ENVIRONMENTAL CONCERNS IN THE ASIA AND PACIFIC REGION

1. Appendix 1 summarized the key environmental concerns, regional, and global, presented in *Emerging Asia*[1] and the *Asian Environment Outlook*.[2]

2. **Urban Air Pollution.** The level of air pollution in Asia's cities is among the world's highest—suspended particulates, which cause respiratory disease, are generally twice the world average, and more than five times that in industrial countries. Lead emissions from vehicles, which cause blood poisoning and impair mental development in children, are above safe levels. Further, concentrations of sulfur dioxide, which damages health, structures, and crops (as acid rain), are still one-third of that in industrial countries, but are nevertheless 50% higher than in other developing regions, Africa, and Latin America. These levels of pollution substantially exceed the guidelines of the World Health Organization (WHO), in particular for most of Asia's megacities. The principal victims are the poor who live in slums in industrial districts. Efforts to improve air quality should focus on particulates in South Asia and the People's Republic of China (PRC), lead in Southeast Asia, and sulfur dioxide in East Asia and the eastern PRC. Indoor air pollution largely results from the use of biomass-based fuels in inefficient cookstoves for cooking and heating without adequate ventilation. One estimate is that indoor air pollution results in 500,000 deaths annually in India, and 700,000 in the PRC; 30% of lost disability-adjusted life years due to major environmental risks arise from this.

3. **Water Pollution.** Asia's rivers typically have 4 times the world average level of suspended solids and 20 times levels in member countries of the Organization for Economic Cooperation and Development (OECD). The biological oxygen demand, a measure of organic pollution, is 1.4 times the world average, and 1.5 times OECD levels. In particular, fecal coliform levels, which indicate bacterial counts from human waste, is 3 times the world average, and 50 times the WHO guidelines. Further, lead concentrations, which originate in industrial effluents, are 20 times higher than in OECD countries. Across subregions, suspended solids are the highest in the PRC, fecal coliforms are highest in India and Southeast Asia, lead is highest in Southeast Asia, and nitrates from fertilizer run-off are highest in South Asia. The main sources are untreated municipal sewage, industrial effluents, and run-off from urban and agricultural activity. In particular, failure to treat urban wastewater means that waters downstream of urban areas are highly polluted. Water pollution results in diarrheal disease, which leads to high infant and child mortality, and long-term health impacts. It asymmetrically impacts the poor, who do not have access to protected water supply. Overall, some 42% of lost disability-adjusted life years in Asia are due to water pollution and inadequate sanitation, making it the most important among the major environment related health risks.

4. **Municipal and Industrial Solid Waste.** Increasing urbanization and economic growth has led to a sharp increase in the quantities of municipal and industrial solid waste generated in Asia. While municipalities in Asia spend 50–70% of their revenues on waste management, only 50–70% of urban dwellers receive any coverage, and the unserved residents are overwhelmingly the poor. Further, growing quantities of toxic and hazardous waste from factories, hospitals, and households are disposed of without proper safeguards. Inadequate management leads to disposal in open water, leaching into groundwater, air pollution from open burning, and spread of disease vectors such as insects and rodents. Untreated or improperly disposed of hazardous and toxic waste impact the poor the most. In addition, other concerns such as indiscriminate disposal of non-degradable products, such as plastic bags, is considered a concern.

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[1] ADB. 1997. *Emerging Asia: Changes and Challenges*. Manila: ADB.
[2] ADB. 2001. *Asian Environment Outlook 2001*. Manila: ADB.

5. **Land Degradation.** In 1992, Asia had only 0.3 hectares (ha) of agricultural land per capita, compared with 1.6 ha for other developing regions, and 1.4 ha in OECD countries. Asia's soils are also generally of poor quality; less than 4% has no inherent cropping constraints, compared with 15% in Africa and 12% in Latin America. Deforestation, cultivation of steep slopes, poor drainage, and inadequate soil conservation has all contributed to severe soil degradation in Asia. Soil erosion is Asia's most serious natural resource problem, and is equally severe in Southeast Asia, South Asia, and the PRC. Salinization and water logging, which render soil unfit for cropping are also acute: 130 million ha of Asian cropland, largely in PRC, India, and Pakistan, are affected due to poor irrigation and drainage practices. In the arid and semiarid areas of South Asia, 63 million ha of rainfed land, and 16 million ha of irrigated land have been lost to desertification. Asia's rural poor are almost wholly dependent on agricultural land, and the degradation or loss of cropland places their livelihoods at serious risk.

6. **Deforestation.** Asia has less forest cover per capita than the rest of the world, just one-third the world average, but is losing it at the rate of 1% a year. Deforestation can occur due to excessive fuelwood collection; logging; construction of infrastructure, especially roads and dams; or conversion of forest to other use, particularly agriculture. Desertification is believed to be largely responsible for increased soil erosion, flooding, biodiversity loss, and drying up of rivers and streams, all of which affect the rural poor the most. A dramatic, recent example of deforestation was the loss of 1 million ha of Indonesia's forests by fires in 1997; the resulting air pollution spread over 6 Southeast Asian countries, affecting 70 million people.

