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REVIEW OF THE IMPLEMENTATION OF AGENDA 21, INTERNATIONAL ENVIRONMENTAL CONVENTIONS, THE REGIONAL ACTION PROGRAMME FOR ENVIRONMENTALLY SOUND AND SUSTAINABLE DEVELOPMENT, 1996-2000, AND THE PROGRAMME OF ACTION FOR THE SUSTAINABLE DEVELOPMENT OF SMALL ISLAND DEVELOPING STATES

(Item 5 of the provisional agenda)

REVIEW OF THE IMPLEMENTATION OF AGENDA 21, INTERNATIONAL ENVIRONMENTAL CONVENTIONS, AND THE REGIONAL ACTION PROGRAMME FOR ENVIRONMENTALLY SOUND AND SUSTAINABLE DEVELOPMENT, 1996-2000

Note by the secretariat

SUMMARY

ESCAP member countries have been active in implementing sustainable development commitments, especially concerning pollution prevention and natural resources conservation. Some progress has been made in air and water quality management. The implementation of international conventions, in particular for biodiversity, desertification, hazardous wastes and climate change, has continued to make substantial progress. Public participation has proved to be a key to success in natural resources management and urban renewal. Private capital is funding some economically viable environmental services, such as sanitation, and could be harnessed in other areas, such as energy generation, social welfare and conservation projects. Education and awareness on the environment are fairly strong, but not sufficient for policy formulation and enforcement. There is a need to develop indicators to measure progress towards sustainable development and to measure the implementation of action programmes.

CONTENTS

	<i>Page</i>
INTRODUCTION	1
I. IMPLEMENTATION EXPERIENCES	1
II. CONSTRAINTS	10
III. LESSONS LEARNED	12

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INTRODUCTION

1. The objective of this paper is to bring into focus issues surrounding regional efforts to implement Agenda 21, particularly those components which have been deemed as regional priorities. The Regional Action Programme for Environmentally Sound and Sustainable Development, 1996-2000 was adopted in November 1995 at the third Ministerial Conference on Environment and Development in Asia and the Pacific and subsequently endorsed by the Commission in April 1996 through its resolution 52/8. This review highlights the progress in the implementation of major international environmental conventions, pertaining to the relevant themes and programme areas identified by the Regional Action Programme. It is envisaged that the insights and lessons that emanate from this review will provide the basis for developing a strategically focused regional action programme for implementation during the period 2001-2005. The present paper is supported by background documents with more details on the implementation status of the Regional Action Programme together with Agenda 21 and other outcomes of the United Nations Conference on Environment and Development.

2. The participating representatives are requested to provide related updated information on their government's policies and activities aimed at sustainable development in their statements. This would contribute significantly towards the implementation of the Conference outcomes.

I. IMPLEMENTATION EXPERIENCES

3. The Regional Action Programme addresses 24 programme areas, each of which describes an implementation strategy and a set of tangible results. In each implementation strategy a range of activities to be undertaken by national governments and international organizations is prescribed and 114 tangible results expected to flow from successful implementation are listed although these are not readily assessable as indicators of implementation performance.

4. Improvement in environmental conditions caused by sustainable development activity is the best indicator of implementation progress. However, full data sets linking implementing activity and environmental conditions are not generally available or are infrequently updated. This is because changes in environmental conditions are gradual, often taking place over a longer time horizon than an implementing activity, and are influenced by a host of other factors. Therefore, in cases where tangible qualitative environmental improvements are not apparent, this may not necessarily indicate lack of progress in implementation. Innumerable implementing activities were and are being carried out by virtually all countries of the region. In this paper, implementing efforts at regional, subregional and national levels have been recognized in their own right as indicators of implementation progress.

5. The following sections examine progress in implementing programme areas in congruence with four strategic objectives: (a) pollution reduction, prevention and control and enhancement of environmental quality; (b) conservation and management of natural resources and ecosystems; (c) sustainable development policy improvement; and (d) sustainable development indicators and assessment.

