

## はじめに

「環境の世紀」といわれる21世紀の幕開けの2001年は、持続可能な開発の実現に向けて2002年秋に開催される「持続可能な開発のための世界サミット」(WSSD)の準備過程の本格化、その一環としての気候変動枠組条約京都議定書の実施規則の国際合意等さまざまな活動が世界レベルで行われた。また、その一方で中国の世界貿易機構(WTO)への加盟の決定等によるグローバル化や情報革命の進行、さらに米国でのテロ事件やそれに起因するアフガニスタンやパレスチナでの戦闘等社会、経済の大きな動きによって環境への影響も危惧されている。

財団法人 地球環境戦略研究機関(IGES)ではアジア太平洋地域の環境問題および政策の動向を収集、整理し同地域における持続可能な社会の実現に資することを目的として、1998年から毎年、アジア太平洋地域における重大ニュースを公表している。本年は、新たにアジア太平洋地域の情報として国際機関および研究機関(国連環境計画アジア太平洋地域事務所(UNEP-ROAP)、地球政策研究所(EPI)、IGESから、また各国の専門家からの情報としてオーストラリアとニュージーランドを加え18ヵ国3機関から92件の情報をまとめた。

## Foreword

The year 2001, which is seen as the beginning of the "Century for the Environment", began with many significant activities on the global environmental front. Preparatory work for organizing the "World Summit on Sustainable Development" (WSSD), to be convened in the autumn of 2002, began in earnest, including an international agreement on rules governing the Kyoto Protocol of the Framework Convention on Climate Change. Serious concerns, however, were raised about the environmental impact of major economic, social and other developments throughout the year. These included further globalization brought about by events such as China's entry into the World Trade Organization (WTO), progress of the information technology revolution and the September 11th terrorist attacks on the United States and resulting fighting in Afghanistan, as well as unrest in the Middle East.

The Institute for Global Environmental Strategies (IGES) collects and analyzes information on environmental problems and policies in the Asia-Pacific region in an effort to contribute to the development of a sustainable society in the region. IGES has publicized major environmental news in the Asia-Pacific region every year since 1998. A total of 92 news items from 18 countries and three organizations have been compiled this year, including, for the first time, reports from international bodies such as the United Nations Environmental Program/Regional Office for Asia and the Pacific (UNEP-ROAP) and research institutes such as the Earth Policy Institute (EPI) and IGES, as well studies from Australia and New Zealand.

# Contents

Foreword .....	1
Overview: Environmental Trends and Problems in the Asia-Pacific Region, 2001 .....	9
<b>[The Asia-Pacific Region] Tim Higham, United Nations Environment Programme, Regional Office for Asia and the Pacific (UNEP/ROAP) .....</b>	<b>13</b>
1. The Asia-Pacific Regional 'Platform' for WSSD	
2. Asia-Pacific Civil Society Perspective on WSSD Heard	
3. Strengthening Regional Capacity for Environmental Law and Conventions	
4. Japanese Company Helps Empower UNEP Education, Awareness and Training Work	
5. Industry Outreach and Networking	
<b>[The Asia-Pacific Region] Lester R. Brown, Earth Policy Institute (EPI) .....</b>	<b>19</b>
1. Dust Bowl Threatening China's Future	
<b>[The Asia-Pacific Region] Institute for Global Environmental Strategies (IGES) .....</b>	<b>25</b>
1. ECO ASIA 2001	
2. Regional Preparation for the WSSD (Johannesburg Summit)	
3. COP 7	
4. Illegal Logging in Indonesia	
5. New Bill on Managing the Three Largest Rivers in South Korea	
6. Korean Environmental Education Act in the Offing	
7. Developments on Environmental Management Accounting in Asia	
<b>[Australia] Gerard Early, Approvals and Legislation, Environment Australia .....</b>	<b>33</b>
1. Environmental Law Reform	
2. Extension of the Natural Heritage Trust	
3. National Action Plan on Salinity and Water Quality	
4. Sydney Harbour Federation Trust	
5. Australia's Virtual Herbarium	
<b>[Bangladesh] Khandaker Mainuddin and Dwijen Mallick, Bangladesh Centre for Advanced Studies (BCAS) .....</b>	<b>37</b>
1. Buriganga, the Most Polluted River in Bangladesh	
2. Arsenic Contamination in Groundwater poses Serious Health Threat	
3. Banning of Polythene Bags is high on the Agenda of the Government of Bangladesh	
4. Bio-diversity Conservation Programme Launched in the Sundarbans	
<b>[Cambodia] Khieu Muth, Ministry of Environment .....</b>	<b>41</b>
1. Survey in Lomphat Wildlife Sanctuary	
2. Regional Platform on Sustainable Development for Asia and the Pacific	
3. The 6th Informal ASEAN Ministerial Meeting on the Environment (15-16 MAY 2001)	
4. Japanese Royal Couple in Cambodia	
<b>[China] Zhou Xin, Policy Research Center for Environment and Economy (PRCEE), The State Environmental Protection Administration (SEPA) .....</b>	<b>47</b>
1. New Restrictions on Automobile Manufacture and Emissions	
2. Beijing Strengthening Environmental Protection to Realize "Green Olympic"	
3. The Law of Desertification Prevention and Control	
4. Air Quality Forecast in 47 Key Environmental Protection Cities	

<b>[India] Prasad Vaidya, The Weidt Group, USA; Maithili Iyer, Lawrence Berkeley National Laboratories, USA</b> . . . . .	<b>51</b>
1. Ban on Plastic Bags Widens	
2. State Governments Follow through on Rainwater Harvesting	
3. Energy Conservation Act	
4. <i>Protection of Plant Varieties and Farmers' Rights Bill</i>	
<b>[Indonesia] Mohamad Soerjani, Institute for Environmental Education and Development (IEED), Member of the National Research Council Indonesia</b> . . . .	<b>55</b>
1. "Clean Ciliwung River Campaign," Jakarta	
2. Integrated Chemical Management and Safety	
3. National Workshop on Environmental Education	
4. Novel Approach to organic Waste Composting	
5. Environmental Policy Revitalization	
<b>[Japan] Yohei Harashima, Takushoku University</b> . . . . .	<b>63</b>
1. Controversy on Ratifying the Kyoto Protocol	
2. Reconsidering the Land Reclamation Project at the Isahaya Bay	
3. Enforcement of the Law for Recycling of Home Appliances	
4. Inauguration of the Ministry of the Environment	
<b>[Korea] Jeong-Gue Park, Korea Environment Institute (KEI)</b> . . . . .	<b>67</b>
1. Environmental Efforts Driven by the 2002 FIFA World Cup Hosted by Korea and Japan	
2. Conservation of the Tumen River	
3. Eco-Technopia 21	
4. Saemankeum Reclamation Project	
<b>[Lao PDR] Soukata Vichit, Science Technology and Environment Agency (STEA)</b> . . . .	<b>71</b>
1. Integration of Environmental Concerns into Socio-Economic Development Plans	
2. The First State of Environment Report	
3. The First Sectoral EIA Regulation	
4. EIA for Gold Mine	
5. Program to Improve Environmental and Social Management	
<b>[Malaysia] Wan Portia Hamzah and Norhayati Mustapha, Institute of Strategic and International Studies (ISIS)</b> . . . . .	<b>75</b>
1. Focus on Wetlands	
2. Natural Heritage of Belum to Remain	
3. EIA for All Projects	
4. Prestigious Award for Malaysians Committed to Turtle Conservation	
5. Transfrontier Protected Areas	
<b>[Mongolia] Ayush Namkhai, Development and Environment Center; Dondogiin Enkhbayar, Ministry for Nature and Environment</b> . . . . .	<b>79</b>
1. Air Pollution in the Capital	
2. Amendments Made to the Law on Environmental Impact Assessment	
3. Determination of List, Estimation of Size and Percentage of Payments and Charges	
4. Pasture Overgrazing Increases	
5. Census of Argali Sheep ( <i>Ovis Ammon</i> ) Population	
6. Drought for Three Years Running	

<b>[Nepal] Phool Chandra Shrestha, Freelance Consultant</b> . . . . .	<b>85</b>
1. Kumrose Community Forest Earns from Eco-tourism	
2. Arsenic Contamination in Groundwater	
3. Lake Phewa Plan Adds Woes	
4. Leasehold Forestry in 16 More Districts	
5. National Policy on Wetland Management	
<b>[New Zealand] Jacquelyn Harman; Neil Ericksen, The International Global Change Institute (IGCI), The University of Waikato</b> . . . . .	<b>91</b>
1. New Zealand Takes Steps Towards Ratifying the Kyoto Protocol	
2. Moratorium on Field Trials of Genetically Modified Organisms Lifted	
3. Ten Years Under the Resource Management Act (1991)	
<b>[The Philippines] Merlin M. Magallona, University of the Philippines</b> . . . . .	<b>95</b>
1. Garbage Crisis and the Semirara Controversy	
2. President Estrada Calls Military to Assist in Garbage Disposal	
3. Smoking Ban Starts June 2001	
4. Congressional Measure for Wildlife Resources Conservation Signed into Law	
<b>[The Russian Far East] Alexander Sheingauz, Economic Research Institute</b> . . . . .	<b>99</b>
1. New Russian Target Program on Ecology and Natural Resources	
2. New GEF Project on Ecosystem Conservation in Khabarovskiy Krai	
3. International Conference on Sustainable Forest Management	
4. Exhaustion of Fish Reserves in the Sea of Okhotsk	
5. A Surge of Poaching in Ussuri Taiga	
<b>[Singapore] Koh Kheng-Lian, Asia-Pacific Centre for Environmental Law (APCEL), Faculty of Law National University of Singapore</b> . . . . .	<b>103</b>
1. Industrial Water ("NEWater")	
2. Convention on Persistent Organic Pollutants, 2001	
3. Resources Conservation & Waste Minimization	
4. Draft Singapore Green Plan 2012	
5. Capacity Building in Environmental Management	
<b>[Thailand] Tongroj Onchan, The Mekong Environment and Resource Institute (MERI)</b> . . . . .	<b>107</b>
1. Phetchabun Flash-Floods and Mudslides: Death Toll Climbs to More Than 120 People	
2. Ban on Inland Prawn Farming	
3. GM Food Will Be Labeled	
4. Bangkok Faces Garbage Crisis	
<b>[Vietnam] Pham Huu Nghi, Institute of State and Law, National Center for Social Science and Humanities</b> . . . . .	<b>113</b>
1. The Project to Improve and Purify the Environment of the Tolich, Lu, and Set Rivers in the Capital City of Hanoi	
2. The Oil Overflow Incident On the Sea of Vungtau	
3. The National Seminar on Abidance with and Enforcement of Environmental Laws	
<b>Afterword</b> . . . . .	<b>116</b>

<Reports are placed in alphabetical order of country>

# Overview: Environmental Trends and Problems in the Asia-Pacific Region, 2001

Based on reports from research collaborators and collaborating research institutes of IGES, this publication presents trends and problems on the environment in the Asia-Pacific region.

## 1. Natural resource management issues require urgent action

The development of Natural resource without due environmental consideration is hurting the environment.

In China, desertification is a serious concern. This has been exacerbated directly by overplowing and overgrazing, and indirectly by water shortages resulting from low rainfall and depletion of aquifers due to over-pumping. As a result, the number of dust storms is on the rise, and yellow dust has been reported as far away as the United States. China has adopted legislation to prevent desertification and other measures, but the EPI warns that urgent action is required to protect the country's future (EPI, China).

Illegal deforestation continues in Indonesia, causing damage to the ecosystem. Further analysis is required to identify the exact nature of the damage, to understand the mechanism by which it occurs, and to formulate appropriate responses. In Far Eastern Russia, rampant over-fishing in the Sea of Okhotsk has brought concerns about a steady depletion of fishery resources. Mongolia reported on the damage caused by three consecutive years of drought and spreading desertification (IGES, Mongolia, Far Eastern Russia, Thailand).

Health hazards were reported in several countries due to consumption of arsenic-contaminated underground water (Bangladesh, Nepal).

## 2. WSSD related activities in the Asia-Pacific region

In November 2001, a high-level regional preparatory meeting in the Asia-Pacific for the World Summit on Sustainable Development (WSSD) was held in Phnom Penh, Cambodia, to prepare for WSSD, to be convened in Johannesburg, South Africa in 2002. At the Phnom Penh meeting, it was pointed out that cooperation among and participation by those concerned, i.e. good governance, would be pivotal in changing people's attitudes and actions towards the goal of a sustainable society.

Preparatory processes were ongoing from country to country. Singapore has drafted the "Singapore Green Plan 2012" and implementation of "Agenda 21" was reviewed in Indonesia.

## 3. Cross-border environmental issues and cooperation for environmental conservation

Environmental issues often cross national boundaries, as seen in numerous incidents reported in 2000. In 2001, a collision involving a Libyan registered tanker off Vietnam caused oil spillage in the surrounding waters (Vietnam).

On the other hand, there were reports on activities for cross-border cooperation. Malaysia and Thailand are jointly developing plans for a nature reserve for the protection of natural resources in an area spanning their border. Singapore established the Singapore Technical Assistance Programme for Sustainable Development (STAPSD) to fund the training of officials in developing countries. In Far Eastern Russia, an international conference was held to discuss sustainable forest management in the area (Malaysia, Far Eastern Russia, Singapore).

International organizations also offered support. UNEP hosted a workshop in Malaysia for the implementation of a convention for chemical and waste management. It provided support to improve the ability to deal with environmental laws and treaties in other countries in the region as well (UNEP). In Vietnam, a seminar on ways to handle court cases and disputes on environmental issues - a new area in that country - was held with technical assistance from international organizations such as the United Nations (UN) and the Association of Southeast Asian Nations (ASEAN) (Vietnam). Indonesia, with the assistance of UNEP amongst others, conducted a workshop on developing its environmental education (Indonesia).

## 4. Regional implementation of international frameworks

Despite the setback experienced in March of 2001 when the United States withdrew its support, the Kyoto Protocol is now moving towards ratification as a result of the international agreement reached at the Seventh Session of the Conference of the Parties (COP 7) to the UN Framework Convention on Climate Change (UNFCCC), and global momentum is building towards the reduction of greenhouse gas emissions. In this context, New Zealand has reportedly already begun public consultations for ratifying the Kyoto Protocol. It is expected

that Japan and other Asian nations will soon move in a similar direction (IGES, Japan, New Zealand).

Malaysia, a signatory to the Ramsar Convention on Wetlands, has added four wetlands to the Ramsar List. Nepal has established a special committee to examine ways to respond to this convention and has drawn up a proposal for a national policy on wetlands management. Singapore signed the Convention on Persistent Organic Pollutants (Malaysia, Nepal, Singapore).

As another example of regional implementation of international frameworks including environmental conventions, it was reported that the Global Environment Facility (GEF) has started a project on ecological preservation in the Far Eastern Russian region (Far Eastern Russia).

## **5. Activities of individual countries towards environmental conservation and a sustainable society**

Because of the multicultural and socially diverse nature of the Asia-Pacific region, environmental conservation policy responses vary among countries. This can be seen in the following reports.

In the area of conservation and management of natural resources, the comprehensive review of the Resource Management Act undertaken by New Zealand and comprehensive river management policies pursued by Korea and Australia merit attention. Mongolia and the Philippines have enacted legislation to ensure biodiversity conservation, while Malaysia, Bangladesh and Cambodia have started substantial projects (IGES, Australia, Bangladesh, Cambodia, Korea, Malaysia, Mongolia, New Zealand, Philippines).

As for the formation of a recycling-based society, the problem of waste disposal remains extremely serious, as reported by the Philippines and Thailand. It should be noted, however, that some countries are adopting new approaches: Indonesia is turning to composting; plastic bag regulations have been enacted in India and Bangladesh; and Japan has enacted the Law for Recycling of Home Appliances (Bangladesh, India, Indonesia, Japan, Philippines, Singapore).

Urban environmental issues have been addressed, in some instances in conjunction with major events that are to take place in the near future. Environmental improvements are driven in Korea by the 2002 FIFA World Cup co-hosted by Korea and Japan. Plans to hold a "Green Olympics" in Beijing were also reported (Korea, China). Air pollution remains serious in Beijing and Ulaanbaatar. China has taken steps to strengthen regulations on exhaust emissions and to make air quality forecasts available (China, Mongolia). Bangladesh, Vietnam and Indonesia have taken measures to counter water degradation in rivers around urban centers (Bangladesh, Vietnam, Indonesia).

## **6. Implementation of development projects with consideration to the environment**

Awareness is increasing on the environmental impact of development projects. Controversy is reported concerning Korea's Saemankum reclamation project and Nepal's Lake Phewa development plan. The reclamation project at Isahaya Bay in Japan has caused unforeseen damage to the environment and there is mounting pressure to review the entire plan (Japan, Korea, Nepal).

Meanwhile, some countries are adopting ways for development projects to proceed while minimizing their effects on the environment. The Government of Laos has drawn attention to the country's environmental problems in its socio-economic development plans. In Malaysia, a proposal has been submitted that Environmental Impact Assessment (EIA) should be carried out for all future development projects. In Vietnam, environment considerations are incorporated into river development projects. These events show how changes taking place in the way countries in the Asia-Pacific region are dealing with development (Lao PDR, Malaysia, Vietnam).

## **7. New Developments**

### **Corporate awareness of environmental conservation**

Corporate participation in environmental education projects and the introduction of environmental accounting and capacity building in industry are on the rise as an increasing number of businesses realize the need to be proactive about environmental issues (UNEP, IGES).

### **Genetically Modified Organisms (GMOs)**

International debate has been held in recent years on the long-term safety of genetically modified organisms. New Zealand, with one of the most stringent regulations regarding genetically modified organisms, lifted the moratorium on field trials of GMOs this year. In contrast, India has drawn up legislation to protect the rights of farmers to develop new varieties and to promote species improvements. In Thailand, it was decided that food products containing more than a certain level of genetically modified corn or soybean would be required to have labels. (India, New Zealand, Thailand).

# The Asia-Pacific Region

**Tim Higham**  
**Regional Information Officer**  
**United Nations Environment Programme,**  
**Regional Office for Asia and the Pacific (UNEP/ROAP)**

## 1. The Asia-Pacific Regional 'Platform' for WSSD

From 27-29 November 2001 the high-level regional meeting for the World Summit on Sustainable Development (WSSD) was held in Phnom Penh, Cambodia. It aimed to assess progress in the implementation of Agenda 21 in the region and identify key policy issues, priorities, goals, constraints and actions. The Asian Development Bank, the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and the UN Economic and Social Commission for Asia and the Pacific (ESCAP) worked together as a taskforce, to organise five sub-regional consultations and the Phnom Penh meeting.

