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INTERNATIONAL ENVIRONMENTAL LAW IN THE ASIA-PACIFIC REGION: RECENT DEVELOPMENTS

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The seas are fast becoming sewers. We make poisons so powerful we don't know where to put them. The rain forests are being turned into deserts. If we can stop the sky turning into a microwave oven, we will still face the prospect of living in a garbage dump.¹

Prince Charles

I. INTERNATIONAL ENVIRONMENTAL PROBLEMS AND CONCERNS

While sharing the global concerns about the environment, the Asia-Pacific region is saddled with specific environmental problems of its own which are causing serious damage to its terrestrial, aquatic and atmospheric ecosystems. Deforestation² and desertification³ are possibly the major contributors to the substantial degradation of the region's terrestrial ecosystem.⁴ Other sources include soil

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1. Quoted in *Action Urged on Ozone Chemicals*, S. China Morning Post, March 8, 1989, at 18, col. 4.

2. Deforestation is the decline of forest resources, usually due to illegal logging and poaching to supply the needs of the poor for fuel and fodder, careless technology and the absence of a comprehensive approach in the design and implementation of forest-oriented development projects.

At an approximate rate of 2,000,000 hectares (1 hectare = 2.471 acres) per year (5000 per day), it is estimated that the projected loss of tropical forests in the Asia-Pacific region by the year 2000 would vary between 72,000,000 hectares in the best-case scenario, and 280,000,000 hectares in the worst. Thus, unless appropriate measures are taken, the region will lose much of its present forest area by the end of the century. See ESCAP, *Regional Overview of Environmental and Socio-Economic Aspects of Tropical Deforestation in the Asian and Pacific Region* in ENVIRONMENTAL AND SOCIO-ECONOMIC ASPECTS OF TROPICAL DEFORESTATION IN ASIA AND THE PACIFIC 5 (Bangkok, 1986).

3. Desertification is a man-made desert brought about by over-exploitation or mismanagement leading to deterioration in the productivity of land. According to a United Nations assessment, some 378,000,000 people living in an area of about 21,000,000 square kilometers are being threatened by a process of desertification in the region. See ESCAP, *Regional Overview* in PROBLEMS AND PROSPECTS OF DESERTIFICATION CONTROL IN THE ESCAP REGION 229 (Bangkok, 1983).

4. The Economic and Social Commission for Asia and the Pacific (ESCAP) has 46

erosion, loss of vegetative cover, water-logging, salination and the extinction of species. Deterioration in the region's aquatic ecosystem is accelerating with marine and freshwater pollution emerging as a significant regional environmental issue.⁵ Although air pollution in the region is of a more recent origin, it has combined with noise pollution to reach a critical level in major cities and industrial centers.⁶

In addition, certain global environmental phenomena manifest themselves in the region in a particularly acute form. Thus, for example, two of the results of the "greenhouse effect"⁷ of immediate concern to the Asia-Pacific region are a likely rise in mean sea levels and changes in water patterns. Higher oceanic tides could cause havoc in low-lying coastal areas, many belonging to the poorest countries.⁸ Equally threatening to these areas are weather changes which may mean an increased likelihood of storms such as tropical cyclones.⁹

Another world-wide issue with particular implications for the region's environment is nuclear weapons. Asia-Pacific is seen as increasingly becoming a major platform for nuclear weapons testing and waste dumping.

Waste dumping is, moreover, not confined to nuclear waste, but

members and associate members, including but not limited to Afghanistan, Australia, Bangladesh, Burma, China, Cook Islands, Fiji, Hong Kong, India, Indonesia, Islamic Republic of Iran, Japan, Republic of Korea, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, Thailand, and Tuvalu. The region contains some of the most devastated land on earth. See Jalal, *An Overview of the State of the Environment in the ESCAP Region*, in ESCAP, ENVIRONMENTAL MANAGEMENT FOR SUSTAINABLE SOCIO-ECONOMIC DEVELOPMENT 31 (Bangkok, 1987). For a comprehensive overview see ESCAP, STATE OF THE ENVIRONMENT IN ASIA AND THE PACIFIC (Bangkok, 1985).

5. For details, see ESCAP, *Marine Environment Problems and Issues in the ESCAP Region*, in INTEGRATION OF ENVIRONMENT INTO DEVELOPMENT: INSTITUTIONAL AND LEGISLATIVE ASPECTS (Bangkok, 1985).

6. Jalal, *Urban Pollution in the Countries of Asia and the Pacific Region: Role of UN/ESCAP*, in POLMET, POLLUTION IN THE URBAN ENVIRONMENT, Vol. I (Hong Kong, 1988) pp. 6-11.

7. The "greenhouse effect" is the gradual rise in the temperature of the earth's surface, caused by carbon dioxide trapped in the atmosphere. Weiss, *A Resource Management Approach to Carbon Dioxide During the Century of Transition*, 10 DEN J. OF INT'L LAW & POLICY 487-88 (1981).

8. Particularly Maldives—whose many islands and coral atolls are barely a few feet above the Indian Ocean—and Bangladesh; simple calculations show that even a 1-meter rise in the mean sea level would submerge a tenth of Bangladesh, displacing millions of people. If the worst predictions are correct, a country such as Kiribati in the South Pacific might disappear within 50 years if no action is taken. See Malik, *Fear of Flooding. Global Warming Could Threaten Low-Lying Asia-Pacific Countries*, FAR E. ECON. REV. 20-21 (Dec. 22, 1988).

9. *Id.* An increase in the number of storms could raise inland watertables, producing worsened salination in some places due to penetration of seawater inland, affecting immediate coastal habitation and vegetation.

extends to other ultra-hazardous wastes, prompting contentions of "garbage imperialism."¹⁰ The problem is further compounded by environmental malpractices of transnational corporations (TNCs) which tend to dominate key, and environmentally sensitive, sectors in several economies in developing Asian and Pacific countries.¹¹

II. REGIONAL INITIATIVES

A. *Growing Awareness*

Following a long period of relative indifference, environmental issues now loom large on the political agenda of most countries in the Asia-Pacific region. Government officials, opinion-leaders, relevant interest groups, the media and occasionally the public at large address themselves to environmental concerns. Institutional mechanisms are being erected to arrest the degradation of the environment and in some cases even improve the quality of environmental life.¹²

B. *Institutionalization*

A distinctive feature of the Asia-Pacific region is the emergence of high level, special-purpose governmental agencies charged with the protection of the state's natural environment and authorized generally to carry out coordination, policy planning, regulatory, conservation and promotion functions. [See Appendix.]