7. **Biodiversity Loss.** Asia accounts for 40% of the world's species of flora and fauna; but with few exceptions, Asian countries have lost 70–90% of their original wildlife habitats to agriculture, infrastructure, deforestation, and land degradation. Biodiversity loss may reduce the resilience in ecosystems, and place the poor who depend on these ecological resources at risk of losing their livelihoods. On the other hand, access contracts for biodiversity and traditional knowledge of biodiversity use may yield significant resources for sustainable development.

8. **Coastal, Marine, and Freshwater Aquatic Resources.** Asia's coastal and marine fisheries, and mangrove and coral reefs are among the most diverse in the world. Around two-thirds of the world's coral reefs are in Asia. Freshwater ecosystems in Southeast Asia are among the world's largest and best developed. However, more than half of Asia's wetlands have been lost, and more than half of mangroves in the Indo-Malayan realm have been cleared. Most wetlands of international significance are threatened by hunting, drainage, pollution, destructive fishing practices, and conversion to other uses. Loss of fisheries and mangroves adversely impact the livelihoods of the poor.

9. **Climate Change.** Emissions of greenhouse gases, primarily but not exclusively due to fossil fuel use, leading to global climate change, is seriously disrupting the earth's ecological balance and human welfare. While the major sources of greenhouse gases so far are the developed countries, owing to their use of fossil fuels since the industrial revolution, several rapidly growing Asian countries that depend on fossil fuel may in the next 20 years significantly increase their share in global emissions in the aggregate. The impacts of climate change include sea level rise, coral bleaching (which destroys fish habitats), changes in agricultural potentials, degradation of forests, accelerated desertification, increased range of vector-borne disease, changes in precipitation, and enhanced frequency and severity of extreme weather events such as cyclones and droughts. These impacts are adversely affecting people in developing countries, particularly the poor in Asia.

ENVIRONMENTAL POLICIES AND STRATEGIES OF OTHER MULTILATERAL DEVELOPMENT BANKS

1. **World Bank.** World Bank operational policy on the environment is made up of safeguard policies to help ensure that World Bank operations do no harm to people and the environment. World Bank operational policies are designed for use by World Bank staff. Safeguard policies that fall within the scope of environmental assessment are cultural property, disputed areas, forestry, indigenous peoples, international waterways, natural habitats, pest management, and safety of dams. The World Bank undertakes environmental screening of each proposed project to determine the extent and type of environmental assessment required, and whether the project may trigger other safeguard policies. The World Bank policy on environmental assessment applies to all projects, sector investment lending, sector adjustment lending, financial intermediate lending, and emergency recovery projects. The policy provides for capacity building in environmental assessment for borrowers, public consultation, and rules for disclosure of environmental assessment reports.

2. The World Bank board of directors approved its environmental strategy on 17 July 2001. The strategy is implemented to improve the way the World Bank does business in the environment sector. The World Bank Environment Strategy (WBES) is set in the larger context of the World Bank's new programming approach, which includes the comprehensive development framework and poverty reduction strategy papers.

3. The WBES outlines how the World Bank will work with its client countries to address their environmental challenges and ensure that World Bank projects and programs integrate principles of environmental sustainability. The WBES has three primary objectives: improving peoples' quality of life, improving the quality of growth, and protecting the quality of the regional and global common goods. Improving the quality of life is to be achieved through enhancing livelihoods, preventing and reducing environmental risks, and reducing people's vulnerability to environmental hazards. Improving the quality of growth is to be achieved by supporting policy, regulatory, and institutional frameworks for sustainable environmental management and by supporting sustainable private sector development to achieve environmental objectives and develop markets for environmental goods and services. Protecting the quality of the regional and global common goods is to be achieved by helping its client countries achieve the objectives of the international conventions and associated protocols, including conventions on climate change, ozone, and biodiversity.

4. In its implementation, the WBES will have implications for client countries, the Asian Development Bank, and other international agencies. The World Bank has developed regional environmental strategies for all of its six regions. These strategies set regional and subregional priorities based on environmental constraints and on poverty reduction and growth. In East Asia for example, the regional environment strategy sets strategic priorities for pollution management; natural resource management; reduction of vulnerabilities to natural disasters; promotion of environmentally sound macroeconomic and sector policy; and support for solutions to regional environmental problems, climate change, and biodiversity. The World Bank acknowledges that implementation of the strategy will require coordination with its client countries and other multilateral and bilateral agencies.