The Phnom Penh Regional Platform on Sustainable Development, adopted at the meeting, noted that while the region has made significant gains in many areas of sustainable development, the environment continues to deteriorate and the number of poor people continues to increase. It highlights several critical environmental resource issues: land and biodiversity, oceans and coastal resources, freshwater resources, energy and mineral resources, atmosphere and climate change, and island vulnerability. On the economic and social front it cites chronic and persistent poverty, the impact of globalization, sustainable energy development, sustainable agriculture for food security, human settlement development, unsustainable consumption and production, human development and coping with natural disasters as key areas of concern. To address these concerns it recognises several cross-cutting issues: policy challenges for sustainable development, institutional reform and governance, capacity building, enabling informed decision-making, technology transfer, promoting the participation of and partnership with major groups, and ensuring gender equality and gender justice. The platform also identifies follow-up actions in the areas of capacity building, poverty reduction, cleaner production and sustainable energy, land management and biodiversity conservation, protection and management of and access to freshwater resources, oceans, coastal and marine resources and sustainable development of small island states, atmosphere and climate change, to be implemented using a range of mechanisms at national, regional/subregional and global levels. To encourage greater financing for sustainable development the platform identified the importance of mobilising all available resources, especially domestic ones, in a practical, coherent and innovative manner. It urged developed countries to reach the accepted UN target of 0.7% of GNP, called for a strengthening the Global Environment Facility, and recognised the value of partnership with civil society and the private sector.

*For further information, [www.rrcap.unep.org/wssd](http://www.rrcap.unep.org/wssd)*

## 2. Asia-Pacific Civil Society Perspective on WSSD Heard

Like the five sub-regional consultations that preceded it, the Asia-Pacific regional preparatory meeting started with a roundtable of representatives of civil society, the business sector and government delegates, and was attended by about 400 people. The Chairman's summary notes areas where participants saw omission or inadequate treatment

in the platform document: gender equity, environmental safety and security, negative impacts of globalization including an imbalance of power in the World Trade Organisation, the external debt burden, growing militarism, disaster mitigation and prevention, intellectual property rights issues, technology transfer and biotechnology issues. It also voices concern over the concentrations of wealth and power in multinational companies, unsustainable consumption patterns, unresponsiveness of international financial mechanisms to the real needs of countries, and unsustainable investment. The critical importance of good governance was highlighted and the Earth Charter mentioned as an important rallying point for changing people's attitudes and behaviour towards greater responsibility and sustainability.

### **3. Strengthening Regional Capacity for Environmental Law and Conventions**

The first ASEAN-UNEP Workshop on implementation of the Chemicals and Waste Management Conventions was held in Malaysia in September, aimed at promoting the signing and ratification of the recent Stockholm and Rotterdam Conventions, strengthening implementation of the Basel Convention, and identifying synergies which could enhance implementation. UNEP plans further documentation, training workshops, networking and pilot project activities as a result of the needs identified by the participants. The potential for synergy between the ozone and climate change conventions was also examined in a Regional Workshop on Technology Choices to Replace Ozone-Depleting Substances hosted by UNEP in September in Bangkok. In October UNEP held national environment law workshops designed to strengthen and broaden implementation of legal and institutional regimes in Cambodia and Vietnam. It has also facilitated the translation of its Environmental Law Training Manual: A Comprehensive Guide to Environmental Law and Multilateral Environmental Conventions into the national languages of Cambodia, Lao PDR, Myanmar and Vietnam. A project to strengthen the capacity of judges in the region to promote compliance and enforcement of environmental regulations and multilateral environmental agreements has also been established by UNEP. An advisory panel of eminent judges will oversee the project to be implemented in collaboration with National Judges Training Institutes. The issues of enhancing access to information and public participation in decision-making, and access to justice on environmental matters, were examined in a three-day regional experts workshop in Bangkok, hosted by UNEP in December.

### **4. Japanese Company Helps Empower UNEP Education, Awareness and Training Work**

Japanese company, GAIAX Co. Ltd. has agreed a three-year project to support UNEP's environmental education, awareness and training work in the region. The US\$350,000 sponsorship will allow UNEP to support six innovative environmental education projects in the region focusing on civil society, business and industry, youth and local government. The projects will be documented, identifying the principles of best practice, so they can be replicated and adapted elsewhere in the region. Context-specific initiation, community ownership and experiential learning approaches have been identified as critical success factors in the informal education setting. The project is closely tied to the environmental education strategies recently developed by sub-regional agencies with the support of UNEP.

UNEP is also working closely with several of the region's media-focussed institutions, the



Asian Media Information and Communications Centre, the Asian Institute for Development Communication and the Worldview International Foundation, in developing and running training programmes on environment and sustainability themes.

## 5. Industry Outreach and Networking

The process of capacity building with industry in the region was further developed this year with UNEP initiatives in the areas of cleaner production, sustainable consumption, financial services, municipal solid waste management, information and communications technology sector, environmentally sound technology assessment, urban environmental management, and awareness and preparedness for natural disasters. The regional industry perspective for submissions for the WSSD was facilitated by a UNEP workshop in Bangkok in November.

*Further information, [www.roap.unep.org](http://www.roap.unep.org)*

# The Asia-Pacific Region

Lester R. Brown  
President, Earth Policy Institute (EPI)

## 1. Dust Bowl Threatening China's Future

On April 18, scientists at the National Oceanic and Atmospheric Administration (NOAA) laboratory in Boulder, Colorado, reported that a huge dust storm from northern China had reached the United States "blanketing areas from Canada to Arizona with a layer of dust." (See Note for link to photo.) They reported that along the foothills of the Rockies the mountains were obscured by the dust from China.

This dust storm did not come as a surprise. On March 10, 2001, *The People's Daily* reported that the season's first dust storm—one of the earliest on record—had hit Beijing. These dust storms, coupled with those of last year, were among the worst in memory, signaling a widespread deterioration of the rangeland and cropland in the country's vast northwest.

These huge dust plumes routinely travel hundreds of miles to populous cities in north-eastern China, including Beijing, obscuring the sun, reducing visibility, slowing traffic, and closing airports. Reports of residents in eastern cities caulking windows with old rags to keep out the dust are reminiscent of the U.S. dust bowl of the 1930s.

Eastward moving winds often carry soil from China's northwest to North Korea, South Korea, and Japan, countries that regularly complain about dust clouds that both filter out the sunlight and cover everything with dust. Responding to pressures from their constituents, a group of 15 legislators from Japan and 8 from South Korea are organizing a tri-national committee with Chinese lawmakers to devise a strategy to combat the dust.

News reports typically attribute the dust storms to the drought of the last three years, but the drought is simply bringing a fast-deteriorating situation into focus. Human pressure on the land in northwestern China is excessive. There are too many people, too many cattle and sheep, and too many plows. Feeding 1.3 billion people, a population nearly five times that of the United States, is not an easy matter.

In addition to local pressures on resources, a decision in Beijing in 1994 to require that all cropland used for construction be offset by land reclaimed elsewhere has helped create the ecological disaster that is now unfolding. In an article in *Land Use Policy*, Chinese geographers Hong Yang and Xiubein Li describe the environmental effects of this offset policy. The fast-growing coastal provinces, such as Guandong, Shandong, Xheijiang, and Jiangsu, which are losing cropland to urban expansion and industrial construction, are paying other provinces to plow new land to offset their losses. This provided an initial economic windfall for provinces in the northwest, such as Inner Mongolia (which led the way with a 22% cropland expansion), Gansu, Qinghai, Ningxia, and Xinjiang.

As the northwestern provinces, already suffering from overplowing and overgrazing, plowed ever more marginal land, wind erosion intensified. Now accelerating wind erosion of soil and the resulting land abandonment are forcing people to migrate eastward, not unlike the U.S. westward migration from the southern Great Plains to California during the Dust Bowl years.

While plows are clearing land, expanding livestock populations are denuding the land of vegetation. Following economic reforms in 1978 and the removal of controls on the size of herds and flocks that collectives could maintain, livestock populations grew rapidly. Today China has 127 million cattle compared with 98 million in the United States. Its flock of 279 million sheep and goats compares with only 9 million in the United States.

In Gongge County in eastern Qinghai Province, the number of sheep that local grasslands can sustain is estimated at 3.7 million, but by the end of 1998, sheep numbers there had reached 5.5 million, far beyond the land's carrying capacity. The result is fast-deteriorating grassland, desertification, and the formation of sand dunes.

In the *New York Times*, Beijing Bureau Chief Erik Eckholm writes that "the rising sands are part of a new desert forming here on the eastern edge of the Qinghai-Tibet Plateau, a legendary stretch once known for grass reaching as high as a horse's belly and home for centuries to ethnic Tibetan herders." Official estimates show 900 square miles (2,330 square kilometers) of land going to desert each year. An area several times as large is suffering a decline in productivity as it is degraded by overuse.

In addition to the direct damage from overplowing and overgrazing, the northern half of China is literally drying out as rainfall declines and aquifers are depleted by overpumping. Water tables are falling almost everywhere, gradually altering the region's hydrology. As water tables fall, springs dry up, streams no longer flow, lakes disappear, and rivers run dry. U.S. satellites, which have been monitoring land use in China for some 30 years, show that literally thousands of lakes in the North have disappeared.

Deforestation in southern and eastern China is reducing the moisture transported inland from the South China Sea, the East China Sea, and the Yellow Sea, writes Wang Hongchang, a Fellow at the Chinese Academy of Social Sciences. Where land is forested, the water is held and evaporates to be carried further inland. When tree cover is removed, the initial rainfall from the inland-moving, moisture-laden air simply runs off and returns to the sea. As this recycling of rainfall inland is weakened by deforestation, rainfall in the interior is declining.

Reversing this degradation means stabilizing population and planting trees everywhere possible to help recycle rainfall inland. It means converting highly erodible cropland back to grassland or woodland, reducing the livestock population, and planting tree shelter belts across the windswept areas of cropland, as U.S. farmers did to end dust storms in the 1930s.

In addition, another interesting option now presents itself—the use of wind turbines as windbreaks to reduce wind speed and soil erosion. With the cost of wind-generated electricity now competitive with that generated from fossil fuels, constructing rows of wind turbines in strategic areas to slow the wind could greatly reduce the erosion of soil. This also affords an opportunity to phase out the use of wood for fuel, thus lightening the pressure on forests.

The economics are extraordinarily attractive. In the U.S. Great Plains, under conditions similar to China's northwest, a large advanced design wind turbine occupying a tenth of a hectare of land can produce US\$100,000 worth of electricity per year. This source of rural economic regeneration fits in nicely with China's plan to develop the impoverished northwest.

Reversing desertification will require a huge effort, but if the dust bowl continues to spread, it will not only undermine the economy, but it will also trigger a massive migration eastward. The options are clear: Reduce livestock populations to a sustainable level or face heavy livestock losses as grassland turns to desert. Return highly erodible cropland to grassland or lose all of the land's productive capacity as it turns to desert. Construct windbreaks with a combination of trees and, where feasible, wind turbines, to slow the wind or face even more soil losses and dust storms.

If China cannot quickly arrest the trends of deterioration, the growth of the dust bowl could acquire an irreversible momentum. What is at stake is not just China's soil, but its future.

IGES began its Second Phase Strategic Research (FY2001 to FY2003) in April 2001, with six research projects consisting of the Climate Policy Project, Forest Conservation Project, Urban Environmental Management Project, Forest Conservation Project, Environmental Education Project, Long-Term Perspective and Policy Integration Project, and Business and the Environment Project. This report introduces seven news items on the research themes of each project all of which cover important issues in the Asia-Pacific region.

### 1. ECO ASIA 2001

The Tenth Environment Congress for Asia and the Pacific (ECO ASIA 2001) was organized by the Ministry of the Environment, Government of Japan, in Tokyo on 13-14 October 2001. About 140 participants from 21 nations, relevant international organizations and others, mainly from the Asia-Pacific region, participated in the conference.

ECO ASIA 2001 endorsed a report entitled "Towards a Sustainable Asia and the Pacific - Report of ECO ASIA Long-Term Perspective Project (LTPP) Phase II" which has been being carried out by IGES over the past 3 years. Building on the four key concepts of Eco-Consciousness, Eco-Partnership, Eco-Technology/Eco-Investment, and Eco-Policy Linkage, the report presented driving forces of environmental change, examined future perspectives and reviewed critical environmental issues as well as regional cooperative mechanisms in the Asia-Pacific region. Based on that analysis, the report explored future paths for developing innovative policies towards sustainable development in the Asia-Pacific region along with policy recommendations.

The participants also endorsed the Asia-Pacific Environmental Innovation Strategy Project (APEIS), as a follow-up to the LTPP. APEIS has the three primary objectives of i) building the scientific infrastructure necessary to formulate innovative policy for sustainable development for use by policy makers, ii) promoting environmental cooperation and capacity building in the region and iii) proposing a model for a regional initiative that explores sustainable development. IGES will contribute to APEIS by planning and implementing research on options for strategic environmental policies.

The meeting also saw the launch of the Asia-Pacific Forum for Environment and Development (APFED). APFED, consisting of more than 20 eminent persons nominated by nations in Asia and the Pacific, aims to explore a new vision for more balanced sustainable development. APFED is expected to send messages to the World Summit on Sustainable Development (WSSD) in 2002, compile a final report in 2004 and present it to the world community at relevant occasions, including ESCAP/MCED 2005. IGES serves as the secretariat and will provide background papers and information to facilitate discussions of APFED.

*By the Long-Term Perspective and Policy Integration Project*

## 2. Regional Preparation for the WSSD (Johannesburg Summit)

Following the United Nations General Assembly Resolution 55/199 of 20 December 2000, calling for a ten-year review of the implementation of Agenda 21, the preparatory process for the World Summit on Sustainable Development (WSSD: Johannesburg Summit), which will take place from August 26 to September 6, 2002 in Johannesburg, South Africa, was initiated at the local, national, sub-regional, regional and international levels.

In Asia and the Pacific, two regional roundtables of eminent persons, one for East Asia and the Pacific and another for Central and South Asia, and five other sub-regional preparatory meetings for North-East Asia, South Pacific, Central Asia, South Asia and South-East Asia were held during the period from July to October 2001, in parallel with national-level preparations.

The sub-regional preparatory meeting for North-East Asia was held on 26-28 July 2001, in Beijing, China. IGES contributed to the sub-regional preparatory process by preparing a report entitled "Sustainable Development in North-East Asia: Assessment and Challenges of Agenda 21", which provided an assessment of the implementation of Agenda 21 in North-East Asia.

These meetings led to the Asia-Pacific Regional Preparatory Meeting for the World Summit on Sustainable Development, which was held on 27-29 November 2001 in Phnom Penh, Cambodia. The Regional Preparatory Meeting produced a Regional Platform of issues and priorities as well as follow-up actions for Sustainable Development for Asia and the Pacific, which articulates the Asia and Pacific regional position at the WSSD.

*By the Long-Term Perspective and Policy Integration Project*

## 3. The Seventh Session of the Conference of the Parties (COP 7) to the United Nations Framework Convention on Climate Change (UNFCCC)

UNFCCC COP 7 was held from October 29 to November 10, 2001, in Marrakech, Morocco. It can be said that at COP 7 the world community made a considerable step towards mitigating greenhouse gas (GHG) emissions. The most important achievements of COP 7 were:

- Rules and modalities on the Kyoto Mechanisms were decided that will allow the immediate start of the Clean Development Mechanism (CDM) and from 2008 on, the start of Joint Implementation (JI) projects. International emissions trading can start as of 2008.
- Monitoring and reporting procedures were established providing transparency and certainty for the operation of the Kyoto mechanisms.
- Rules were set for the use of credits from sink activities in forestry and agriculture.
- A special package for Least Developed Countries that are most vulnerable to the adverse effects of climate change was adopted.
- The issue of compliance was resolved as a legally binding system, after the Kyoto Protocol comes into effect.
- CDM Executive Board and Expert Group of Technology Transfer were established.
- The accord of COP 7 has sent a strong message to the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002.

The successful agreement at COP 7 means that Japan, which is the only one Annex I country in Asia, now begins to establish its domestic policies and measures in order to ratify the Kyoto Protocol. It also would urge other Asian countries such as Korea to move forward to the next step to address climate change issues

*By the Climate Policy Project*

#### 4. Illegal Logging in Indonesia

Illegal logging is so rampant in Indonesia's forests that it has become an international concern. It includes wood/timber cutting and trading. Reports have uncovered illegal logging in several areas in Sumatera and Kalimantan, including protected forests and national parks.

The illegal logging chain consists of tree cutting and document processing. These involve two levels of actors. Local cutters practice non-mechanical and semi-mechanical tree cutting. Fully mechanical cutting involves concessionaires. The local cutters receive financial support from "wealthy bosses": capital owners or sawmill companies.

Illegal logging can only flourish with the support of the authorities, including security apparatuses. A 1999 report by EIA/Telapak, an NGO, shows how corrupt officials have allowed logging to escalate in Tanjung Puting National Park and Gunung Leuser National Park. Good connections between loggers and officials, in which cutters pay officials under the table, guarantees the issuance of necessary documents. The Jakarta Post indicates such collusion within the port administration, forestry agency, custom and excise offices, as well as the police. A local source from Kutai National Park said, "It is not possible to smuggle wood from inside the park unless there is back-up from powerful individuals."

A study is needed to explore the mechanisms and factors accounting for illegal logging as well as its ecological impact.

*By the Forest Conservation Project*

#### 5. New Bill on Managing the Three Largest Rivers in South Korea

The National Assembly Environmental and Labor Committee in South Korea recently approved a special bill on managing the Nakdong, Kum, and Yongsan rivers, three of the four largest rivers in Korea. The move is expected to be a milestone towards more comprehensive management of the nation's drinking water supply.

The proposed bill puts strict regulation on land-use in the watershed areas of these rivers. More specifically, it will ban the construction of potential sources of pollution such as restaurants, hotels, livestock facilities and factories, around the riparian buffer zone areas of these three rivers. The sewage and wastewater standards for existing facilities will meanwhile be tightened to reduce pollutant levels by half. In addition, city and provincial authorities will, from 2004 at the earliest, regulate the total amount of pollutants that can be discharged from the watersheds. Tap water users will be obligated to pay charges commensurate with their level of water use. Those funds will then be used to support upstream residents and local governments that face disadvantages due to land use restrictions.

The proposed water-related bill, effective from July 2002, will complete the final stage of the government's decade-long effort to preserve the quality of the nation's drinking water, which began to become concrete when laws were enforced to keep the Han River clean in 1999. Environmental authorities hope the bill will significantly reduce the high Biological Oxygen Demand (BOD) levels of the Nakdong, Kum and Yongsan rivers.