**A. Progress in the implementation of the programme areas of the
Regional Action Programme, 1996-2000**

1. Pollution reduction, prevention and control and enhancement of environmental quality

6. Air pollution and ambient air quality issues, primarily in urban and peri-urban settlements have been accorded national priority in most countries of the region. There is a growing recognition of the severity of the health impacts of air pollution as well as the economic implications of substantial losses in human productivity owing to illness and respiratory diseases. A wide spectrum of regional efforts to combat air pollution consists of a combination of interventions, such as the promotion of cleaner industrial production; regional cooperation to address transboundary pollution; reduction of harmful vehicular emissions progressively through the use of cleaner fuel; leaded fuel phase-out programmes and enhanced traffic management; and supportive legislative and policy measures.

7. The concept of cleaner production has been gaining wider acceptance. National cleaner production centres have been established in a number of countries (China, India, Indonesia, Thailand, Viet Nam). These centres serve to disseminate cleaner production technologies, build capacity and establish demonstration projects to convince the private sector and policy makers that such technologies offer viable solutions to improve environmental health in addition to making sound economic sense. Improved coal combustion technologies and/or the adoption of cleaner fuels in the industrial production process have been achieved with encouraging results (China, India, Mongolia, Republic of Korea).

8. In the megacities of the region where population densities are high, vehicular emissions tend to be a more significant determinant of air quality than industrial emissions. Perhaps the single most effective policy decision to curb harmful pollutants from vehicular emissions has been the phasing out of leaded fuel and the switch to cleaner fuels. The Philippines is among the latest addition to a number of countries (Malaysia, Republic of Korea, Singapore, Thailand) that have made this important transition to unleaded fuel in the interests of environmental health. National lead phase-out programmes are in various stages of development with a range of preparatory projects being designed and implemented throughout the region, including Azerbaijan, Bangladesh, India, Kazakhstan, Pakistan and Uzbekistan. Reductions in vehicular emissions have also been recorded as a result of cleaner and more efficient mass transit systems (Philippines, Republic of Korea,

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Thailand) and through better city traffic management and restrictions on automobile use (Jakarta, Kuala Lumpur, Shanghai, Singapore).

9. Enabling legislative and policy measures to combat air pollution from both industrial and transport sectors include the establishment of environmental quality standards (Pakistan, Republic of Korea, Sri Lanka, Viet Nam), regulatory measures such as pollution charges (Philippines), and effective mechanisms to monitor air quality on a systematic basis (Malaysia). Efforts to facilitate compliance and enforcement of environmental standards and legislation, however, have not been fruitful although greater environmental awareness, cooperation between enforcement agencies and polluting industries, and voluntary compliance measures are gradually becoming more prevalent.

10. The transboundary haze phenomenon in the South-East Asian subregion, which was most prominent during the latter part of 1997, posed one of the most serious environmental health hazards engulfing both rural and urban settlements. As a response, the Association of Southeast Asian Nations (ASEAN) formed a haze technical task force, held ministerial meetings on haze and adopted a regional haze action plan. Malaysia and Indonesia adopted a Memorandum of Understanding for collaboration on forest fires, haze and other natural disasters. The Asian Development Bank (ADB), ESCAP, the World Meteorological Organization and the United Nations Environment Programme (UNEP) supported national and subregional endeavours within their capacity and resources. In the South Asia subregion, the South Asian Cooperative Environment Programme (SACEP) and UNEP have been jointly implementing the Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia adopted during the Seventh Governing Council Meeting of SACEP.

11. Improved urban and rural sewage disposal remains a fundamental need throughout the region and disposal facilities are gradually being improved where funding is available. A frequently used means of raising finance for improvement was the privatization of sanitation services (Indonesia, Malaysia, Thailand). One of the problems is that cleaning wastewater discharged from multitudes of small and medium-sized enterprises is difficult to regulate. International cooperation for the transfer of appropriate technology is being promoted to address this problem.