At the regional level, environmental administration is served mainly by two international organizations—the Economic and Social Commission for Asia and the Pacific (ESCAP) and the United

10. "Garbage imperialism" is the dumping of the West's waste in the Third World. See Note, *Transboundary Movement of Hazardous Wastes*, 18 ENVIR. POL. & L. 103 (1988). See also Organization of African Unity Resolution 153 (XLVIII) of 1983 on the Dumping of Nuclear and Industrial Wastes in Africa, which renounced such dumping as a "crime against Africa and the African people" and called upon African states to put an end to agreements or arrangements for dumping wastes in their territories.

11. See generally ESCAP, *TRANSNATIONAL CORPORATIONS AND ENVIRONMENTAL MANAGEMENT IN SELECTED ASIAN AND PACIFIC DEVELOPING COUNTRIES* (Bangkok, 1988).

12. For example, the "Resolution on the Unfolding of a Nationwide Voluntary Tree-Planting Campaign" (adopted by the fifth National People's Congress of China in 1981) stipulated that every able-bodied Chinese citizen has the obligation to plant three to five trees every year. People, particularly youth, took part enthusiastically in the voluntary afforestation campaign. It was reported that in 1984, Chinese youth voluntarily planted more than 1 billion trees. Environmental and Socio-Economic Aspects of Tropical Deforestation in Asia and the Pacific, *supra* note 2, at 45.

An eminently successful program in Gujarat, India concerns backyard tree nurseries in school compounds. Some organizations in India are providing every child in selected villages with saplings to plant at home, to look after and keep record of growth. At the end of a given period, the child judged to be the best caretaker is given an award. *Id.* at 50.

Nations Environmental Program (UNEP).¹³

Perhaps a more significant development in the institutional setting for environmental management in the region has been the formulation of sub-regional environmental programs, such as the ASEAN Environment Program (ASEP),¹⁴ the South Asia Cooperative Environment Program (SACEP),¹⁵ and the South Pacific Regional Environment Program (SPREP).¹⁶

Finally, an important component of the institutional framework in the Asia-Pacific region are the non-governmental organizations (NGOs) which, apart from generally promoting environmental awareness and raising public consciousness, have been instrumental in the formulation of national policies and laws as well as regional agreements.¹⁷

13. UNEP was created by a U.N. General Assembly resolution. U.N. Doc. A/RES./2997 (XXVII), Dec. 15, 1972. For more information about the structure and functions of UNEP, see BRUNNÉE, *ACID RAIN AND OZONE LAYER DEPLETION: INTERNATIONAL LAW AND REGULATION* 67 (1988).

14. The Asean Environment Program (ASEP) is a collaborative effort by Indonesia, Malaysia, Philippines, Singapore, Thailand and Brunei to rationally manage the natural resources of the region with the aim of ensuring sustained economic development. Identified priority areas for co-operative effort are as follows: (1) environmental management including environmental impact assessment, (2) nature conservation and terrestrial eco-systems; (3) marine environment; (4) industry and environment; (5) environmental education and training, and (6) environmental information.

15. The South Asia Co-operative Environmental Program (SACEP) is an undertaking of Afghanistan, Bangladesh, India, Iran Maldives, Nepal, Pakistan and Sri Lanka. In 1981, a ministerial meeting adopted a 6-point Colombo Declaration on the Environment for the sub-region. It is undertaking a program of work in the following areas: (1) environmental impact assessment and cost-benefit analysis; (2) environmental quality standards; (3) technology for the development of renewable and non-renewable resources; (4) environmental legislation; (5) conservation of mountain eco-systems and watersheds; (6) social forestry; (7) conservation of wildlife and genetic resources; (8) conservation of corals, mangroves, deltas and coastal areas; (9) island eco-systems; (10) tourism and the environment; (11) energy and the environment; (12) environmental education and training; and (xiv) training in wildlife management. Programs dealing with environmental education and training, environmental law, energy and environment and natural resource and environmental management are being launched.

16. The South Pacific Regional Environment Program (SPREP) came into being through the efforts of the South Pacific Commission and the South Pacific Bureau for Economic Cooperation with the support of the United Nations Environment Program and the Economic and Social Commission for Asia and the Pacific. Involved in the program are the following countries or areas in the South Pacific: American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Nauru, New Caledonia, Niue, Norfolk Island, Papua New Guinea, Pitcairn, Samoa, Solomon Islands, Trust Territory of the Pacific Islands (now Federated States of Micronesia, Northern Marianas Islands, Marshall Islands and Palau), Tuvalu, Tokelau, Tonga, Vanuatu, and Wallis and Fortuna. A coordinating group representing the four organizations directs the program, which has as its main objective the maintenance and improvement of their shared environment and the enhancement of their capacity to provide a resource base to support the needs and maintain the quality of life of the peoples of the Pacific.

17. Non-Governmental Organizations (NGOs) are organizations which are not directly controlled by any government or inter-governmental body. Their role is mainly to

The statutory framework for environmental protection in the region has also been strengthened substantially, although the scope of the relevant legislation varies considerably from one country to another. Japan, the Philippines and Indonesia boast comprehensive environmental legislation.¹⁸ However, environmental laws in other countries may only provide for enabling acts or establish the central environmental agencies.¹⁹ Given the different techniques of control adopted by the various countries, it is evident that a unified approach to the management of the environment in the Asia-Pacific region has not evolved. Most common are regulatory measures such as specification, performance and discharge standards, which are viewed as a practical and equitable form of control. Also widely accepted is the "polluter-pays-principle" (PPP)²⁰ which underlies much of the legislation in the region, taking the form of user and polluter charges. Less typical among Asia-Pacific countries, is the utilization of incentives as a control technique²¹ or economic sanctions as enforcement tools.²² However, all countries in the region do

bridge the gap between government policies and aspirations of the people.