*By the Urban Environmental Management Project*

## 6. Korean Environmental Education Act in the Offing

The Korean Society for Environmental Education and the Environmental Forum of the National Assembly of the Republic of Korea (a group of Assembly members) have been working, for the past year, to draft an environmental education act entitled the Korean Environmental Education Act. Its objective is to improve the system of environmental education by developing a mechanism of providing institutional and financial support and formulating and implementing policies and plans. The draft designates the Ministry of the Environment as the focal point responsible for developing and implementing comprehensive plans (both short and long-term) on environmental education in Korea. The draft also has the provision that a special committee representing the Ministry of Environment and the Ministry of Education and Human Resources Development should jointly implement the environmental education policy and plans. The draft was discussed in a public hearing attended by over 100 participants. The draft is now being revised to incorporate suggestions obtained from the hearing. The Environment and Labor Committee of the National Assembly, which is responsible for legislation on matters related to the environment, will review and forward the draft to the National Assembly for approval before the President puts his seal on it. The draft is still under deliberation.

*By the Environmental Education Project*

## 7. Developments on Environmental Management Accounting in Asia

The fourth meeting of Expert Working Group Meeting on Governments' Role in Promoting Environmental Management Accounting (EMA), which was organized by the United Nations Division for Sustainable Development (UNSD) and hosted by the Ministry of the Environment of Japan, was held on June 5th to 7th in Tokyo, marking the start of a new era for sustainable management in Asia. It was held for the first time in Asia, where interest in EMA is rapidly growing. Experts from seventeen countries and two international organizations attended the meeting. It was significant that this time, although Japan has always been a member, experts from several Asian countries participated. Participants made presentations on the current status and progress of EMA in each country and discussed the importance of information exchange, especially in Asia. They also agreed to seek possibilities of putting EMA into practice by conducting case studies and compiling workbooks. The meeting welcomed the establishment of the Environmental Management Accounting Network - Asia Pacific (EMAN-AP), which is a network to exchange research and information between experts and researchers of EMA in the Asia-Pacific region. IGES Kansai Research Center, which opened in June in Kobe, Japan, held an international workshop on EMA in September at Kobe in close cooperation with EMAN-AP.

*By the Business and the Environment Project*



# Australia

**GERARD EARLY**  
Head,

***Approvals and Legislation, Environment Australia***

## 1. Environmental Law Reform

In July 2001, Australia's new environmental law, the *Environment Protection and Biodiversity Conservation Act 1999*, had operated for a full year. The most significant reform of Australia's environmental legislation ever, the Act provides a comprehensive framework for the protection of matters of national environmental significance for the first time in Australia's history. The Act provides for improved environmental outcomes, greater certainty on the Federal Government's role in environmental matters, an enhanced capacity for cooperation with States and Territories through accredited processes and the introduction of strict timeframes within which government decisions must be made. The Act was further strengthened in June 2001 when Australia's wildlife trade laws were enhanced and built into the Act. The Australian Parliament is currently considering a proposal to incorporate strengthened protection for Australian places of national heritage significance into the Act.

## 2. Extension of the Natural Heritage Trust

In May 2001 the Federal Government committed another \$1 billion to extend the operation of the Natural Heritage Trust for a further five years. The Trust, which has *Helping Communities Helping Australia* as its slogan, is the largest, most comprehensive range of environmental programs ever undertaken by an Australian Government. The programs stimulate activities for the conservation, sustainable use and repair of Australia's natural environment. They focus on key areas such as conserving and restoring Australia's native vegetation, saving endangered species, restoring degraded wetlands and rivers, protecting Australia's coast and marine environment and managing environmentally significant areas of land through the protected area network. The Natural Heritage Trust is today worth \$2.5 billion and has involved almost 400,000 Australians in more than 10,000 environmental repair projects over the past five years.

## 3. National Action Plan on Salinity and Water Quality

The May 2001 Federal Budget also provided the first funds for Australia's National Action Plan on Salinity and Water Quality. The \$1.4 billion initiative is jointly funded by the Federal and State Governments and represents a national effort to address salinity and deteriorating water quality in key catchments across Australia. It identifies high profile, immediate reforms to ensure lasting benefits for the environment and Australia's natural

resource-based industries. Central to the plan is the setting of regional targets for water quality and salinity and providing funding for community-based or regional bodies to develop and implement natural resource management plans relevant to their region. The funding is additional to the \$1 billion of new money for the extension of Australia's Natural Heritage Trust.

#### **4. Sydney Harbour Federation Trust**

The Sydney Harbour Federation Trust was established in March 2001 to manage the conservation and rehabilitation of a range of environmentally sensitive sites around Sydney Harbour. Most of the sites had for a long time been off limits to the public because of their use for defence and other government purposes. They cover 137 hectares, including areas of bushland, sites of Aboriginal significance and more than 400 buildings, many of which are heritage-listed.

Through the work of the Sydney Harbour Federation Trust, the sites will be returned to public ownership to enhance one of the icons of Australian life - Sydney Harbour - and leave a lasting legacy for Sydney previously not available. Draft Plans of Management for the sites are expected to be developed by the end of 2002, and implemented over about ten years. In the meantime the Trust will undertake several projects to provide public access to the sites, maintain the buildings and structures, protect and enhance the environment and prepare the sites for future use.

#### **5. Australia's Virtual Herbarium**

In June 2001 a long-term collaborative venture to create Australia's Virtual Herbarium was announced. A universally accessible, integrated Australian flora information system, the Virtual Herbarium is the most ambitious computerisation of botanical collections undertaken anywhere in the world. The venture will computerise all the data related to six million species held in eight separate herbaria across the country and make this information publicly available via the Internet. About 40% of specimens have been recorded in electronic databases. The Virtual Herbarium project will enable the remaining 60% of records to be computerised and available through a single query at portal web sites.

## 1. Buriganga, the Most Polluted River in Bangladesh

The river *Buriganga*, the lifeline of Dhaka City, is dying due to the dumping of deadly waste and due to illegal encroachment. According to a Department of Environment report, 82 percent of the city's human waste is being dumped into the river. Furthermore, the river is increasingly being polluted by the thousands of industrial units including tannery, dyeing and textile units in the city. More than 500 tannery units at *Hazaribagh* are dumping 15,000 to 21,000 cubic meters of highly toxic liquid waste per day, comprising different types of chemicals, into the river. An unspecified volume of toxic waste from many industries in the nearby suburban towns is also finding its way into the river. Environmentalists say that the river has already lost its aquatic life and millions of people living in the city and on the riverbanks are exposed to various health hazards caused by untreated toxic industrial waste polluting the environment.

In view of the increasing concern expressed by citizens, the Bangladesh Environmental Lawyers Association (BELA) filed a lawsuit against the companies responsible for polluting the river. However although the High Court verdict went against the polluting industries there has been no significant progress in controlling the pollution of the river. More recently, during the last quarter of 2001, the government has taken the bold step of beginning to remove all unauthorized structures built within the river. This will restore the normal flow of current and navigability of the river.

*Source: The article has been prepared based on reports published in The Daily Star and The Bangladesh Observer in October and November in 2001 respectively.*

## 2. Arsenic Contamination in Groundwater poses Serious Health Threat

Panic concerning arsenic contamination has spread to every corner of the country. The Public Health and Engineering Department of the government of Bangladesh has already detected thousands of arsenic-contaminated tube-wells all over the country. Arsenic contamination of ground water is of grave concern to public health as over 90% of the population is dependent on tube-well water for drinking, cooking, washing and other household use. The problem is acute in rural areas, especially in the southwest, south and southeast, where a piped water supply is absent. Thousands of cases of arsenic poisoning have been recorded and some deaths have already been reported due to arsenic poisoning. All efforts by government agencies, NGOs and development partners are now directed at new technologies and devices to purify groundwater and give people alternative safe sources of water for drinking and cooking.

*Source: Based on reports published in the Financial Express on 11 April 2001 as well as in the Daily Star on 12 July 2001.*

### 3. Banning of Polythene Bags is high on the Agenda of the Government of Bangladesh

The newly elected government of Bangladesh has decided to ban the manufacture, marketing and use of polythene bags. Initially the ban will be imposed in Dhaka City and gradually extended over the entire country in phases. According to various sources, over ten million polythene bags are used in the country every day with Dhaka City alone accounting for 60% of this. A significant quantity of non-biodegradable polythene bags is dumped into drains, manholes and other open locations. This leads to a clogging of the city's already fragile drainage system. The black dyes used in manufacturing polythene bags are known to be carcinogenic. It should be noted that the use of polythene bags has been rapidly expanding since the early eighties, replacing the traditional jute bags made of biodegradable natural fibers. The government is also planning to revive the use of jute bags as an alternative to polythene bags. Although the likely negative impacts of the ban in terms of loss of employment and income may cause some difficulties in the short-term, according to knowledgeable sources and the government, the environmental benefits would much outweigh this in the long run.

*Source: Reports published in different newspapers in 2001*

### 4. Bio-diversity Conservation Programme Launched in the Sundarbans

Bangladesh has initiated a massive conservation programme entitled "Biodiversity Conservation in the Sundarbans Reserve Forest". The programme would be implemented by the government, in collaboration with NGOs, research institutions and the local beneficiary group. The Sundarbans, covering both Bangladesh and India, is the largest single compact mangrove ecosystem in the world and has rich flora and fauna including the Royal Bengal Tiger. In addition, the forest ecosystem supports 330 species of plant, 400 species of fish, more than 50 species of wild animal, 315 kinds of bird and 53 reptile species. The 60-mile mangrove forest protects the coastal region from cyclones tidal bores. It should be stressed that the gradual destruction of forest resources due to human intervention is endangering the sustainability of the rich bio-diversity of the forest.

*Source: The Independent and The Financial Express, 15 February, 2001*

## 1. Survey of Lomphat Wildlife Sanctuary

Lomphat Wildlife Sanctuary (LWS) is located in the east of Cambodia, covering an area of 2,500 km<sup>2</sup> across the provinces of Mondulkiri and Ratanakiri. Grasslands and dry scrubland cover most of the sanctuary, especially in the southwest and north. In the east, semi-evergreen and mixed deciduous mosaic forests are more dominant. Most of this habitat is still in tact and is known to be suitable for many globally threatened species of very large mammals such as tigers, as well as for waterbirds.

The sanctuary lies between longitudes 106°30'-107°25' and latitudes 13°05'-13°35'.

In addition, LWS represents an important watershed for several rivers. Like the rest of the country, LWS has two seasons: wet (November - May) and dry (June - October). The annual means rainfall varies between 1000 and 2000 mm with the temperature averaging 20.5°C.

At present, the sanctuary does not have any management plan. This is mainly due to a lack of resources, information about the area and technical capacity. Furthermore, current law enforcement cannot suppress illegal activities due to the fact that the sanctuary has limited rangers, little authority in weapon mobilization, and funding. In addition, the sanctuary does not undertake community programs as it has little experience in such methods and does not have the resources necessary. It is important that the sanctuary should have this ability so that communities can become involved in wildlife conservation and protection.

When compared to many areas in South East Asia, the forests of the sanctuary are still relatively extensive, heterogeneous and intact and may well be critical for the long-term survival of many Globally Significant species such as Wild Cattle, Tiger, Asian Elephant, vultures, Sarus Cane, Green peafowl and others. However, the habitats and wildlife of the sanctuary now face the same threats as elsewhere in the region. All the present threats involve either some form of habitat degradation or direct persecution of species for food or trade. All these activities are illegal and all threats are well known to the conservation organizations and Governments of the region.



## 2. Regional Platform on Sustainable Development for Asia and the Pacific

This document articulates the Asian position at the World Summit on Sustainable Development to be held at Johannesburg, South Africa in 2002. The region is home to over half of the world's population and about two thirds of the world's poor. Together with its unique economic, environmental and social features, this has made the region an important and complex ground for fighting the global battle to achieve sustainable development. During the past decade, the region has made notable progress in economic growth, poverty reduction, environmental policy, legislation-building, social infrastructure development and promoting partnership. Unfortunately, such progress has been marred from time to time by financial crises, natural disasters and other events. Therefore, six major Asia-Pacific initiatives are initially proposed in preparation for the World Summit in various areas to help to promote sustainable development. These are (a) capacity-building, (b) poverty reduction, (c) cleaner production and sustainable energy, (d) biodiversity and natural resources conservation, (e) freshwater resources and (f) oceans and marine resources.

## 3. The 6th Informal ASEAN Ministerial Meeting on the Environment (15-16 MAY 2001)

Meetings of ASEAN Environment Ministers are held to review regional and global environmental issues and to further enhance collaborative actions to protect the environment.

On land and forest fires and transboundary haze, the Ministers expressed concern regarding the prediction by the ASEAN Specialized Meteorological Centre that there is a 75 percent chance of drier than normal conditions during the second half of 2001, and there-

fore the potential for spells of smoke haze during that period. The Ministers pledged to be vigilant, and resolved to undertake greater efforts for regional preparedness to prevent the problem.

The Ministers launched the ASEAN Environmental Education Action Plan 2000-2005 and reviewed progress of implementation of the ASEAN Strategic Plan of Action on the Environment. They also released an ASEAN-ADB joint publication, "Fire, Smoke, and Haze - the ASEAN Response Strategy."

The Ministers also noted that Indonesia had enforced a new regulation in February 2001 to step up enforcement measures to control open burning, and that court action had been taken against a number of plantation companies that had undertaken open burning.

The Ministers agreed that the draft agreement on Transboundary Haze Pollution should be concluded by September 2001, to be signed during the ASEAN Summit in November 2001 in Brunei Darussalam. The World Conference and Exhibition on Fire Hazards from Land and Forest Fires will be organized in Malaysia in 2002.

The Ministers noted ASEAN would soon launch its Second State of the Environment Report, to be followed by the Third SoER in early 2002, in time for the World Summit on Sustainable Development (Rio+10). The Ministers urged all relevant governments and agencies to assist the two governments of Cambodia and Indonesia in hosting preparatory meetings for Rio+10. These are namely, the Asia-Pacific regional meeting in Cambodia and the ministerial-level meeting in Indonesia.

The Ministers expressed deep concern over the US Government's position on the Kyoto Protocol. The Ministers were of the view that the provisions of the Kyoto Protocol should not be re-negotiated, and looked forward to the amicable resolution of outstanding issues at the resumed session of the Sixth Conference of Parties of the Climate Change Convention.

The Ministers also held consultations with the Asian Development Bank (ADB), UNEP, UNESCO, United Nations, University (UNU) and the Hanns Seidel Foundation (HSF) on continued co-operative activities with ASEAN. The Ministers expressed their deep appreciation to these organizations for their substantial support in improving the environmental conditions in ASEAN.

#### **4. Japanese Royal Couple in Cambodia**

The visit of Prince Akishino and his wife Princess Kiko marked the first time a member of Japan's royal family has visited Cambodia, and will enhance greatly the ties of friendship between the two countries.

The royal couple spent three days in Phnom Penh meeting with government officials, shopping at Phsar Thmey and visiting cultural sites such as the National Museum. King Norodom Sihanouk hosted a luncheon in their honor, while Prime Minister Hun Sen organized a dinner for the royal couple. Prince Akishino and Princess Kiko left Phnom Penh on a flight to Siem Reap, where they visited the temples of Angkor Thom and Angkor Wat as well as the Tonle Sap Lake. The prince, an expert on catfish, observed the crocodile and fishing industries on the Tonle Sap Lake.

Prince Akishino was very impressed with the dynamic nature of the Prek Toal areas in Tonle Sap, where he was accompanied during the visit by H.E. Dr. Mok Mareth. Prince Akishino enjoyed the wonderful atmosphere and every aspect of life in Cambodia.

## 1. New Restrictions on Automobile Manufacture and Emissions

With the development of automobile use, the resulting emissions are becoming more severe in many megacities in China. In order to tackle this problem, a list of automobiles whose manufacture is to be restricted and a list of those which comply with the emission standards were issued by the State Environmental Protection Administration as administrative documents to local environmental protection bureaus and relevant domestic automobile manufacturers in September 2001. According to the new emission limitations issued in April 2001, the manufacture of both light automobiles and heavy automobiles using diesel oil which do not comply with the emission limitations will be stopped from 1 October 2001 and 1 September 2001 respectively. Those new automobiles manufactured before the implementation of the new emission limitations will be gradually phased out by 31 December 2002. A list of automobiles that will benefit from tax reductions if complying with the Euro II Standard is under preparation.

*Source: <http://www.zhb.gov.cn>*

## 2. Beijing Strengthening Environmental Protection to Realize "Green Olympics"

Beijing is making more efforts to combat air pollution and to construct its environmental infrastructure after the city succeeded in its bid to host the Olympic Games in 2008. In order to realize the objective of a "Green Olympics", Beijing drafted the "Tenth Five-Year-Plan for Municipal Environmental Protection" in July and decided to start new initiatives in Phase VII to tackle air pollution, from 1 November 2001 to 31 March 2002. Emphasis will be placed on particulate control, and the short-term target of air pollution control is to ensure that the Class II Air Pollution Index or better is achieved on 50% of days in 2001. Measures to be taken include checking the quality of coal, controlling SO<sub>2</sub> emissions, shutting down some cement plants and issuing stricter emission limitations on boilers and automobiles. From January to October, 153 days achieved Class II Air Pollution Index or better. This improvement of environmental quality will lay a good foundation for a successful Olympic Games in 2008.

*Source: <http://www.zhb.gov.cn>*

## 3. The Law of Desertification Prevention and Control

North China has been hit by severe sandstorms in recent years, which is causing alarm about the degradation of the ecological environment. In order to control sandstorms and desertification, a Law of Desertification Prevention and Control was issued by the 23<sup>rd</sup> Meeting of the Standing Committee of the Ninth Its aims are to Session of the National People's Congress on 31 August and will be implemented on 1 January 2002. The law comprises seven chapters covering issues such as the planning of desertification prevention and control, the prevention of desertification, recovery from desertification and measures to ensure the prevention and control of desertification and aims to prevent and control



desertification, to sustain ecological security and to promote sustainable development.

*Source: <http://www.zhb.gov.cn>*

#### 4. Air Quality Forecast in 47 Key Environmental Protection Cities

The daily reporting of air quality was implemented via the media in 47 designated key environmental protection cities on 5 June 2000. In order to implement the amended Law of Air Pollution Prevention and Control and the Law of Meteorology, air quality forecasting via CCTV in the same 47 cities was initiated on 5 June 2001. The forecasting covers pollution index, the level of major pollutants and ambient air quality from 20:00 on the current day to 20:00 the next day. Daily reporting and forecasting of air quality in major cities in China have proved to be effective instruments in protecting public health, promoting public participation and improving environmental awareness.

*Source: <http://www.zhb.gov.cn>*

## 1. Ban on Plastic Bags Widens

Traditionally Indian society wasted nothing and valued most things - material objects were reused, repaired or scavenged. Thin plastic "carry" bags did not fit this tradition, being too flimsy to be reused and uneconomical for ragpickers to collect for recycling. So, these bags ended up littering beaches, gardens, drains, streets, garbage dumps, and even found their way into the digestive tracts of scavenging animals.