12. Revitalized efforts to improve public health, such as measures for declining water quality, including chemical contamination, were undertaken in the region (Bangladesh, Japan, Thailand, Viet Nam). The Commission in 1999 called upon member states to intensify time-bound action on priority health issues affecting the region. The Republic of Korea introduced effluent charges, Malaysia engaged non-governmental organizations and the media to promote awareness and river clean-up, and Sri Lanka established a national water resources authority. China focused on controlling the total pollutant load discharged into its "Three Rivers and Three Lakes". The Government of India addressed national capacity-building for watershed management and improved

river water quality through basin-wide action plans. Despite these approaches to water quality improvement, raising the level of water quality remains a daunting task because of limited capacity for wastewater treatment which is found to be as low as five per cent in some of the big cities.

13. Regional activities to develop solid waste management capacity have in general lacked progress in many cities. While it is estimated that municipal authorities spend up to 50-70 per cent of their revenue on waste management, the scale and coverage of waste collection is usually less than half of the urban population and up to 50-70 per cent in exceptional cases. However, there were some encouraging developments in terms of particular progress in industrial waste minimization (Japan, Thailand); regulation of mining wastes (China, the Lao People's Democratic Republic, Malaysia, Viet Nam); incineration of hospital wastes (India, Thailand); development of national waste exchange systems (China, Philippines); and waste recycling for industrial and other uses (Singapore). The South Asian subregion experienced isolated local success in urban renewal largely through non-governmental organizations and public participation supported by state or municipal government (Bangladesh, India, Pakistan, Sri Lanka).

14. Many Asian countries promoted the efficient use of energy. On the supply side, efficiency was promoted through the development of combined cycle (gas and steam turbine) and combined heat and power energy generation facilities (Bangladesh, India). In some countries, particularly those with industries highly dependent upon energy, demand-side management was promoted through legislation imposing building codes, consumption audits and product labelling, and through administrative frameworks offering advisory and funding services (Australia; Hong Kong, China; Islamic Republic of Iran; Philippines; Republic of Korea; Thailand). Relative to the developed countries, the level of conventional energy consumption in the region is low, but rising steadily, whereas the use of renewable energy has, with few exceptions, hardly progressed beyond the prototype stage.

2. Conservation and management of natural resources and ecosystems

15. The region leads the world in tropical forest plantation development. Net reforestation is taking place in some ESCAP member countries (Bangladesh, Nepal, New Zealand, Republic of Korea) but is outstripped by deforestation rates in other countries (Australia, Cambodia, Indonesia). Community forestry programmes have proved to be among the most successful approaches to the sustainable management of forests (Bangladesh, India, Nepal, Philippines, Thailand) and systematic decentralization of management is being explored to enable widespread community management.

16. At the subregional level, the establishment of the ASEAN Regional Centre for Biodiversity Conservation has promoted greater awareness and facilitated networking on biodiversity conservation in South-East Asia. At the national level, the formulation and adoption of national

biodiversity action plans and strategies in many countries (Australia, Bangladesh, Bhutan, China, Fiji, India, Indonesia, Japan, Malaysia, Maldives, Marshall Islands, Mongolia, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, Russian Federation, Singapore, Sri Lanka, Thailand, Turkey, Uzbekistan, Viet Nam), sometimes supplemented by endangered wildlife conservation strategies (Australia, Japan), were encouraging developments within a relatively short time. In many cases, support for the preparation of these strategies was available through the financial mechanisms under the Convention on Biological Diversity, the Global Environment Facility (GEF), and multilateral development agencies. The implementation of these well written and quite comprehensive action plans and strategies, however, has been lacklustre in general. New protected areas are commonly used as a means for biodiversity conservation, although management plans and resources are frequently lacking.