5. The World Bank intends to work toward systematic application of environmental sector analysis in conjunction with the development of its assistance strategy in each client country. The World Bank intends to use strategic environmental assessment of sectoral and regional programs and its policies to address environmental concerns early in the decision making and

planning process. It also intends to provide its client countries with capacity development and institutional strengthening for (i) analytical work on poverty-environment linkages, and (ii) development of inputs into poverty reduction strategy papers. The WBES also commits the World Bank to mainstreaming environment in country assistance strategies and sectoral programs and portfolios. As a part of this mainstreaming, the Global Environment Facility resources into project and program lending is to be improved integration. The WBES mandates improvements to the World Bank safeguard systems through better compliance monitoring and evaluation systems and work with its client countries to assess and to build capacity in environmental assessment.

6. **Inter-American Development Bank.** The Inter-American Development Bank (IDB) is currently revising its environmental framework. At present, IDB's operations policies are divided into (i) general policies common to all types of financing activities; and (ii) sectoral policies, which guide IDB staff, borrowers, and others in specific fields of activity (e.g., environment, women in development, and energy). In addition to these policies, IDB's lending program is also guided by strategies, broader statements that seek to make operational the "mandates" given to IDB by its governors. These mandates are the single most comprehensive statement of IDB's priorities (poverty reduction and social equity, modernization and integration, the environment, and support for the private sector). The mandates are outlined in the document detailing IDB's practices and procedures corresponding to the eighth capital replenishment. Best practices are a third instrument used in the development and design of projects. These documents are case studies and papers incorporating lessons learned from a variety of sources worldwide (including projects financed by IDB) and are gathered and disseminated by IDB's Sustainable Development Department.

7. The IDB operational policy on environment is a broad statement (i) ensuring that in all projects financed by IDB, environmental aspects are considered, and that appropriate measures are taken to avoid environmental impact with due attention for economic and social costs and benefits; (ii) mandating IDB cooperation with its member countries through loans and technical cooperation for the financing of projects designed to improve or preserve the environment; (iii) mandating IDB assistance to its member countries for identifying environmental problems and finding solutions; and (iv) mandating IDB assistance in the development, transfer, and use of science and technology in environmental management and to help strengthen national institutions in environmental management. The focal point of environmental assessment in IDB is the Committee on Environment and Social Impact (CESI). The procedures for CESI outline the basic requirements for the review of the impacts of IDB operations. These include (i) the promotion of adequate environmental and natural resource regulatory and management frameworks; (ii) the adoption of environmental protection, management, mitigation, and enhancement measures; (iii) consideration of indigenous rights and community development issues; (iv) consideration of involuntary resettlement matters; (v) stakeholder consultation requirements; (vi) gender considerations; and (vii) issues of social impact and sustainability.

8. The CESI procedure applies to all IDB operations including major projects, sector loans, investment loans, technical cooperations, small projects, Multilateral Investment Fund operations, private sector operations, and any major reformulation of those operations. In conducting its operations, CESI relies on three key types of IDB documents: (i) when available, IDB country environmental strategies (CESs); (ii) environmental and social impact briefs; and (iii) when required, environmental and social impact reports. The IDB Regional Operations Department is encouraged to prepare CESs as part of their strategic planning and country programming process. The CES outlines the environmental issues that are most important to the member country's development strategy. The CES describes IDB's role in strengthening the

environmental law, policy, regulatory, and management framework as well as in helping to remove the environmental constraints on a country's development strategy. The environment and social impact briefs are used during the scoping stage for projects and identify the specific environmental assessment requirements and the environmental and social issues that must be resolved. In cases where impacts are expected to be significant, an environmental impact assessment is to be prepared by the borrower. After completing the environmental impact assessment, IDB evaluates all results of the impact assessment and other relevant information obtained during project preparation. This information is summarized in the environmental and social impact reports, which is the final impact statement.

9. IDB has recently prepared strategies on integrated water resources management, coastal and marine resources management, and agricultural development. These strategies all have a strong environmental focus and emphasize that the development of the sector plays an important role in the reduction of rural and urban poverty and in sustainable management and natural resources.

PUBLIC CONSULTATION PROCESS

1. When formulating its environment policy, the Asian Development Bank (ADB) adopted a strategy for gaining wide participation from a diverse group of stakeholders to ensure that they had the opportunity to comment, provide suggestions, and enrich the proposed environment policy. ADB's targeted stakeholders included representatives from governments, nongovernment organizations (NGOs), civil society, academic institutions, the private sector, and funding agencies. Participation was open to stakeholders in all member countries, and ADB was able to undertake consultations involving 25 countries. Workshop consultations were held in Australia, Bangladesh, People's Republic of China, India (two), Indonesia, Japan, Kazakhstan (including representatives from Kyrgyz Republic, Turkmenistan, and Uzbekistan); Lao People's Democratic Republic, Nepal, Pakistan, Philippines (three), Sri Lanka, Sweden (including representatives from Denmark, Finland, and Norway), the United States (one in Washington, DC and an open forum during ADB's annual meeting in Honolulu), and Viet Nam. ADB directly invited stakeholders in four South Pacific nations (Cook Islands, Marshall Islands, Samoa, and Vanuatu) to provide written comments on the draft policy. Stakeholders from six other members (Cambodia; Canada; Hong Kong, China; Malaysia; Papua New Guinea; and United Kingdom) also provided written comment on the draft policy.