18. Japan has, in addition to a Nature Conservation Law, a Basic Law for Environmental Pollution control which has served as an umbrella for the enactment of legislation such as the Law on the Settlement of Environmental Pollution disputes, the Law for Punishment of Crimes Related to Environmental Pollution which Adversely Affects the Health of Persons and the Pollution Related Health Damage Compensation Law. In the Philippines the Environmental Policy Presidential Decree—PD 1151—which recognizes the inalienable right of people to a healthy environment is backed up by an Environment Code (PD 1152). Indonesia has promulgated Act No. 4, 1982, which contains Basic Provisions for the Management of the Living Environment and serves as a constitutional yardstick for judging the validity of all legislation related to aspects of the living environment. See ESCAP, *Regional Overview*, in INTEGRATION OF ENVIRONMENT INTO DEVELOPMENT, *supra* note 5, at 11 [hereinafter *Regional Overview*].

19. See for example, Sri Lanka's National Environmental Act under which the Central Environmental Authority was set up with power to recommend various management schemes involving difficult aspects of the environment; and Iran's Environmental Protection and Enforcement Act which established a Department of Environment with wide regulatory powers. See ESCAP, *Status of Environmental Legislation in the ESCAP Region*, in INTEGRATION OF ENVIRONMENT INTO DEVELOPMENT, *supra* note 5, at 133 [hereinafter *Status*].

20. The principle means that the polluter should bear the expenses of carrying out measures drawn up by public authorities to ensure that the environment is in an acceptable state. Disincentives take the form of user and pollution taxes. *Id.* at 139.

21. Incentives in the form of preferential tax treatment like tax credits on importation of pollution abatement facilities not locally available, accelerated depreciation allowance on investment in the control equipment, loans and other assistance programs during a limited period of time may also be used to encourage compliance with regulatory standards. They are applicable not only between the government and the industry or trade but also between the central and local government. For example, the central government may subsidize part of the cost of the installation of sewage treatment plants for which municipal governments are responsible under the law. *Id.* at 139-40.

22. These are not effluent charges or pollution taxes but an economic penalty equal to the monthly cost of compliance. They work by imposing on a company a liability that is directly related to the financial savings which result from not complying. For example, a

not have access to less formal or administrative enforcement schemes nor is citizen participation in surveillance, monitoring or enforcement generally recognized or encouraged.²³

In fact, notwithstanding their impressive array of environmental laws and supporting institutional infrastructure, Asia-Pacific countries have not been successful in implementing and enforcing environmental policies. The lack of sustained and systematic implementation and enforcement is due to various factors, including inadequate financial, technological and administrative resources, corrupt practices and the low demand for environmental quality because of the relative leverage of interest groups.

C. Norm-Creating Regional Activities

Despite problems with implementation and enforcement, support has been given to norm-creating activities such as the 1981 Colombo Declaration on the Environment by members of the South Asia Cooperative Environmental Program (SACEP).²⁴ More effective has been the 1978 ASEAN Environment Program (ASEP)²⁵ which generated action plans for the priority areas of marine environment, nature conservation and environmental education as well as several ministerial declarations pledging to protect the ASEAN environment.²⁶ The strongest expression of commitment by ASEAN countries is the 1985 Agreement, signed by all ASEAN member-States, on the Conservation of Nature and Natural Resources,²⁷ which is considered the most modern regional instrument

cement manufacturing company that fails to install an anti-pollution device worth \$1,000 becomes liable for an economic penalty of the same amount for the delay. *Id.* at 140.

23. See, however, the Philippines PD 1160, which empowers private citizens who are village officials to enforce pollution control and other environmental laws. *Id.* at 144-45. Currently, more than 50% of industrial pollution reports are made by these officials.

24. See ESCAP, *Status of Institutional Framework for Management*, in INTEGRATION OF ENVIRONMENT INTO DEVELOPMENT *supra* note 5, at 87. The Declaration maps out a program of work in the following areas: (1) environmental impact assessment and cost-benefit analysis; (2) environmental quality standards; (3) technology for the development of renewable and non-renewable resources; (4) environmental legislation; (5) conservation of mountain ecosystems and watersheds; (6) social forestry, (7) conservation of wildlife and genetic resources; (8) conservation of corals, mangroves, deltas and coastal areas; (9) island ecosystems; (10) tourism and the environment; (11) energy and the environment; (12) environmental education and training; and (13) training in wildlife management. See also *supra* note 15 (discussing SACEP).

25. See also *supra* note 14 (discussing ASEP).

26. These declarations include: the 1981 Manila Declaration on the Environment; the 1984 Bangkok Declaration combined with a Declaration on Heritage Parks and Resources as well as the Resolution on Policy Guidelines for Implementation; and the most recent 1987 Manila Summit Declaration. 27 I.L.M. 603 (1988).

27. 15 ENVIR. POL. & LAW 64 (1985).

ever adopted in the field of conservation and closely reflects the thinking of the World Conservation Strategy.²⁸

Equally encouraging in the development of regional norms of environmental protection are the obligations assumed by the 1986 South Pacific Forum.²⁹ The Parties agreed to take all appropriate measures to prevent, reduce and control pollution of the region from any source and ensure sound environmental management and development of natural resources.

A specific example of the determination on the part of South Pacific countries to formulate legal norms for the protection of the region's environment is the South Pacific Nuclear Free Zone (SPNFZ) Treaty.³⁰ Parties to the Treaty renounced the manufacturing, acquisition and possession of nuclear explosive devices; agreed to abide by safeguards in the provision of nuclear material and equipment; undertook to prevent the stationing of any nuclear explosive device on their territory; and agreed not to dump radioactive wastes and material at sea anywhere within the SPNFZ.

