this booklet so that readers can grasp environmental trends and problems in the region through a broader view and fresh perspective.

Overview: Environmental Trends and Problems in the Asia-Pacific Region, 2000

In this section, environmental trends and problems in Asia and the Pacific region are summarized based on information from sixteen countries and two international organizations, which has been obtained in cooperation with research institutes and researchers.

1. Transboundary Environmental Problems

Many transboundary environmental problems are reported: the illegal transfer of hazardous wastes to the Philippines by a Japanese industrial waste disposal company, frequent oil or chemical spills caused by tankers, illegal toxic discharge of the US Army in Korea and toxic waste contamination in the former U.S. military.

(see ADB-1, Japan-5, Korea-1, Malaysia-2·5, The Philippines-2 to 4, Singapore-4)

2. Development of International Cooperation in the Region and Subregion

As one of growing trends in discussing environmental problems in the region and subregion, and producing a comprehensive framework, the Ministerial Conference on Environment and Development in Asia and the Pacific (MCED) 2000 was held in September 2000.

In addition, many countries took steps towards transboundary cooperation on environmental issues. This is seen in the North-East Asia Subregional Programme for Environmental Cooperation (NEASPEC) which provides a mechanism for environmental cooperation in North-East Asia.

In April 2000, the G8 Environment Ministers' Meeting was held.

(see UN/ESCAP-1·5, Japan-3·4, Russia Far East-5)

3. Penetration of International Frameworks into the Region

As examples of the infiltration of international frameworks into the region, completion of Indonesian Sectoral Agenda 21, establishment of the "ECO ASIA" Institute in Mongolia, creation of a law in Mongolia meeting requirements of the Basel Convention (which was applied to the case, illegal transfer of hazardous wastes to the Philippines removed by the Japanese government) were reported.

In particular, although the Sixth Conference of the Parties (COP-6) to the United Nations Framework Convention on Climate Change (Hague, The Netherlands) failed to reach agreement on entry into force of the Kyoto Protocol, it has been reported that publication of reports and documents on policies concerning climate policies in the region, and preparation of inventories of greenhouse gas (GHG) emissions are ameliorating climate change problems. This clearly indicates that international frameworks have been steadily penetrating into the region.

(see Cambodia-2, Indonesia-2, Lao PDR-2, Malaysia-3, Mongolia-2·3·5)

4. Efforts towards a recycling-based society to enable sustainable development

Countries in the region have made efforts to reform social structure for a recycling-

based society in order to shift current systems such as mass production, mass consumption and mass disposal towards a sustainable society. The Basic Law for Establishing a Recycling-based Society, which promotes waste reduction and recycling was passed in Japan. It is regarded that the law meets requirements in international society from the point of introducing the concept of "Extended Producer Responsibility (EPR)". Korea has established the Presidential Commission on Sustainable Development (PCSD).

In order to move into a recycling-based society, not only action, such as seen in the draft rules to control reprocessing of used lead acid batteries in India, but also measures considering regional characteristics, such as those observed in the environmental disaster of a garbage avalanche that occurred in a dumping site in Philippines, are prerequisites.

With the developments from industrialization, it has become clear that many toxicological problems are arising due to increasing utilization of chemicals in processing of products and in their waste. The mistreatment of radioactive waste in Thailand can be regarded as one of such examples. This reinforces the necessity of appropriate measures to deal with hazardous materials.

(see Bangladesh-2, India-2, Indonesia-3, Japan-1, Korea-3, The Philippines-1, Russia Far East-5, Singapore-3·5, Thailand-5)

5. Policies to prevent environmental destruction caused by urban development

With rapid industrialization, the situation of environmental destruction has been growing more and more serious in many countries. To cope with these problems, new decrees and laws to protect the environment have been established and revised. For example, decrees and laws to protect the environment have been established. These include the law to control emission of air polluting matters, the ordinance¹ covering the regulation of exhaust gasses from diesel vehicles in the Tokyo Metropolitan Area, and the decree of environmental impact assessment (EIA) to prevent pollution which will be caused with increasing development and infrastructural expansion in Lao PDR.

As a step in the region and subregion, the Kitakyushu Initiative was adopted as a part of the Regional Action Programme (RAP) which is one of the outputs of the Ministerial Conference on the Environment and Development in Asia and the Pacific (MCED) 2000. The initiative focuses on environmental protection in urban areas and leads to promotion of local measures. In addition, the "Green Olympic Action Plan" was initiated by Beijing in China.

(see UN/ESCAP-3·4, Cambodia-3, China-1 to 3, Japan-2, Lao PDR-1·3, Nepal-5)

6. Review of development projects

Interest in environmental problems has been growing through activities to boost environmental protection. This is reflected in many reports in which development projects have been reviewed, and problems of projects pointed out.

(see Korea-2·4, Malaysia-1·4·7, Thailand-1 to 4, Viet Nam-3)

¹ "The Ordinance Concerning Environment to Secure Health and Safety of Residents of Tokyo (Ordinance for Environmental Security)" was passed and adopted on 15 December, 2000.

The Asia-Pacific Region
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1. Ministerial Conference on Environment and Development in Asia and the Pacific (MCED) 2000

MCED2000, the fourth of the regional environmental ministers' conferences, which have been held every five years since 1985, was successfully organized from 31 August to 5 September 2000 in Kitakyushu, Japan, by ESCAP with co-sponsorship of the Asian Development Bank (ADB), World Bank and United Nations Environment Programme (UNEP).

Ministerial-level representatives of 42 countries and 33 international organizations participated in the conference, to a) comprehensively review the state of the environment and sustainable development policies in the region, b) assess the implementation of Agenda 21, international environmental conventions and Regional Action Programme (RAP) 1996-2000, c) deliberate the critical environmental concerns for the region, and d) formulate a new blueprint of actions for the next five years.

A series of associated events were organized by NGOs, media, women's groups, youth organizations and the private sector, etc. to ensure multi-stakeholder input into the intergovernmental deliberation.

The conference adopted 1) **Ministerial Declaration "Vision for the 21st Century"** reflecting the high-level political commitments expressed in the conference, regarding the countries' support towards the realization of environmentally sound and sustainable development into the next century in the region, 2) **Regional Action Programme (RAP) 2001-2005**(see article 3) supplemented with priority implementation mechanism 3) **"Kitakyushu Initiative for a Clean Environment(see article 4)"**, and 4) **Regional Message for Rio+10**.

2. State of the Environment in Asia and the Pacific 2000

ESCAP study on State of the Environment in Asia and the Pacific (SoE) has been conducted and published every five years since 1985. The fourth study was completed in 2000 and its major findings were submitted to the Ministerial Conference to facilitate the deliberation on the region's urgent environmental challenges.

The SoE analysis, presented with an environmental data compendium in 22 chapters, demonstrates that overall environmental conditions are continuing to deteriorate, and the challenges for sustainability have been intensifying in the region. There are some positive trends that are discerned in areas of policy responses, such as strengthening of institutions and organizations for environment, improvements in policy formulation and implementation, growing environmental consciousness, and increased participation of NGOs and civil society groups. However, the failure to avoid environmental degradation can still be traced basically to the weakness of the institutions, adoption of inappropriate policy tools and lack of effective policy enforcement. The principal environmental challenge in the 21st Century is therefore to carry out con-

tinual policy reform and to improve its effectiveness of implementation both in cross-sectoral and sectoral areas.

3. Regional Action Programme (RAP) for Environmentally Sound and Sustainable Development in Asia and the Pacific 2001-2005

RAP 2001-2005, as adopted as a core product of MCED2000, provides a focused and concrete framework for action to redouble efforts towards sustainable development in Asia and the Pacific for the next five years. It clusters the issues into eight strategic programme areas: environmental quality and human health, biodiversity, coastal and marine environment, freshwater, desertification, climate change, sustainable energy, globalization and policy integration, in order to provide a multidisciplinary and broad-based approach to problem-solving. In elaborating these themes, it provides the rationale for problem identification objectives, and ways of alleviating the problems, for example, through setting achievable targets as appropriate. Each of the programme areas indicates the status and trends of the issues, action areas, an implementation strategy, and activities and targets at the national level, including areas of support at the regional and subregional level.

Further, it elaborates the overall implementation, coordination and appraisal mechanisms. While the primary responsibility for implementing RAP lies with the national governments, regional and subregional cooperation will foster opportunities for assistance and a coordinated response to national initiatives. The role of various stakeholders that include major civil society groups such as local organizations, women, non-governmental organizations, media and the private sector is also highlighted.

Progress in implementing RAP will be reviewed by the next MCED that is likely to be organized by 2005.

4. Kitakyushu Initiative for a Clean Environment

MCED2000 adopted the Kitakyushu Initiative as a priority implementation mechanism of RAP for its programme area of environmental quality and human health, with special focus on the urban areas. Its mission is to achieve measurable progress in improving the urban environment in major cities in the region, principally by promoting local initiatives aimed at control of air and water pollution, and minimization of all kinds of wastes, through selected technical, institutional, regulatory and participatory measures available.

The formulation of the initiative took maximum advantage of the fact that the Ministerial Conference was organized in close cooperation with the City of Kitakyushu. Kitakyushu is renowned for having successfully overcome the environmental pollution that was once very severe in its urban area, and for continuing its efforts to assist pollution-control initiatives in a number of local authorities in the Asia-Pacific region.

As the initiative identifies priority actions for its implementation, specific features include: a) promotion of ground-level activities to achieve tangible improvements in urban environmental quality; b) application of quantitative indicators/targets in monitoring such improvements; c) encouragement of transfer of 'best practices', i.e. replication of successful measures used in improving urban environment by cities that have achieved significant progress; d) strengthening local initiatives and partnership;

and e) sharing experiences through an action-based Network.

Immediately after MCED2000, ESCAP started designing follow-up activities in consultation with a number of collaborating organizations, including the City of Kitakyushu and Institute for Global Environmental Strategies (IGES).

5. Environmental Cooperation in North-East Asia

Momentum of environmental cooperation in North-East Asia is intensifying and progress has been observed in different initiatives.

In this subregion, the North-East Asia Subregional Programme for Environmental Cooperation (NEASPEC) has provided a unique intergovernmental mechanism for environmental cooperation since 1993. It has continuously developed its function as a policy dialogue forum to deal with environmental issues of common concern to the countries in the subregion. This is in parallel with pursuing environmental cooperation projects in the relevant fields, with participation of China, Mongolia, Japan, the Republic of Korea, Russian Federation and the Democratic People's Republic of Korea. Its Sixth Meeting of Senior Officials (Seoul, 8-10 March) was a landmark in adopting a very momentous Vision Statement, which *inter alia* committed NEASPEC to develop the current framework into more comprehensive institutional and financial provisions in a two-year timeframe. As the first step, a core fund was established with the initial pledge by the Republic of Korea to contribute 100,000 U.S. dollars.

NEASPEC's Vision Statement also calls for further coordination among environmental cooperation initiatives that are ongoing at sectoral or informal levels in the subregion. These are namely, Acid Deposition Monitoring Network in East Asia (EANET), ECO ASIA, Northeast Asian Conference on Environmental Cooperation (NEAC), North-West Pacific Action Plan (NOWPAP), Tumen River Area Development Project and Tripartite Environment Ministers Meeting among China, Japan and the Republic of Korea, many of whom showed tangible progress in the past year. Among others, NEAC, at its 9th meeting (Ulaanbaatar, 24-26 July), committed to developing a mission statement by next year's meeting, for possibly promoting itself as a more open and frank forum involving environmental practitioners, academia and NGOs, and linking broad environmental expertise to intergovernmental dialogues. The enhanced participation of the Democratic People's Republic of Korea was discussed in many of these initiatives reflecting the recent detente in the Korean Peninsula.