17. The need for integrated management of watersheds is now widely accepted in the region. Some progress has been made through the adoption of management plans, conservation and rehabilitation projects, pollution prevention strategies and capacity-building (Bangladesh, China, India, Japan, Malaysia and Thailand). In the lower Mekong basin, environmental improvements for remote watersheds and the protection and management of Tonle Sap Lake and the critical wetlands were promoted through the Greater Mekong subregional programme by ADB. Cross-border cooperation for joint resources management through the Mekong River Commission and the Tumen River Area Development project were supported by the United Nations Development Programme. Cooperation on environmental issues in the Central Asian countries, focusing on Aral Sea basin rehabilitation programmes, has made progress.

18. There has been a shift towards integrated planning for coastal and marine zone development in the region, including the establishment of representative systems of marine protected areas (Australia, China, Indonesia). Many countries have taken initiatives to combat marine pollution at the national level and at the subregional level through the Regional Seas Programme of UNEP which included the formulation of action plans and implementation of projects for the East Asian Seas, South Asian Seas, North-West Pacific, and the Black Sea. The UNDP/IMO (International Maritime Organization) project on the protection of the East Asian Seas in its current phase is building partnerships in environmental management for the seas of East Asia. GEF funded a project to be implemented by IMO and the South Pacific Regional Environment Programme to address vessel and land-based sources of marine pollution in the South Pacific. In addition, ADB undertook studies on investment promotion in the coastal areas of Cambodia, China and Viet Nam, and ESCAP issued guidelines on coastal environmental management, environmentally sound development of coastal tourism, and on integrated coastal zone management. Even so, limited institutional capacity and resources continue to impede coastal environmental management plans that have been developed (Bangladesh, Pakistan, Philippines, Sri Lanka, Tonga).

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3. Sustainable development policy improvement (including progress in the implementation of international environmental conventions)

19. Forty-five regional countries have ratified the United Nations Framework Convention on Climate Change while only nine countries have ratified its Kyoto Protocol. Actions to reduce growth rates of greenhouse gas emissions vary across the region. The Environment Agency of Japan in cooperation with ESCAP were organizing the Asia-Pacific Symposia on Climate Change to analyse the relevant issues in line with regional perspectives. Developing country members have undertaken voluntary greenhouse gas reducing projects (China, India), or given priority to combating climate change in their national sustainable development action plans (Bangladesh, Indonesia, and most of the small island developing states of the region). These programmes and national efforts have aimed at the development of national programmes, inventories and reporting; least-cost greenhouse gas abatement strategies; scientific monitoring and research; and renewable energy development. While a great deal of intergovernmental activity is taking place, the effective mobilization of private sector capital remains necessary to implement the Climate Change Convention.

20. Ratification of the Convention for the Protection of the Ozone Layer (1985) and its Montreal Protocol (1987) by Asian and Pacific countries is extensive, but regional ratification rates for the Protocol's 1990, 1992 and 1997 amendments varies. In general, rapidly industrializing countries of the region have phased out chlorofluoro-carbon (CFC) consumption in order to keep up with contemporary technologies (Malaysia, Thailand). CFC producers face higher costs in retrofitting CFC technology-based facilities (China, India), but are making encouraging progress.

21. Forty-four countries in Asia and the Pacific have ratified the 1992 Convention on Biological Diversity. Human and financial resources to implement the Convention are relatively scant, and bilateral and multilateral collaboration is proving important to pool practical experience. Several developing countries are receiving technical assistance to implement biodiversity projects, such as enhancing in situ conservation, restoring habitat, capacity-building in taxonomy, documenting of traditional knowledge, and establishing biodiversity information networks. Twenty-seven regional countries have ratified the Convention on Wetlands of International Importance which promotes the sustainable management of not just wetlands but virtually all water bodies except those classified as marine.

22. The United Nations Convention to Combat Desertification has been acceded to and/or ratified by 41 countries in the region. Most countries have designated national focal points and some have developed national action plans (Islamic Republic of Iran, Kazakhstan, Mongolia, Pakistan and Turkmenistan). Since a ministerial conference held in Beijing in 1997, various regional and subregional workshops on the implementation of the Regional Action Plan have been held and a

number of thematic networks, including desertification monitoring and assessment, agro-forestry and soil conservation, and rangeland management and sand-dune fixation have been established. Asian and Pacific countries are currently preparing their first national reports on the implementation of the Regional Action Plan, which is to be reviewed by the next Conference of Parties.