The South Pacific SPNFZ Treaty inspired ASEAN countries to work for a future free from nuclear weapons and endorsed the early conclusion of a treaty banning nuclear weapons from the region.³¹

A legal framework for environmental protection has been established for the Southeast Pacific region. Thus, as part of the implementation of action plans under the UNEP Regional Seas Program, the countries in that sub-region adopted the 1981 Convention for the Protection of the Marine Environment and Coastal Areas of the Southeast Pacific and Subsequent Protocols on Regional Cooperation in Combatting Pollution by Oil and Other Harmful Substances in Case of Emergency and on Pollution from Land-Based Sources.³² Two new protocols are being prepared on environmental impact assessment—the first such regional protection—and on pro-

28. Note the 1976 Convention on Conservation of Nature in the South Pacific, *reprinted in* Kiss, ed., *SELECTED MULTILATERAL TREATIES IN THE FIELD OF THE ENVIRONMENT* 47, 463 (UNEP, Nairobi, 1983).

29. Convention for the Protection of the Natural Resources and Environment of the South Pacific Region. 26 I.L.M. 41 (1987). For related protocols on cooperation in combatting pollution emergencies in the South Pacific, and the prevention of pollution in the South Pacific by Dumping, *see* 26 I.L.M. 59, 65 (1987).

30. 29 I.L.M. 1442 (1985).

31. *See* Manila Summit Declaration *supra* note 26. Also in this connection *see* General Assembly Resolution A/43/834 of December 7, 1988 on the Establishment of a Nuclear Free Zone in South Asia. The Manila Summit Declaration made Southeast Asia a nuclear free zone, and a zone of peace, freedom and neutrality.

32. *See* UNEP, CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT AND COASTAL AREAS OF THE SOUTH EAST PACIFIC AND ITS SUPPLEMENTARY AGREEMENT (New York, 1984).

tected areas.³³

It may be added that work is being completed under the UNEP Regional Seas Program on a draft convention and related protocols for the protection and management of the East Asian Seas region.³⁴ Interest has also been demonstrated in setting up and implementing an action plan for a North-West Pacific region which would involve the People's Republic of China, Democratic People's Republic of Korea, Japan, the Republic of Korea and the Union of Soviet Socialist Republics.³⁵

Apart from conventional developments in the Asia-Pacific region, several activities by regional institutions have played an important role in the progressive evolution of regional customary law. Particularly influential were the ESCAP organized Expert Group and Intergovernmental Meetings on the Integration of Environment into Development held in 1984. The Expert Group, which met in Tokyo in June 1984, adopted a set of concrete recommendations.³⁶ Similar recommendations were made by the Intergovernmental Meeting in Bangkok in November 1984.³⁷

33. See Law of the Sea Report of the Secretary General A/43/718 of October 20, 1988, ¶ 87.

34. *Id.*

35. *Id.*

36. See *Recommendations of the Expert Group Meeting, Tokyo*, June 5-11, 1984, in ESCAP, INTEGRATION OF ENVIRONMENT INTO DEVELOPMENT, *supra* note 5, at 3. The recommendations for the national level include: (1) resource conservation and environmental planning, (2) incorporation of ecosystems evaluation and environmental impact assessment, (3) examination of the relevant legal machinery, development of environmental accounting procedures, (4) promotion of environmental training and awareness, (5) creation of environmental management information systems, (6) establishment of mechanisms for effective public information and participation, to be embodied in national development plans. Also recommended as national measures were (1) creation and/or reinforcing of a high level environmental agency, (2) strengthening of the institutional and legislative framework of environmental protection, (3) development of methods for the resolution of environmental disputes by independent mechanisms as well as "supporting measures" such as the promotion of formal and non-formal education, (4) training and awareness programs, (5) establishment of environmental monitoring systems, (6) provision of free access to environmental information, and (7) encouragement for active involvement and participation of NGOs and local communities.

Recommendations at the international level pertained to (1) improving implementation of international environmental agreements and protocols in the ESCAP Region, (2) preparation of a code for handling pesticides and toxic chemicals, (3) the development of strict international controls of nuclear wastes, (4) critical scrutiny by developed countries of environmental standards of "offshore" activities of private enterprise corporations, and (5) assistance for needy countries in developing alternatives for renewable and non-renewable resources.

Finally, at the regional level, the enhancing of sub-regional to programmatic and institutional support of ASEP (ASEAN Environment Program), SACEP (South Asia Cooperative Program) and SPREP (South Pacific Regional Environment Program).

37. For full text, see *Recommendations of Intergovernmental Meeting, Bangkok, Nov. 26-30, 1984*, at 6.

III. REGIONAL RESPONSE TO DEVELOPMENTS IN INTERNATIONAL ENVIRONMENTAL LAW

A. "Sustainable Development"

Of particular significance in the Asia-Pacific context is the introduction into international environmental norms of the key concept of "sustainable development" which pertains to the integration of environmental considerations into the development planning process so that long-term economic development is ensured while the quality of life of present and future generations is preserved and improved.³⁸

Countries in the region, which face serious problems of poverty, malnutrition and the effects of maldistribution of population, have long considered economic development as a policy priority necessary to secure basic human needs of the Asian-Pacific people. In fact, a conflict between the demands of economic growth and an ecologically-sound environment characterizes policy debates also in the more prosperous countries in the region.³⁹

Currently, however, it is increasingly realized in the region, as well as globally, that irrational use of natural resources and degradation of the environment which occurred in the process of economic development will in turn impede development itself. Hence, in the long-run, conservation of natural resources and the environment on the one hand with economic and social development on the other are not incomparable but mutually reinforcing goals.⁴⁰

38. See generally WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT (WCED), *Our Common Future* (London: Oxford UP, 1987). The WCED's findings and recommendations were endorsed in General Assembly Resolutions 42/186 & 187, Dec. 11, 1987, and a sub-item was included in the provisional agenda of the General Assembly's Forty-Third Session (1988) entitled "A Long-Term Strategy for Environmentally Sound Sustainable Development." See also WCED, *Legal Principles for Environmental Protection and Sustainable Development*, 25 I.L.M. 494 (1986).