A. Means of Consultation

2. ADB adopted the following means to solicit a wide-ranging consultation from stakeholders within and outside the Asian and Pacific region:

(i) extensive dissemination of information within and outside ADB through meetings and electronic media—E-mail, facsimile, and an interactive web site with the overview paper, environment policy working paper, questionnaires, consultation schedule and contacts, and synthesis of comments;
(ii) country consultation meetings with government agencies, NGOs, the academe, private sector, civil society and other development agencies, soliciting feedback on the draft environment policy working paper where necessary, ADB arranged for the translation of the working paper into local languages; and
(iii) meetings with key NGOs to share information about the draft environment policy paper, get their views on proposed major policy changes, and discuss ways to strengthen partnerships with them.

B. Process of Consultation

3. ADB adopted a two-step process to solicit feedback and gather information from its stakeholders.

4. **Step 1: Overview Document.** With the help of resident missions or local consultants, ADB identified in each targeted country key stakeholders to be invited to provide feedback. ADB then disseminated an overview document entitled "A Note on the Draft Environment Policy Working Paper" to generate ownership and partnership in the development of an environment policy. This five-page document provided background into the need for an ADB environment policy, and an overview of ADB's philosophy and proposed policy reforms. Accompanying the overview was a short questionnaire for soliciting feedback on the proposed direction. The local consultants followed up with each stakeholder, answered questions, and encouraged participation. After receipt of comments, ADB synthesized the comments and uploaded the synthesis to the Internet. The comments were considered in formulating the revised draft.

5. **Step 2: Environment Policy Working Paper and Country Consultations.** After receiving initial comments and completing the environment policy draft, ADB disseminated the draft and held at least one consultation meeting in each of the 15 countries identified earlier with participants from step 1. Environment specialists from ADB participated in the meetings. Trained consultants facilitated the sessions.

C. Results

6. Over 632 stakeholders from 18 ADB developing member countries (DMCs) and 7 donor countries participated by sharing their opinions, experience, and suggestions. This appendix summarizes the comments received in writing or through the 22 consultation workshops held from February to October 2001. A supplementary appendix, Public Consultation Strategy and Results, includes a complete synthesis of the comments and a brief explanation of the changes made as a result of the comments (or reasons why a suggestion was deemed inappropriate). The following summarizes the comments on the previous drafts, by the main themes.

7. **Format, Scope, and Approach.** Many readers expressed the need for a well-defined policy statement. Some thought the focus and tone of the working paper lacked a cultural and regional perspective. Many found the tone reactive rather than proactive and strategic. Many stakeholders thought the earlier draft working paper, especially the August version, did not adequately analyze the underlying causes of environmental degradation, and this analysis should not simply be placed in an appendix. Further economic argument should be provided against the “grow up now, clean up later” approach. Some wanted to see a discussion of economic growth, globalization, and development reconciled with that of environmental sustainability and social equity.

8. **ADB’s Implementation of the Policy.** An overwhelming majority of the participants were concerned about whether the policy could be implemented, and how. They wanted more information on the processes, mechanisms, and structures needed to put the principles and values into action.

9. **ADB’s Accountability.** Readers from six DMCs and two donor countries (mostly from NGOs) commented on the need for ADB to be more accountable to the public. The policy should address who in ADB is responsible for compliance, and the consequences of noncompliance. ADB should evaluate past projects and performance and formalize lessons learned.

10. **Environmental Assessment Processes.** Several thought the policy should include a complete explanation of the assessment categories, including criteria and definitions. Stakeholders applauded the use of strategic environmental assessment, but suggested the language used was too “timid.” Some requested that ADB expand its environmental assessment processes to include social, economic, health, political, and cultural implications. Participants all agreed that ADB’s environmental assessment guidelines should be revised to be more clear and comprehensive. In general, some stakeholders wanted to see environmental assessment processes made more stringent, while some thought ADB’s current processes are too restrictive. Some wanted more details about environmental assessment processes, including how mitigation measures will take place and by whom, in the policy itself. NGO stakeholders in several countries emphasized the need for ADB’s environmental assessment processes to adopt “participatory processes that result in stakeholders’ consensus and not simply use consultation.” All environmental assessment reports should be made public and available in the local language. How participation will be incorporated through the stages of the project/program

development cycle should be made clear in the policy. Workshop participants expressed the need for clearer and more transparent procedures for evaluating environmental impact assessments.