Following the Ministry of Environment and Forests' notification of rules for the manufacture and use of recycled plastic bags, Indian cities and state governments have banned thin plastic bags. Cities like Mumbai, New Delhi, Chennai, Kolkata, Bangalore and over 11 states have banned plastic bags less than 20 microns thick.

This ban makes way for thicker and more durable plastic bags that are suitable for reuse and worth the ragpickers' effort of collection for recycling. In some locations, the ban, for health reasons, also applies to the use of recycled plastic bags for carrying food items. Critics argue that the ban will increase the amount of plastic needed and produced, while reducing the public eyesore, and in effect will benefit the plastic industry. However, the ban is welcomed by ragpickers, and in Maharashtra and Kerala the use of plastic bags has visibly reduced.

*For further information: Down To Earth February 15 & 28 April 30 2001, The Indian Express New Delhi October 17 2001, <http://www.oneworld.org/ni/issue323/factfile.htm>, The Gazette of India Extraordinaire Part II 1999.*

## 2. State Governments Follow through on Rainwater Harvesting

Rainwater harvesting (RWH) efforts range from building checkdams and the rehabilitation of existing ponds and their waterfeeders, to rooftop collection and storage systems. RWH is an effective flood management technique both in urban and rural areas, while also saving water and recharging groundwater reserves.

The Union Government called on all states to legislate for RWH in order to arrest overexploitation and to recharge sub-soil water. New Delhi and Hyderabad have mandated rooftop water RWH in their building byelaws and the state of Madhya Pradesh (MP) provides a 6% property tax rebate for buildings that have RWH equipment. While small-scale efforts are visible all over, the states of MP, Rajasthan, Gujarat and Andhra Pradesh and Karnataka have launched substantial RWH programs. This year the MP government organized perhaps the world's biggest rainwater conservation effort. 706,304 water-harvesting structures were created in 5 months. This follow-through by the MP government from previous watershed activities of the Rajiv Gandhi Mission to the second generation Pani Roko Abhiyan (Stop Water Campaign) signals a strategic shift in effort towards a mass movement for water conservation.

The success can be seen in rising groundwater tables. Consistent availability of water has jumpstarted rural economic and ecological regeneration. Most programs involve peo-

ple's participation in building water-harvesting structures; sustaining them will also need the people's cooperation and the government needs to redefine water rights so that people continue to take care of their watershed.

*For further information: <http://www.rainwaterharvesting.org>*

### 3. Energy Conservation Act

India is the second country in the world after the USA to pass such an act. The Act makes provision for creating an Energy Conservation Fund that is expected to meet the costs of implementing the Act and disseminating information. The Act gives central government the power to enact regulations establishing energy standards for buildings, equipment, and industrial processes. State governments will be given powers to customize building energy standards. The Act gives the government the power to classify energy users as 'designated' consumers, and equipment or appliances as 'specified' equipment or appliances. The Act also creates the Bureau of Energy Efficiency, which will recommend energy standards and energy labels on specified equipment/appliances.

The Act is considered to have the potential to be a major catalyst for kick-starting the energy management services (EMS) market through a combination of incentives by government, industry associates and other market players.

Experts consider this a rational move by the Government to offer financial support for energy efficient practices rather than subsidized electric power and the move is likely to open up a huge EMS market comprising farmers and small industries. USAID estimates a savings of nearly 30,000 MW of installed capacity through the implementation of energy conservation programs in India.

*For further information see [http://powermin.nic.in/bill\\_2001.pdf](http://powermin.nic.in/bill_2001.pdf)*

### 4. Protection of Plant Varieties and Farmers' Rights Bill

Complying with India's agreement on Trade Related Aspects of Intellectual Property Rights, this bill provides for a National Gene Fund, and Plant Varieties & Farmers' Rights Authority (PVP). The intention is to protect plant varieties and the rights of farmers and plant breeders, and encourage the development of new varieties. The bill recognizes the role of farmers as cultivators and conservers, and the contribution of traditional, rural and tribal communities to agro-biodiversity by entitling them to benefit-sharing and protecting their rights.

The breeder or farmer will be entitled to save, use, sow, re-sow, exchange, share or sell produce or propagating material. The PVP will characterize, document and register new and extant varieties and provide compulsory licensing if the right-holder does not arrange for production and sale of the seeds to ensure that protected seeds are available to farmers. The bill makes concessions for researchers, protects farmers in cases of innocent infringement, and gives compensation if a registered variety fails to perform. Varieties that may use 'terminator technology'<sup>1</sup> or prove harmful to people or the environment will not be registered.

Though critics maintain that permission granted to 'essentially derived varieties' could allow backdoor entry of GM crops, this bill is considered as a good start to protect the rights of farmers and tribal communities.

*For further information: <http://agricoop.nic.in/seedssf.htm>,  
<http://www.grain.org/publications/india-pvp-2000-act-en.cfm>*

---

<sup>1</sup> Terminator Technology is the application of genetic engineering to prevent the seeds of agricultural crops from germinating.

# Indonesia

*Mohamad Soerjani*

*Institute for Environmental Education and Development (IEED),  
Member of the National Research Council Indonesia*

## 1. "Clean Ciliwung River Campaign," Jakarta

In May 1989 a clean river campaign was initiated at the Environmental Study Center of the University of Indonesia with the support of representatives of eight universities located in Jakarta and some NGO groups. The campaign is named after the river Ciliwung, one of the best known of the 13 rivers in Jakarta. The campaign has received wide and enthusiastic support from government, education institutes from primary to tertiary levels, the business sector, professional societies and NGOs at large, including Women's Associations. In addition, thanks to the then Japanese Ambassador Mr. Kimio Fujita, the campaign received financial support (US\$ 57,099) to construct a Ciliwung River Campaign Center building.

It is now timely to revitalize the campaign, 12 years after its launch. One of the ideas behind cleaning up the river is to enable vessels to be used for transportation as well as tourism by dredging to deepen the bottom of the river. In the future it is hoped that there will also be better housing facilities on the river banks. Plans for dredging are now being prepared as a proposal to all stakeholders, in the hope that these efforts could be a reference model for river management in other cities.

## 2. Integrated Chemical Management and Safety

Article 19 of Agenda-21, as agreed by UNCED in 1992, stated that there must be efforts to manage chemical substances safely by the year 2000. "AGENDA 21 INDONESIA A National Strategy for Sustainable Development" was launched in 1997 and contains, among others, chapters concerning human health, toxic, hazardous and radioactive chemicals and waste management. In compliance with this agenda, Indonesia launched a program under the Coordinating Forum on Chemical Management and Safety in 1997 under the auspices of the Ministry of State for Environment and the Ministry of Health.

In October 2001 the Coordinating Forum prioritized the following programs for 2002-2005.

Raising awareness on Chemical Safety, by developing teaching materials on the role of chemicals for life (for Primary and Secondary Schools), and producing leaflets on the risks and management of hazardous chemicals (to be distributed to the producers, manufactures, traders, distributors and users of the chemicals).

To develop and maintain a database of chemicals including their management in a national information system in support of sustainable development.

These programs urgently need support from sources within Indonesia who have business directly or indirectly related to chemicals, such as manufacturers of traditional and modern medicines, chemical industries, agro-chemical factories and chemical distributors, as well as international agencies such as WHO, UNDP, UNEP, UNITAR, ILO, UNESCO, JICA and other grant awarding foundations.

*Those wishing to support the program can approach the Secretariat of the Coordinating Forum on Chemical Management and Safety at the National Agency for Drugs and Food Control "National Agency for Drugs and Food Control", Jl. Percetakan Negara No. 23, Jakarta 10560, Indonesia; Phone: 62-21-4244691, Fax: 62-21-4244947. Those wishing to know more about **teaching materials** in the role of chemical for life (for primary and secondary schools) may contact the Institute for Environmental Education and Development (IEED), Aldevco Octagon Building II 4<sup>th</sup> floor, Jl. Warung Jati Barat No. 75, Jakarta 12740, Indonesia; Phone: 62-21-7902951, Fax: 62-21-7985460, Email: soerieed@centrin.net.id.*

### 3. National Workshop on Environmental Education

The Ministry of State for Environment/Agency for Environmental Impact Management, in cooperation with the Centre for Research on Human Resources and Environment of the University of Indonesia, conducted a "National Workshop on Environmental Education" on November 5-6, 2001 in Jakarta. The workshop was conducted with support of UNEP and HSF (Hanns Seidel Foundation), and was held to formulate environmental education and learning processes to promote human resources that behave, care, are aware, and are friendly to the environment".

The objectives of the workshop were as follows.

- Identification and evaluation of the current implementation of environmental education in Indonesia.
- Formulation of a vision of environmental education through empowering all stakeholders.
- Formulation of alternative environmental education models in Indonesia.

These are some of the main results of the workshop.

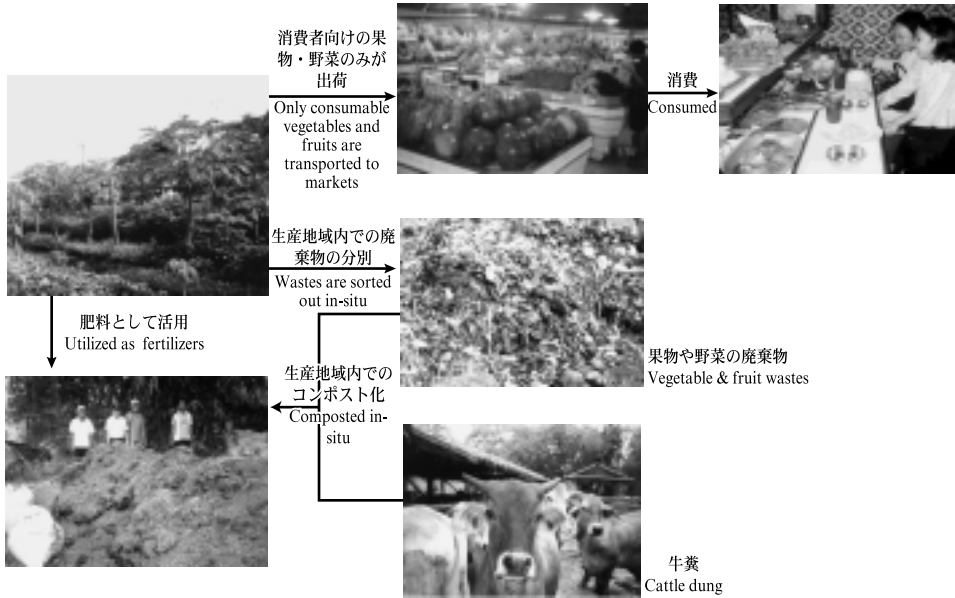
- Agreement to streamline and integrate formal, non-formal and informal environmental education to develop a consensus in sustaining development of the quality of life. The framework for this is based on a philosophy of knowledge, affection and care and in the implementation of the human ethics of attitude, commitment and behavior in life.
- Agreement that environmental education will be an integral part of technical and managerial skills training for all professional levels, particularly low and medium level workers.
- The establishment of the "Indonesian Environmentally Care Forum" as a network of all groups or institutions involved in environmental education and environmental management.

### 4. Novel Approach to organic Waste Composting

The urban population in Indonesia is increasing steadily from 76 million (36%) in 2000 to an expected 90 million (approximately 40%) of the total 223 million by 2005. In the meantime as a consumer of everyday goods (foodstuffs, vegetables, fruits, etc) produced in rural hinterlands, the urban community produces domestic waste amounting to over 100,000 tons/day. It is estimated that of the 94% burnable waste component, 74% is

organic matter, Of that only 25% can be composted and 20% is being recycled. This leaves almost 60,000 tons of domestic waste being dumped daily.

Cities like Jakarta is overburdened with organic waste that has to be dumped in a number of dumping sites. In cooperation with Prof. Takashi Hayase from Nagasaki University, the Institute for Environmental Education and Development are in the on-going efforts to introduce novel approach in composting the organic waste from vegetable and fruit plantation to be sorted-out locally and with waste (dung) from cattles to be composted and used by the plantation as organic fertilizer.



果物と野菜は生産地で分別され、一定の品質を保持しているものだけが消費者向けとして市場や都市部に運ばれる。したがって、市場に流れる廃棄物はより少なくなる。果物や野菜の廃棄物は牛糞と一緒に、生産地域内でコンポスト化され、肥料として使用される。(写真：著者提供)

Fig. 2. Vegetables and fruits are sorted out, and only qualified consumable vegetables and fruits transported to markets and cities for consumption, therefore less waste is transported to the market. Refusal of vegetables and fruits (wastes) are composted together with cow dung and recycled in-situ as fertilizers for vegetable and fruit plantations (photos by Soerjani).

The multipurpose benefits are:

- less burden of transportation to cities;
- less transportation from markets to waste dumping sites;
- high quality of vegetables and fruits are transported with higher values and higher price;
- composting wastes are directly utilized in-situ as organic fertilizers which promotes environmentally friendly farming system;
- this will create awareness among the farmer's community, while they could improve their managerial skill through farm cooperatives.

It is hoped that the model will be used in practical way by other cities. Support of additional resources is now being requested from the Ministry of Education, Japan.

## 5. Environmental Policy Revitalization

The minister responsible for environment issues in Indonesia was for five years (1978-1983) the Minister of State for Development Supervision and Environment and for ten years (1983-1993) the Minister of State for Population and Environment. Both posts were held by Prof. Emil Salim. Mr. Sarwono Kusumaatmadja, a technical engineer, was Minister of Environment from 1993-98 and he was followed for less than one year in 1998 by medical doctor Mr. Panangian Siregar. Dr. Sonny Keraf, a university lecturer on business ethics, was incumbent from 1998-2001. President Megawati then appointed Mr. Nabel Makarim as the new minister, who is a familiar figure through his environmental dedication.

Since its inception in 1978 he was one of the key staff of the Minister of Development Supervision and Environment, and played a role in the establishment of the Environmental Impact Management Agency in 1991 as Deputy for Pollution Prevention. With Mr. Makarim as the Minister of State for Environment it is hoped that there will be continuity in environmental policy in Indonesia. It is expected that there will be clearer vision, strategy and programs in environmental management, mainly returning to the task of assuring the future environmental, economic, social and cultural feasibility of Indonesian national development.

The World Summit on Sustainable Development will be held in September 2002, in which implementation of Agenda 21 will be evaluated. Indonesia was appointed to organize the Fourth Preparatory Committee on this Summit held on May 27 - June 7, 2001. The Office of the Minister of State for Environment together with all sectoral department and other stakeholders: educational institutions, private and business sectors, NGOs, community-professional organizations and the mass-media, are in the midst of preparing the Indonesian-Agenda 21 position to be reported in the WSSD next year. Among the chapters of Agenda 21-Indonesia, the following priority programs should be evaluated thoroughly: poverty alleviation, the promotion of human health, atmospheric protection, toxic chemical management, sustainable forestry, agriculture and rural development, the promotion of ecodiversity technology and integrated management of coastal and marine resource. Sustainable development is that which benefits equally and proportionally all people in the improvement of quality of life.

## 1. Controversy on Ratifying the Kyoto Protocol

In the Kyoto Protocol against global warming adopted in 1997, Japan has made a commitment to reduce greenhouse gases (GHGs) emissions by 6 % of the 1990 level during the period 2008-2012. However, as the Bush administration of the United States decided not to ratify the Kyoto Protocol in March 2001, ratification of the Kyoto Protocol became a matter of controversy in Japan. The Japanese government has been put in a delicate position between the U.S. on one hand and the EU countries that are positive about ratifying the Kyoto Protocol on the other. The Prime Minister Junichiro Koizumi remained cautious about ratifying the Kyoto Protocol without the U.S., and asserted that Japan and the European members should make efforts to urge the U.S. to participate in the Kyoto Protocol. Many experts and environmental groups strongly demanded that the Japanese government ratify the Kyoto Protocol regardless of U.S. participation. Public awareness of the Kyoto Protocol also rapidly increased. Since the second part of the 6th Conference of the Parties of the UNFCCC (COP 6), the Ministry of the Environment has set up a Global Warming Prevention Headquarters and also initiated formulation of a budget plan for ratifying the Kyoto Protocol. Just after the 7th Conference of the Parties of the UNFCCC (COP 7) in November 2001, the Japanese government finally made a decision to ratify the Kyoto Protocol in 2002.

*For further information, the Japan Center for Climate Change Actions (<http://www.jccca.org/en/>).*

## 2. Reconsidering the Land Reclamation Project at the Isahaya Bay

In April 1997, a set of water gates sealed off a part of the bay in the national reclamation project at the Isahaya Bay, which is a part of the Ariake Sea. At that time, many environmental groups strongly protested against sealing off the bay because it could cause water pollution and ecological destruction. Last year, the seaweed crop was poor and the seaweed harvest sharply reduced in the Ariake Sea. Local fishermen alleged that deterioration of water quality caused by the reclamation project resulted in a poor harvest. Since January 2001, fishermen from Fukuoka and Saga prefectures have begun to collectively stage protest demonstrations at the sea against the reclamation project. On 13 May 2001, a large-scale protest meeting was held. Roughly 1,500 fishermen demanded the government cancel the reclamation project and open water gates at the Isahaya Bay. On the other hand, some local people around the Isahaya Bay wished to continue the reclamation project, on the grounds that the relationship between the reclamation project and the poor seaweed crop is not yet clear and the local community will be seriously damaged by suspension of the reclamation project. In October 2001, the Ministry of Agriculture, Forestry and Fisheries proposed a revised plan for the reclamation project, which proposes to scale-down the reclamation area but not to open water gates. The argument on the reclamation project will clearly not end soon.

*For further information, the Fisheries Agency (<http://www.jfa.maff.go.jp/>), in Japanese only.*



### 3. Enforcement of the Law for Recycling of Home Appliances

In Japan, the total amount of waste discharge was 450 million tons in 1998, i.e. approximately 10 kg per capita per day. Waste management is a policy agenda with overriding priority in Japan. Last year, the Basic Law for Establishing the Recycling-based Society was enacted in order to urgently review citizens' lifestyles and economic activities, and pursue a society in which consumption of natural resources is restricted with a reduced environmental burden. Under the basic law, the Law for Recycling of Home Appliances has been put into effect since April 2001 in order to strengthen the responsibilities of consumers, retailers, and manufactures in recycling four specified kinds of home appliances, namely televisions, refrigerators, air-conditioners, and washing machines. This law requests retailers to take back used home appliances, and also puts manufactures under an obligation to recycle used appliances taken back in accordance with the recycling standards set by the government. In addition, consumers shall pay collection/recycling fees for retailers and manufactures when they dispose of those appliances as wastes. This is the first step of the challenge to establish a recycling-based society in Japan.