39. It has been observed, for example, that Hong Kong has "a First World economy but a Third World environment." See Appleyard, *Time to Tackle Pollution. HK's Third World Environment*, S. China Morning Post Mar. 26, 1989, at 8, col. 3.

40. The following is an example of such a cooperative effort:

Dune Afforestation in Socialist Republic of Vietnam

The Problem:

Due to successive battles throughout the war, Bink Tri Thien and Quang Mam-Da Nang were particularly affected by repeated bombings and defoliant spraying. The result was a degradation of natural cover and manmade plantations over an area stretching along the coast for 300 km.

The Project:

Over 15,000 workers will work to plant or replant 45,000 hectares. Seed collections and nurseries will be established. Roads will be opened, mines cleared, and tracks and firebreaks installed. The workers will receive free family rations for the duration of the project.

The Rewards:

The 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources⁴¹ provides in its Preamble that "the relationship between conservation and socio-economic development implies both that conservation is necessary to ensure sustainability of development and that socio-economic development is necessary for achievement of conservation on a lasting basis." The same idea is incorporated in another formal document of relevance to the region, the 1980 Declaration of Environmental Policies and Procedures Relating to Economic Development.⁴²

As a basic principle, States are therefore under an obligation to ensure that the conservation of natural resources and the environment is treated as an integral part of the planning and implementation of development activities. The principle was confirmed by ASEAN States who have undertaken to guarantee, within the framework of their respective municipal laws, that "conservation and management of natural resources are treated as an integral part of development planning at all stages and at all levels."⁴³

A general commitment to the principle of environmentally sound and sustainable development in the Asian and Pacific region has been expressed recently in Resolution XLIV adopted by ESCAP in its April 1988 session. The resolution invites members and associate members to "integrate environmental considerations into their development policies and programs aimed at contributing to environmentally sound and sustainable development."⁴⁴

Several countries in the region have in fact incorporated the concept of "sustainable development" into their constitutions, legislation or decrees.⁴⁵ Despite this recognition, actual planning linkages

Workers and their families benefit from food rations, close to the national norms, which enable them to become a labor force specialized in afforestation. More wood will be produced per hectare, a more regular water supply will be obtained, allowing for more stabilized cultivation. From Problems and Prospects of Desertification Control in the ESCAP Region, *supra* note 3, at 323-25.

41. See *supra* note 27.

42. 19 I.L.M. 524 (1980). The declaration was adopted by Donors of Development Assistance; the African Development Bank, the Arab Bank for Economic Development in Africa, Asian Development Bank, World Bank, Commission of European Communities, Organization of American States, UN Development Programme and the UN Environment Programme. The declaration states that "in the long run environmental protection and economic and social development are not only compatible but interdependent and mutually enforcing." *Id.*

43. 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources, Art. 2; *supra* note 27.

44. 6 ESCAP ENVIRONMENT NEWS 5-6 (Apr.-June 1988).

45. For example, India, Indonesia, Malaysia, Papua New Guinea, Philippines, Vanuatu.

between environment and development in the Asia-Pacific region continue to be weak. Effective implementation of sustainable development has yet to occur. It is also apparent that the practical interpretation of the concept varies considerably among countries in the region, depending largely on their respective level of social and economic development.

It is for this reason that special importance must be attached to the detailed recommendations of the 1984 Expert Group and Intergovernmental Meetings concerning the implementation of sustainable development in the Asia-Pacific region.⁴⁶ Indeed, given the involvement of high-level national policy-makers, stronger expectations have been created for objectives such as the formulation of national policy on sustainable development,⁴⁷ preparation of a national conservation strategy,⁴⁸ institution of a system of land-use planning,⁴⁹ prescription of environmental impact assessments as prerequisite for all proposed development projects,⁵⁰ establishment of environmental standards,⁵¹ enactment of statutory environmental

46. See 14 ENVIR. POL. & L. 51 (1985). These recommendations were endorsed in the 1985 Ministerial Declaration and Framework for Action Plans for the Management of the Asian Environment.

47. Note the National Policies and Measures on Environmental Development adopted by the Thai Cabinet and incorporated in the Present National Development Plan of Thailand; Japan's National Economic and Social Plan embraces the goal of promoting a general environmental policy within the plan (although Japan does not have a national policy on sustainable development as such). See *supra* note 18.

48. A National Conservation Strategy as set out in the World Conservation Strategy has been proposed for India, although current initiatives are directed towards the formulation of sectoral national conservation strategies; Sri Lanka has undertaken specific conservation activities such as reforestation, water conservation, prevention of soil erosion and protection of corals. See *National News and Activities of National Forums in ESCAP ENVIRONMENT NEWS* 20 (Apr.-June 1988).

49. Note the National Land Use Planning Act in Japan. See *Regional Overview, supra* note 18.

50. The use of environmental impact assessment (EIA) as an essential management and planning tool for development projects is increasing, in varying degrees, in the Asia-Pacific region. There are three countries in the region—Australia, Philippines and Papua New Guinea—with specific legislation on EIA while nine countries—Indonesia, Iran, Malaysia, New Zealand, Pakistan, People's Republic of China, Korea and Sri Lanka—rely on general environmental legislation as a basis for the government to require EIA for particular projects. In addition, six countries—Bangladesh, Burma, Hong Kong, India, Japan, Nepal—follow informal EIA procedures (basically to incorporate environmental considerations into planning of specific types of projects). See ESCAP, *The Situation in the Asian and Pacific Region in Environment Impact Assessment. Guidelines for Planners and Decision Makers*, 58 (Bangkok, 1985).

51. The People's Republic of China, for example, has introduced a large number of environmental standards in order to encourage the proper use of resources, to maintain the ecological balance, ensure the health of human beings and protect public property. Environmental quality standards are available in Sri Lanka as guidance in the development planning process. A National Code is anticipated in Bangladesh. See *Regional Overview, supra* note 18.

measures, development of appropriate mechanisms for resolution of environmental disputes,⁵² and promotion of community awareness.⁵³

Generally, it may be observed that while the record of formal ratification by Asia-Pacific countries of international conventions and agreements pertaining to the government is not particularly impressive, certain rules and principles incorporated in such treaties or in other relevant international legal instruments have been endorsed by countries in the region. Some of these rules and principles are in any event applicable to the region by virtue of being part of customary international law.