11. **Private Sector Operations.** Many participants in developing and donor countries believe the accountability and rules governing loans to the private sector should be specified more clearly. Some believe ADB should do more to foster public-private partnerships, and develop small-scale industry, to ensure the sustainability of a project. The policy should distinguish between the corporate private sector and small and medium enterprises.

12. **Environmental Management.** Participants from all stakeholder groups expressed the need for clear statements in the policy regarding DMC autonomy. Others questioned whose standards are adhered to in loan covenants, those of the DMC or of ADB or international guidelines. Without this specificity, participants fear the policy might be interpreted differently across DMCs. Many participants thought greater emphasis should be accorded to improved environmental governance, with increased assistance toward ensuring regional and global environmental governance. Part of this includes assisting in the regular updating of DMC environmental policies, and inclusion of mechanisms to translate policies into action and monitor their implementation.

13. **Poverty-Environment Nexus.** Stakeholders from all groups challenged ADB to strengthen the link between poverty reduction and environment in earlier drafts of the working paper. A few participants highlighted the need for a definition of “the poor,” recognizing the heterogeneity among the poor). Several readers from the South Pacific noted that there is a different view of the “poor” there, and the poverty focus is not as relevant. In the global context, many felt the rich are the worst polluters and the poor are the victims of environmental degradation.

14. **Transboundary Issues.** Readers applauded the policy’s emphasis on transboundary issues. Some participants noted the need to strengthen this framework, especially in facilitating the mitigation of transboundary issues. In addition, some thought the policy should explicitly state ADB’s role in implementing these agreements; many nations are ignorant of the provisions therein. Yet, ADB should be careful to respect each country’s foreign policies. A few stated their view that the poor are often marginalized in an open trade and investment regime.

15. **Information, Education, and Communication.** Participants from 15 DMCs and 3 donor countries noted the need for ADB to develop an information, education, and communication strategy in its environment policy for disseminating information and environmental awareness raising. ADB should proactively disseminate information (in local languages) and solicit input and participation from local governments, organizations, and communities. In addition, there should be a direct feedback mechanism, or local comments might be “filtered” by executing agencies without ADB’s knowledge. Some readers thought the language of the draft working paper demonstrated a top-down attitude. Participants in general thought the policy should address ways to enhance community environmental awareness. This education process should be culturally sensitive and two-way, respecting local knowledge and management of resources.

16. **Capacity Building.** Stakeholders from 10 DMCs and 2 donor countries indicated the need for enhanced measures for capacity building in DMCs. Existing institutions, local government units, NGOs, peoples’ organizations, and the private sector are among the target constituents. Many local groups lack the confidence needed, due to fear of corruption, political will, and financial and human resource management.

17. **Public Participation.** In reviewing earlier drafts, the majority of reviewers thought the sections on public participation were weak. A more proactive approach is necessary. All stakeholders should be involved in policies, projects, and programs at all stages (from design to monitoring and evaluation). The policy should outline the structure and mechanisms for systematized stakeholder participation. The monitoring process should ensure that affected stakeholders were listened to and follow-up actions taken. Many participants indicated the need for the policy to articulate the importance of protecting the rights of local communities to manage their natural resources; governance should be community-based and bottom-up. The policy should outline concrete mechanisms for involving local affected communities. Some believed affected stakeholders should have the opportunity to reject the project, and consensus should be reached. Many participants also emphasized the need for greater NGO involvement in decision making, as independent "watchdogs" for compliance, in policy implementation, and in the entire project and program cycle.

18. **Monitoring and Evaluation.** The category of highest response (18 DMCs and 4 donor countries) was in the area of monitoring and evaluation. All participants noted that the one sentence attributed to monitoring and evaluation in the February and August 2001 drafts was insufficient. How will the policy and ADB interventions be monitored for compliance? Some participants noted the need for monitoring and evaluation mechanisms to engage affected communities. Several stakeholders (mostly NGOs) indicated the need for compliance to be independently monitored. NGO readers from several countries pointed out the lack of standards, performance indicators, targets, and monitoring criteria in the policy, other than that of the DMCs. A diverse segment of participants thought enforcement of the policy in DMCs should be strengthened.

19. **Environmental Topics.** Many participants mentioned the need for different topics to be addressed or strengthened in the environment policy working paper. These included coastal resource management, waste management, water, gender, conservation, alternative energy, pollution, green procurement, appropriate technology, persistent organic pollutants, culture, population, tenure, resettlement, livelihood, and research.

20. **Principles Underlying the Environment Policy.** In the February and August 2001 drafts of the working paper, an entire section was dedicated to underlying principles. Several of these were included as key operational principles in the note on the draft environment policy working paper. While received favorably, respondents questioned how these principles will be "operationalized." In addition, they lack interpretation and clear definition of terms. The "least cost" principle was found misleading and ambiguous. The "precautionary" principle does not reflect the full definition from Rio 15.