23. The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal has been ratified by 21 regional countries. Four South Pacific island countries ratified the 1995 Waigani Convention on Hazardous Wastes. Work needs to be done in developing the legislative and administrative apparatus governing transport manifests, as well as packaging, labelling, customs inspection, waste evaluation, and disposal standards to effectively implement the Conventions.

24. National environmental standards for regulating air and water quality in many countries have been established. In South-East Asian countries, somewhat piecemeal sector-based earlier approaches were improved upon by more comprehensive legislation. Consolidations also took place in Australia, Japan and Malaysia. In Thailand, environmental regulations were included in the Constitution of 1997 to make them more binding and easier to implement. In the South Pacific there are fewer legal mechanisms on the books although these are emerging.

25. In East Asia, China has made efforts to strengthen its institutions for more effective environmental regulation of industry and other sectors; Japan has introduced self-monitoring and evaluation; and the Republic of Korea has employed economic instruments to influence environmentally sound decision-making. Cambodia, the Lao People's Democratic Republic and Myanmar are all at the initial stages of strengthening institutional frameworks. In South Asia, the judiciary has been active in response to institutional enforcement shortcomings. In the South Pacific, enforcement through the sanction of traditional culture and community structures has been weakening as a result of continued migration to urban areas and the pressure to derive cash incomes from unsustainable resource extraction. Overall, the regional capacity to implement legislation has been limited by relative weakness in political commitment, environmental institutions, funding bases and technical expertise. Steps to strengthen the capacity to implement environmental legislation were taken at the intergovernmental level, as demonstrated by the UNEP Regional Office for Asia and the Pacific regional network on environmental compliance and enforcement. UNEP also organized several subregional symposia on sustainable development law and implementation of environmental conventions for the judiciary and environmental lawyers in South Asia and South-East Asia.

26. New national strategies or plans for sustainable development or environmental management were adopted in a number of countries with planning horizons varying from 5 to 20 years (Bangladesh, China, Myanmar, Philippines, Republic of Korea, Sri Lanka, Thailand, Viet Nam).

The Green Vision 21 of the Republic of Korea is significant for its quantified objectives and deadlines, making it a plan rather than an aspiration. Some of the plans are in the form of project clusters, mainly intended for external assistance, but they will require mobilization of domestic resources. In terms of implementation, however, most of these plans, with the notable exception of the Republic of Korea, lack concrete and measurable targets although in some cases the need has been recognized. Thus, their implementation cannot be effectively assessed other than serving as an awareness-raising tool within the national administration.

27. Environmental impact assessment (EIA) has widely been institutionalized in Asian and Pacific countries, usually through legislation. The incorporation of social aspects into EIA has commenced (China, Indonesia, Philippines), as has decentralization of responsibilities for the process (Islamic Republic of Iran, Pakistan, Philippines, Sri Lanka). The extent of public participation in EIA processes has varied across the countries of the region, as has the approval process. While EIA processes are well established as laws, quality controls are needed to ensure proper implementation rather than bureaucratic formality. Environmental risk management practices are emerging in regional countries, particularly for chemicals and biotechnology management (Australia, India, New Zealand, Pakistan, Republic of Korea, Russian Federation).

28. In sectors involving the provision of public goods and services, such as fish stocks (Australia, New Zealand), freshwater (Australia), and sanitation and wastewater management (Japan, Republic of Korea), economic instruments such as tradeable quotas and user charges are gradually being introduced. Eco-labelling is used to support environmental awareness and sustainable consumption in a few countries (Japan, Republic of Korea, Singapore). The adoption of the Kyoto Protocol to the United Nations Framework Convention on Climate Change is stimulating experiments with economic instruments such as carbon banking (Australia).