B. *Protection of the Ozone Layer*

The 1987 United Nations Protocol on Substances that Deplete the Ozone Layer (the "Montreal Protocol"),⁵⁴ requires parties to freeze, and eventually reduce, their production and consumption of chlorofluorocarbons (CFCs)⁵⁵ and halon.⁵⁶ This requirement presents countries in the Asia-Pacific region with a particularly hard choice between the imperatives of economic development or environmental conservation.⁵⁷ It is not surprising, therefore, that

52. Note the Act for Settlement of Pollution Disputes in Japan which provides for the establishment of administrative collegial bodies charged with handling dispute procedures; also the Environmental Dispute Mediation committee in Korea. See *Status, supra* note 19.

53. An extensive program of education and information to increase environmental awareness of people was launched by the Environmental Pollution Control Department in Bangladesh. See *supra* note 48. Singapore conducts regular mass-based national campaigns to promote awareness among citizens. Efforts in Sri Lanka include many activities ranging from studies, research, surveys and monitoring activities to introduction of environmental education in school curricula and environmental education of the general public. See *Regional Overview, supra* note 18.

54. 26 I.L.M. 1541 (1987). The Protocol is the culmination of a process of negotiation by sixty-two countries to limit the ozone-depleting chemicals which had commenced following the adoption of the 1985 Vienna Convention for the Protection of the Ozone Layer, 26 I.L.M. 1516 (1987). Note also the recent Declaration by delegates from 81 countries to a U.N. Conference on the Environment held in Helsinki in May 1989 to phase out CFC production by the end of the half century, reported in 35 *KEESING'S CONTEMPORARY ARCHIVES* 36672 (1989).

55. CFCs are long-lived synthetic compounds made up of chlorine, fluorine, carbon and sometimes hydrogen. Sorensen, *Montreal Protocol on Substances That Deplete the Ozone Layer*, 29 *HARV. INT'L L.J.* 185, 186 n.4 (1988).

56. Halons are chemicals used in fire extinguishers. *Id.* at 187.

57. Three countries in the region—Japan, People's Republic of China and India—are already significant makers of CFCs. Hong Kong manufactures and sells \$50,000,000 worth of the chemicals each year. Taiwan is set to begin production this year at a new Fromose Plastics facility; and South Korea's Ulsan Chemical Corporation is also building a plant. Both the People's Republic of China and India have ambitious development plans that will require expanded production of CFCs. Japan's industry (particularly electronics, electric appliances and cars) is likely to be seriously affected by rigorous controls on CFCs, as will the

the region's support for global efforts to save the ozone from further depletion has been marked by lack of enthusiasm.⁵⁸ China and India, for example, contend that the developed world, which consumes some ninety percent of all CFCs, should bear the main responsibility and cost of solving the problem. They are willing to accede to the Montreal Protocol only if developed countries provide financial aid to less-developed nations to ease the economic burden of shifting to alternative technologies.⁵⁹

Even countries in the region which have not signed or acceded to the Protocol might be affected as producers or exporters of CFCs because the Protocol bans the import of the controlled substances from any State not complying with the agreement within one year of its entry into force. The Protocol also forbids, under specific conditions, countries which have ratified the agreement to export these substances to a non-party State, beginning on January 1, 1993.⁶⁰

C. *Transboundary Movement of Hazardous Wastes*

Other recent international developments of special relevance for the Asia-Pacific region concern transboundary movements of hazardous wastes. In addition to the numerous Organization for Economic Cooperation and Development (OECD) Council Decisions and Recommendations,⁶¹ a UNEP-sponsored global Convention on the Control of Transboundary Movements of Hazardous Wastes was recently concluded.⁶² The Convention bans the export of haz-

export-oriented economics of Taiwan and South Korea. See Goldstein, *Asian Countries Face Tough Choice on CFCs: The Ozone Trap*, FAR E. ECON. REV. 45 (Apr. 13, 1989).

58. Note, however, that Japan signed the Protocol; Malaysia and the Philippines announced their intention to sign, Hong Kong has become a party following the U.K.'s signature (a draft Ozone Protection Bill is due to be passed into law by July 1989); Taiwanese officials say that the island hopes to lower its consumption eventually in line with the Montreal guides. See report, *Pleas of World Wide Effort*, S. CHINA MORNING POST, Mar. 8, 1989, at 18, col. 4.

59. See report *China Calls for Fund on Ozone Layer*, S. CHINA MORNING POST, March 7, 1989, at 16, col. 3. In fact, under the Montreal Protocol, art. 5, developing countries are given a ten-year grace period to comply with the provision of the Protocol and may even increase their consumption of CFCs during this period to 0.3kg per capita. Ironically, the pact theoretically would enable the People's Republic of China to boost their consumption from 18,000 tons a year currently to 300,000 tons because of its one billion population. Art. 10 of the Protocol provides for technical assistance to countries, in particular developing countries, for the purpose of implementing or participation in the Protocol.

60. Art. 4; *supra* note 54.

61. Including the 1984 Council Decision and Recommendation on Transfrontier Movements of Hazardous Wastes, 23 I.L.M. 214 (1984); the 1986 Decision-Recommendation on Exports of Hazardous Wastes from OECD Area, 25 I.L.M. 1010 (1986). See also the 1988 Decision on Transfrontier Movements of Hazardous Wastes, 28 I.L.M. 257 (1989).

62. See *Nations Agree to End "Garbage Imperialism,"* S. CHINA MORNING POST, Mar. 23, 1989 at 14, col. 6. See also General Assembly Resolution A/43/919 Dec. 20, 1988

ardous waste causing cancer, birth defects and many other health problems, to countries which are not equipped to handle it properly. While countries in the region may be viewed as generally the "affected States," international legal obligations relating to traffic in toxic and hazardous wastes are imposed on all States in an attempt to achieve environmentally sound world-wide waste management. Indeed, at least one aspect of the problem, namely disposal of nuclear wastes at sea, is given some attention under the 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region.⁶³ However, rigorous implementing measures have not been introduced by countries in the region.