The potential of NGOs and civil society organizations are repeatedly emphasized in many fora. The international symposium "Review of Environmental Cooperation in Northeast Asia and Prospects for the Millennium" (Seoul, 5-6 October) organized by the Kyobo Foundation in the Republic of Korea was an admirable event to bring together different environmental cooperation initiatives by broader perspective.

The Asia-Pacific Region
Mr. S. Tahir Qadri
Asian Development Bank (ADB)

1. Impact of Forest Fires on the Association of South East Asian Nations (ASEAN)

The wildfire episodes in Southeast Asia, have all resulted in loss of life, livestock, capital, and even extended impact in the form of smoke and haze in adjacent countries of the region. The fires were made possible by periods of reduced rainfall that were long enough for rainforest to become dry and vulnerable to burning. Since 1982, five major fires have been recorded in Southeast Asia, with small fires occurring almost annually. In Sumatra, more than 1.5 million hectares have been affected while over 6 million hectares have burned in Kalimantan, about 0.1 million hectares in Java, approximately 0.4 million hectares in Sulawesi and about 1 million hectares in Irian Jaya. Of the burned area, 4.65 million hectares are forestland. It was estimated that economic loss could amount to 6 billion U.S. dollars, which does not include the full environmental costs (loss of biodiversity or cost of social suffering).

Forest fires have affected the indigenous population and their means for livelihood, and jeopardized the prospects and ability of the rural poor to improve their standard of living. Surviving forests were also degraded by the potential impacts affecting composition, regeneration, productivity, protection functions and aesthetic values. The ecological impacts of forest fires were reflected in the degradation of vegetation quality, expansion of savanna and sterile grasslands, erosion of biodiversity, damage to the health of forest ecosystems, plant mortality, loss of wildlife habitat and wildlife decline, pollution in rivers and estuaries, and overall ecological retrogression.

Indirectly, agricultural productivity and tourism were affected too. The forest fires have affected the quality and productivity of soil by destroying humus, and altering its chemistry. They have also led to an increase in soil temperature, decimating microbial inhabitation, and reducing moisture retention capacity of the soil. This in turn caused the erosion of surface soil and nutrient loss, thus increasing run-off, lowering the sub-soil water table which caused desertification, and ultimately, reduced the carrying capacity of land involved.

Forest fires also contribute to global climate change and warming. The burning of forests destroys an important sink for atmospheric carbon. Biomass burning has contributed to as much as 10 percent of gross carbon dioxide emissions and 38 percent of tropospheric ozone.

The formation, dispersion, and the adverse impacts of haze have affected air quality both within boundary and transboundary. Other impacts include impairment of visibility, transport disruption, and health hazards. Apart from public health, social welfare is adversely affected through displacement of communities, loss of income source, and dwindling livelihood opportunities.

The increasing trend in the frequency and intensity of fire and haze incidents has led to several parallel alternatives globally and in the region. Indonesia, the hardest and

most frequently hit, has taken several strategic steps and institutional measures to suppress forest fires and contain it. UN agencies, development banks, international community, and non-governmental organizations have offered fire emergency assistance of various types. The Association of South East Asian Nations (ASEAN) has assumed a central role concerning the issue on transboundary atmospheric pollution in the region. The Asian Development Bank (ADB) provided the Regional Technical Assistance (RETA 5778) for *Strengthening the Capacity of the ASEAN to Prevent and Mitigate Transboundary Atmospheric Pollution* and Advisory Technical Assistance (ADTA 2999-INO) on *Planning for Forest Fire Prevention and Drought Management in Indonesia*. The focus of ADB's regional technical assistance project was to strengthen the ASEAN's capacity in operationalizing and implementing the Regional Haze Action Plan (RHAP) which was signed during the time intense fire, smoke and transboundary pollution were taking place. The ADB's response was a two-pronged approach - to support the regional as well as national initiatives by addressing the causes of economic and environmental damages from these fires and preventing recurrence. Through the technical assistance provided by the United Nations Environment Programme (UNEP) and ADB, the operational RHAP was implemented in a sustainable manner. Transboundary Agreement on Haze Pollution is being developed. It has already been agreed that the agreement will be negotiated at the ASEAN Environment meeting.

[BANGLADESH]
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1. Devastating Flood Hit South-West Region of Bangladesh

The south-western region of Bangladesh was hit by a devastating flood during the months of September and October 2000. The flood was rather unusual and unprecedented since the south-west region has for long been known as a flood-free area of Bangladesh, a country prone to floods and other natural calamities. About one-tenth of the country's area and more than 20 million people were badly affected by the flood which caused more than 100 deaths, and huge loss of properties and standing crops. The late monsoon flood was attributable to heavy rains in the region and the neighboring districts of India. In the opinion of some experts, the flood was caused by the construction of embankments and sluice gates without environmental assessment, thus reducing the drainage capacity of the rivers and canals into the Bay of Bengal.

References: The Daily Star, 30 October 2000 and Financial Express, 11 October 2000

2. Sound Waste Management; an Immediate Necessity for Dhaka City

According to recent statistics, 5400 tons of human, 3500 tons of solid and other waste are generated in and around Dhaka City per day. About 400 tons of solid waste remains on the road and in open spaces, while 300 tons are recycled by the rag pickers. Of the city's solid waste, 49% is generated from residential areas, 21 percent from commercial areas and 24 percent from industrial areas. Potentially hazardous hospital wastes are being dumped into municipal bins along with household waste which is collected by the city cleaning staff. Human waste has become a major contributor to



ダッカ市の廃棄場から再利用可能な物を掘りおこしている人
Rag pickers collecting recyclable materials from a dumping-site in Dhaka city

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environmental pollution owing to the fast growing population, and inadequate sanitation and waste treatment system. There is a growing demand from the citizens to undertake a sound waste management programme for improvement of the city environment.

Reference: The Daily Star, 19 November, 2000

3. Suspended Particulate Matters² Remain High in the Air of Dhaka City

Although the introduction of lead-free petrol last year has reduced the lead content in the air, other suspended particulate matters continue to remain high; four times the limit in some parts of the city. Earlier, the Government decided to undertake initiatives to make petroleum products lead free in the wake of deadly lead pollution and its harmful impact on human health, especially in the case of children. As a result, the import of higher octane unleaded petrol instead of lower octane rated petrol has gone up, reducing lead pollution in the air. However, inefficient combustion remains a problem since most of the vehicles are old, releasing unburned hydrocarbon into the air.

4. Red List on Endangered Wildlife

At least 13 species of vertebrate animals have disappeared in Bangladesh during the last century according to a book: the *Red List of Threatened Animals of Bangladesh*, published by the International Union of Conservation of Nature (IUCN). Moreover, 54 varieties of fish, eight types of amphibians, 58 types of inland reptiles, 41 types of resident birds and 40 inland mammals have come under the threat of extinction. Bangladesh has an area of 147,570 square kilometers, and houses 766 categories of inland fishes, 442 categories of marine fishes, 22 types of amphibians, 109 types of inland reptiles, 17 types of marine reptiles, 388 types of resident birds, 240 types of migrant birds, 110 inland mammals and three marine mammals. Of the surviving species, 64 are critically endangered categories including 12 fishes, 19 birds, and 21 mammals.

Reference: The Daily Star, 19 November, 2000

² Suspended Particulate Matter (SPM) is fine particles in the air. Its diameter is less than 10 μm [Source: Kankyo Kagaku Jiten(Dictionary of Environmental Science), 1994, Tokyo Kagaku Dojin(Tokyo Chemistry Coterie)].

[CAMBODIA]
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1. Floods in Cambodia

In 2000, during the rainy season from May to October, Cambodia was heavily affected by two different floods. Provinces along the Mekong River were heavily flooded by the surplus water from the river while the western parts of Phnom Penh were affected by heavy and unusual rains from the upland.

According to the National Committee for Disaster Management, it was estimated that 112 districts in 20 provinces were affected, leaving 186 people dead, 606 sick, and over four hundred and sixty thousand families (over two million people³) homeless. Of approximately five hundred thousand flooded hectares⁴ of rice, about three hundred thousand hectares⁵ were destroyed. In addition, hundreds of infrastructures such as schools, roads, water irrigation systems, and bridges were heavily affected.

Now the situation is recovering. But in the near future, due to these floods Cambodia may suffer from problems such as a shortage of seeds for the next cultivation, as well as disease and damage to fauna and flora, and a change in the ecosystem.

2. National Greenhouse Gas Inventory for 1994

In early 2000, Cambodia conducted its first 1994 national greenhouse gas (GHG) inventory following the revised 1996 Intergovernmental Panel on Climate Change (IPCC) methodology. The inventory includes three major GHGs: carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). It covers five major sectors: (i) Energy; (ii) Industrial Process; (iii) Agriculture; (iv) Waste; and (v) Land Use Change and Forestry. The inventory of GHG emissions by sources and removal by 'sinks', for example forests that remove carbon dioxide from the atmosphere, indicates that in 1994, Cambodia emitted 14,197Gg (giga-grams) of CO₂ equivalent. In the same year, forests absorbed 60,555 Gg of CO₂. This means that in 1994, Cambodia was a country with a total net carbon sink uptake of 46,358 Gg of CO₂ equivalent.

The main source of carbon dioxide emissions was the energy sector, which was estimated at 1,272 Gg. The remaining were: 1,379 Gg from land use change and forestry, and 50 Gg from industrial processes. Methane emissions in 1994 was 372 Gg, of which 91% was generated from agriculture, especially from domestic livestock and rice cultivation; 6% from energy; 2% from waste; and very small amount from land use change and forestry. For nitrous oxide, the total emission of 12 Gg was mainly emitted from agricultural soil. (See: 3. New Sub-Decree of Air Pollution.)

3. New Sub-Decree of Air Pollution

Environmental pollution status in Cambodia, including air pollution, is still low compared to adjacent countries. However, the Ministry of Environment established the

More exact figures are:³ 464,998 families (2,250,227 people) homeless.

⁴ Of 535,178 flooded hectares of rice.

⁵ 304,887 hectares were destroyed.

'Sub-Decree of Air Pollution Control and Noise Disturbance' on 10th July 2000 for the protection of the environment.

Although we have this sub-decree, we only have approximate data and statistics of factories, 200 factories and 34,000 handicrafts, of which 170 factories and 1200 handicrafts⁶ are located in Phnom Penh City. Most of them are garment factories. This estimation also indicated the amount of vehicles; about fifty seven thousand cars, 5,000 trucks, 500 buses, 450,000 motorbikes⁷ are being used. 60% of motorbikes and 90% of cars exist in urban areas, mainly Phnom Penh Municipality.

Today, the main sources of atmospheric pollution are considered to be the industrial sector and urbanization. Energy consumption for these sectors is generated from fuel, such as gas and coal, which are exported from overseas, except for fuel wood, cattle manure and other biomass fuel.

The communication system in Cambodia, including that of Phnom Penh City, so far, is being confronted with major problems, particularly traffic jams and poor road conditions. The effects resulting from the traffic jams include traffic accidents and air pollution. It is predicted that in the future, the atmosphere in Phnom Penh City will be faced with pollutants from crowded vehicle movement. It is necessary that a proper management system to control and analyze air pollution, including a laboratory system, is established.