D. ADB's Response to Participants' Recommendations

21. All suggestions submitted in writing or expressed at workshops were considered in redrafting the environment policy working paper. The entire draft was reworked to ensure a clear policy statement and ways in which the policy will be implemented and reviewed. The focus was changed to emphasize pollution prevention (including green procurement), conservation, and natural resource management, rather than merely remediation. The link between environment and poverty has been strengthened. References to ADB's history vis-à-vis the environment were added, and lessons learned incorporated in the policy. ADB agrees that stakeholder participation, capacity building, and education are important in its environmental activities, and the appropriate sections of the paper were enhanced to make this

more explicit. The section on monitoring and evaluation was also enhanced considerably. Statements on DMC autonomy and responsibility, and ADB accountability, were added or clarified.

22. Many suggestions were more appropriate for ADB's environmental assessment guidelines and are being considered as the guidelines are modified in tandem with the policy. Complete descriptions of project categories, full explanations of the optional use of strategic environmental assessment, the way environmental assessment processes will trigger further analysis of other issues, how the public will be involved, tools for economic valuation of environmental impacts, the specific rules for private sector loans, and how assessments are reviewed are all issues that are addressed in more detail in the environmental assessment guidelines. Likewise, the environment policy strengthens and complements ADB's existing sectoral and crosscutting policies. The topics of coastal resource management, water and watershed management, gender, tenure, resettlement, and research are addressed by other ADB policies. Instead of dedicating an entire section to underlying principles that might be difficult to implement and monitor, the policy now includes a statement of support for the principles of sound environmental management as outlined in the Rio Declaration under Agenda 21.

ADB ENVIRONMENTAL OPERATIONS (1995–2001)

Environment-Oriented Technical Assistance (1995–2001)

Year	TA No.	Country	Title	Amount ($)
1995	2403	IND	Strengthening the Capability of the Industrial Development Bank of India in Energy and Environmental Project Management	585,000
	2474	IND	Environmental Improvement and Sustainable Development of the Agra-Mathura-Ferozabad Trapezium in Uttar Pradesh	600,000
	2296	IND	Strengthening EIA Capacity and Environmental Legislation	500,000
	2366	KAZ	Rehabilitation and Environmental Improvement of the Almaty No.1 Heat and Power Station	556,000
	2397	KGZ	Strengthening Environmental Institutions and Improving Procedures for EIA	556,000
	2329	LAO	Strengthening Environmental Planning and EIA Capability	599,000
	2425	MAL	EIA of the Kalaka-Saribas Integrated Agricultural Development-Phase II	87,000
	2299	MAL	Strengthening the Institutional Framework for Sustainable Development	142,000
	2350	MON	Energy Conservation	100,000
	2458	MON	Strengthening Land Use Policies	580,000
	2385	PHI	Environmental Evaluation of Swamps and Marshlands	100,000
	2407	PRC	Capacity Building for Soil and Water Conservation	590,000
	2337	PRC	Coastal Environmental Protection and Institutional Assessment	98,500
	2434	PRC	Establishing a Center for the Transfer of Environmentally Sound Technology	550,000
	2298	PRC	Improving Coal Efficiency and Reducing Environmental Pollution	570,000
	2398	PRC	Improving Environmental Monitoring and Enforcement in Henan Province	90,000
	2394	PRC	Jianfengling Park Management and Biodiversity Conservation	600,000
	2408	PRC	Land Use and Land Tenure Policy in Fujian Province	600,000
	2456	PRC	Pilot Environmental Plans for Selected Medium Size Cities	537,000
	2494	PRC	Sound Safety and Environmental Practices for Offshore Oil and Gas Production	600,000
	2505	PRC	Strengthening Environmental Standards and Enforcement Policies	600,000
	2445	PRC	Xian-Xianyang-Tongchuan Environment Improvement	500,000
	2511	PRC	Zhejiang-Shanxi Water Conservancy	1,000,000
	2303	THA	Bangkok Metropolitan Region Wastewater Management Action Plan and Feasibility Study	600,000
	2369	THA	Solid Waste Management Sector Plan	400,000
	2351	THA	Strengthening the EIA Review Process	600,000
	2378	THA	Strengthening the Environmental Unit of the Department of Highways	200,000
	2319	TUV	Urban Planning and Environment Management	310,000
	2411	VIE	Forestry Sector and Watershed Management	598,000
	5658	REG	Capacity Building for Environmental Law Training in the Asia and Pacific Region	600,000
	5622	REG	Subregional Environmental Monitoring and Information System	1,000,000
1996	2724	BAN	Biodiversity Conservation in the Sunderbans Forests	500,000
	2531	BHU	Strengthening EIA Capabilities and Preparation of Environmental Guidelines	350,000
	2723	CAM	Institutional Srengthening and Expanding EIA Capacity	1,000,000
	2535	INO	Coral Reef Rehabilitation and Management	600,000
	2665	INO	Institutional Strengthening of the Forestry and Soil Conservation Services in the Segara Anakan Basin	250,000
	2641	KIR	Environmental Improvement	72,500
	2734	LAO	Nam Ngum Watershed Management	1,200,000
	2613	NEP	Institutional Strengthening of NEA's Environment Division	534,000
	2563	PAK	Forestry Sector	14,145,000