D. Protection of the Marine Environment Against Pollution from Land-based Sources

Equally significant for environmental protection in the Asia-Pacific region is the 1985 UNEP Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-Based Sources.⁶⁴ These guidelines were prepared on the basis of common elements and principles drawn from relevant existing agreements, such as the 1982 Law of the Sea Convention, and the 1974 Paris Convention for the Prevention of Pollution from Land-Based Sources to which several countries in the region are parties.

E. State Responsibility for Environmental Damage

Finally, the nations of the region cannot avoid state responsibility for activities giving rise to transboundary environmental harm. Asia-Pacific countries must assume concrete obligations beyond the fundamental commitment articulated in Principle 21 of the widely-accepted 1972 Stockholm Declaration of the U.N. on the Human Environment.⁶⁵ Principle 21 ensures that activities do not cause damage to the environment of other States or to areas outside the limit of national jurisdiction.⁶⁶

on the *Responsibility of States for the Protection of the Environment: Prevention of the Illegal Traffic in, and the Dumping and Resulting Accumulation of, Toxic and Dangerous Products and Wastes Affecting the Developing Countries in Particular*, summarized in 19 ENVIR. POL. & L. 29 (1989).

63. Art. 10; *supra* note 29; see also the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, *supra* note 29.

64. 14 ENVIR. POL. & L. 7 (1985).

65. 11 I.L.M. 1416 (1972).

66. While not legally binding, Principle 21 can be said to reflect current community expectations. See discussion in Mushkat, *The Daya Bay Nuclear Plant Project in the Light of International Environmental Law*, U.C.L.A. PACIFIC BASIN LAW JOURNAL (1989).

Specifically, States in the region are under a "compound primary duty"⁶⁷ consisting of four duties to prevent, inform, negotiate and repair.

This compound obligation is set out in the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources, which provides:

- 1) Contracting Parties have in accordance with generally accepted principles of international law the responsibility of ensuring that activities under their jurisdiction or control do not cause damage to the environment or the natural resources under the jurisdiction of other Contracting Parties or of areas beyond the limits of national jurisdiction.
- 2) In order to fulfill this responsibility, Contracting Parties shall avoid to the maximum extent possible adverse environmental effects of activities under their jurisdiction or control. . . .
- 3) To that effect, they shall endeavour (a) to make environmental impact assessment before engaging in any activity that may create a risk of significantly affecting the environment or the natural resources of another Contracting Party or the environment or natural resources⁶⁸ (b) to notify in advance the other Contracting Party of Contracting Parties concerned of pertinent details of plans to initiate, or make a change in, activities which can reasonably be expected to have significant effects beyond the limits of national jurisdiction (c) to enter into consultation concerning the above-mentioned plans upon request of the Contracting Party or Contracting Parties in question (d) to inform the Contracting Party or Contracting Parties in question of emergency situations or sudden grave national events which may have repercussion beyond national jurisdiction.⁶⁹

Notwithstanding the recent trend in international environmental instruments to give special consideration to concerns of developing

67. See International Law Commission, "Schematic Outline", Third Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, U.N. Doc. A/CN.4.4/360. Corr. 1, at 24-30 (1982) *reprinted in 2 Yearbook of the International Law Commission*, Pt. 2 (1982).

68. For support in other international, regional and bilateral instruments of a requirement to conduct an environmental impact assessment *see* references in Experts Group on Environmental Law of the World Commission on Environment and Development, *Final Report on Legal Principles for Environmental Protection and Sustainable Development*, in ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT, LEGAL PRINCIPLES AND RECOMMENDATIONS 58-62 (1987).

69. See *supra* note 67. See also the 1986 Convention on Early Notification of Nuclear Accidents, 16 I.L.M. 1370 (1986), to which several countries in the Asia-Pacific region (India, Indonesia, Iran, Democratic People's Republic of Korea, People's Republic of China) are parties.

countries,⁷⁰ no derogation from international rules of State responsibility is permitted. Thus, common justifications⁷¹ raised on behalf of developing States have not been generally accepted as legitimate.

F. Duty to Cooperate

Cooperation between developed and developing countries is emphasized in all major international legal instruments, such as the 1972 Stockholm Declaration on the Human Environment which proclaimed that:

International matters concerning the protection and improvement of the environment should be handled in a co-operative spirit by all countries, big or small, on an equal footing. Co-operation through multilateral or bilateral arrangements of other appropriate means is *essential to effectively control, prevent, reduce, and eliminate adverse environmental effects resulting from activities conducted in all spheres*, in such a way that due account is taken of the sovereignty and interests of all States [emphasis added].⁷²

A duty to cooperate in good faith is imposed in relation to: (1) the maintenance and restoration of a reasonable and equitable use of a transboundary natural resource, and (2) the prevention and abatement of transboundary environmental interferences.⁷³

70. For example, allow developing states a certain transition period during which greater leeway is afforded to alleviate hardship resulting from imposition of new standards, or provide for financial and technical assistance in implementing the relevant international obligations. See, for example, 1987 Montreal Protocol on Substances That Deplete the Ozone Layer, *supra* note 54; 1982 Law of the Sea Convention, Dec. 10, 1982, 211 I.L.M. 1261, art. 202, 203.

71. (1) That they may not have sufficient information to predict the potential for transboundary harm created by activities within their territories of foreign or foreign-owned entities; (2) that they may not have sufficient technical expertise to evaluate complex technological proposals or monitor ongoing performance; (3) that they lack regulatory and administrative skills necessary to implement pollution control laws; (4) that their pollution-control laws may inadvertently be inadequate; (5) that the need to develop may compel them to accept foreign or domestic investment that carries with it a high risk of transboundary harm; or (6) that the developed States are responsible for pollution problems because of their past industrial activities and that they alone should bear the financial cost of remedying the situation or of not worsening it, at least until developing States have had the opportunity to pollute. For a discussion of such claims and the approach taken by the International Law Commission, see Magraw, *The International Law Commissions' Study of International Liability for Nonprohibited Acts as it Relates to Developing States*, 61 WASH. L. REV. 1041 (1986).