4. Coastal and Marine Problems

The coastal and marine ecological system, in the year 2000, continues to be threatened by destructive and illegal activities.

Mangroves, which are important nursery areas for many species, protect the coastline from storm surge and shoreline erosion, and provide fishery opportunities, are under severe threat. They were felled by nearly all coastal communities for construction materials and firewood. More seriously, mangroves were destroyed by the expansion of salt farms and extensive shrimp farming.

Beach systems, which provide economic opportunities through tourism, nesting areas for turtles, and help protect local communities from wave surge, are heavily polluted by litter, both from local communities and water-borne sources.

Coral reefs, although little known in Cambodia, are also destroyed by dynamite and cyanide fishing, and coral collection. Threats to the national wildlife such as bleaching and crown-of-thorns starfish also occur in Cambodia.

Likewise, seagrass beds, which are important nursery and breeding areas for commercial important species, are under severe threat by illegal and destructive fishing activities such as trawling and push-netting.

More exact figures are: ⁶ 200 factories and 34,085 handicrafts, of which 170 factories and 1,282 handicrafts are located in Phnom Penh.

⁷ 57,169 cars, 5,400 trucks, 530 buses, 451,000 motorbikes are being used. 60% of motorbikes and 90% of cars exist in urban areas, mainly Phnom Penh Municipality.

[CHINA]

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1. The Second Revision of the Law of Air Pollution Prevention and Control

The Law of Air Pollution Prevention and Control was issued on September 5, 1987 and was amended in August, 1995. The first revision of the law played an important role in the promotion of national air pollution prevention and control. However, with the rapid economic development and speeding up of urbanization in recent years, the law could not meet the higher environmental requirements set by the state government and needs to be further amended. Therefore, the second revision of the law was passed by the Standing Committee of the National People's Congress on April 29, 2000 and issued for enforcement on September 1, 2000. The major amendments are to: 1) clear and define the fact that pollution discharge exceeding relevant discharge standards is a violation of the law; 2) establish the total control system and discharge permit system⁸; 3) establish the charge rates based on total pollutant discharge; 4) focus on air pollution prevention and control in major cities; 5) strengthen the control of pollution from vehicles; 6) strengthen the control of urban dust pollution; and 7) intensify legal liabilities.

2. Great Efforts Taken to Realize the Target of "One Control and Double Attainments"

"One control" means that by the end of 2000, the total discharge of major pollutants in each province, autonomous region and the capital of each province must be controlled under the quota allotted by the state. One "attainment" means that by the end of 2000, the pollutant discharge from all industrial sources must attain national or local discharge standards. The other "attainment" means that ambient air quality and the quality of surface water in 47 designated environmental protection cities (municipalities directly under the central government, provincial capitals, cities located in the special economic zone, coastal and opening-up cities and key tourism cities) must attain the national standard. "One control and double attainments" is an environmental target for the ninth five-year-plan (1996-2000) set by the State Council in 1996 and therefore the top priority of environmental protection work in 2000, the last year to achieve the target. Through such measures as mandatory requirements on treatment within a stated time, adjustment of economic structure, technological renovation, cleaner production and shutting down facilities which are incapable of attaining the standard, the rate of attainments was 81% at the end of July, 2000. The total discharge of each twelve major pollutants has been controlled within the quota. Of the 47 key cities, 18 cities satisfied the ambient air quality standard, 33 cities reached the surface water quality standard and 16 cities attained the standards for both air quality and surface water quality.

⁸ Explanation of 'Discharge Permit System': a legal system stipulated in the newly revised Law of Air Pollution Prevention and Control. Article 15, Chapter Two of the Law writes: "Local people's governments in the designated zones of total control of air pollution check and ratify total emission quotas of major air pollutants from enterprises and facilities, and issue discharge permits according to the conditions and procedures set by the State Council and based on the principle of transparency, equity and just". "Enterprises and facilities, who emit pollutants and have the assignment of total control air pollution, must behave according to the ratified emission quota and emission condition prescribed in the discharge permit."



「一控双達標」の実現に向けて

One Control and Double Attainments

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3. Beijing Initiates the "Green Olympic Action Plan"

At the end of August this year, Beijing was selected as one of the candidate cities for hosting the 2008 Summer Olympic Games. At the same time, Beijing initiated the "Green Olympic Action Plan"; "Green Olympic" is one of the three themes for the competition. In recent years, Beijing has taken a number of actions to improve the environmental quality and environmental infrastructure. Presently Beijing operates four sewage treatment plants covering 50% of the total urban sewage. Beijing plans to construct another four medium to large sized sewage treatment plants by the end of 2006, making the total disposal rate more than 90%. For the disposal of municipal solid wastes, Beijing has four landfills, two incineration plants, one compost plant and two comprehensive disposal plants, with total disposal rate being 68%. One incineration plant generating electricity is under construction. The city government plans to construct another six landfills by 2002. Since 1998, Beijing has taken more than 60 measures to combat air pollution, including the application of high quality coal with low sulphur, the wide use of natural gas, enforcement of new criteria for vehicles, the promotion of clean fuels for public transportation and taxis and the controlling of dust from open construction sites. Beijing will welcome the new millennium with clear waters, green lands and a blue sky.

Reference: China Environment Newspaper, 2 September, 2000

4. Sandstorms Hit Beijing and Tianjing Municipalities

Severe sandstorms have been a rarity in North China throughout most of the past 50 years. However, this has changed in recent years. North China was pelted with mixtures of wind and sand twelve times this past spring. The sandstorms are coming from rapidly expanding deserts in China's northeastern areas. A research group has been set up to develop anti-desertification technologies and methods for application in Beijing and Tianjin municipalities and other north provinces. During the tenth five-year plan (2001-2005), new measures will be taken to increase green foliage in north-west parts of the country. According to statistics, 51 percent of the land in these regions is desert, accounting for 57 percent of the country's total. The country's top legislature, the National People's Congress will enact a new law regarding the prevention of sandstorms and desertification.

Reference: China Daily, 28 November, 2000

[INDIA]
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1. India Joins the GLOBE Program

In August 2000, India joined the GLOBE Program. Started in 1994 by U.S. Vice-President Al Gore, the GLOBE Program is a worldwide network of students, teachers, and scientists working together to study and understand the environment. GLOBE students, from over 9,800 schools worldwide, make environmental observations and report their data through the Internet. India will join the program on a small scale with 50 schools participating. The Centre for Environment Education, in Ahmedabad, will administer the program in the first year.

For further information, ENVIRONNEWS August September 2000, <http://envfor.nic.in/news/news.html> and the GLOBE Program, <http://www.globe.gov>.

2. Draft Rules for Recycling/ Management of Lead Acid Batteries

In May 2000, the Ministry of Environment and Forests (MOEF) posted draft rules to control hazardous and unauthorized reprocessing of used lead acid batteries. Battery manufacturers, importers, and assemblers shall collect one used battery for each new unit sold, and collected batteries shall be sent to MOEF registered recyclers. Experts believe that given the innumerable existing illegal smelting units, enforcement of the rules will be a difficult task, and lead emission standards need to be set up for monitoring pollution.

For further information, Down to Earth, September 30, 2000, http://www.oneworld.org/cse/html/dte/dte20000930/dte_srep1.htm and ENVIRONNEWS June July 2000, <http://envfor.nic.in/news/news.html>.

3. Supreme Court Clears Sardar Sarovar Project on the Narmada River

After six years of litigation, the Supreme Court dismissed a public interest petition and cleared the construction on the Sardar Sarovar dam to a height of 90m. Environmental clearances will be required for each stage beyond 90m to the project maximum of 138m. The dam, while providing irrigation water and hydroelectric power, will also displace 245 villages. Critics of the project maintain that the concerned authorities have neither the capacity, nor the will, to rehabilitate the displaced population.

For further information, <http://news.indiainfo.com/spotlight/narmada/18sci.html>.

4. State Governments Fund Participatory Water Harvesting Programs

Following recent media hype and monsoon failure, two states, Gujarat and Andhra Pradesh, launched crash programs encouraging rural communities to build small scale, traditional, rainwater-harvesting schemes. Proposals for the check dams were invited from the villagers themselves with committees in individual villages administering the construction. The Gujarat government's decentralized program, that emulated and built upon the successes of smaller rainwater harvesting schemes around the country, has made a significant difference in the state's drought-prone areas. Despite the poor

rain of 2000, more than three-fourths of the 10,500 check-dams⁹ built were reportedly overflowing, and the groundwater table has risen and dug wells have water.

For further information, Down to Earth, October 31, http://www.oneworld.org/cse/html/dte/dte20001031/dte_analy.htm and <http://www.lgpc.state.ny.us/CheckDam.pdf>.



溜池の建設
Construction of check-dam
(<http://www.narmada.org>から転載、
Courtesy of www.narmada.org)

⁹ Check dams are small temporary (usually stone) dams built across drainage channels like streams and rivers, to reduce the flow velocity. By reducing velocity, the check dams allow the waterway to be full over a longer period of time, thus allowing better use of the water and also allowing recharge of ground water.

[INDONESIA]

Prof. Dr. Mohamad Soerjani

Institute for Environmental Education and Development (IEED), Indonesia

1. NATIONAL CONFERENCE ON NATURAL RESOURCE MANAGEMENT

Natural resource management is a very crucial problem in Indonesia. A national conference was held in Jakarta on May 23-25, 2000 to discuss among the stakeholders how natural resource management could appropriately support national development to improve the quality of life of the people in a sustainable way. The conference was held recognizing that natural resources, so far, are not being managed equitably or beneficially for the people in a sustainable manner, and in reality the quality of our natural resources is continuously being degraded. Stakeholders of natural resource management development and the President, Mr. Abdurrachman Wahid, attended the conference.

The purpose of the event was to discuss a national consensus, so that there will be a better strategy to develop an integrated agenda among all stakeholders through all sectors of development. The conference was concluded with various strategies concerning the economic and business atmosphere to support national development, the culture and education, politics and the civil society, and law as well as policy to manage natural resources.

It was suggested that in order to create a corporate social responsibility of the business community it would be necessary to implement green accounting. There must be a reorientation of the vision and mission of national education to include in it commitment to manage our valuable natural resources including its mega biodiversity. All policies and regulations must include the spirit to eliminate the discrimination against women, and finally there must be reorientation of a development paradigm to allow bargaining opportunity among development stakeholders.

2. INDONESIAN SECTORAL AGENDA 21

On October 12, 2000 the Ministry of State for Environment, with the support of UNDP and with the participation of development and environmental experts from universities, research institutions, business and industry and NGOs completed the Sectoral Agenda 21 that consists of principles and guidelines to implement sectoral development in a sustainable way. The principles and guidelines are aimed at improving the quality of life of people and are outlined in three books covering basic guidelines, planning, and sustainable development indicators. These sectoral development guidelines include five books consisting of the following sectors: forestry, mining, energy, housing and tourism. These books are complementary to the Agenda 21 that Indonesia launched in 1997, and covers public service (among others to improve health and welfare), waste management, soil resource management, and natural resource management.

Those who require further information should approach Mr. Sudarsono, Secretary of the Ministry of State for Environment or Dr. Ravi Rajan, UNDP Representative for Indonesia.