29. Concerning the relationship between trade and environment, regional intergovernmental activity took the form of information gathering and exchange through ESCAP and the Asia-Pacific Economic Cooperation forum. ASEAN members have taken the position that environmental measures must be consistent with the General Agreement on Tariffs and Trade principles. Some ESCAP members were engaged in a trade-environment dispute resolved through the World Trade Organization.

30. Some countries have developed national natural resources accounting systems. The environmental and natural resource accounting project of the Philippines, by treating the environment as a productive sector, has attempted to integrate economic aspects of the environment into the System of National Accounts which is the model disseminated by the United Nations Statistics Division and used by all national governments to compile raw data and analyse economic activity. The Australian Bureau of Statistics has developed national account balance sheets that

include the market value of natural assets, although non-monetary environmental values are excluded. Japan and the Republic of Korea have developed systems of integrated environmental and economic accounting, based on the United Nations System of Integrated Environmental and Economic Accounting.

31. Economic growth has been accompanied by poverty reduction in some countries, as indicated by health, education and life expectancy improvements, but the benefits have not filtered down to all levels of society. Innumerable anti-poverty programmes are in place, mostly at the grass roots or micro-level, many of which have been very successful. On the whole, however, the major obstacle to poverty reduction remains structural, concerning matters such as the quality of economic growth, land reform, and the equitable distribution of wealth. Moves towards structural solutions are indicated by the higher priority being given to poverty reduction by multilateral funding institutions. The International Monetary Fund, for example, announced in 1999 that it would place poverty reduction at the centre of its programmes. The World Bank is calling for an "attack on poverty" across the three axes of empowerment, security and opportunity, joined by ADB which has earmarked no less than 40 per cent of its lending towards projects with environmental and/or poverty reduction objectives as their primary concern. However, in most cases, the power to alleviate poverty is ultimately a matter of national governance.

32. Environmental education focused on upgrading school education (Fiji), electronic databases (Japan, Republic of Korea), and training in environmentally sound technology. The information base fundamental to education, awareness and training in most countries of Asia and the Pacific, except Japan and Republic of Korea, is relatively weak. The media has made notable strides in directing public attention to environmental issues indicated by the number of news items and investigative reports featured in major newspapers. However, environmental matters have yet to enter the mainstream of public discourse and the complexity of environmental problems and responses has not always been adequately reflected.

4. Sustainable development indicators and assessment

33. Some regional countries have begun developing sustainable development indicators (China, Japan). In the absence of international agreement, self-chosen sustainability goals were adopted as the basis for national indicators. ESCAP undertook a project with the United Nations Department of Economic and Social Affairs to develop sustainable development indicators. ADB, in association with Harvard University, has been developing and field testing indicators of environmental sustainability in the Philippines. Other organizations such as the World Bank and the Canada-based International Institute for Sustainable Development have also been experimenting with applying practical indicators of sustainable development to countries in the region.

34. The UNEP environmental assessment and reporting programme for Asia and the Pacific maintains a database on the region's environment and natural resources, assisting countries and subregional organizations to prepare state-of-the-environment reports. Through the initiative of ESCAP, a regionwide report on the implementation of Agenda 21 was submitted to the special session of the United Nations General Assembly in 1997.

35. A regional network for the transfer of environmentally sound technologies (ESTs) has been established among countries participating in the Mechanism for Exchange of Technology Information (Bangladesh, China, India, Indonesia, Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Russian Federation, Sri Lanka, Thailand, Viet Nam) under the aegis of the Asian and Pacific Centre for Transfer of Technology. The utility of such a network in promoting sustainable development, however, is limited because of an inadequate local educational base for the absorption of technological know-how and the lack of supportive measures.