Moreover, in order to discuss policies for the creation of "Wa-no-kuni - an ecosociety through partnership", the Prime Minister Junichiro Koizumi has organized a Conference for Establishing "Wa-no-kuni" in the 21st Century, which includes all of the Cabinet members as well as ten experts from a broad range of disciplines. Prof. Akio Morishima, Chair of the Board of Directors of IGES, has also been appointed as a member of the conference.

*For further information, the Ministry of Economy, Trade and Industry (<http://www.meti.go.jp/english/index.html>) and the Ministry of the Environment (<http://www.env.go.jp/en/index.html>).*

### 4. Inauguration of the Ministry of the Environment

In January 2001, one Office and twenty-one Ministries were reorganized into one Cabinet Office and twelve Ministries under central government reform in Japan. Under the reform, the Environment Agency established in 1971 was upgraded to the Ministry of the Environment. This reform shows that environmental issues as a policy agenda have come to have more priority within the Japanese government. The most remarkable change is to integrate powers and responsibilities on waste management into the Ministry of the Environment, and to create a new department for waste management and recycling within the Ministry. It is also worth noting that new special divisions were created for dealing with issues of both global warming and integrating environment and economy respectively. The number of staff in the Ministry of the Environment has increased to 1131. Prior to the inauguration of the Ministry of the Environment, the Japanese government revised the Basic Environmental Plan in December last year. The new basic plan provides several strategic environmental programs on selected policy agendas such as global warming and establishing a recycling-based society. Moreover, the basic plan also requests a strengthening of monitoring and a review system for effective implementation of the basic plan. While the Ministry of the Environment is facing a number of policy agenda to be addressed, properly implementing the basic plan becomes an essential agenda among them.

*For further information, the Ministry of the Environment (<http://www.env.go.jp/en/index.html>).*

## 1. Environmental Efforts Driven by the 2002 FIFA World Cup Hosted by Korea and Japan

The 2002 World Cup will take place from 31 May to 30 June in ten cities throughout Japan and the Republic of Korea. Thirty-two teams from around the world will take part in the event and 13,000 participants comprising members of thirty two teams, FIFA representatives, and the media, etc. will gather in Korea, not including spectators and volunteers. The World Cup is not simply a football tournament but has come to be an internationally recognized event, and thus Korea has been making preparations for some time. As part of these efforts, the 2002 World Cup has been named the "Clean World Cup" to promote environmental-consciousness in the preparation and execution of the event, and a "World Cup Environmental Coordinating Committee" has been established. The committee plans to systematically address environmental improvement in the sectors of stadium facilities, area beautification, and air, water, and waste management. The Korean government is presently assessing the current environmental conditions in which the Organizing Committee for the 2002 FIFA World Cup Korea/Japan will implement recommendations for environmental improvement, and it will then provide an appropriate budget. In addition, under the auspices of the Prime Minister, the Ministry of Environment, the Organizing Committee for the 2002 World Cup and various NGOs, an assessment of environmental improvement will be undertaken in order to implement concrete plans for an "ECO-World Cup". Furthermore, during the tournament the government is declaring environmental measures in eight major cities in Korea. Vehicle use will be regulated so only 1/2 or 1/5 of total cars can operate, 5,000 diesel buses will be replaced by Compressed Natural Gas (CNG) buses, and there will be no smoking allowed in the stadiums. On conclusion of the World Cup, there are also plans to deal with the clean-up efforts in an environmentally responsible manner.

## 2. Conservation of the Tumen River

Although mostly situated in North Korea, the Tumen River runs for 547.8km, covering an area of 32,920km<sup>2</sup> in Korea, China, and Russia. With abundant forest resources covering 94% of the surrounding area, the river is inhabited by a variety of rare wildlife, is rich in coal dregs upstream, and is renowned for its underground mineral deposits. Recently, wastewater from factories and households combined with detrimental development practices has been destroying the ecosystem of the Tumen River. In response, the five nations of North and South Korea, China, Russia and Mongolia have initiated a project from 2001-2002 to start environmental protection efforts for the region of the Tumen River. This project, funded with US\$52 million from the Global Environmental Facility (GEF) and led by the United Nations Development Programme (UNDP) is divided into five sectors: environment protection strategy and implementation, transboundary diagnostic analysis, research on pollution conditions, establishment of an environmental information network structure and environment awareness campaigns. Korea is planning on assisting mainly in environmental

protection, countermeasures and investment, but these plans are contingent on environmental conditions and pollution in the region. The Ministry of Environment of Korea (MOE) is making great efforts to bring together Korean stakeholders from academia, industry and NGOs, as the Tumen region project has the potential to attract large financial investment. Furthermore, the MOE anticipates that this project will serve as a stepping stone for further environmental cooperation between the two Koreas.

### 3. Eco-Technopia 21

The future of Korean environmental technology is under threat due to international environmental regulation. Because the Korean government recognizes new environmental technology as significant, the Korean Ministry of Environment (MOE) initiated Eco-Technopia21 (ET21) in 2001, with the objective of opening new international markets and also improving the quality of Korea's environment. With a ten year budget of one trillion Won (US\$770 million), ET21 has set five major goals: synthesis of environmental management technology, ecological preservation and restoration, pollution prevention, global environment preservation and environmental management awareness. In addition, the project will be implemented by strategies focusing on research and investment in environmental technologies, cooperation between experts from Korean industry, academia, and research institutions, and the large-scale export of "ECO-technology" to China and Southeast Asia. The MOE has spent 50 billion won (US\$38 million) during 2001 on projects like ET21 and what it deems as difficult issues, such as the restoration of ecology and polluted soil and the reduction of endocrine disruptors in the environment.

### 4. Saemankeum Reclamation Project

Saemankeum is claimed to be the world's largest ongoing reclamation project, amounting to 40,100 hectares at the mouth of the Mankyung and Tongjin Rivers, Chollabuk Province, in the western region of Korea. This reclamation aims to expand the national land area, agricultural and industrial water supplies, and to aid drainage of adjacent areas. In addition the project plans to develop an international harbor, and will include 33km of sea-walls, including the tidal flats in the Saemangeum area. The Saemangeum project, planned in detail in 1986 and launched in 1991, is part of a national long-term project dating from the 1970s to reclaim the western and southern seashores of South Korea. The original 2004 completion date will most likely be extended due to environmental budgetary problems. This project was intended for land extension and the acquisition of farmland. However during the project's development, the municipal bodies of Chollabuk Province formulated another plan that included an industrial complex which worries many environmentalists. At present 56% of the seawall construction has been completed and the Government has pledged its support for the project's completion. Unfortunately, the Saemangeum project was planned more for political motives than valid, effective land policy and about seventy cases of deficiencies have been found. Nevertheless reports on the project provide evidence of the international importance of this ecological unit of extensive tidal-flats and shallows to migratory and aquatic species.

## **1. Integration of Environmental Concerns into Socio-Economic Development Plans**

The Government of Laos adopted at the beginning of 2000 a Socio-economic Development Strategy (NSEDS) for the years 2010 and 2020 along with the fifth socio-economic 5-year plan (2005-2010). The plans set out requirements and guidelines concerning the development of environmental protection regulations. Sectoral plans and strategies have to be developed by all government agencies in accordance with the NSEDS, and the Science Technology and Environment Agency has thus prepared the Environmental Strategy and Action Plan. It will soon be submitted for cabinet approval. The plan forms a basis for environmental policies and programmes to progressively integrate environmental concerns into socio-economic development, taking account of institutional, human and financial capacity building.

## **2. The First State of Environment Report**

The first State of Environment Report of Laos will be launched at the end of 2001 by the Science Technology and Environment Agency with the support of UNEP and the Danish Agency for Development Assistance (DANIDA). The report highlights five main environmental issues which are linked to natural resources such as land, forest, water and biodiversity resources and the urban environment.

The report will be one of only a few documents dealing solely with the environment of Laos and it is expected to contribute to the ongoing preparation of a country report for the World Summit on Sustainable Development to be held next year in South Africa.

## **3. The First Sectoral EIA Regulation**

Laos is still one of the Least Developed Countries. Its industrial production, both gross and per capita, is at low level and the number of vehicles is small. Hence, pollution is considered to be minor at present. However, in the future problems may grow rapidly due to emerging economic activities. One of the most effective preventative measures against environmental damage is Environmental Impact Assessment (EIA). In 2000 the Science Technology and Environment Agency issued a Ministerial Decree on general EIA requirements in accordance with the Environmental Protection Law. The Minister of Industry and Handicraft issued the first sectoral EIA regulation for the hydropower sector in November 2001. This will contribute considerably to the environmental protection and sustainable development of Laos, because hydropower development is being strongly promoted by the government to achieve national economic goals.

Other sectoral EIA regulations for road transport, industry, forestry and mining are also being prepared to ensure that the major economic activities of the country will be properly managed in respect to sustainable development.

#### 4. EIA for Gold Mine

The largest gold mine in Laos is going to be developed in the Sepone District of Savannakhet Province, southern Laos, in compliance with EIA regulations. The EIA report carried out addresses the issues of natural environment as well as social environment. Public consultation with local people was carried out. The project will contribute to national development, increase the national income and also establish a social fund to support community development in the villages affected, thus alleviating poverty in the project area.

The project will soon receive the Environmental Compliance Certificate issued by Science Technology and Environment Agency, and next prepare the Environmental Management Plan that is subject to government approval before the inception of the project.

#### 5. Program to Improve Environmental and Social Management

A programme to improve environmental and social management in the energy and transport sector, focusing on hydropower and road transport is to start early in 2002 and finish in 2004. The programme will be executed by the Science Technology and Environment Agency with a US\$20 million soft loan and technical assistance from the Asian Development Bank (ADB). The objectives of the programme are to: (i) strengthen the national policy and regulatory framework for environmental management and social safeguards, (ii) enhance policy implementation measures and capacity at sectional and provincial levels, (iii) improve compliance and enforcement, (iv) promote river basin management as a multi-sectoral and integrated planning framework for the energy and transport sector and (v) establish a sustainable financing mechanism such as an environment fund. These objectives are expected to be achieved through various projects supported by ADB, other lenders and donors. A steering committee for the program is to be established and a secretariat is to be set up at the Department of Environment of the Science Technology and Environment Agency. By the end of the programme, systems will be improved or instigated for environmental management and in particular third party monitoring, public consultation, environmental performance bonds, an environmental fund and so on.

## 1. Focus on Wetlands

As a signatory to the Ramsar Convention, and with Tasik Bera listed on the Ramsar List<sup>2</sup>, Malaysia has identified four new potential sites for inclusion. These are the Kuala Gula and Pondok Tanjung forest reserves in Perak, Timah Tasoh in Perlis and Pulau Gruit in Sarawak. In announcing this at the August opening of the 'Asian Wetland Symposium 2001,' the Minister of Science, Technology and Environment (MOSTE) Datuk Law Hieng Ding also cited plans for setting up a study center to be supported by international wetlands organizations and based in Penang's Universiti Sains Malaysia. He called for cooperation from the various state governments in designating more wetland areas, which are now recognized for their educational and tourism potential. Soon after this in mid October, the Paya Indah Wetlands eco-tourism park was launched by the Hon Prime Minister Dato' Seri Dr Mahathir Mohamed. The 3,100 hectare sanctuary, hailed as a gift from the Federal and Selangor governments, sits approximately 50 km from the capital city and houses many rare species of animals, including a gift from the Botswana government in the form of four Nile hippopotamus. Other features of the park include an educational Exploration Centre, a Palm Garden and a traditional Malay heritage house.

## 2. Natural Heritage of Belum to Remain

In line with a call made by the Prime Minister at the 50th Pacific Asia Travel Association (PATA) annual conference that the tourism industry should be managed on the concept of sustainable development, plans to develop the Belum forest in Perak into an eco-tourism destination will be subjected to various environmental conditions, including Environmental Impact Assessment (EIA). In announcing this on May 30, the Chief Minister of Perak stressed that with the nomination of Belum for placement in the World Heritage List by the United Nations Educational, Social and Cultural Organisation (UNESCO) it was even more important that the site remained in its natural pristine state. Belum, which has been the subject of intense research by the scientific fraternity in recent years, is rich in flora and fauna and spans 100,000 hectares. More than 20 new species of orchids, flies, flowers and prawns have been discovered at the site which encompasses an Orang Asli (aboriginal) settlement and tourism attractions such as rivers, salt licks and hot springs. Access will be provided by a proposed landing strip; and hotels and chalets are to be built causing minimal impact on the forest itself, given that the building activities will take place on Banding Island which fronts Belum.

---

<sup>2</sup> The Ramsar List is a List of Wetlands of International Importance under the Convention on Wetlands. Sites are selected by the Contracting Parties for designation in reference to "Criteria for the Identification of Wetlands of International Importance." The Contracting Parties are to submit a Ramsar Information Sheet (RIS) in which ecological features, educational and commercial uses, a management plan, and other information concerning the site are described, and the government is obliged to take necessary steps to maintain the ecological character of the site.

### 3. EIA for All Projects

The Cabinet Committee on Coordination of Highlands and Islands Development proposed in its April 2 meeting that Environmental Impact Assessment (EIA) be carried out for all development projects, an improvement on the present situation where only those projects 50 hectares and above are subjected to EIA. Thereafter, land use for the purpose of farming, road building, construction and employment of heavy machinery will have to obtain an EIA Order 1987 under the Environmental Quality Act (EQA)1974. The Malaysian Hills Network, a coalition of NGOs comprising WWF Malaysia, the Malaysian Nature Society, the Consumers Association of Penang, Sahabat Alam Malaysia and Wetlands International Malaysia, welcomed the committee's decision as being very significant and a major step in the right direction. A further boost came with the tabling of a Parliamentary Bill on 12 April to involve local governments in environmental enforcement. According to Deputy MOSTE Minister Datuk Zainal Abidin Dahalan who tabled the Bill, the EQA (Amendment) Act 2000 will enable the Director General of Environmental Quality to delegate his powers to allow any person or body to perform the duties of the Ministry.

### 4. Prestigious Award for Malaysians Committed to Turtle Conservation

Malaysian marine biologists Dr. Chan Eng-Heng and Mr. Liew Hock-Chark, who have rescued over a quarter of a million turtle eggs, received UNEP's prestigious Global 500 award this year. The husband-and-wife team, currently based at the Sea Turtle Research Unit (Seatru) in Trengganu, began as long ago as 1993 to save turtle eggs from being sold as food. They were alarmed that turtles on the island of Redang were facing extinction as a result of the government-licensed egg collection trade. It was estimated that some 200,000 hatchlings managed to return to sea. Chan and Liew have previously gained international recognition for their research contributions and skills in tracking green turtles. Both are involved in other satellite-tracking projects with scientists from other nations including Japan. The Seatru team has also taken initiatives to develop educational programmes for the young. Sponsorship from committed corporate sectors enables students to attend Seatru's "Turtle camp" where they are taught to appreciate their marine heritage and to understand their role in saving these magnificent marine reptiles.

### 5. Transfrontier Protected Areas

Malaysia's Perlis State Park (PSP) in the peninsular north and Thailand's Thaleban National Park were highlighted by the media in October, as the two protected areas share many natural features including the Nakawan Range, which is a blue-green forested belt. The beautiful PSP, with its limestone hills and caves dating back 500 million years, houses the Meranti-Gerutu seasonal forests, rare mammals and about 180 species of birds. Equally breathtaking is the Thaleban National Park with its massive limestone unit on the western front that supports 80 species of mammal, 59 species of reptile, and a mangrove forest that reaches out to the Andaman Sea. To overcome problems caused by political boundaries not coinciding with ecological boundaries, plans to establish the first transfrontier protected area (TPA) along the Malaysia-Thailand border are underway. A TPA will ensure that the two parks are given better protection, allowing comprehensive joint research programmes, better management with standardized laws and procedures and opportunities for tourism-related activities. To date, Malaysia has already established two TPAs, one being the Lanjak Entimau-Betuang Karimunan TPA with Indonesia and the other the Turtle Islands Heritage Protected area with the Philippines.

# Mongolia

**Ayush Namkhai, Development and Environment Center  
Dondogiin Enkhbayar, Ministry for Nature and Environment**

## 1. Air Pollution in the Capital

Within the last few years air pollution levels in Ulaanbaatar City, the capital of Mongolia, have been continuously increasing and in winter time especially the issue becomes one of the biggest ecological problems.

There are three thermal power stations in Ulaanbaatar City which use over 2.52 million tons of coal and produce 2,509.6 million kw of energy. While operating they produce 10-20 tons of soot every hour. The range of air pollution dispersion is mainly dependent on wind speed and under normal conditions, 50 tons of soot will disperse within a range of five km. In windy conditions this range increases to 25 km. In addition, the approximately 63,000 families living in ger (small house) areas in Ulaanbaatar City use over 70,000 small-size ovens to produce heat. On average, they burn 350,000 tons of coal and releases a quite big portion of the capital's polluted air. As a result of the above, air particulate levels in the capital city are estimated at 120-200 mg/m<sup>3</sup>. The atmospheric levels of carbon dioxide and sulfur dioxide in Ulaanbaatar City exceed the rate that should have a negative influence on human health by 1.5-2.6 and 1.3-2.8 times respectively.

The Government of Mongolia and World Bank have budgeted 340 million tugrik and as a result of the Ministry of Nature and Environment promptly organizing a tender for the design and manufacture of fuel-saving stoves, 15,000 stoves of 4 varying models have been already manufactured and distributed to consumers as a trial. The newly designed stoves have both ecological and economic benefits as they save fuel by 30-50% and decrease soot by 80%.

*Source: Mongolia, Ulaanbaatar, The "TIME" Newspaper, No.5, November, 2001*

## 2. Amendments Made to the Law on Environmental Impact Assessment

Some concrete amendments have been made to the Law on Environmental Impact Assessment ratified by the Parliament of Mongolia in 1998 and the Law was ratified in its new form at the session of the Parliament on November 30, 2001. The amendments made in the Law on Natural Impact Assessment comprise several important provisions determining in a detailed way the duties, rights and responsibilities of the State Central Organization in charge of Environmental issues, Project Clients and a Project Expert or competent authority for conducting detailed environmental impact assessment.

For instance, the Law stipulates that, "a general environmental statement shall be made before obtaining a license on mineral resource utilization, land exploitation and ownership as well as before beginning of implementation of any project."

It also states that to guarantee environmental protection duties are fulfilled, the organization executing the project shall deposit a sum of money in the special account for nature of the relevant soum (national administrative unit) or district. This sum of money shall be at least equal to 50% of the expenses required for environmental protection and restoration measures in the relevant year. A report on the execution of the plans shall also be made.



Observation of this new law containing the additional amendments described above shall be of great importance for both the protection and the restoration of the nature and environment of Mongolia.