3. ENVIRONMENTAL TOXICOLOGY, POLLUTION CONTROL AND MANAGEMENT

A seminar and training course concerning environmental toxicology, pollution control and management was held in Jakarta in October 2000. The seminar was organized by the Environmental Impact Management Agency (BAPEDAL), the Ministry of State for Environment and UNDP. Prof. Dr. Chulabhorn, the daughter of King Bumiphol Adulyadev of Thailand, who is an organic chemist and a toxicologist was invited to deliver a speech. She clearly suggested that there must be precautionary actions by all Southeast Asian countries (Malaysia, Thailand, Vietnam, Philippines, Singapore and Indonesia), since these countries have undergone rapid industrial development. Therefore, they are all facing serious toxicological problems due to the increasing trends of chemical utilization in the processing of products, and in their waste.

She mentioned that in 1977 there were 4 million chemicals utilized by industries. Among these, 70,000 were used by the community, and 1,000 new chemical formulas have been added to the market annually since then. Professor Chulabhorn who is a professor at Mahidol University also stated that 800 to 900 chemicals were known to have carcinogenic effects that cause cancer to human beings, and these numbers may increase to 1,600-2,800 chemical formulas in the future. She seriously warned us that there must be toxicological understanding and precautionary principles included in the curriculum of education at all levels. As we all understand, toxic chemicals are spreading around us, in the food offered to school children, in our day-to-day foods, in our home, office, agriculture and industry.



2000年10月30日にジャカルタで開催された環境毒物学に関するセミナーで講演するチュラボン教授 (写真中央)。セミナーにはインドネシア政府から環境大臣のソニー・ケラフ博士が出席した。Dr. Sonny Keraf, the Indonesian Minister of State for Environment, has accompanied Prof. Chulabhorn (seated in the middle) in delivering her speech at the environmental toxicology seminar in Jakarta on October 30, 2000

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4. NATIONAL FLORA AND FAUNA LOVING DAY, 2000

On November 5, 2000 the National Flora and Fauna Loving Day, 2000 was inaugurated at Bogor Presidential Palace by the Ministry of State for Environment. The event was attended by various groups of communities, NGOs, embassy representatives, experts from universities and research institutions from all over the country. The Vice President Mrs. Megawati Sukarnoputri, the daughter of the first President Sukarno, attended and delivered a speech. The National Flora and Fauna Loving Day, 2000 was aimed at socializing the importance and potential of the biodiversity of our flora and fauna.

These have to be utilized in a sustainable way to improve the quality of life of all people.

5. CARING FOR THE FUTURE

The Independent Commission on Population and Quality of Life was established in Paris on December 3, 1991 under the initiative of several organizations that have been involved for many years in the population field and that recognize the need for answering accumulating questions regarding the population/family planning fields and programmes. The goal of the Commission is to analyze conditions that could ultimately improve the quality of life of people and work towards a healthy and sustainable environment.

The Commission was led by Mrs. Maria de Lourdes Pintasilgo a chemical engineer who was Prime Minister of Portugal (1979-80) with members from various parts of the world. After several public hearings around the world, among others in Manila for Southeast Asia from September 20 to 23, 1994, finally the report of the Commission was published as a book: *CARING FOR THE FUTURE; A Radical Agenda for Positive Change*. The book contains analyses of the present and review for the future matters related to the quality of life as challenged by the population dynamics, social, ecological and economic situations in the present global atmosphere. The book also discusses in depth the carrying capacity of the Earth, the alternative educational policy, from medical to health care, redefinition of work, empowering women, and finally mobilizing resources of the Earth, amongst others, by tapping the global market.

The book was published by Oxford University Press, and UNESCO supported the translation of the book into Indonesian language. This was done under the responsibility of Dr. Mohamad Soerjani.

Those who are interested in obtaining the Indonesian translation should contact the Institute for Environmental Education and Development, Jakarta.

Phone: 66-21-7902951 / Fax: 66-21-7985460

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[JAPAN]
Dr. Yohei Harashima,
Takushoku University, Japan

1. Basic Law for Establishing a Recycling-based Society

The National Diet passed the 'Basic Law for Establishing a Recycling-based Society' on May 26, 2000. This law aims to promote waste measures and recycling measures comprehensively and systematically. The most striking feature of this law is the adoption of the principle of "Extended Producer Responsibility" (EPR) which requests that those who produce and/or sell products bear a certain responsibility to produce and dispose of goods in an environmentally friendly way. In addition, five individual laws, such as revision of the Waste Disposal Law, were established in the same National Diet session.

2. Regulation of Exhaust Gases from Diesel Vehicles in the Tokyo Metropolitan Area

Ahead of the Japanese government, the Tokyo Metropolitan Government proposed a policy for regulating the emission of Particulate Material (PM¹⁰) in exhaust gases from diesel vehicles. This policy bans non-complaint vehicles from driving within Tokyo. It is expected to be adopted in the Tokyo Metropolitan Assembly in December this year, and be put into effect in October 2003. This is the first case where local governments have, in their own right, taken initiatives to regulate exhaust gases from diesel vehicles.

For further information, <http://www.kankyo.metro.tokyo.jp/>.

3. ESCAP Ministerial Conference on Environment and Development

The Ministerial 'Conference on Environment and Development in Asia and the Pacific' was held from August 31 to September 5, 2000 in Kitakyushu, Japan. The conference was attended by participants at the Ministerial level from countries in the Economic and Social Commission for Asia and the Pacific (ESCAP) region and beyond. Among the major outcomes of the conference were the 'Vision for the 21st Century: Ministerial Declaration on Environment and Development in Asia and the Pacific', the 'Regional Message for the Rio+10', and the 'Kitakyushu Initiative for a Clean Environment'.

The Institute for Global Environmental Strategies (IGES) reported the issues for sustainable development to the conference. It also held a seminar to introduce IGES activities.

For further information, <http://unescap.org/mcd2000/index.htm>.

¹⁰ Particulate matter (PM) consists of solid or liquid particles. The Air Pollution Control Law specifies particulate matter (PM) as one substance of exhaust gases from vehicles [Source: Kankyo Kagaku Jiten (Dictionary of Environmental Science), 1994, Tokyo Kagaku Dojin (Tokyo Chemistry Coterie)].

4. G8 Environment Ministers' Meeting

The Environment Ministers of the eight major industrialized countries and the European Commissioner responsible for the environment met from 7 to April 9, 2000 in Otsu, Japan. This was as a follow-up to the last meeting in Schwerin in 1999, to discuss challenging environmental issues. Key themes discussed at the meeting included climate change, sustainable development in the 21st century and Rio+10, and the environment and health. In the field of climate change, the communique referred in particular to the necessity of the ratification and effectuation of the Kyoto Protocol by no later than 2002.

For further information, http://www.eic.or.jp/eanet/g8_2000/e_index.html.

5. Illegal Transfer of Hazardous Wastes to the Philippines

2,700 tons of garbage in 122 containers, including disposable plastic syringes, adult diapers, aluminum foil and sanitary towels, were exported to the Philippines in July and October in 1999 by the industrial waste disposal company Nisso Ltd. of Tochigi Prefecture. The export allegedly violated the Basel Convention on the 'Control of Transboundary Movements of Hazardous Wastes and their Disposal', which prohibits the export of hazardous wastes. Therefore, the garbage was shipped back from the Philippines to Japan in early January in 2000. The return shipment was arranged and paid by the Japanese government because Nisso had gone bankrupt. This was the first case for the Japanese government to ship back illegally-exported waste in accordance with the Basel Convention.

[KOREA]
Dr. Hoi-Seong Jeong
Korea Environment Institute (KEI), Korea

1. Illegal Toxic Discharge by the Eighth U.S. Army

The Eighth U.S. Army stationed in Korea shockingly discharged 20 boxes of deadly poisonous antiseptic solution used for preserving corpses without any purifying processes. In addition to methanol, the solution included formaldehyde which is known to cause emotional uneasiness, loss of memory, and concentration disorder when in the form of gas, and kill fish and shellfish when in the form of liquid. It is a toxic material under strict control by Korean environmental laws and regulations.

The incident was publicized by a service worker in the U.S. army who made a conscientious announcement in the Green Korea United, which is one of Korea's biggest environmental NGOs. The Eighth Army was strongly criticized under the suspicion that they might have done that kind of unholy job more than a few times.

This incident provoked public calls for a more equal SOFA (Status of Force Agreement), which had been signed up during the Korean War and lacks any environmental provisions. The U.S. army, which has been rather passive in the revision of the agreement, has been made to pay more positive attention.

2. Suspension of the Planned Construction of Yongwol Multi-Purpose Dam

The construction of the Yongwol Multi-Purpose Dam was officially suspended on June 13 according to the decision of the Water Management Policy Co-ordination Committee under the Prime Minister's Office.

The project was initiated after the disastrous flood of the Han River in September 1990. The suspension was in response to the recommendation of the Civilian Investigation Team, that was- organized in September 1999, and wrapped up its reviewing activities to assess the validity of the construction project in May 2000.

Their conclusion was that the multi-purpose dam, which had a high level of bio-diversity and so was worth preserving, needed additional complementary countermeasures for problems like water shortage and flood regulation. It marked the first case where the dam construction plan that was very nearly launched was stopped, even though it had already gone through the whole preparatory procedure; assessment of the project's feasibility in 1991, designing of the construction structure in 1996, and notice of the planned construction site in September 1997.

With the suspension of the construction plan, the government is now arranging new policy conditions as in the newly established comprehensive long-term water resource management plan and the promotion of a water demand management policy.

3. Establishment of the Presidential Commission on Sustainable Development (PCSD)

The Korean Government, on August 5, officially launched the PCSD that was promulgated as a presidential order under the stipulation of the Sustainable Development Council.

The commission is a presidential policy advisory body for environmentally friendly and sustainable development, as envisioned by President Dae-jung Kim in 'New Millennium Environmental Vision' for the World Environmental Day on June 5.

The commission is supposed to consist of less than 35 members. 12 of these members are ministers, including the Finance-Economy Minister and the Labor-Welfare Secretary in Chief of the Presidential Office, who automatically join the commission as members. In addition, 20 civilian delegates representing the industry, the academic world, the legal circle, and NGOs are designated as two-year-term members by President. They also include chiefs of central administrative institutions, metropolitan cities, and provinces who are to additionally participate depending on the matters concerned.

The commission consists of six divisional committees: National Land Preservation Committee, Water Resource Committee, Ecology and Health Committee, Energy Policy Committee, Industry and Environment Committee, and International and Regional Cooperation Committee. Its secretarial body has three teams under the leadership of the Chief of Planning and Coordination.

4. Environmental Impacts Investigation of the Saemankeum Reclamation Project

The public-private joint investigation of the environmental impacts on the Saemankeum reclamation project was disappointingly wound up without any agreed conclusion.

The government on November 28, 1991 embarked on the Saemankeum reclamation project. The grand project is to build a 33-kilometer seawall connecting Byunsan-Myun Puan-Kun and the New Town of Kogunsan up to Beeung Island, developing a 11,800ha fresh water lake and 28,300ha land. This mega-sized national project was to cost 1.7 trillion won: 1.3 trillion for construction and 400 billion for compensation.

By the end of 1999, the budget had been executed to a considerable extent: 47% of the whole construction expense and 96% of the whole compensation fee. The environmental problems of the project were raised in full scale in 1996 when the pollution problem of Shiwaha Reserve became a social issue. From the later half of 1998, in particular, environmental impacts and the economic validity of the project were fully questioned by some environmental groups, concerning coastal environment, water quality pollution, and the destruction of an ecological system of mudflats.