BAN = Bangladesh; BHU = Bhutan; CAM= Cambodia; EIA = environmental impact assessment; IND = India; INO = Indonesia; KAZ = Kazakhstan; KGZ = Kyrgyz Republic; KIR = Kiribati; LAO = Lao People's Democratic Republic; MAL = Malaysia; MON = Mongolia; NEP = Nepal; PAK = Pakistan; PHI = Philippines; PRC = People's Republic of China; REG = regional; THA = Thailand; TUV = Tuvalu; VIE = Viet Nam.

Year	TA No.	Country	Title	Amount ($)
	2623	PHI	Evaluation of Environmental Standards for Selected Industry Subsectors	400,000
	2735	PRC	Capacity Building for Natural Resources Legislation	800,000
	2695	PRC	Coastal Resource Conservation and Environmental Improvement	810,000
	2693	PRC	Formulation of an Integrated Environmental Management Plan for the Chao Lake Basin	800,000
	2729	PRC	Industrial Pollution Investigation and Assessment in TVEs	600,000
	2675	PRC	Market Based Energy Conservation and Environmental Improvement	597,000
	2619	SRI	Upper Watershed Management	600,000
	2704	VIE	Hazardous Waste Management	600,000
	5702	REG	Acid Rain and Emission Reduction for Asia, Phase II	600,000
	5669	REG	Capacity Building in Environmental Economics	598,000
	5712	REG	Coastal and Marine Environmental Management in the South China Sea, Phase II	2,700,000
	5695	REG	Environmental Cooperation in Northeast Asia	495,000
	5684	REG	Subregional Environmental Training and Institutional Strengthening in the GMS	1,665,000
1997	2806	IND	Karnataka Coastal Environmental Management and Urban Development	800,000
	2936	IND	Urban and Environmental Infrastructure Fund	400,000
	2805	INO	Strengthening of Urban Waste Management Policies and Strategies	600,000
	2822	INO	National Biodiversity Information Network	700,000
	2958	INO	Marine Resources Evaluation Management and Planning	600,000
	2934	KGZ	Environmental Monitoring and Management Capacity Building	598,000
	2856	MAL	Industrial Pollution Control Management	588,000
	2458	MON	Strengthening Land Use Policies (Suppl.)	244,000
	2808	NEP	Implementation of the Pesticides Regulatory Framework	100,000
	2847	NEP	Institutional Strengthening of the Ministry of Population and Environment	600,000
	2928	PAK	Quetta Water Supply and Environment Improvement	900,000
	2803	PHI	Pasig River Environmental Management and Rehabilitation	800,000
	2835	PHI	Metro Manila Air Quality Improvement	150,000
	2751	PRC	Capacity Building of Wastewater Treatment Operations in Anhui Province	400,000
	2770	PRC	Fuzhou Water Supply and Wastewater Treatment	598,000
	2792	PRC	Study on Clean Coal Integrated Gasification Combined Cycle Technology	500,000
	2873	PRC	Improvement of Environmental Management in Shaanxi Province	935,000
	2870	PRC	Capacity Building for Energy Conservation	78,000
	2900	PRC	Financing Mechanism for Energy Efficiency Investment	150,000
	2901	PRC	Shanxi Environment Improvement	590,000
	2951	PRC	Promotion of Market-Based Instruments for Environmental Management	697,000
	2854	RMI	Fisheries Management	598,000
	2942	SRI	Biodiversity Conservation	800,000
	2820	THA	Capacity Building for Waste Management Program Administration	300,000
	2859	UZB	Strengthening of Institutions Engaged in Environmental Protection	675,000
	2790	VIE	Ho Chi Minh City Environmental Improvement	600,000
	2852	VIE	Forestry Sector	7,000,000
	2871	VIE	Red River Basin Water Resources Management	1,362,663
	5595	REG	Regional Community Forestry Training Center in Kasetsart University (Suppl.)	1,400,000
	5727	REG	Multilateral Financial Institutions Environmental Group Meeting	52,000
1998	3152	CAM	Sustainable Forest Management	980,000
	3089	IND	Calcutta Environmental Improvement	1,000,000
	3133	LAO	Strengthening Social and Environmental Management	950,000
	3121	NEP	Watershed Rehabilitation and Management	600,000
	3018	PNG	Social and Environmental Studies	150,000
	3123	PRC	Provincial Legislation on Environmental Protection and Natural Resources Conservation	300,000
	3095	PRC	Hai River Basin Wastewater Management and Pollution Control	570,000

CAM = Cambodia; EIA = environmental impact assessment; IND = India; INO = Indonesia; KGZ = Kyrgyz Republic; LAO = Lao People's Democratic Republic; MAL = Malaysia; MON = Mongolia; NEA = National Environment Agency; NEP = Nepal; PAK = Pakistan; PHI = Philippines; PNG = Papua New Guinea; PRC = People's Republic of China; REG = regional; RMI = Marshall Islands; SRI = Sri Lanka; THA = Thailand; UZB = Uzbekistan; VIE = Viet Nam.