*Source: The Ministry for Nature and Environment*

### 3. Determination of List, Estimation of Size and Percentage of Payments and Charges

In 2000, the "Mongolian Law on Animal Kingdom" was ratified. 13 mammal, 8 bird, 4 fish and 1 insect species were included in a list of extremely rare animals and according to this law, it was made legally binding that the Government ratify the list. However by Governmental resolution No. 264, 2001 the list of rare animals, the ecological and economical evaluation of animals, the price standards of findings, size and the percentage of payments and charges have been determined anew.

Based on provision 6 of article 7 of the "Mongolian Law on Animal Kingdom" and provision 3 of article 5 of the "Mongolian Law concerning Charges on License for Hunting and Catching Animals and Payment for Utilization of Hunting Reserve", the Government of Mongolia makes the following resolutions. The "List of Rare Animals", "Ecological and Economical Assessment of Animals", "Size and Percentage of Charges on License for Hunting and Catching Animals and Payment for Utilization of Hunting Reserve" and "Price standard and Size of Charges on Game beasts permitted to be hunted by Foreign citizens for the special payment" shall be ratified respectively according to Appendixes 1; 2; 3 and 4.

*Source: The Ministry for Nature and Environment*

### 4. Pasture Overgrazing Increases

The hay and pasture area of Mongolia embraces approximately 147,167,500 hectares of combined land consisting of different geographical zones including high mountains, forestry steppes, steppes and gobi, which account for 76.5% of the total territory of the country. Over 2,600 types of plants are grown within the pastures, more than 200 of which are natural types and approximately 600 are edible by livestock. According to calculations made by scientists, in terms of sheep numbers, the total pasture area is adequate for 50-60 million livestock but by 2001, the number of sheep in the country has reached 72 million. This fact shows that the natural pasture has reached the limit of its capacity to provide basic feed to livestock.

Plant-cover and vegetation in a 2.4 million hectare area where harmful rodents are rife have suffered great losses. Vegetation growth in the area has decreased by up to 90% and a number of plant types within the area have been reduced by 83.3%. For instance, periodical population explosions of Brandt's voles have been observed in 1956-1957, 1963-1965, 1970-1973, 1980-1985, 1990-1991 and 1998-2001.

Although, the Government of Mongolia has spent over 240 million tugrig on a campaign of Brandt's vole elimination, this amount is not enough for the complete elimination of the voles. In addition, it should be considered also that the pasture has been greatly degenerated owing to a lack of the legal and economical basis necessary to regulate matters connected with the protection, proper utilization and restoration of pasture.

## 5. Census of Argali Sheep (*Ovis Ammon*) Population

In 2001, the Ministry of Nature and Environment of Mongolia in cooperation with the American Association for Protection of Asian Cloven-hoofed Animals (Catrino group) conducted the first census of argali sheep within the territory of Mongolia. The census was conducted for a period of 6-7 months by a group of 182 individuals consisting of Mongolian biologists, experts on hunting and nature conservancy staff using methodology accepted at a worldwide level. It benefited from the participation of Dr. Will Wool, American biologist and a scientific advisor of the Catrino group.

As a result of this census, which covered the three regions of Altai, Khangai and Gobi, it has been determined for the first time that there are approximately 15,000 argali sheep in Mongolia. The project has been financed by 25 million tugrig donated by the Mongolian Government and 7 million tugrig provided by the Catrino group.

*Source: The Ministry for Nature and Environment*

## 6. Drought for Three Years Running

Although during the summers of 1999 and 2000 drought embraced over the half of the total territory of Mongolia, in the summer of 2001 approximately 70% of the territory has been affected. In other words, the country has suffered from drought for three years running. These droughts are rightly considered as a natural disaster that hasn't happened for the last 60 years. Because of this adverse natural phenomenon, the national economy of Mongolia has experienced a loss of US\$ 90 million during the last three years.

*Source: National Agency for Meteorology, Hydrology and Environment Monitoring*

## 1. Kumroze Community Forest Earns from Eco-tourism

In the late 1980s the community of Kumroze got together to plant trees and recreate the once lush jungles of the area. Today the Kumroze Community forest is a 1,050 hectare patch of jungle and generates 1.5 million rupees annually from tourists visiting the area for elephant rides and nature walks.

Today, nearly 1,200 households in the vicinity benefit directly from the Kumroze forest, which helps meet their firewood, timber, fodder and thatch needs. With the restoration of the forest, wildlife from the Royal Chitwan National park has also started sneaking into the Kumroze forest. The Asiatic one-horned rhinoceros and Royal Bengal Tiger both roam the forest, and this brings in tourists keen to catch a glimpse of these rare beasts, or go on jungle walks or even camp out. A recently constructed viewing tower offers visitors a new facility to observe wildlife and experience jungle life.

The Kumroze Community forest is a remarkable success story of how community forestry and conservation can co-exist. The village collects the fees from the rides and ploughs the money directly into further conservation work. The money is also invested in various development activities for Kumroze village.

*References: Nepali Times, 2-8 November 2001*

*G.P.O. Box: No. 7251, Kathmandu, Nepal*

*Tel: 722 - 01 - 543333, Fax: 722 - 01 - 521013*

## 2. Arsenic Contamination in Groundwater

Evidence of arsenic contamination in ground water has been found in the southern plains of Nepal, causing health hazards to those drinking well water contaminated with the chemical, which can cause cancer in the long run.

A one-and-a-half year long study carried out by His Majesty's Government's Department of Drinking Water and Sewerage in conjunction with the Environment and Public Health Organization (a non government Organization) has found excessive concentrations of arsenic in ground water samples taken from shallow tube-wells, mainly in the districts of Rautahat, Parsa, Nawalparasi, Banke and Bardia. Meanwhile Jhapa, Saptari, Sarlahi, Bara, Rupandehi and Kapilvastu districts were found to be contaminated with arsenic over the maximum permissible level of 0.01 milligram per litre set by the World Health Organization. Concentrations well beyond the Bangladeshi and Indian Governments' recommended level of 0.05 mg/l were found in Rautahat, Parsa, Nawalparasi, Banke and Bardia.

The research findings are preliminary and more samples are being collected and tested from across the Tarai belt. A detailed picture will be available shortly when the research is completed. A five member Arsenic Adhoc Steering Committee has prepared a national arsenic policy draft and submitted it to the Ministry of Housing and Physical planning for endorsement and to set arsenic standards for Nepal.

*Reference: The Kathmandu Post, 29 July 2001.*

*For further information:*

*Environment and Public Health Organization (ENPHO), New Baneshwor, Kathmandu*

*Fax: 977-1-491376, E-mail: enpho@mail.com.np*

### 3. Lake Phewa Plan Adds Woes

The future of the magnificent Lake Phewa, a popular tourist attraction, appears to be bleak as both the government and local bodies are implementing what are being seen as faulty development programmes. In a recent move to save Lake Phewa from siltation problems the Pokhara municipality has constructed drains around the periphery of the lake. Several sedimentation purification points along the system were also envisaged but only one has been built.

The trouble is that along with rainwater the drains are also discharging urban sewage into the lake. This direct flow of urban waste has deteriorated water quality. Environmentalists say that the municipality should have constructed a scientific filtration tank that can not only segregate sediment but also chemical pollutants

Geologists say that Phewa will turn into marshy plains within the latter half of the next decade if corrective measures are not taken soon. A good number of siltation tanks need to be constructed to prevent the rapid silting up of Lake Phewa. The immediate sufferers of this unresolved problem will be the dwellers of Pokhara whose future depends upon the booming tourism business around the lake.

*Reference: The Kathmandu Post, 15 November, 2001*

### 4. Leasehold Forestry in 16 More Districts

Buoyed by the success seen in improving conditions of people living below the poverty line and its role in improving the ecological condition of the open barren lands of the mid-hills in ten districts, the government has decided to extend the leasehold forestry project to 16 other districts. The project initially started in four districts with the objectives of improving the conditions of those living below the poverty line and improving the ecological condition of the open and barren mid-hills of Nepal by leasing blocks of degraded and barren forest land to small groups of poor families.

According to an evaluation report of the eight year long Hill Leasehold Forestry and Forage Project prepared by Department of Forestry recently, more than 11,500 poor families have directly benefited from the project. There is a clear trend of increased income from the sale of farm products. Leasehold households have increased food security by 16%. The ecological condition of 7,000 hectares of degraded forest has also been improved, and this has been distributed to the lease hold groups. As the degraded open lands have been covered with trees and vegetation, water levels have increased substantially.

*Reference: The Kathmandu Post, 15 November 2001*

## 5. National Policy on Wetland Management

The Ministry of Forest and Soil Conservation, the Department of National Parks and Wildlife Conservation and IUCN (the World Conservation Union) jointly organized a workshop on "Draft National Policy on Collaborative Management of Wetlands in Nepal" on 3 August 2001 in Kathmandu.

The wetlands are taken to be fertile land in terms of agriculture production and are rich in biodiversity. There are altogether 242 wetland areas in Nepal including 163 in Tarei region and 79 in the hilly and mountainous region. Of the 242 wetland areas in Nepal, the Koshi Tappu has been listed under the Ramsar Convention<sup>3</sup>.

As decided by His Majesty's Government, a seven member taskforce was constituted for the implementation of the Ramsar Convention in Nepal, and accordingly the taskforce has prepared a draft national policy on the community-based collaborative management of wetlands in Nepal. The draft national policy on wetlands has emphasized the need to include the wetlands of international importance in Nepal in the Ramsar Convention and develop them into protected areas. The draft national policy also stresses the conservation and prudent management of other wetland areas in the country and has emphasized community participation in the management and conservation of wetland areas.

*Reference: The Rising Nepal, 5 August 2001*

*For further information:*

*Department of National, Parks Wildlife Conservation Babarmahal, Kathmandu, Nepal*

*Tel: 977-1-22091, Fax: 977-1-22767, E-mail: [dnpwc@bdcin.wlink.com.np](mailto:dnpwc@bdcin.wlink.com.np),*

*Website: [www.dnpwc.gor.np](http://www.dnpwc.gor.np)*

---

<sup>3</sup> Ramsar List: See the report from Malaysia.

# New Zealand

*Jacquelyn Harman, Research Assistant*  
*Neil Ericksen, IGCI Director*  
*The International Global Change Institute (IGCI)*  
*The University of Waikato*

## 1. New Zealand Takes Steps Towards Ratifying the Kyoto Protocol

The New Zealand Government will ratify the Kyoto Protocol before the World Summit on Sustainable Development (WSSD) in September 2002. Before New Zealand can meet obligations of the Kyoto Protocol a number of steps still need to be worked through and policies implemented. This process has already begun with: 1) the inclusion of new energy efficiency requirements in the national building code; 2) agreement on introducing Minimum Energy Performance Standards and mandatory energy performance labeling; and 3) release of the *National Energy Efficiency and Conservation Strategy* in September 2001. Energy use is one of the dominant sources of New Zealand's greenhouse gas emissions and improving energy efficiency is one of the most cost-effective ways for New Zealand to reduce them.

In addition, climate change legislation is to be implemented in two-parts. The minimum legislative requirement for ratification of the Kyoto Protocol (Part I) is currently going through the public consultation process, and includes the nation's compliance equation, registry, and inventory. Legislation specifying domestic policy options (Part II) will be introduced at a later date.

## 2. Moratorium on Field Trials of Genetically Modified Organisms Lifted

Controversy over research into genetically modified organisms (GMOs), including destruction of field trials by protesters, caused the New Zealand Government to set up a Royal Commission on Genetic Modification in May 2000 to examine the issues and options. The Commission was required to consult widely on GMO issues, including: environmental, economic, legal, ethical, and health, as well as public perceptions. It was then required to report to Government on options available to New Zealand for dealing with genetic modification and to advise on appropriate changes to relevant legislation and policies.

Maori, the indigenous people of New Zealand, generally oppose genetic modification for spiritual and cultural reasons. Some members of the public are also opposed because of the potential adverse long-term health and environmental risks of GMOs. Many believe that introducing genetically modified crops into the environment will spoil New Zealand's "eco-friendly" image and destroy the growing organic food production business and lucrative export market. Others, especially scientists involved in GMO research and related industries, can see the possible benefits, especially for treating diseases.

On 30 October 2001, Prime Minister Helen Clark lifted the moratorium that was in place on field trials of GMOs. However, the commercial release of genetically modified organisms was banned for 2 years. The *Hazardous Substances and New Organisms Act* will also be amended to increase monitoring regimes and controls on research involving GMOs. Although some researchers welcomed the decision, they were disappointed at the failure to loosen the stringent regulatory framework that is in place arguing that New Zealand already has the most stringent regulations in the world. In making its decision, the

Government has taken a precautionary approach that will preserve existing leading-edge research into GMOs, while at the same time not compromising New Zealand's "eco-friendly" status.

### 3. Ten Years Under the Resource Management Act (1991)

On 31 October 2001, the innovative *Resource Management Act* (RMA) had its 10<sup>th</sup> anniversary. The RMA aims to promote the sustainable management of New Zealand's natural and physical resources, and attracted world-wide interest when introduced in 1991. The RMA replaced over 50 pieces of legislation governing land, air and water in one encompassing Act. This integrated approach to environmental planning is different from most other countries where the management of land, air, and water resources is still under separate legislation. Building on the previous planning regime, the RMA set up a hierarchy of policies and plans in a devolved and facilitative intergovernmental system (national, regional, local). The resulting plans were to focus on reducing the adverse effects of human activities of the environment, rather than regulating the resource use activities themselves, as happens in most other countries.

Results from research on planning under the RMA, including the intergovernmental processes aimed at facilitating the preparation and implementation of policies and plans, were reported to Government earlier this year. They show that local plans are of only good to poor quality and that this outcome tends to correlate with capacity levels in the 16 regional and 74 local councils. Research in selected councils also shows that unless the quality of the implementation process for plans improves, desired environmental outcomes locally may not be readily achieved.

A major cause of this problem is shown in the Report to be the failure of Government to provide adequate resources throughout the 1990s for its central agencies to help build the capacity in the regional and local councils for implementing its mandate-- the RMA. The Minister for the Environment has responded positively to the reported results, and is working on ways to improve the situation, so that this leading-edge approach to environmental sustainability may be realized.

## 1. Garbage Crisis and the Semirara Controversy

As garbage piled up all over Metropolitan Manila in the wake of holiday season, the Metro Manila Development Authority (MMDA) was confronted with a crisis as it had failed to convert an open pit coal mine in Semirara Island into a dumpsite.

Under contract with Semirara Coal Corp., MMDA proposed dumping Metro Manila's 2,000 tons of solid waste daily for two years by transporting the garbage on barges to fill up the 28-hectare Panian open pit in Semirara Island.

Part of Antique province, Semirara is an island between Panay and Romblon and is about 24 hours away from Manila by boat. It forms part of a cluster of islands that includes the Tubbataha Reef Marine Park, a World Heritage site, and in 1987 was declared a bird and turtle sanctuary.

The MMDA plan provoked opposition among the Semirara population that found mounting support province-wide and in the sub-region consisting of the five island provinces of Occidental Mindoro, Oriental Mindoro, Marinduque, Romblon and Palawan. Semirara became an environmental by-word in a national protest which caused President Joseph E. Estrada to order an indefinite halt to the use of Semirara Island as a dumpsite.

*References: The Philippine Daily Inquirer, 22 and 30 December 2000 and 1, 2, 10, 11, 12, 15 January 2001.*

## 2. President Estrada Calls Military to Assist in Garbage Disposal

To help rectify the garbage problem in Metro Manila, President Joseph E. Estrada called on the Department of National Defense as well as the military. In a press conference held on 3 January 2001 at Quezon City, Defense Secretary Orland S. Mercado said:

"The President has given us instructions to coordinate with the MMDA on how we can ease this garbage crisis. ... We are not taking over the function of garbage collection ... but as in the past, the Armed Forces and the Department of National Defense have been in the forefront of disasters and calamities."

*Reference: The Business Day (Manila), 4 and 16 January 2001*

## 3. Smoking Ban Starts June 2001

Smoking was banned inside public buildings and in enclosed public places from the beginning of June 2001. Prohibited places include public vehicles and other means of transportation as well as any enclosed area outside one's private residence.

The smoking ban is legislated for in the rules and regulations of Republic Act No.8749, the Philippine Clean Air Act of 1999.

*Reference: DENR Administrative Order 2000-81 on Integrated Air Quality Improvement Framework; The Business Day (Manila), 23 November 2001*



#### 4. Congressional Measure for Wildlife Resources Conservation Signed into Law

President Gloria Macapagal-Arroyo signed into law on 30 July 2001 the "Wildlife Resources Conservation and Protection Act," which was enacted by Congress early this year. The new law, designated as Republic Act No. 9147, declares it the policy of the State "to conserve the country's wildlife resources and their habitats for sustainability."

Republic Act No. 9147 strictly regulates the possession, collection, exportation, importation and breeding of wildlife resources, as well as the conducting of scientific research upon them. It requires prior informed consent of the local or indigenous communities concerned before a permit for bio-prospecting may be issued. Furthermore, "all activities dealing with genetic engineering and pathogenic organisms in the Philippines, as well as activities requiring importation, introduction, field release and breeding of organisms that are potentially harmful to man and the environment" are subject to review in accordance with bio-safety guidelines issued under this law.

Unless justified by reasons defined by the new law, the following acts, among others, are considered illegal: (1) the killing and destroying of wildlife species, (2) inflicting injury which impairs the reproductive system of wildlife species, (3) the dumping of waste products detrimental to wildlife, mineral exploration, logging or quarrying in a critical habitat, (4) trading in wildlife, and (S) the gathering or destroying of active nests and host plants.

*Reference: House of Representatives, Legislative Reference Section*

## 1. New Russian Target Program on Ecology and Natural Resources

On 23 August 2001 the Government of the Russian Federation adopted the federal target program "Ecology and Natural Resources of Russia" for 2002-2010. The program has three main targets: 1) the development of mineral, water, forest and aquatic biological resources, 2) stabilization of the ecological situation, especially improvement of environment quality in regions with high pollution levels, and 3) perfection of the monitoring of natural resource use and environmental state including hydro-meteorological and cartography services. Implementation of the program will cost 912 billion rubles (US\$30.4 billion) during 9 years, i.e. 101 billion rubles annually.

## 2. New GEF Project on Ecosystem Conservation in Khabarovskiy Krai

In the middle of 2001, the Global Environment Facility (GEF), with the help of the World Bank, launched a new project for 2001-2004 entitled "Protected Areas Network for Sikhote-Alin Mountain Forest Ecosystems Conservation in Khabarovsk krai (Russian Far East)". The project objective is to establish in the south of krai an integrated system of protected areas, which will unite areas with different protective regimes to ensure that habitats of critical conservation importance are preserved and that the biological resources of the krai are used in a sustainable way. The project has 5 components: 1) establishing 2 nature parks (1,476 sq. km), 3 ecological corridors (1,143 sq. km), 6 landscape nature monuments (180 sq. km) and a number of limited use territories, 2) improving the efficiency of the protected areas network, 3) public awareness and environmental education, 4) monitoring and 5) policy coordination. The project executor is the Wildlife Foundation (Khabarovsk, Russia). It is the first time in Russia that GEF has commissioned its project with a local NGO. The total cost of the project is US\$750,000. Expected co-financing would bring an additional US\$1 million.