The Public-Private Joint Investigation Team on the Environmental Impacts of Saemankuem Reclamation Project started working on their job in May 1995, with its 30 members including 21 civilian experts and 9 governmental and institutional representatives. However, its more than one-year investigation ended up in failure without any agreed conclusion among the members of each investigative committee, only to submit individual final reports separately.

[LAO PDR]
Dr. Viengsavanh Duangsavanh
Technology and Environment Agency, Lao PDR

1. The Environment as Public Responsibility

Since 1995, the Science, Technology and Environment Agency (STEA) has been working on the Environment Protection Law. The Norwegian Aid Agency (NORAD) has supported this activity through the United Nations Development Programme (UNDP), starting in 1996. On 3rd April 1999, the National Assembly passed the Environmental Protection Law. In 2000, STEA has continued to work on the law by drafting the Implementation Decree in order to clarify roles and responsibilities between the different technical agencies. At the same time, STEA, together with the National Assembly and the Ministry of Justice, has been disseminating the Environment Protection Law throughout all provinces. At the time of writing this document, 14 provinces were covered and an additional two will follow during the month of December. NORAD has decided to further support this project by providing the necessary assistance in order to develop follow-up legislation, such as decrees, guidelines and standards as well as to continue the dissemination.

2. Local Environmental Management

With the ongoing shift of party and state towards decentralization, provinces have become the strategic unit in the government. Districts have become planning centres and the villages, implementation units. According to the Environment Protection Law, STEA is the main coordinating government agency both on a horizontal as well as vertical level. In the year 2000, STEA established branches in 14 of the country's 17 provinces and special zones, with the remaining few to be integrated soon. These branches are the main instruments in environmental management at the provincial level. This is also true for the dissemination, implementation and follow-up on environmental legislation.

3. Environmental Impact Assessment (EIA)

The Lao PDR is a country rich in natural resources but poor in infrastructure. At present, pollution is not an issue, but with increasing development and infrastructure expansion it is expected to grow rapidly. Therefore, in order to protect our environment and prevent unsustainable use of our natural resources, environmental impact assessment has become the centerpiece of environmental management. In 1999, STEA started to develop general EIA guidelines, which were decreed on 2nd October 2000. The EIA decree serves as a basis to the technical agencies, so that they can develop their own EIA guidelines, covering projects and activities under their jurisdiction. Basically it can be said that all major undertakings need to carry out an environmental impact assessment before a license can be given. This is a very important contribution to sustainable development.

4. Public Involvement in Nam Theun 2 Hydro-Power Project

Nam Theun 2 is a hydropower development project, planned to produce 1,069 MW. It will have major environmental impacts. The Lao government, together with the World Bank, is paying great attention to environmental protection and mitigation in connection to this project. Public participation, is an important factor in carrying out the impact assessment of this project, as stated in the Environment Protection Law: "Environmental impact assessment shall include participation from the local administration, mass organizations and all stakeholders".

The latest public participation meeting at a national level took place from 22nd to 23rd November 2000 in Vientiane, introducing the latest draft of the Environmental and Social Management Plan. Sixty-eight participants came from the three affected provinces, sixty-nine staff from involved ministries and mass organizations, and fifty-two representatives from embassies, international organizations, and NGOs. The meeting was part of the normal public involvement process, which in fact had been carried out over many years. Its goal is to ensure and increase economic viability, minimize negative environmental impacts and to convince the population about the benefits of the project. It was suggested that the Lao government officially approve this project. The construction phase is planned to last from 2002 to 2006.

5. Press Release on Climate Change

The Lao PDR has been a party to the United Nations Framework Convention on Climate Change since 1995. Since mid-1997, the Science, Technology and Environment Agency has been implementing a project on the establishment of a National Greenhouse Gas Inventory. According to this inventory, the release of greenhouse gases is still much lower than would be required by the convention. On the one hand this is mainly because of the still relatively rich forest cover, while on the other hand it is because of the state of development. However, the government has already put in place strategies and policies for the management of greenhouse gases.

[MALAYSIA]
Ms. Norhayati Mustapha
Institute of Strategic and International Studies (ISIS), Malaysia

1. Timely Review of Highland Development

In the wake of concerns arising from indiscriminate development of hilly areas, the Government of Pahang has proposed a review of local plans involving the Cameron Highlands, the state's popular hill resort. In an October press announcement, state authorities indicated that they would wait for satellite pictures from the Malaysian Center for Remote Sensing (MACRES), an agency of the Ministry of Science, Technology and Environment (MOSTE), before proposing concrete measures. The satellite images will be used to determine the extent of damage done by land clearing for farms as well as resort construction, which has resulted in stream diversion, soil erosion and dry taps for the mountain resort's residents. Adverse effects of over-development in the highland district, currently protected under the Land Conservation Act 1960, came to a head earlier in the year when at least 6 people, mostly workers on vegetable farms were killed in a landslide on January 6.

2. Foiled Toxic Waste Shipment

Thanks to public alertness and cooperation between the Department of Environment (DOE) and the Customs and Excise Department, the attempted shipping out of suspected toxic waste numbering nine containers in all, from the North Port in Port Klang, was foiled in early April. The consignments, believed to contain dross, a by-product of the galvanizing process, were discovered on two separate occasions, April 4 and 8 respectively, and were supposed to be sent to an address in Taiwan. This episode drew reactions of surprise that in spite of the existence of a local treatment facility in Bukit Nanas, a little further south, some have seen fit to send their waste elsewhere. Statements from 6 people associated with a heavy metal factory in Sri Kembangan Industrial Estate have been recorded, and analytical findings from DOE and the Chemistry Department are expected to facilitate MOSTE's court action against the suspected offender. The penalties for such offences stand at RM 500,000 or 5 years jail or both.

3. Climate Change Update

Malaysia launched its Initial National Communication Report in July for submission to the 6th Meeting of the UN Framework Convention for Climate Change at the Hague in November. The book was the result of collaborative efforts between scientists and officials from various ministries and universities, coordinated by the Institute for Strategic and International Studies. Under the stewardship of the National Steering Committee chaired by MOSTE, the report adopted guidelines of the 2nd Conference of Parties and the 1995 Inter-governmental Panel on Climate Change methodologies for the inventories of greenhouse gas (GHG) emissions, using the year of 1994 as a refer-

ence. In the book, the national inventory of GHG is set out, possible impacts of climate change assessed, and initiatives suggested to address the issue. Furthermore, several mechanisms and measures are put forth, representing policy responses to promote sustainable development efforts that the government has been pursuing for many years.

4. Millennium Tree Planting

A nation-wide millennium tree planting campaign going by the theme of 'Greening the Nation' was launched by the Prime Minister in October, in conjunction with World Habitat Day and Malaysia Environment Week, when 100,000 saplings were planted in one minute, meriting an entry into the Guinness Book of Records. The campaign was one step towards realizing the government's aim of transforming Malaysia into a 'Garden Nation' by 2005, in collaboration with the 'Gift of trees' program initiated by the Malaysian Nature Society, a local NGO. Government agencies primarily involved in the exercise were Ministry of Housing and Local Government, the National Landscape Department, DOE and the Forest Research Institute of Malaysia. On the morning of October 15, a siren was broadcast nationwide over the radio, signaling participants from communities, schools, local governments, hotels and other associations to complete the task of planting a tree in one minute flat. At the same time that the PM himself planted a tree in Bukit Jalil, Malaysians all over the country were doing the same. To date, organizers are confident of setting the record with more than 30,000 trees counted so far, potentially beating the current world record holder, Brazil.

5. Beach Clean-up

A Panama-registered tanker, the Natuna Sea ran aground in Indonesian waters near Singapore, spilling at least 7,000 metric tons of crude oil into the ocean on October 4. A week later, remnants of the oil slick reached Teluk Ramunia in Malaysia, whereupon the national oil spill contingency plan was activated at the district level. Nine days into the spill, the southern region Marine chief reported that the slick had already weathered and clumped into tar balls as it had been treated with dispersant. Clean-up operations, coordinated by the district office with the assistance of DOE and the Marine Department, were therefore directed at clearing the beach of these balls. Two DOE personnel had been dispatched to analyze the ecological consequences of the slick, given the likely impact on the local fishermen's livelihood. The Marine Department sent two patrol craft to monitor the situation and two support craft for clean-up work, pooling members of the village security and development committee. Meanwhile, plans are underway to build a satellite ground receiving station which when operational, will enable MACRES to monitor all vessels along the Straits of Malacca and the South China Sea. This, according to MOSTE in an earlier press statement, would greatly help in detecting sources of pollution at sea, whereby authorities can act immediately to nab culprits.

6. Recycling Launch

With most of the nation's 230 landfills reaching saturation point, the government through the Ministry of Housing and Local Government (MHLG) began a recycling campaign on December 2. In addition, a task force comprising of waste management experts from MHLG and the Health Ministry, representatives of local authorities and relevant agencies will study the situation and report in 3 months time. A consultant will be engaged to educate people on waste separation, centering on the "3 Rs" - "reduce, recycle and reuse". To help expand the life span of existing landfills, 30,000 rubbish bins in 3 colours, blue for paper, orange for aluminium and brown for glass were distributed to 30 municipalities. Among the places slotted for distribution are densely populated areas e.g. the Kelang Valley, which encompasses the city of Kuala Lumpur, and tourist districts such as Lumut, Langkawi and Cameron Highlands.

[MONGOLIA]

Dr. Ayush Namkhai, Development and Environment Center, Mongolia
Mr. Dondogiin Enkhbayar, Ministry for Nature and Environment, Mongolia

1. Law on Tourism

In Mongolia, there are many specific traditions and customs associated with the history and culture, and many places of natural beauty and historical attraction. In many localities, the country's nature has been preserved in its virgin state. All this attracts the interests of tourists from various countries around the world.

On consideration of this, the Parliament of Mongolia passed the law on Tourism in May 2000. According to the law it shall be submitted by the state administrative organization concerned with tourism issues, the Prime Minister's tourism board, and local units on tourism issues. Any organization wishing to operate in the sphere of tourism shall apply for a special license/permit and will be called "tour operator" or "tour agency".

The law specifies that organizations operating in the sphere of tourism shall assume such responsibilities and rights as to ensure comfortable conditions for tourists and to undertake appropriate precautions in order to ensure their clients' safety.

Thus, the law on tourism serves the purposes of providing appropriate conditions for foreign guests and Mongolian tourists, encouraging them to make tours around the country in order to relax and admire the wonderful scenery, and places of historical and cultural significance.

2. Law Banning the Import and Trans-boundary Movement of Hazardous Waste, and Concerning its Export

Mongolia has joined the Basle Convention on the control of trans-boundary movement and disposal of hazardous waste. The Ministry of Nature and Environment devised the "Law Banning the Import and Trans-boundary Movement of Hazardous Waste, and concerning its Export" which was passed by the Mongolian Parliament in November, 2000.

The law specifies that any refuse and waste that impairs human and animal health, or their gene pool, leading to any diseases and disorders, or disturbing the environmental balance shall be regarded as dangerous.

The law prohibits the importation and transportation of hazardous refuse and waste through the border. However, citizens of Mongolia, foreign citizens, stateless persons and persons who have legal rights on business are allowed to export dangerous refuse and waste.

3. National Action Programme on Climate Change

A very significant paper called the National Action Program on Climate Change has been approved by the Mongolian Government's resolution No. 120 issued this year.

The NAPCC is a policy document that identifies specific measures to adapt to the

potential impacts of climate change and to mitigate GHG emission in Mongolia. The action program establishes implementation strategies for priority response measures and gives an opportunity to integrate climate change concerns into other development plans and programs. The NAPCC is an important basis for the national communications required under the UNFCCC.