72. Stockholm Declaration, Principle 24, *supra* note 65. The duty to cooperate is also incorporated in the 1982 Law of the Sea Convention, art. 197, *supra* note 70. WCED Experts' Report, *supra* note 68, at 69-72.

73. See WCED Experts' Report, *supra* note 68, at pp. 90-94; 1982 Law of the Sea Convention, art. 63, *supra* note 70 at 66-67; see also the 1986 Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency, 16 I.L.M. 1377 (1986); and the recent OECD Council Decision on the Exchange of Information Concerning Accidents Ca-

Regional cooperation is one form of international cooperation which is desirable in combatting environmental problems. Regional cooperation is particularly effective in the protection of the marine environment.⁷⁴ Generally, it is perceived that a regional approach to environmental issues offers more precise and restrictive norms and more useful institutions by narrowing the consensus-forming community to those States that have either a close geographical relationship or a common attitude towards the range of environmental problems that affect them.⁷⁵

CONCLUSION

There have been several instances in the Asia-Pacific region of cooperation in environmental matters, particularly within sub-regional frameworks. However, the level of cooperation among countries in the region is rather low, especially when compared with decision-making and growing willingness to coordinate national policies in Europe. In fact, cooperation in the Asia Pacific region has been confined largely to formal institutional setting, as distinct from the highly focused and rule-oriented European approach.

The decentralized pattern of problem-solving in the Asia-Pacific region is understandable given the cultural, economic, linguistic, political, religious and social diversity which characterizes the region. Indeed, an overview of the legal systems of Asia-Pacific States reveals the mosaic-like nature of the region's legal system. As one commentator has noted, "it is not simply a choice between common law or civil law or a mixture of both. While one system is founded on Islamic and Hindu law with selective retention of Dutch law, a few others share traditions of British law super-imposed upon Islamic foundations Others have indigenized eclectic legal systems which have integrated concepts from American, Spanish, Indian and French legal systems. Intricate as it is, the mosaic is even more elaborate when seen in detail, with a great variety of ethnic

pable of Causing Transfrontier Damage, 28 I.L.M. 247 (1989).

74. The most promising examples of cooperation are said to be those undertaken within the UNEP Regional Seas Programme. See Okidi, *The Prospects for Cooperation Among Developing Countries in Legal Aspects of Control of Transboundary Air Pollution*, in Flinterman, Kwiatkowska & Lammers, eds., *TRANSBOUNDARY AIR POLLUTION, INTERNATIONAL LEGAL ASPECTS OF THE COOPERATION OF STATES* (1986) 235, 245-46. See also the exhortation for cooperation on a regional basis in the 1985 Montreal Guidelines on Protection of the Marine Environment Against Pollution from Land-Based Sources, guideline 5, *supra* note 64.

75. See SPRINGER, *THE INTERNATIONAL LAW OF POLLUTION PROTECTION THE GLOBAL ENVIRONMENT IN A WORLD OF SOVEREIGN STATES* 38 (1983).

and customary laws particularly in the Pacific countries.”⁷⁶

Notwithstanding the diversity of the region, environmental problems confronting the Asia-Pacific region are of such magnitude that greater cooperation is inevitable. The challenges in the environmental domain cannot be handled effectively by individual countries, and the advantage of a collective approach is that it allows economies of scale and makes use of the institutional machinery that is already in place.

Given that the problem should be tackled jointly, it is appropriate to conclude this article by calling for the adoption of a comprehensive integrated regional strategy for environmental protection and rational use of natural resources, based on the environmental priorities specific to the region. To ensure its successful implementation, such a strategy should be embodied in an international treaty and supported by formal enforcement mechanisms. However, in addition to regional efforts, efforts directed at improving environmental control at a global level should continue and individual States in the region should be encouraged to adhere to agreements which are international in scope.

Regional cooperation could evolve in stages, with initial steps taken to harmonize national laws, followed by codification and progressive development through treaty-making. Finally, effective environmental protection will depend on the national “political will,” including recognition by national decision-makers of the importance of environmental issues faced by their countries and the willingness of key domestic groups to accept the costs associated with regulation efforts.

76. *Status, supra* note 19, at 137.

APPENDIX
GOVERNMENT ENVIRONMENTAL AGENCIES
 in the
ASIA PACIFIC REGION

East Asia:

Hong Kong	Environmental Projection Department (upgraded from Agency)
Japan	Environmental Agency
Korea	Environmental Administration under the Ministry of Social Affairs
People's Republic of China	Ministry of Urban and Rural Construction and Environmental Protection; Environmental Protection Commission (under State Council of China); and National Protection Agency; (Also local organizations in provinces, municipalities, some complexes and large plants)
Taiwan	Environmental Protection Administration

South East Asia:

Indonesia	Ministry of Population and the Environment
Malaysia	Ministry of Science, Technology and Environment
Philippines	Department of Environment and Natural Resources; National Environmental Protection Council (chaired by the Minister of Human Settlement)
Singapore	Ministry of the Environment
Thailand	National Environmental Board

Vietnam State Committee of Science and Technology

South Asia:

Bangladesh Department of Environmental Pollution Control (under the Ministry of Local Government, Rural Development, Cooperatives and Religious Affairs, Local Government Division)

India Department of the Environment

Iran Department of the Environment

Nepal National Planning Commission, Environment and Resource Conservation Division

Pakistan Environment and Urban Affairs Division (under Ministry of Housing and Works); Environmental Protection Council; Environmental Protection Agency

Sri Lanka Central Environmental Authority

South Pacific:

Australia Department of Environment, Housing and Community Development (Federal)

Cook Islands Directorate of Conservation

New Zealand Ministry of the Environment (supported by Environmental Secretariat in the Commission for the Environment)

Papua New Guinea Office of Environment and Conservation