*For further information, <http://www-esd.worldbank.org/gef>*

## 3. International Conference on Sustainable Forest Management

The international conference on "Commercial Forestry in the Russian Far East: Opportunities for Sustainable Trade, Conservation, and Community Development" took place on 18 - 20 September 2001, in Yuzhno-Sakahlinsk city (Sakhalin island, Russia). It was co-hosted by 13 non-government, business, and academic organizations from Russia, USA and Japan. The purpose of the conference was to discuss market-based strategies to promote sustainable forest management and a sustainable forest industry in the Russian Far East (RFE) and to catalyze connections between potential partners in sustainable commercial forestry. The conference discussed critical issues facing the forestry sector in RFE. These include the status of timber trade between RFE, Japan and China, the growing market

opportunities for third-party certification of forest use, the risks of unsustainable practices and illegal logging, the contribution of forestry to the economic development of local communities and the aboriginal use of forests, etc.

*For further information, <http://www.forest-trends.org>*

#### 4. Exhaustion of Fish Reserves in the Sea of Okhotsk

Hundreds of Russian and foreign ships are carrying out uncontrolled fishing in the Sea of Okhotsk. They literally scoop out both mature and non-mature fish. After that a large proportion of them are thrown overboard. In 2001, the allowable catch was estimated at 900,000 tons but about 150,000 tons were jettisoned. In the last 10 years the reserves of Pollack (the main commercial species) have decreased 10 times. As a reaction to the situation, Russia has introduced a drastic 40% cut in China's fishing quota for 2001 in the Sea of Okhotsk, however some Russian fishers and scientists are demanding more resolute restrictions.

*For further information, [www.pacificenvironment.org](http://www.pacificenvironment.org)*

#### 5. A Surge of Poaching in Ussuri Taiga

In the fall of 2001, a surge in contraband of biologically active products was noticed at the Russian-Chinese border. Chinese poachers had entered Ussuri taiga<sup>4</sup> (the southern part of RFE) and illegally bagged ordinary and Siberian ginseng, as well as such tonic plants as aralia, schisandra, etc. In particular they tried to catch snakes and tree-frogs that command a big price in the Chinese market but are not used in Russia.

*For further information, <http://news.battery.ru/theme/ecology>*

---

<sup>4</sup> Taiga: a core type of boreal forest

# Singapore

**Koh Kheng-Lian**

**Director, Asia-Pacific Centre for Environmental Law (APCEL),  
Faculty of Law, National University of Singapore**

## 1. Industrial Water ("NEWater")

The Public Utilities Board (PUB) was reconstituted on 1 April 2001 with the merger of the Sewage Department of the Ministry of the Environment and the PUB. The merger was said to have taken place because, "our rivers, reservoirs, drainage systems and water-treatment works should be managed in an integrated manner to optimize the use of water resources. They are all parts of the same cycle." (<http://www.env.gov.sg/info/press/pr2001/ref17> (May 2001)) Singapore is encouraging "NEWater" which is sewage water that has been treated and ultra-purified. Recently, seven wafer-fabrication plants signed a deal with PUB to switch from potable water<sup>5</sup> to "NEWater" (The Straits Times). To conserve potable water, more plants that can recycle sewage water into pure water will be built over the next few years. "NEWater" will replace 15% of potable consumed by 2012 (Draft Singapore Green Plan 2012).

*References : The Straits Times, 31 August 2001, "Wafer-fab plants opt for recycled water" and Draft Singapore Green Plan 2012, p 11*

*For further information, [http://www.env.gov.sg/sgp2012/draft\\_sgp2012.pdf](http://www.env.gov.sg/sgp2012/draft_sgp2012.pdf) and <http://www.env.gov.sg/info/press/pr2001/rel-152A-2001.htm>*

## 2. Convention on Persistent Organic Pollutants, 2001

On 23 May 2001, Singapore signed the above convention. It calls for measures and international cooperation to control the production, use, trade and disposal of substances termed as persistent organic pollutants. There are 12 pollutants on the list.

## 3. Resources Conservation & Waste Minimization

Pursuant to the recommendations of the Review Committee for Resources Conservation and Waste Minimization established in 1999, the following measures have been implemented.

- To encourage the use of natural gas vehicles, rebates ranging from between 5% and 20% of the vehicle's Open Market Value (OMV) for buses and passenger cars (including taxis) can be used to offset fees and taxes payable on registration. In addition there will be a rebate of 20% on road tax. These rebates came into force on 1 October 2001 and will be reviewed on 31 December 2003.
- New industrial air emission standards for industries were introduced by the Environmental Pollution Control (Air Impurities) Regulations 2001, which came into force on 1 January 2001. The new standards are intended to reduce industrial air emissions.
- The Inter-Agency Committee on Energy Efficiency (IACEE) was formed in 1998 by the Ministry of National Development (MND) to promote energy efficiency. The

---

<sup>5</sup> Water suitable for drinking

Committee's roles include reviewing current energy usage and projecting future energy needs and demand and benchmarking Singapore's energy consumption efficiency against other cities of the world. It has also established the impact of building regulations, energy pricing policies and other energy-related policies on energy demand and supply as well as on land resource planning and recommended policy measures to improve efficiency energy efficiency. On 1 April 2001, the IACEE was reconstituted into the National Energy Efficiency Committee (NEEC).

- In March 2001 an Inter Agency Task Force was established to develop Singapore into a centre of excellence for waste recycling over the next ten years. The Task Force comprises representatives from the Economic Development Board (EDB), the Jurong Town Corporation (JTC), the Trade Development Board (TDB), the Productivity and Standards Board (PSB), the National Science and Technology Board (NSTB) and ENV.

#### 4. Draft Singapore Green Plan 2012

Singapore launched its draft Singapore Green Plan 2012 on 10 November 2001 (see above). This is Singapore's environmental master-plan for the next ten years. It incorporates some recommendations made by Singapore's National Preparatory Process for WSSD, established in August 2001.

The key goals of the SGP 2012 are to ensure clean air, clean water, clean land, lush greenery, parks, gardens and landscaped streets. It also deals with the sustainable use of scarce resources, working in partnership with the community and doing Singapore's part for the global environment.

*For further information, <http://www.env.gov.sg/sgp2012/national.htm>*

#### 5. Capacity Building in Environmental Management

The Asia-Pacific Centre for Environmental Law (APCEL), established by the Faculty of Law, National University of Singapore, continues to play a significant role in the promotion of environmental training as envisaged by the Germany/ Singapore/ South Africa/ Brazil Initiative at Rio + Five, 1997. The four member initiative, led by Chancellor Helmut Kohl of Germany, was devised "to keep alive the spirit of Rio." Pursuant to this initiative, Singapore's Prime Minister Goh Chok Tong established the Singapore Technical Assistance Programme for Sustainable Development (STAPSD). Through (restored original) STAPSD, Singapore funds the training of officials in developing countries, and APCEL was appointed by the Ministry of Foreign Affairs, Singapore to organize some of the training programmes (see KL Koh, "The Role of Asia- Pacific Centre for Environmental Law and the German/ Singapore ...Initiative at Rio + Five 1997" presented at the German- Singapore Lawyers' Association Annual Conference 2001, 25 - 27 May 2001, Singapore). In 2001 APCEL organized two seminars under this initiative. These were "The Role of Protected Areas in Integrated Coastal Management" held from 19 - 23 February 2001, and "Urban and Industrial Environmental Management" held from 26 - 30 November 2001. Senior officials in developing countries attended these seminars.

The National University of Singapore and the National Technological University recently formed an alliance involving five universities in Asia to pool resources on environmental technology, research and the exchange of staff and students.

*Reference: The Straits Times, 1 November 2001*

# Thailand

**Professor Dr. Tongroj Onchan**  
**President,**  
**The Mekong Environment and Resource Institute (MERI)**

## 1. Phetchabun Flash-Floods and Mudslides : Death toll climbs to more than 120 people

More than 120 people were killed after flash-floods and mudslides which were triggered by Typhoon Usagi in the early hours of Saturday of August 11, 2001 in Lom Sak district's Tambon Nam Kor, Phetchabun province, in the lower North of Thailand.

Although the local bureau had warned of storms, the scale of the flooding was not predicted so residents had no time to prepare. The damage was caused by the collapse of two weirs in the area and the muddy flood water carried with it logs that crashed through villagers' homes in Lom Sak district where some 2,000 families in Tambon Nam Kor, Tambon Namchun and Tambon Nong Kwai were forced to flee for their lives when the floods came at about 3 a.m. Many climbed up high on the trees to escape the strong muddy currents. Those who could not make it were buried alive in mudslides and some were swept away with the current. The water level rose to about 1.5 metres in Tambon Nam Kor and many local people were left stranded in their houses. The area was declared an unsafe location by the provincial government.

Prime Minister Thaksin Shinawatra, who inspected the affected areas, said the government would spend hundreds of million of baht in helping the flood victims in Phetchabun provinces, as well as those in other affected provinces such as Chiang Rai and Chiang Mai (North) and Udon Thani (Northeast). He also said that a warning system should be established in areas prone to flash floods in order to prevent a similar disaster from happening again. It is estimated that at least 1,000 villages throughout the country are prone to flash floods and mudslides. They are usually located at the foot of the hills. The Local/Administration Department, Ministry of Interior, would develop a more effective way of warning and evacuating villagers from flood-prone areas. However, due to a limited budget, the Interior Ministry plans to provide only 200 villages and areas with an early warning system.

*Source: [www.nationmultimedia.com](http://www.nationmultimedia.com) (from August 12, to September 20, 2001)*

## 2. Ban on Inland Prawn Farming

For over a year (since July 2000), the Ministry of Science, Technology and Environment (MOSTE), has put a ban on inland black tiger prawn farming to prevent potential environmental problems in the paddy farmlands of the Central Plain. However, the Ministry, which previously supported the ban, now appears to argue that prohibition would be ineffective and therefore it would be better to opt for limited and supervised farming (a so-called closed system) instead of an impractical ban. This some people argued would help boost tiger prawn exports. The move would therefore be beneficial to the overall growth of the sagging national economy. This has caused a public outcry as these paddy areas (especially those in Suphan Buri province) might face adverse environmental impacts if inland aquaculture for tiger prawn farming was allowed. The permanent secretary for agriculture, Mr. Petipong Pungbun Na Ayudhya, said that inland aquaculture farms must be closely supervised and that the government has to carefully balance economic gains and environmental destruction. The Office of the Environmental Policy and Planning (OEPP) was said to be

aware of the fact that inland aquaculture could increase soil salinity and that it opposed a total lifting of the ban. Moreover, environment and soil experts warned that the short-term benefit of boosting prawn exports could not justify the staggering costs of soil desalination. There have also been plenty of bad experiences along the coastal areas of the eastern region where after damage has been made to the soil, rehabilitation of the area has proved infeasible.

After much debate and information gathering on the benefits and costs of such a lifting of the ban, the National Environment Board has decided to continue to enforce the ban. In the meantime, a further study on the use of the closed system will be carried out to find out whether it will pose an adverse impact on the soil and the environment. Therefore it appears that this issue will likely emerge again in the future.

*Source: www.nationmultimedia.com (August 12, to September 20, 2001)*

### 3. GM Food Will Be Labeled

After a long debate about the pros and cons of the labeling of genetically modified products, the Food and Drug Administration (FDA), which has been responsible for the drawing up of policies on this issue since April 2001, decided in July that food products containing more than 3-5 percent of genetically modified corn or soybean would be required to have labels. In the initial stage, only two products would be covered. It was also decided that only final products ready for consumers should be tested for GM content before they are labeled. This is because it would be very costly and complicated to require the testing of the raw materials used to make the products. The label (in Thai) will specify that the product is "made from genetically modified corn" or "made from genetically modified soybean". The purpose of the labeling is to inform the public only. The announcement is to be made in December 2001 and manufacturers will be allowed 180 days to clear their stock from the market, before the announcement takes effect. A decision will be made later as to whether products with less than 3-5 percent of GM content require labeling.

At present, laboratories in Thailand are capable of testing only corn and soybean for GM materials. This is why only these two products are affected first. Other products will be added later. The draft of the regulations was prepared in July 2001 and presented for public comment in August. NGOs rejected the final draft in regard to the required amount of GM materials. They want all products containing any amount of GM materials to have a label. The drafting committee said a product would be labeled if its overall ingredients or one of its three main ingredients contained more than 5 percent of GM materials. Food producers are afraid that labeling will increase product prices and that they need more time to prepare, especially to find new reliable non-GM raw material suppliers. On this, FDA said the regulations would come into effect one year after details were published in the Royal Gazette. This should give producers and all parties concerned sufficient times to prepare for this important change and adjustment.

*Source: www.bangkokpost.com (August 12, to September 2001)*

### 4. Bangkok Faces Garbage Crisis

The amount of refuse continues to increase in Bangkok and its disposal has been a serious problem for a long time. However, after protests from local people and the refusal of the Tambon Administrative Organization (TAO) to allow a private firm to dump garbage at the landfill site in Tambon Rajathewa, Samut Prakarn province, the problem will become critical. The private company won a concession from the city administration to transport the garbage from Bangkok to the landfill site, with an approval by the Rajathewa TOA. However, residents living near the dumpsite filed a complaint with the Administrative Court, alleging that the site had caused health problems. Later, the Court issued an injunction preventing the firm from burying garbage at the site. The Court ruling will cause a serious problem for the Bangkok Metropolitan Administration (BMA), even if the dumpsite is

closed just for a few days. The site is needed to dispose of the approximately 3,000 tons of garbage generated by the capital everyday. This is one of three landfill sites used by BMA. The BMA's city clerk said that the company had not breached any contract and had handled the dumping in accordance with environment standards and that before issuing the injunction, the court did not give a warning or a deadline for the company to try to improve the site. The BMA would have to prepare a contingency plan in case the Rajathewa site could not be used. (For example, BMA now plans to set up trash trading centers which will be run by local communities). In the mean time, as the TAO had not yet issued any ban against the disposal, the firm continued transporting the garbage from Bangkok to the site.

*Source: www.bangkokpost.com (December 1-18, 2001)*



## **1. The Project to Improve and Purify the Environment of the Tolich, Lu, and Set Rivers in the Capital City of Hanoi**

On 27 February 2001 The Bureau for Transportation and Civil engineering of Hanoi, and Shimizu, a Japanese construction corporation, held the ground-breaking ceremony for a project to improve and purify the environment of the Tolich, Lu and Set rivers. This is a most important project to comprehensively reconstruct the three main sewage rivers in the Capital City of Hanoi. The goals of the project are to ensure a good sewage system for the city, upgrade the scenery and the urban environment along these rivers and contribute to the improvement of urban transportation. Shimizu won the contract with a bid of total investment capital amounting to around 600 billion VND. The duration of construction is set at 24 months from this ground-breaking day. This Project will not only effectively resolve the flooding problem in the area of Hanoi but will also restore the rivers' natural and poetic beauty.

*Source: The Bureau for Transportation and Civil Engineering, The People's Committee of Hanoi*

## **2. The Oil Overflow Incident On the Sea of Vungtau**

At 1:20 am on 7 September 2001, on the sea of Vungtau, Formosa One, a Liberian registered tanker collided with the tanker Petrolimex 01 causing 900 tonnes of oil overflow to pollute the sea. The People's Committee of Baria-Vungtau Province and the Bureau for Science, Technology and Environment have mobilized forces to overcome the incident and collect the overflow oil to minimize pollution to the environment.

The oil overflow incident made the number of tourists to Vungtau decrease by 5/6 and caused a loss of about 43 billion VND to the tourist industry. The industries of aquaculture, seaboard fishing and supply services for fishing suffered a loss of 108 billion VND, and the salt industry a loss of 27.08 billion VND. The impact on the health of the community cost 11.21 billion VND, and the cost of cleaning up the environment was 60 billion VND. Total losses were estimated to be 260 billion VND or 17.2 million US\$.

The People's Committee of the Baria-Vungtau Province has assigned the Bureau for Science, Technology and Environment to sue the Formosa Plastic Marine company and the Vitaco company for 17.2 million US\$ in compensation for losses caused to the environment by the oil overflow.

*Source: Vietnam News, 12 October, 2001*

### 3. The National Seminar on Abidance with and Enforcement of Environmental Laws

On 21 - 22 October 2001, in Hanoi, The Environment Department under the Ministry for Science, Technology and Environment of Vietnam held a national seminar on abidance with and enforcement of environmental laws. Participants in the seminar comprised judges and lawyers from 20 provinces throughout the country. The total cost of the seminar was sponsored by the Hanns Seidel Foundation Fund. The UN University, ASEAN secretariat and UNDP assisted with technical matters.

At the seminar, the participants examined the situation regarding abidance with and observation of environment laws in Vietnam, the judgment of cases relating to the environment and ways and means to resolve environmental disputes in Asia and other countries.

Judging cases on the environment and resolving environment disputes is a new field in Vietnam. Therefore, this seminar organized by the Environment Department had a very practical meaning.

*Source: The Environment Department, Ministry for Science, Technology and Environment*

## あとがき

2001年の報告では、昨年と比べ、各国が持続可能な開発や環境保全のためより一層の努力をし、実行に移してきていることがうかがわれる。しかし、土壌、森林等自然資源の悪化や都市における大気、水質汚染やごみ問題等依然として環境問題は深刻であり、対応が急がれる。また、アフガニスタンやパレスチナ問題による環境影響も危惧されており、早急な平和の実現が望まれる。

UNEPの報告で示されているように、WSSDにおいては、持続可能な開発の実現に向けてその基本的な条件の一つである貧困の撲滅に向けて国際社会が努力していくことが大きな課題の一つとなる。社会・経済のグローバル化、先進国と途上国、国、企業、NGO、市民等のパートナーシップと環境政策決定におけるガバナンスがこれに対する新たなアプローチを探る際の鍵になると考えられる。

IGESでは、2001年4月から第2期戦略研究計画を開始したところであり、気候政策、森林保全、都市環境管理、環境教育のプロジェクトを継続することに加え、企業と環境、長期展望・政策統合プロジェクトを新たに開始した。これは、長期的、横断的な視点から戦略研究を行おうとするものであり、IGESとしては、これらの成果の活用によって今後ともアジア太平洋地域を中心とした地球環境保全のために貢献することを目指している。

## Afterword

Reports delivered during 2001 show that countries in the Asia-Pacific region are making greater efforts to achieve sustainable development and environmental conservation and put plans into practice than in the previous year. However, serious environmental issues remain, including the continuing degradation of natural resources such as soil and forests; air and water pollution; and waste disposal problems in urban areas. These require immediate action. The environmental impact of the Afghan situation and the Palestinian issue is equally worrying, and peaceful solutions are being sought urgently.