The NAPCC comprises current climate in Mongolia and future scenarios, an overview of its impact and adaptation assessments, a GHG emission inventory and emission projections, possible adaptation, GHG mitigation measures/projects, and implementation strategies. According to the observation records of the last 60 years, Mongolia's climate has changed significantly. Studies based on General Circulation Model¹¹ scenarios suggest that the current climate change tendency will be intensified in the 21st Century.

Given the fact that Mongolia has a limited capacity to deal with different problems of global climate change, has relatively weak institutional arrangements, and is very vulnerable to climate change, international support and foreign investment must play an important role in the implementation of Mongolia's NAPCC.

4. Natural disaster

***Zud* (severe winter)**

During the winter period from December 1999 up to March 2000 there was a *zud* (a local name used when heavy snowfall occurs in the autumn and winter and results in livestock being unable to reach its fodder and therefore is lost en masse). This *zud* extended to over 70 per cent of the country's territory including 157 soums (small administrative units) and 13 provinces of Mongolia. The *zud* seriously damaged the Mongolian economy's key sector - animal husbandry. The major reasons for the *zud* are as follows. In the summer of 1999 there was a drought in those areas, due to which the pasture yields were not sufficient enough to live off during following autumn and winter. Possibilities for hay-making were restricted, moreover there were heavy snowfalls (25 to 50 cm) in the autumn through to November and December. There was a warming period when the snow fallen turned into crusts of ice, then in January the air temperatures dropped, thereby causing the preconditions for the livestock perishing.

According to the State Emergency Commission in 1999-2000 there were some 190 thousand households with 33.5 million heads of livestock in total. Due to the *zud* some 77.8 thousand households including 412 thousand people and 7 million heads of livestock experienced hardship throughout the winter and spring.

On the national scale, 2.4 million heads of livestock were lost. Damages suffered accounted for 91.7 billion tugruqs (Mongolian currency, equivalent to 83 million U.S. dollars), and 2,369 herdsman's households rendered without any cattle and any source of income. In addition, the remains of perished livestock could be seen everywhere during the spring and summer, aggravating the localities' environmental pollution.

¹¹ Numerical representation of the atmosphere and its phenomena over the entire Earth, using the equation of motion and including radiation, photochemistry, and the transfer of heat, water vapour, and momentum.

Substantial relief aid and support granted from the government, people and organizations within the country, and from abroad played an important role in assisting the herdsmen to cope with their troubles and strife.

Drought

A large-scale strong drought took place during the last spring and summer in Mongolia affecting about 60 per cent of the country's territory. During the period from late May 2000 through to July 20th, a period of very hot weather was recorded for most of the country's territory when the air temperatures in the steppe area reached 30° to 35° C, and in the Gobi 38° to 42° C, the ground temperatures ranging from 50° to 60° C, and in the Gobi from 60° up to 66° C. The amount of precipitation fallen was much less than usual. In 1999, drought occurred and heavy snowfall took place the following winter, causing the country's economy to meet serious losses.

5. Establishment of the "ECO ASIA" Institute

For the first time, an institute dealing with ecological education, training and research was established last autumn in Ulaanbaatar, the capital of Mongolia. The institute is called the ECO ASIA Institute.

The institute will prepare environmental inspectors, attorneys, and experts to engage in the spheres of environmental monitoring, environmental assessment and tourism.

Besides that, the institute will carry on other activities including research in fields such as natural disasters (including droughts, severe winters, floods, strong winds, and storms), climate change, protection of biological diversity, mitigation of air, soil and water pollution, remote sensing, and Geographic Information Systems (GIS).

[NEPAL]

Mr. Phool Chandra Shrestha, Freelance Consultant, Nepal
Dr. Bishnu B. Bhandari, Institute for Global Environmental Strategies
(IGES), Japan

1. Nepal's "Gift to the Earth"

At the 39th annual conference of the World Wide Fund for Nature (WWF), Prime Minister Girija Prasad Koirala declared Royal Bardia National Park (RBNP) as a "gift to the Earth". The gift program is the WWF's highest recognition of a new conservation action in support of its 'Living Planet Campaign'. RBNP is the second protected area to be declared as a "gift to the Earth", the first being Kanchanjungha Conservation Area in far-eastern Nepal.

RBNP presently covers an area of 968 sq. km. and is home to 8 types of ecosystems that contain 124 species of trees supporting 34 species of mammals and over 300 birds including endangered species such as Royal Bengal tigers, one-horned rhinos, Asiatic elephants, four horned antelopes and swamp deers.

The Government has decided to include another 900 sq. km. of area to the park. This extension would link eleven prime wildlife habitats in Nepal and India known as Terai Arc, which will provide a corridor to facilitate wildlife movement between Nepal's Churia and India's northern border. It will have a buffer zone of 550 sq. km. The extension would also pave the way for the creation of one of the best Tiger habitats in the region.

Reference: The Kathmandu Post, Thursday 15 November 2000

For further information: Department of National Parks and Wildlife Conservation, Babar Mahal, Kathmandu, Nepal

Address: P. O. Box 860, Kathmandu, Nepal

Tel: 9-77-1-22-0912/9-77-1-22-7926

Fax: 9-77-1-22-7675

E-mail: dnpwc@bdcin.wlink.np

2. Restoration of the Churia Foothills as a Biological Corridor

The Ministry of Forests and Soil Conservation and WWF Nepal program have signed a memorandum of understanding to restore the forests of the Churia foothills as a biological corridor linking Royal Bardia National Park and Sukla Phanta Wild Reserve in the Terai region of far-western Nepal. The objective of this initiative is to preserve habitat integrity and increase land base that supports viable populations of tigers, rhinos, elephants and other mammals of the western Terai of Nepal. The restoration of the Churia foothills will not only facilitate the movement of wildlife between these protected areas but also ease their transboundary movement between the protected areas of Nepal and the Indian protected areas of Katernia Ghat Wildlife Reserve and Dudhuwa National Park. The initiative will promote community forest programs and groups that use the area to mobilize local communities.

Reference: Wildlife Nepal Newsletter, May-June 2000

For further information: Ministry of Forests and Conservation, HMG/Nepal

Address: Ministry of Forests and Conservation, Singhdurbar, Kathmandu, Nepal
Tel: 9-77-1-22-3862
Fax: 9-77-1-22-6099
E-mail: mfsc@singdbr.mos.com.np

3. Nepal Rhino Count 2000

The Rhino Count 2000 has recorded a total of 612 Greater One Horn Rhinoceros (*Rhinoceros unicornis*) in the kingdom of Nepal. About 544 rhinos are found in Royal Chitwan National Park (RCNP) in central Nepal and its vicinity. Royal Chitwan National Park is the prime habitat for the second largest population of rhino in the world. Another group of 67 rhinos are found in Royal Bardia National Park. The western Terai of Nepal is selected as one of the priority sites for Greater One Horn Rhinoceros in the South Asian Bio-Region. The first rhino count was undertaken in 1994 (approximately 444 to 446 rhinos).

Reference: Wildlife Nepal Newsletter, DNPWC, May-June 2000

For further information: Department of National Parks and Wildlife Conservation (DNPWC), Ministry of Forests and Conservation, Babar Mahal, Kathmandu, Nepal
Address: P. O. Box 860 Kathmandu, Nepal
Tel: 9-77-1-22-0912/977-1-22-7926
Fax: 9-771-22-7675
E-mail: dnpwc@bdcin.wlink.np

4. Grassroots Conservation Initiatives in Rural Nepal

Nepal has set up an Environment Support Fund of 800,000 U.S. dollars to strengthen local capacity of NGOs, Community Based Organizations (CBO's) and forest user groups. This is a joint effort between the Ministry of Population and Environment, Nepal Forum of Environment Journalists (NEFEJ) and the Embassy of Finland based in Nepal. NEFEJ manages this program under the overall guidance of a steering committee. Its major objective is to strengthen local initiatives in the environment and biodiversity conservation and management in Morang, Sunsari and Jhapa districts of eastern Nepal through training, technical assistance, conservation works and small grants.

Reference: NEFEJ News, bi-monthly publication, January-June, 2000

For further information:

Nepal Forum of Environment Journalists
Address: P. O. Box 5143, Kathmandu Nepal
Tel: 9-77-1-26-1991
Fax: 9-77-1-26-1191
E-mail: nefej@mos.com.np

5. Ban on Old Vehicles in Cities in 2001

The Ministry of Population and Environment (MOPE) has recently decided to ban vehicles of more than 20 years old from operation in all the municipalities of the country. The decision will be effective from 15 November 2001. The decision which has

already been published in the Nepal Gazette comes more than a year after the government banned diesel operated three wheeler Bikram Tempos from the Kathmandu Valley. According to the experts, the ban will have more effect in the capital city where more than sixty percent of registered vehicles are concentrated. As a result the estimate of about 20-30 percent of the vehicles that are currently plying will be banned from operating in the Kathmandu valley. Numerous studies conducted in recent times have shown that the quality of air in the bowl-shaped Kathmandu Valley is worse than the permissible limit set by the World Health Organization (WHO).

Similarly, the Ministry of Population and Environment has also decided to ban petrol or gas run two stroke three - wheeler tempos operating from Kathmandu valley from 15 November 2001.

Reference: The Kathmandu Post, Thursday, November 23, 2000

For further information: Ministry of Population and Environment (MOPE), His Majesty's Government, Nepal

Address: Ministry of Population and Environment, Singhdurbar, Kathmandu Nepal

Tel: 9-77-1-24-5364

Fax: 9-77-1-24-2138

E-mail: mope@mos.com.np

[THE PHILIPPINES]
Prof. Merlin M. Magallona
University of the Philippines, The Philippines

1. Garbage Avalanche Killed More Than 200 People

A mountain of garbage in Payatas dumpsite located in Quezon City, caused an environmental tragedy when on July 10 it came crashing into a community of rubbish scavengers, killing more than 200 people buried under the massive garbage avalanche. Heavy rains loosened the 15-meter high garbage dump.

Days after the disaster, recovery teams were still pulling out corpses from the debris and mud. Known as *Lupang Pangako* (Promised Land), the shanty-town is inhabited by about 80,000 slum dwellers who thrive on scavenging the garbage for items that can be sold to junk shops. Daily they trek up the garbage mountain for livelihood, to earn about 100 to 200 pesos (2 to 4 U.S. dollars) a day.

Four days after the tragedy, President Joseph Estrada announced that the dumpsite would be permanently shut down. However, the Philippine Daily Inquirer of December 4 this year quoted Mayor Ismael Mathay of Quezon City as saying that President Estrada had just allowed the "temporary" reopening of the Payatas dumpsite to relieve the city of the stink from uncollected garbage.

2. Hazardous Waste Shipment Sent Back to Japan

In the year 2000, government authorities continued the investigation on the case of more than 120 container vans purporting to carry recyclable paper and plastic products from Japan but which turned out to be a shipment of 3,000 tons of hazardous wastes from hospitals and medical clinics. For the purpose of filing criminal charges against the importers and accountable parties, the Department of Justice conducted hearings in January and February on the complaint of Secretary Antonio Cerilles of the Department of Environment and Natural Resources.

Last December, even as the importing firm, Sinsei Enterprises, denied that its shipment involved hazardous wastes, the Japanese government decided to ship back to Japan the questionable importation at its own expense. On December 24, the Japanese Foreign Ministry announced from Tokyo that the hazardous wastes would be removed from the Philippines by January 11 and that it would pursue legal action against the company responsible for the shipment. Subsequently, the Associated Press reported from Tokyo on January 14 that police had raided the office of Nisso in Tochigi prefecture on the suspicion of exporting garbage illegally to the Philippines.