II. CONSTRAINTS

36. Inadequate institutional and technical capacity for comprehensive environmental assessment and long-term forecasting of trends, as is required for priority setting, exemplifies all sustainable development sectors in developing member countries of the region. While institutional capacity-building was progressing well up to 1997, growth prospects are lower than before the Asian financial crisis. With fewer funds available, partly as a result of declining official development assistance levels, total government expenditures on environmental protection have fallen significantly and the capacity to monitor and enforce environment protection regulations is falling behind in many countries. For example, while decentralization can be extremely positive, it needs to be accompanied by technical and financial support to help local governments, communities and non-governmental organizations handle their new responsibilities. Inadequate capacity and reliance on departments/ministries responsible for protecting the environment coupled with the overriding pressure for development activities tends to overwhelm those entrusted with actively promoting environmentally sound and sustainable development.

37. Intra-generational equity is recognized as necessary for effecting sustainable development over the long term to ensure that current patterns of resource use will not imperil the survival of future generations. Poverty and the growing income gap, particularly acute in the South Asian subregion, have led the countless poor and disadvantaged groups to exert pressure on marginal lands and degrade the environment in the absence of alternate livelihood options. In this context, poverty itself may be regarded as a formidable constraint to an improved environment for current and future generations. The poor and disadvantaged groups, however, are not to be unjustly blamed. Under such circumstances, appropriate policy responses may entail alternate income-

generating activities and livelihood options to reduce the reliance of the poor on the natural resource base.

38. The lack of availability of ESTs particularly for small and medium-sized enterprises is a substantial constraint upon regional progress towards sustainable development. Developing countries in the Asian and Pacific region are highly dependent on imported ESTs. Only a quarter of these countries develop in-house ESTs in some form while the rest import them. There is clearly a need for the local development of ESTs. Technology transfer is multidimensional and involves not only the provision of information but also the financial resources, communication and distribution systems and skills training to build, utilize, adapt and maintain infrastructure for any particular technology. While ESTs are becoming more prevalent in the rapidly industrializing countries of the region, their availability and use has yet to penetrate other countries, particularly in the South Asian and Pacific subregion.

39. It may be noted, however, that the transfer of technology and the provision of financial resources have not always led to the successful implementation of environmental initiatives in the region. In some cases, large public sector projects such as wastewater treatment plants, highways, dams, and power plants have been rendered ineffective within a few years of construction. There is a need for recipient governments and donors alike to recognize the longer-term implications of implementing environmental infrastructure projects and to adopt a programmatic approach that addresses post-project interventions including cost-recovery plans to ensure that the substantial investments in environmental management provide maximum benefits over a longer period for the society as a whole.

40. There is increased public awareness of environmental problems, but less awareness of or access to information enabling the implementation of sustainable development. The main problems identified in this regard are: (a) lack of information, including sustainable development indicators, and incomplete or unreliable data; (b) very limited public access to information, especially through public education programmes and freedom of information laws; and (c) limited opportunity for the involvement of major groups, including women, in influencing public policy outcomes. Overall, the participation of major groups has been increasing in the Asian and Pacific region, but it is still far from the degree necessary for this not to remain an apparent constraint on the implementation of sustainable development aims. Participation by key stakeholders early in policy formulation processes improves support for national environment and sustainable development policies and facilitates their implementation. For example, non-governmental organizations can provide services, mobilize public opinion, defend minority or inadequately represented perspectives, monitor enforcement agencies, advise governments, contribute to ongoing policy debates and bridge the gap between policy initiatives and grass-roots efforts.

III. LESSONS LEARNED

41. Experience in implementing the Regional Action Programme over the past five years seems to suggest that careful consideration needs to be given to addressing the constraints hindering implementation and that practical mechanisms for implementation should be included in the design. The analyses further suggest that more specific subregional priorities could be better articulated in regional action programmes and should be focused on fewer and more targeted, achievable programmes.