As outlined in the UNEP report, one of the major tasks facing the coming WSSD will be the eradication of poverty. This is a key requirement for the attainment of sustainable development and requires the cooperation of the global community. The globalization of economic and social structures; developed countries versus developing nations; partnerships between governments, businesses, NGOs and citizens and governance in the decision-making process of environmental policies will all be critical factors in adopting a new approach to tackling poverty.

IGES launched the Second Phase of its Strategic Research in April 2001. In addition to the Climate Policy Project, Forest Conservation Project, Urban Environmental Management Project and Environmental Education Project, IGES has started new projects. These are the Business and the Environment Project and the Long-Term Perspective and Policy Integration Project. The idea is to carry out strategic research based on a long-term perspective and across a broad range of issues. By making good use of research results, IGES aims to contribute further to global environmental conservation focusing on the Asia-Pacific region.

## Contents of the 2000 Top News on Environment in Asia

### Foreword

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

[The Asia-Pacific Region] Masakazu Ichimura, United Nations Economic and Social Commission for Asia and the Pacific (UN/ESCAP)

1. Ministerial Conference on Environment and Development in Asia and the Pacific (MCED) 2000
2. State of the Environment in Asia and the Pacific 2000
3. Regional Action Programme (RAP) for Environmentally Sound and Sustainable Development in Asia and the Pacific 2001-2005.
4. Kitakyushu Initiative for a Clean Environment
5. Environmental Cooperation in North-East Asia

[The Asia-Pacific Region] S. Tahir Qadri, Asian Development Bank (ADB)

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

[Bangladesh] Khandaker Mainuddin, Bangladesh Centre for Advanced Studies (BCAS)

1. Devastating Flood Hit South-West Region of Bangladesh
2. Sound Waste Management; an Immediate Necessity for Dhaka City
3. Suspended Particulate Matters Remain High in the Air of Dhaka City
4. Red List on Endangered Wildlife

[Cambodia] Khieu Muth, Ministry of Environment, Cambodia

1. Floods in Cambodia
2. National Greenhouse Gas Inventory for 1994
3. New Sub-Decree of Air Pollution
4. Coastal and Marine Problems

[China] Zhou Xin, Policy Research Center for Environment and Economy (PRCEE), The State Environmental Protection Administration (SEPA)

1. The Second Revision of the Law of Air Pollution Prevention and Control
2. Great Efforts Taken to Realize the Target of "One Control and Double Attainments"
3. Beijing Initiates the "Green Olympic Action Plan"
4. Sandstorms Hit Beijing and Tianjing Municipalities

[India] Prasad Vaidya, The Weidt Group

1. India Joins the GLOBE Program
2. Draft Rules for Recycling/Management of Lead Acid Batteries
3. Supreme Court Clears Sardar Sarovar on the Marmada River
4. State Governments Fund Participatory Water Harvesting Programs

[Indonesia] Mohamad Seriani, Institute for Environmental Education and Development

1. National Conference on Natural Resource Management
2. Indonesian Sectoral Agenda 21
3. Environmental Toxicology, Pollution Control and Management
4. National Flora and Fauna Loving Day, 2000
5. Caring for the Future

[Japan] Yohei Harashima, Takushoku University

1. The Basic Law for Establishing a Recycling-based Society
2. Regulation of Exhaust Gases from Diesel Vehicles in the Tokyo Metropolitan Area
3. ESCAP Ministerial Conference on Environment and Development
4. G8 Environment Ministers' Meeting
5. Illegal Transfer of Hazardous Wastes to the Philippines

[Korea] Hoi-Seong Jeong, Korea Environment Institute

1. Illegal Toxic Discharge of the Eighth US Army
2. Suspension of the Planned Construction of Yongwol Multi-Purpose Dam
3. Establishment of the Presidential Commission on Sustainable Development (PCSD)
4. Environmental Impacts Investigation on the Saemankeum Reclamation Project

[Lao PDR] Viengsavanh Duangsavanh, Technology and Environment Agency

1. The Environment as Public Responsibility
2. Local Environmental Management
3. Environmental Impact Assessment
4. Public Involvement in Nam Theun 2 Hydro-Power Project
5. Press Release on Climate Change

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

1. Timely Review of Highland Development
2. Foiled Toxic Waste Shipment
3. Climate Change Update
4. Millennium Tree Planting
5. Beach Clean-up
6. Recycling Launch

[Mongolia] Ayush Namkhai, Development and Environment Center Dondogiin Enkhbayar, Ministry for Nature and Environment

1. Law on Tourism
2. Law on Banning the Import and Trans-boundary Movement of Hazardous Waste, and Concerning its Export
3. National Action Programme on Climate Change
4. Natural Disaster
5. Establishment of the "ECO ASIA" Institute

**[Nepal] Phool Chandra Shrestha, Freelance Consultant Bishnu B. Bhandari, Institute for Global Environmental Strategies (IGES)**

1. Nepal's "Gift to the Earth"
2. Restoration of the Churia Foothills as a Biological Corridor
3. Nepal Rhino Count 2000
4. Grassroots Conservation Initiatives in Rural Nepal
5. Ban on Old Vehicles in Cities in 2001

**[The Philippines] Merlin M. Magallona, University of the Philippines**

1. Garbage Avalanche Killed More Than 200 People
2. Hazardous Waste Shipment Sent Back to Japan
3. Lawyers Demand Compensation for Victims of Toxic Waste Contamination in Former U.S Military Bases
4. Oil Spill by Singaporean Tanker

**[The Russian Far East] Alexander Sheingauz, Economic Research Institute**

1. New Administration for the Use of Natural Resources
2. Voluntary Forest Certification Begins
3. New Protected Area Is Established in Amurskaya Oblast
4. International Workshop on Sustainable Forest Management
5. New Method of Oil Waste Utilization

**[Singapore] Chia Lin Sien, Institute of South East Asian Studies**

1. Sewage Contamination of Water Supply in Public Buildings

2. Review of Long-Range Comprehensive Concept Plan
3. Waste Collection in Singapore
4. Chemical Spill Stops Fishing and Swimming
5. Deep Tunnel Sewerage System (DTSS): First Tender For Changi Wastewater Treatment Plant
6. Virus Outbreak of Hand, Foot and Mouth Disease (HFMD)

**[Thailand] Tongroj Onchan, The Mekong Environment Resource Institute (MERI) and Thailand Environment Institute (TEI)**

1. Protest against Thai-Malaysian Natural Gas Pipeline
2. The Violent Pak Moon Dam Protest at the Government House
3. The Car Free Day Campaign
4. Costly Dike Causes Water Pollution
5. Mishandling of Radioactive Waste

**[Vietnam] Pham Huu Nghi, Deputy Director of State and Law Journal, Institute of State and Law, National center for Social Science and Humanities**

1. Sanctuary for the Ho Guom Turtle
2. Large Flood in Cuu Long River Delta, South Vietnam
3. Effects of the Ho Chi Minh Highway Project on Cuc Phuong National Garden

**Afterword**

## **Contents of the 1999 Top News on Environment in Asia**

**[Cambodia] Kol Vathana, International and Public Cooperation, Ministry of Environment (MoE)**

1. Participation in the Second Regional Forum for Southeast Asia of the IUCN World Commission for Protected Areas
2. Workshop on "Awareness of the Ramsar Convention on Wetlands of International Importance"
3. "Management of Forests and Elimination of Illegal Forest Activity" Begins
4. Workshops on Development of Local Forests
5. Drafting of a "Sub-Decree on the 23 Protected Areas Management in Cambodia"

**[China] Zhou Xin, Policy Research Center for Environment and Economy of State Environmental Protection Administration (PRCEE)**

1. Twentieth Anniversary of the Enactment of "The Environmental Protection Law of the People's Republic of China"
2. Highlighting Pollution Control: Evident Results Achieved
3. Increase of Investment in Environmental Protection
4. Ecological Conservation in the Yangtze and Yellow River Basins

**[India] Maithili Iyer, Tata Energy and Resources Institute**

1. Supreme Court Tightens Emissions Standards in Delhi
2. Ministerial Directive to Use Fly Ash for Construction Purposes
3. Negotiations for a Biosafety Protocol

**[Indonesia] Mohamad Soerjani, National Research Council**

1. Provincial Autonomy in Regional Development
2. Profile of the Environmental Minister
3. Sustainable Development and Provincial Autonomy
4. Environmental Impact Analysis New Regulations 1999
5. Timber Plantation

**[Japan] Yohei Harashima, Institute for Global Environmental Strategies (IGES)**

1. Crested Ibis Hatching
2. Accident at the Conversion Building in the Nuclear Fuel Processing Plant
3. Law Concerning Special Measures for Dioxin Contamination
4. First Tripartite Environmental Ministers Meeting among China, Japan, and Korea
5. IGES Hosts the 1999 Open Meeting of the Human Dimensions of the Global Environmental Change Research Community

**[Korea] Seung Woo Kim, Korea Environment Institute (KEI)**

1. Reforming of the Greenbelt Policy
2. The Dong-gang Controversy
3. New Plan to Improve Nakdong River Water Quality
4. New System to Regulate the Use of Disposable Products
5. Nuclear Radiation Leak Accident

**[Malaysia] Wan Portia Hamzah and Ms. Norhayati Mustapha, Institute of Strategic and International Studies (ISIS) Malaysia**

1. National Coastal Zone Policy
2. The Dugong - A Creature Threatened?
3. Hope for Biodiversity
4. The Sungai Selangor Dam
5. Pesticide Danger in Rivers?
6. Climate Change Scenario
7. Decisive Action on Toxic and Hazardous Waste

**[Mongolia] Ayush Namkhai, Development and Environment Center (DEC)**

1. Draft Law on the Fauna of Mongolia
2. Natural Disaster Mitigation Country Programme
3. Programme for Protection of the Air
4. Regulation for Issuing Permits to Import, Sell and Use Ozone-Depleting Substances
5. Natural Disaster (Drought)

**[Nepal] Bishnu Bhandari, Institute for Global Environmental Strategies (IGES)**

1. Nepal Establishing a Trust Fund for Biodiversity Conservation
2. Vikarm Tempo Banned in Kathmandu
3. Forest Fire in the Himalayan Region
4. Drought in the Himalayas

**[The Philippines] Merlin M. Magallona, University of the Philippines (UP)**

1. A New Comprehensive Clean Air Law
2. Garbage Crisis in Metropolitan Manila
3. Policy of Sustainable Forest Management

**[Singapore] Chia Lin Sien, Institute of Southeast Asian Studies (ISEAS)**

1. Policy Statements by Minister of the Environment, Singapore
2. The Deep Tunnel Sewerage System (DTSS)
3. Join the OPRC Conventions and Accepts Annex V of MARPOL 73/78
4. Annual Oil-spill Exercise
5. Suspension of Import of Live Pigs and a New License for Selling Chilled Pork

**[Thailand] Tongroj Onchan, Thailand Environment Institute (TEI)**

1. Anchovy Causes National Conflict
2. A Conservation Angle From Zemin's State Visit
3. A Controversial Movie "The Beach"
4. Confusion over Public Land Encroachment near Sri Nakharin Dam
5. Protest against the Coal-fired Power Plant Project

**[Vietnam] Pham Huu Nghi, Institute of State and Law, National Center for Social and Humanities**

1. Launching of Environmental Protection Policy
2. Hoi An and My Son to Become World Heritages
3. Worst Floods in Forty Years

**[Southeast Asia] Chia Lin Sien, Institute of Southeast Asian Studies (ISEAS)**

1. UNEP Commissions Review of Marine Pollution of East Asian Countries
2. Tenth Meeting of the ASEAN Senior Officials on the Environment, Bangkok
3. Regional Consultative Workshop on the East Asian Seas (EAS) Programme to Discuss Issues Concerning Liability and Compensation for Oil Spill Damage and Clean-up Claims
4. An Update on the Regional Haze Situation in Southeast Asia
5. Nipah Virus Epidemic in Peninsular Malaysia

## **Contents of the 1998 Top News on Environment in Asia**

**[China] Ren Yong, Institute for Global Environmental Strategies (IGES)**

1. Enactment of the State Council Ordinance Concerning Environmental Management for Construction Projects
2. Promotion of National Environmental Protection Agency (NEPA)
3. The Yangtze River Flood Caused by Abnormal Climate Conditions, but Worsened by Ecological Destruction in the Middle and Upper Reaches

**[India] Maithili Iyer, Institute for Global Environmental Strategies (IGES)**

1. Biodiversity Bill to be Discussed in the Winter Session of the Parliament
2. High Court Issues Notice to Manage Fly-ash Disposal
3. Proposed Ban on New Diesel Vehicles in the National Capital Region (NCR)

**[Indonesia] Mohamad Soerjani, Institute for Environmental Education and Development (IEED)**

1. Efforts to Socialise the New Environmental Management Law in Indonesia
2. Sustainable Development: Principles and Implementations
3. The Indonesian Biodiversity Foundation
4. New Eco-tourism Development, Depok, Indonesia

**[Japan] Yohei Harashima, Institute for Global Environmental Strategies (IGES)**

1. Enactment of the Law for the Promotion of Measures to Tackle Global Warming
2. The Emerging Environmental Pollution Caused by Exogenous Endocrine Disrupting Chemicals

3. Preparatory-Phase (Activities) of Acid Deposition Monitoring Network in East Asia (EANET)
4. Establishment of the Institute for Global Environmental Strategies (IGES)

**[Korea] Tae Yong Jung, National Institute for Environmental Studies (NIES)**

1. Posting Toxic Chemicals Control Act and Regulations
2. Reforming of Green-belt (Development Restriction Area)
3. First Ever Ecological Survey Planned on DMZ

**[The Philippines] Merlin M. Magallona, University of the Philippines (UP)**

1. Environmental Policy in the Philippine Fisheries Code of 1998
2. Environmental and Natural Resources Officers for Philippine Cities

**[Singapore] Chia Lin Sien, Institute of Southeast Asian Studies (ISEAS)**

1. New Measures to Combat Maritime Pollution
2. Singapore Ratifies International Maritime Conventions
3. Study on Energy Efficiency
4. The Haze Continues

**[Thailand] Tongroj Onchan, Thailand Environment Institute (TEI)**

1. Salween Logging Scandal
2. Forest Encroachment and the Right of People to Live in Thailand's Dwindling Forest
3. The Effects of El Nino and the Worst Forest Fires
4. Thai-Burmese Gas Pipeline Project
5. Inland Prawn Farming

[ IGESレポート執筆者 ] Kamal GUEYE IGES研究員 / Tae Yong JUNG ( 丁 太庸 ) IGES上席研究員 /  
Martinus NANANG IGES主任研究員 / Changki KWON ( 權 昌基 ) IGES主任研究員 /  
Bishunu BHANDARI IGES上席研究員 / 神田 泰宏 IGES主任研究員

#### 日本語翻訳

[ UNEP-ROAP ] 今井 健一 IGES主任研究員  
[ EPI ] 丸山 亜紀 IGES研究員  
[ IGES ] 大塚 隆志 IGES研究員 / 二宮 康司 IGES研究員 / 立花 敏 IGES主任研究員 /  
荒木 浩介 IGES研究員 / 中端 章博 IGES研究員 / 神田 泰宏 IGES主任研究員  
[ オーストラリア ] 渡邊 理絵 IGES研究員  
[ バングラデシュ ] 勝本 修三 IGES研究員  
[ カンボジア ] 高橋 正弘 IGES研究員  
[ 中国 ] 金子 慎治 IGES研究員  
[ インド ] 大塚 隆志 IGES研究員  
[ インドネシア ] 野村 康 IGES研究員  
[ 日本 ] 原嶋 洋平 拓殖大学 助教授  
[ 韓国 ] 荒木 浩介 IGES研究員  
[ ラオス ] 小松 潔 IGES研究員  
[ マレーシア ] 高橋 妙子 IGES研究員  
[ モンゴル ] 日和崎 りさ IGES研究員  
[ ネパール ] 高橋 正弘 IGES研究員  
[ ニュージーランド ] 二宮 康司 IGES研究員  
[ フィリピン ] 中端 章博 IGES研究員  
[ 極東ロシア地域 ] 立花 敏 IGES主任研究員  
[ シンガポール ] 片岡 八束 IGES研究員  
[ タイ ] 高橋 若菜 IGES研究員  
[ ベトナム ] 佐藤 麻貴 IGES研究員

[Authors of the IGES report] Kamal GUEYE, IGES Research Associate; Tae Yong JUNG, IGES Senior Research Fellow;  
Martinus NANANG, IGES Research Fellow; Changki KWON, IGES Research Fellow;  
Bishunu BHANDARI, IGES Senior Research Fellow; Yasuhiro KANDA, IGES Research  
Fellow

#### Japanese Translation

[UNEP-ROAP] Kenichi IMAI, IGES Research Fellow  
[EPI] Aki MARUYAMA, IGES Research Associate  
[IGES] Takashi OTSUKA, IGES Research Associate; Yasushi NINOMIYA, IGES Research Associate;  
Satoshi TACHIBANA, IGES Research Associate; Kosuke ARAKI, IGES Research Associate;  
Akihiro NAKAHATA, IGES Research Associate; Yasuhiro KANDA, IGES Research Fellow  
[Australia] Rie WATANABE, IGES Research Associate  
[Bangladesh] Shuzo KATSUMOTO, IGES Research Associate  
[Cambodia] Masahiro TAKAHASHI, IGES Research Associate  
[China] Shinji KANEKO, IGES Research Associate  
[India] Takashi OTSUKA, IGES Research Associate  
[Indonesia] Ko NOMURA, IGES Research Associate  
[Japan] Yohei HARASHIMA, Takushoku University, Associate Professor  
[Korea] Kosuke ARAKI, IGES Research Associate  
[Lao PDR] Kiyoshi KOMATSU, IGES Research Associate  
[Malaysia] Taeko TAKAHASHI, IGES Research Associate  
[Mongolia] Lisa HIWASAKI, IGES Research Associate  
[Nepal] Masahiro TAKAHASHI, IGES Research Associate  
[New Zealand] Yasushi NINOMIYA, IGES Research Associate  
[The Philippines] Akihiro NAKAHATA, IGES Research Associate  
[The Russian Far East] Satoshi TACHIBANA, IGES Research Fellow  
[Singapore] Yatsuka KATAOKA, IGES Research Associate  
[Thailand] Wakana TAKAHASHI, IGES Research Associate  
[Vietnam] Maki SATO, IGES Research Associate