Earlier, the Japanese government sent to Manila a team of environmental and health experts to look into the controversial shipment. Led by Masafumi Ishii, director of Southeast Asian Division of Japan's Foreign Ministry, the team later confirmed the findings of the Philippine environment and health departments that the shipment involved hazardous wastes, in violation of the 1989 Basel Convention of which both Japan and the Philippines are parties.

The decision of the Japanese government averted a crisis in its relations with the Phil-

ippines, just as the issue was about to be debated in the Philippine Senate. On March 13, Japan's ambassador to the Philippines, Yoshihisa Ara, told the press that no shipment of medical waste would ever reach Philippine ports again. The Philippine Daily Inquirer reported that the Ambassador said that the illegal shipment was "very unfortunate and regrettable".

3. Lawyers Demand Compensation for Victims of Toxic Waste Contamination in Former U.S. Military Bases

In a letter of June 28 this year, lawyers from the law firm of Pefia Sanchez Lacson and Mison in Metropolitan Manila served a "final demand for payment" from the United States government through the U.S. Embassy for compensation amounting to 102 billion U.S. dollars for damages on the part of deceased victims as well as the survivors for contamination from toxic wastes and hazardous substances stored and used in the 'Clark' and 'Subic' military bases.

A similar demand was also made on the Philippine government for P52 billion (1.2 billion U.S. dollars) for neglect and refusal to deal with incidents of deaths and illnesses of the victims who worked and lived in the two U.S. military bases.

Subsequently, based on these demands, a class suit was filed with the Regional Trial Court of Pampanga province on behalf of a long list of victims of toxic waste contamination, both living and dead. The case is still pending.

In the last two years, the press has carried reports of deaths by leukemia and cancer caused by toxic contamination of drinking water. On March 2, the Philippine Post reported that the People's Task Force for Bases Clean-up "has recorded since 1995, at least 80 deaths resulting from drinking contaminated water at the Clark motorpool". Earlier, the Philippine Post on February 20 published a report on claimed incidents of leukemia in the former Clark Air Base.

4. Oil Spill by Singaporean Tanker

On January 24, *Nol Shedar*, a Singaporean tanker loaded with more than 69,000 metric tons of coal from Australia, hit a shoal off Lingayan Gulf in Pangasinan province spilling its drums of oil. Immediately, the oil slick affected 10 villages, destroyed 60 fish pens, and ruined 90 hectares of protected marine area maintained by the University of the Philippines Marine Science Institute. After two weeks it was further disclosed that the oil spill also destroyed a 12-hectare mangrove reforestation project and a sea urchin reproduction reserve, as reported in the Philippine Daily Inquirer, February 13. The estimated spill of 10,000 liters of bunker oil from the tanker affected about 10 kilometers of shoreline.

The municipal government of Bolinao, the town which suffered most, decided to bring a suit for recovery of damages. However, it is still difficult to determine the extent of the environmental impact.

[RUSSIAN FAR EAST]
Prof. Dr. Alexander Sheingauz
Economic Research Institute, Russia

1. New Administration for the Use of Natural Resources

According to the Russian President Decree of 17th May 2000, all administrations for ecology and the use of natural resources have been united and restructured. Now the administration of the Far Eastern Federal Okrug¹², that unites ten Russian provinces, has a special Natural Resource Department. It governs by two forms: in Khabarovskiy krai directly, and in other provinces through provincial Natural Resource Committees. Separate State Ecological Committees, Forest Services, etc. have been abolished. The Federal Government reckons that the restructuring will provide better management. However, many experts and people of the "green movement" are sure that it will result in the worsening of the ecological situation.

For further information, <http://www.regions.ru/news/>.

2. Voluntary Forest Certification Begins

Some Far Eastern logging companies have begun to show an interest in voluntary certification¹³. The first of them is the industrial group Terneyles, located in Primorskiy krai, that concluded a treaty with the Forest Certification Center (FCC) on spadework for international ecological certification that will start next year. FCC was the first voluntary forest certification unit in the Russian Far East. It was established in Khabarovsk City as an open non-commercial partnership. FCC activity is based mostly on the principles of Forest Stewardship Council (FSC), and also on other ecological principles (ISO etc.).

For further information, FCC@region.khv.ru.

3. New Protected Area is Established in Amurskaya Oblast

The Plot of Irkun, a new state botanic protected area otherwise known as "a *zakaznik*" has been established in Amurskaya Oblast. The plot is located near a planned water reservoir for an electric hydropower station on the Bureya River, and is seven thousand hectares wide. It includes not only taiga¹⁴ sites but also prototypes of the Mongol and North China steppes. Its flora includes thirty rare species that are listed in the Russian Red Book. Logging, open mining and other ecologically dangerous activities are prohibited in this 'zakaznik.'

For further information, <http://www.regions.ru/news/>.

¹² 'Okrug'=region.

¹³ Explanation of 'voluntary certification': In Russia there is obligatory state certification of all products according to the Forest Code and other acts. This certification is based on the state national standards that demand product quality but do not take into account the ecological aspects of technology operations. There is a new, non-governmental movement for ecological certification based on the international principles of the Forest Stewardship Council (FSC) or the International Standards Organization (ISO). This certification is not obligatory, it can be done only according to the good will of any forest enterprise.

¹⁴ 'Taiga': a core type of boreal forest.

4. International Workshop on Sustainable Forest Management

Eight state and non-governmental bodies of three countries organized the International Workshop in September 2000 in Khabarovsk. The Economic Research Institute in Khabarovsk, Russia, and the Institute for Global Environmental Strategies in Hayama, Japan, were leading organizers of the workshop. How to move towards sustainable forest management and combine rational multiple forest use with biodiversity conservation in the Russian Far East, was discussed. Eighty representatives of administration, business, science and NGOs from five countries from the Asian Pacific Region took part in the workshop. The workshop's recommendations will be used for elaborating the Concept of Forest Sector Development in Khabarovskiy Krai.

For further information, sheingauz@ecrin.khstu.ru.



ワークショップの現地調査
Field Surveys of the Workshop

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5. New Method of Oil Waste Utilization

Utilization of oil waste is currently a big problem for Sakhalin Island. However, a new method for processing oil waste, that is based on natural materials has been developed. It involves transporting oil waste from sea oil rigs and other sources of waste to a special land area where it is processed and absorbed using material that contains turf and microorganisms. Processed waste turns into fertile soil. The experimental unit utilizes six tons of waste per hour. In order to prove the effectiveness of the new method, different crops were planted in the area of one hectare with the new soil.

For further information, <http://www.battery.ru>.

[SINGAPORE]
Prof. Chia Lin Sien,
Institute of South East Asian Studies (ISEAS), Singapore

1. Sewage Contamination of Water Supply in Public Buildings

In August 2000, poor design and negligence resulted in sewage contamination in Bukit Timah Plaza and the adjacent Sherwood Towers, respectively, a shopping complex and residential building built 25 years ago. The sewage pipes ran directly above water storage tanks in the basement; a design that is no longer permitted. The polluted water caused 122 people to fall ill. The Public Utilities Board (PUB) and the Environment Ministry (ENV) concluded that their investigations showed that the management corporation had "grossly neglected its duty" to maintain the complex's water supply and internal sewage-piping systems. The management corporation faces a maximum fine of S\$40,000, or a three-month jail term, or both, if convicted under the Sewerage and Drainage Act. As a result of this incident, nearly 400 commercial buildings and private apartment buildings constructed more than 25 years ago will be checked to prevent a similar occurrence.

For further information, <http://straitstimes.asia1.com.sg/index.html>.

2. Review of Long-Range Comprehensive Concept Plan

It has been nearly ten years since adopting the last Concept Plan also known as the Constellation Plan. A number of review committees were set up and an Interim Review report on land allocation was released in November. The report recommended higher buildings and reduction of the amount of land for roads, which now occupy 8,200 ha or 12.4 per cent of total land area. The plot ratio¹⁵ could be raised to 8 that translates into 40-storey buildings while high-density private and public housing estates would have a ratio of 3.65 up from the current average of 2.5. This would mean 4,350 ha, and not the estimated 8,000 ha needed to house an eventual 5.5 million population. All nature areas should be retained and gazetted for protection. The Nature Conservation Review Committee's (NCRC) recommendations include five additional areas as nature areas and to expand five other existing nature areas. There is no need for more golf courses. The target of 0.8 ha per 1,000 persons should be met for the expected 5.5 million population. This would require an additional 2000 ha of park land.

For further information, <http://www.ura.gov.sg>.

3. Waste Collection in Singapore

Waste collection and disposal in Singapore has been gradually privatized over the last decade. SembCorp Sita, a waste management joint venture between local conglomerate SembCorp Industries (SCI) and Sita of France, has put its waste collection and disposal services online. Initially, the online service is available to hospitals and medical centers, but will expand to cover industrial and commercial wastes by the start of

¹⁵ Plot ratio = The total floor area of the building ÷ the land area for the building

2001. Its municipal waste and hazardous waste businesses will go online next September and in August 2002 respectively. SembCorp Sita aims to reduce its operating cost by 10-15 per cent for 2001. SembCorp Waste Management (SembWM) has acquired Semac, a government-owned company and Singapore's largest waste-management company that enjoyed a monopoly of the business from 1996-1998. The company intends to gain a larger share of the Industrial and Commercial Waste (ICW) market that is worth S\$130 million to S\$150 million a year.

The country is divided into nine municipal collection zones and is in the process of privatizing four remaining zones.

For further information, <http://straitstimes.asia1.com.sg/index.html>.

4. Chemical Spill Stops Fishing and Swimming

On 4th August 2000, a collision between an Indonesian tanker, Hikari 2, and the Dutch-registered dredger, Volvox Delta caused a chemical spill south of Pulau Ubin. An estimated 230 tonnes of the chemical phenol, an industrial disinfectant, was spilled. The areas affected are popular Changi and Pasir Ris, as well as Pulau Ubin, Loyang, Punggol Point and Coney Island. As a precaution, the harvesting and sale of fish from 25 floating fish farms located off Pulau Ubin was suspended. The Maritime and Port Authority of Singapore (MPA), the Environment Ministry (ENV) and the Agri-food and Veterinary Authority issued a cautionary statement after the accident to warn people not to fish or swim in the area. The phenol level at the accident site was 9.4 mg/l at 11.25 am, but it was reduced to "not detected" by 1.40 pm the following day.

For further information, <http://straitstimes.asia1.com.sg/index.html>.

5. Deep Tunnel Sewerage System (DTSS): First Tender For Changi Wastewater Treatment Plant

On 10th November, the Ministry of the Environment called the first of several tenders for the construction of the Changi Waste Water Treatment Plant as part of the Deep Tunnel Sewerage System (DTSS) to provide long-term solution to meet Singapore's needs in wastewater collection, treatment and disposal through the 21st Century. The Changi Wastewater Treatment Plant is designed with Treatment Plant that has a capacity for treating 800,000 cubic meters per day. This plant will receive flows from the deep tunnel sewer currently being constructed. The first tender is for foundation works, site development and management. The main works under the contract will entail deep excavation of the site, moving of the excavated materials and piling works. The successful tenderer will also be responsible for managing the entire site including environmental control and site security during the course of the project. The Treatment Plant is scheduled for completion in 2008.