42. Although funds from official development assistance sources to Asia and the Pacific have been declining, the region is the recipient of an increasing share of private capital flows. Foreign direct investment and foreign portfolio investment increased sixfold to nearly \$300 billion between 1991 and 1996. Half of all private sector capital went to the Asian and Pacific region. However, private sector led finance is not a panacea for sustainable development problems because unregulated markets fail to internalize externalities, produce public goods or deal with questions of poor distribution. Regional countries must create policy frameworks to keep private sector led growth on a sustainable path, to invest in environmental and social capital and to provide a safety net for those left out. The potential for private sector contributions to sustainable development initiatives in the region, however, is promising and remains largely untapped. Many innovative policy ideas, approaches and initiatives have been emerging from the non-governmental organization and research community, as well as from public-private partnership investments, targeted investment funds, citizens groups and other sources (India, Malaysia, Pakistan, Singapore). The opportunity for advancing sustainable development lies in the creation of policies that support, intensify and broaden the active participation of the private sector, creating spaces for innovation and responses to the environment and development challenge.

43. Localized successes in implementing the Regional Action Programme can be identified as best or good practices. These are usually generic organizational practices applicable across many programme areas and can be emulated or adapted where appropriate elsewhere in the region. Given the established nexus between poverty and unsustainable natural resource use, experience has consistently shown that some of the exemplary achievements in poverty reduction have occurred through development projects aimed at empowering communities to sustainably manage their natural resource base. Furthermore, it is often appropriate to design multi-focused projects which include poverty alleviation as an integral component. Another common practice in many Asian and Pacific sustainable development success stories is to engage stakeholders. The impact of this simple

technique, in terms of stakeholder ownership and pride, project continuity and effectiveness, cannot be overstated. Depending upon the local circumstances and the different stages of a project cycle, engaging stakeholders may involve community education, empowerment, consultation, devolution of resources or authority, or feedback. It is important to accurately tailor the nature of consultations to suit the experience and background of the community or participants to make them a relevant and meaningful exercise. The natural complement to such bottom-up participation is, of course, a willingness from the top to engage stakeholders, despite the complexity of the processes.

44. While many countries of the region participated diligently in the implementation of various international environment conventions, their implementation can be made more effective if certain institutional and coordinating mechanisms are streamlined. Since many of the environmental issues addressed by most of these conventions are inter-linked, greater synergies in work planning, fund-raising and national reporting requirements need to be formalized in order to facilitate an integrated and more effective approach to implementation. For their part, regional governments may benefit from restructuring and empowering key ministries or line departments to be better able to address cross-sectoral sustainable development issues.

45. Countries of the region need to intensify efforts to create an enabling environment for greater public access to information on major initiatives towards sustainable development. A culture of enhanced cooperation among government, private sector, non-governmental organizations and other civil society actors needs to be fostered in order for sustainable development initiatives to succeed. The vision of a cleaner environment, healthier people and a secure livelihood is a unanimous aspiration for all stakeholders in the region, whether they are governmental or non-governmental actors. The opportunity to build upon this common interest in promoting sustainable development through dialogue and partnership clearly exists and must be harnessed.

46. Together with the lack of quantifiable performance indicators, there is also an inadequate monitoring mechanism of the Regional Action Programme at the national level. This has arguably been among the most instructive lessons gleaned from the analysis and its importance cannot be overstated. The absence of measurable targets and indicators to ascertain progress in the implementation of subsequent regional action programmes is likely to result in arbitrary and unsubstantiated analyses, which will serve no purpose. Monitoring implementation progress over the next five years, therefore, requires the development of a practical set of performance indicators, relating implementing activities vis-à-vis tangible qualitative environmental change, together with sufficient tools and resources to carry out such an evaluation.

47. At the regional level, there is a need to make optimal use of international workshops as training tools with wide dissemination of the proceedings on the Internet, encouraging the participants to pass on knowledge or share information acquired upon return to their respective countries. ESCAP may assist in this regard since its information gathering and distribution role puts it in a strong position to serve as the region's sustainable development communications hub, circulating information among diverse stakeholders, including United Nations bodies, intergovernmental organizations, national governments, the private sector and civil society. Intensified efforts are needed to ensure the optimal use of regionwide sustainable development information and public dissemination through electronic media, particularly via the Internet through web sites which will be particularly helpful for the island countries' policy makers and citizens to promote environmentally sound and sustainable development.