Reference: Ministry of the Environment, press release R/No. 149/2000, 8 Nov 2000.

For further information, <http://www.env.gov.sg/info/press/index.html>.

6. Virus Outbreak of Hand, Foot and Mouth Disease (HFMD)

Two children died on 30th September from viral infection of both the lung and brain. The Department of Pathology at the Singapore General Hospital (SGH) identified it

has Enterovirus 71 (EV71). Another two-year old child who died on 10th September was found to have viral infection of the lungs. The sequences of viruses for the fatal cases were closely related to the EV71 strain associated with the outbreak in the region in 1997. Notifications of HFMD among children below 5 years peaked on 3rd and 4th October with 187 and 195 cases, respectively. The Ministry of Education ordered the closure of all preschools, and since then the number of cases have dropped steadily. These were reopened on 12th October. The average daily number of notified cases for the first week from 1st October was 200 and this dropped to 90 in the second week and continued to decline. Cases of hospitalisation have also dropped significantly. At 12 noon on 19th October, there were three cases compared with 33 on 4th October. All cases were mild and the patients in stable condition.

Reference: Ministry of Environment News Release No. 134/2000, 19 October 2000

For further information, <http://www.env.gov.sg/info/press/index.html>.

[THAILAND]
Prof. Dr. Tongroj Onchan
The Mekong Environment Resource Institute (MERI),
Thailand Environment Institute (TEI), Thailand

1. Protest Against Thai-Malaysian Natural Gas Pipeline

The second public hearing of the controversial 28-billion baht project organized by a committee appointed by the Government and conducted on October 23, 2000 in Songkhla province, experienced another big blow and violence when hundreds of angry protesters, comprising mainly of NGOs, local leaders, and villagers, clashed with the police. At least 33 people including 13 policemen were reported to be injured. The hearing was wrapped up quickly in support of the construction of the pipeline before the protesters closed down the session. There was also an unfortunate incident when a vehicle belonging to a key opponent of the Project was shot by a group of six men and one of the six men believed to be involved in the attack was immediately arrested. Violence also broke out when villagers used firecrackers, smashed windows and set fire to a window curtain of the Chana Police Station. Later, a warrant was issued for the arrest of a protest leader on several charges, including inciting a riot during the public hearing. More arrests were also planned. But all charges were dropped later.

For further information, <http://www.bangkokpost.com>.

2. Violent Protests Against Pak Moon Dam, at the Government House

Some 200 villagers from the Pak Moon Dam area broke into the Government House compound on Sunday, July 18, 2000, and touched off a weeklong crisis. Civic groups and NGOs accused policemen of using unnecessary violence, which left about 30 protesters in hospital with minor but painful injuries. Over 200 men, women and children were arrested. The Prime Minister, Mr. Chuan Leekpai, said the villagers had the right to protest but not to invade the Government House. Leaders of the Assembly of the Poor denounced the alleged police brutality and called Mr. Chuan a "tyrant". However, by mid-week, all protesters were released while the protest continued.

For further information, <http://www.nationmultimedia.com>.

Note: The protest remains active up to November 10, 2000

3. Car Free Day Campaign

The Car Free Day Campaign, organized by the National Energy Policy Office (NEPO), was aimed at raising awareness about the need to cut the number of cars on the Bangkok streets in order to reduce pollution and conserve energy. On September 22, 2000, Bangkok joined 600 cities in 22 European countries in a "Leave Your Car at Home" day. Authorities declared the event a success, with 10% fewer cars on the road, a 13% drop in the amount of CO₂ and dust particles in the air, increased use of public transport and 67.2 million baht saved. The success has prompted the Cabinet to approve

the Car-Free Day proposal to encourage people to leave their cars at home on the 22nd of every month.

For further information, <http://www.nationmultimedia.com>.

Note: This was not practiced in November, 2000

4. Costly Dike Causes Water Pollution

A multibillion-baht dike, about 70 kms from the estuary of Bang Pakong River, was shut out of use because the river became badly polluted only a month after it was officially opened on January 6, 2000. The Bang Pakong dike that was built with an ultimate goal of preventing salt water from the sea from invading Prachin Buri, Chachoengsao and Nakhon Nayok's rivers, during the high tide period which lasts from January to June, changed the colour of the river water to a dirty reddish brown, causing a reduction in fish population and damaging river banks in three districts in Chachoengsao province. It also brought flooding to houses and farmlands along the river, causing widespread damage. To tackle the problems authorities adopted several measures, including stricter enforcement of regulations related to wastewater released from communities, pig farms, and factories, into the river. However, local residents were upset about these measures as they said the authorities, passed their responsibilities to them.

For further information, <http://www.nationmultimedia.com>.

5. Mishandling of Radioactive Waste

In February 2000, used radioactive cylinders which were sold to a junkyard dealer in Samut Prakarn Province left five garbage collectors in hospital after suffering from exposure to dangerous levels of radiation that leaked from a metal cylinder cut open by one of them in February 2000. Later, the junkyard and the surrounding area were cordoned off as restricted radioactive areas. Officials identified the nuclear substance as Cobalt-60, which is commonly used in the medical and food-preservation industries. The five workers affected by radiation remained under intensive care in two hospitals for several days. Free health check-ups for local residents were also given to alley public fear and several hundred people turned up for the check-ups.

An inspection team from the Office of Atomic Energy for Peace, based in Vienna, and three Japanese medical doctors from Hiroshima took part as a fact-finding team. They made a visit to the leak site to collect detailed data for further study and also the victims of the radiation. The incident brought to attention the lack of adequate and effective management of hazardous wastes in Thailand.

For further information, <http://www.nationmultimedia.com>.

Note: Three victims of radiation died a few months later

[VIET NAM]

**Dr. Pham Huu Nghi, Deputy Director of State and Law Journal,
Institute of State and Law,
National Center for Social Science and Humanities, Viet Nam**

1. Sanctuary for the Ho Guom Turtle

Ho Guom, otherwise known as Sword Lake or Return Sword Lake, is located at the center of the capital, Hanoi. It is a historical and well-known part of the landscape of Hanoi where a very precious turtle lives. According to Prof. Ha Dinh Duc of Hanoi National University, the turtle exists nowhere in the world other than in Ho Guom. From past years until now, the Ho Guom turtle rising to the Lake's water surface has become a cultural and spiritual symbol even for Vietnamese. In particular, in October 2000 Hanoi celebrated its 990th year of foundation, at the time when the turtle rose to the lake's surface. In order to avoid the danger of extinction of this rare turtle, the Board of historical landscape management of the Hanoi People's Committee built two sanctuaries for the turtle on the small island in the middle of the Lake. Each area is 3m in length and breadth, 40cm deep and contains a mixture of soil and sand.

Reference: Tien Phong Chu Nhat newspaper, 12 November 2000

2. Large Flood in Cuu Long River Delta, South Vietnam

In the year 2000, the flood in the Cuu Long river delta came one month earlier than in previous years and was prolonged for more than 4 months, from July to November 2000. This historical flood caused the deaths of 453 persons, affected the lives of 10 million people, and submerged 800,000 families in the water, among which 50 000 have to move to other places. Half a million people need donation help and 800,000 pupils have to stop going to school. The flood has also damaged 150,000 hectares of paddy fields, among which 56,000 hectares are completely destroyed, 12,600 hectares of aqua-agricultural area, 13,000 km of roads for transportation and 4,000 bridges,



7月から11月まで続いたメコン川デルタ地帯の大洪水
Flood in CUU LONG River Delta July-November 2000
Copyright © Pham Huu Nghi

and it swept 26 million meters squared of soil into the irrigation system. It is primarily estimated that the damage caused by the flood is about 3,800 billion Vietnamese dong (VND).

All the people in Vietnam and international organizations have shared the difficulties with the people in flood areas. As recorded up to 5th November 2000, the Vietnam Fatherland Frontier Committee has received 37 billion VND, and the Vietnam Red-Cross organization has received 25 billion VND and 2.7 million U.S. dollars. The Government has allocated 112.5 billion VND, 3,000 tons of rice, and 20,000 tons of vegetable seed to the flooded areas.

Reference: Nhandan newspaper, 11 November, 2000

3. Effects of the Ho Chi Minh Highway Project on Cuc Phuong National Garden

The Cuc Phuong National Garden is located in the area of 3 provinces: Ninh Binh, Hoa Binh, and Thanh Hoa. It is the first national garden in Vietnam and was founded in 1962.

In July 2000, the Board of Management of Cuc Phuong National Garden requested that the Government re-consider the decision to approve the Ho Chi Minh Highway Project, also known as the North-South Highway. According to this project, some 8km of the highway will cut through the National Garden. The complainant said, "Construction of that 8km will destroy the balanced natural eco-system in this area". In July 2000, some newspapers in the Vietnamese towns of Laodong, Tienphong, Thanhnien, Tuoitre, Phapluat, issued articles requesting that the Government assess the environmental impacts of the project and protect the National Garden when implementing the project. Due to pressure from the mass media, in addition to recognizing his responsibility, Mr. Chu Tuan Nha, Minister of Ministry of Science, Technology and Environment, led a team to search factual sites. After six days of fact-searching, Mr. Nha confirmed that according to the Highway Project, there are some 8km of highway cutting through the National Garden, and 5 of the 8km cut through what is strictly a natural protection area in Phong Nha county and Quang Binh Province. Mr. Nha has reported to the Prime Minister for a final decision.

Reference: The Environment Department of the Ministry of Science, Technology and Environment

あとがき

アジア太平洋環境白書2000 (UN/ESCAP-2参照)も指摘しているように、北京市、天津市を頻繁に襲った砂嵐(中国-4 参照)、東南アジア諸国連合地域の森林火災 (ADB-1 参照)、洪水の被害(バングラデシュ-1、カンボジア-1、ベトナム-2 参照)等地球環境の全般的な状況は悪化している (UN/ESCAP 参照)。地域規模での多様な環境問題に対応するには各国が単独で対応するには限界があり、国際協力体制の確立とその推進のためのネットワークを構築することが重要となっている。また、21世紀に環境問題を解決するためには政策的な改革を継続し、セクター別やセクター横断的に政策の実施の効率を大幅に向上させることが必要であると指摘されている (UN/ESCAP-2 参照)。

これらの状況を踏まえ、IGESは、政府機関、研究機関、NGOなどとネットワークを構築するとともに、研究成果に基づいた戦略的な政策提言を行うことなどによりアジア太平洋地域を中心とした地球環境保全に貢献していく所存である。

今後ともIGESの活動にご注目いただき、より一層のご支援・ご協力をお願い申し上げます。

Afterword

As the State of the Environment in Asia and the Pacific (SoE) points out (see UN/ESCAP-2), overall environmental conditions on the Earth are continuing to deteriorate, as illustrated in cases such as the frequent sandstorms in Beijing and Tianjing municipalities (see China-4), forest fires in the ASEAN (see ADB-1) and damage by floods (see Bangladesh-1, Cambodia-1, Viet Nam-2). As coping with diverse environmental problems on a global scale is beyond the abilities of a sole nation, it is important to establish international cooperative systems and networks to promote them.

To find solutions to environmental problems in the 21st Century is therefore to carry out continual policy reform and to improve its effectiveness of implementation both in sectoral and cross-sectoral areas.

Considering the above conditions, IGES will develop networks among governmental institutes, research institutes and NGOs, and contribute to environmental protection through strategic policy proposals based on research outputs.

IGES therefore greatly appreciates your continued support and cooperation.