Year	TA No.	Country	Title	Amount ($)
	3079	PRC	TA Cluster to the PRC for the Promotion of Clean Technology	3,500,000
	3069	PRC	Soil and Water Conservation in the Upper Yangtze River Basin	99,000
	2675	PRC	Market-Based Energy Conservation & Environmental Improvement (Suppl.)	150,000
	3039	PRC	Yunnan Road Environmental and Social Analysis	150,000
	3036	PRC	Power Rehabilitation and Environmental Improvement	1,000,000
	3025	PRC	Suzhou Creek Environmental Rehabilitation	965,000
	3047	SRI	Forest Resource Management	800,000
	3013	THA	Promotion of Market-Based Instruments for Environmental Management	605,000
	5772	REG	Regional Training Course on Solid Waste Management in DMCs	75,000
	5778	REG	Strengthening the Capacity of the ASEAN to Prevent and Mitigate Transboundary Atmospheric Pollution	1,000,000
	5783	REG	Strategic Environmental Framework for the Greater Mekong Subregion	1,600,000
	5784	REG	Appropriate Technology for Soil-Conserving Farming Systems (Phase I)	600,000
	5797	REG	Training of Journalists in Management of Environmental Information Resources	40,000
	5800	REG	Measurement of Environmental Performance	441,000
	5816	REG	Mayors' Asia-Pacific Environmental Summit	85,000
	5822	REG	Protection and Management of Critical Wetlands in the Lower Mekong Basin	1,650,000
	5826	REG	Asian Environmental Outlook	900,000
1999	3297	BAN	Urban Transport and Environment Improvement Study	645,000
	3300	BAN	Sundarbans Biodiversity Conservation	3,500,000
	3324	IND	Community Participation in Urban Environmental Improvement	150,000
	3252	INO	Capacity Building for Decentralization of the Environmental Impact Assessment Process	420,000
	3234	INO	Natural Resources and Environmental Management Sector	380,000
	3350	KAZ	Strengthening Environmental Management	700,000
	3364	NEP	Urban Environmental Improvement	750,000
	3383	PAK	Integrated Pest Management	500,000
	3282	PHI	Community-Based Forest Resources Management	840,000
	3211	PRC	Improving Environmental Management in Suzhou Creek	840,000
	3216	PRC	Tianjin Wastewater Treatment and Water Resources Protection	800,000
	3290	PRC	Capacity Building in Ministerial Status Responsibilities in the SEPA	810,000
	3325	PRC	Shanxi Air Quality Improvement	700,000
	3372	PRC	Yunnan Comprehensive Agricultural Development and Biodiversity Conservation	1,332,000
	3376	PRC	Songhua River Flood, Wetland, and Biodiversity Management	1,545,000
	3271	SRI	Sustainable Natural Resource Management for Development	800,000
	3273	SRI	Protected Area Development and Wildlife	330,000
	3277	SOL	Marine Biodiversity Conservation	150,000
	3255	VIE	Study on the Policy and Institutional Framework for Forest Resources Management	470,000
	5840	REG	Promotion of Cleaner Production Policies and Practices in Selected DMCs	600,000
	5844	REG	Promoting Sustainable Development Agenda in Asia: Ministerial Conference 2000	600,000
	5860	REG	Institutional Strengthening and Collection of Environment Statistics	500,000
	5861	REG	Capacity Building for Implementation of the Kyoto Protocol and the Clean Development Mechanism	200,000
	5865	REG	Transboundary Environmental Cooperation in Northeast Asia	350,000
	5866	REG	Fourth Agriculture and Natural Resources Research at CGIAR Centers	5,600,000
	5867	REG	Water Resources Management in Southeast Asia (Phase 2)	250,000
	5888	REG	Third ADB-NGO Consultative Meeting on Environment and Sustainable Development	150,000
	5896	REG	Strengthening the Live Reef Fish Trade Management in the PDMCs	215,000

BAN = Bangladesh; DMC= developing member country; IND = India; INO = Indonesia; KAZ = Kazakhstan; NEP = Nepal; PAK = Pakistan; PHI = Philippines; PRC = People's Republic of China; REG = regional; SOL = Solomon Islands; SRI = Sri Lanka; THA = Thailand; VIE = Viet Nam.

Year	TA No.	Country	Title	Amount ($)
	5899	REG	Subregional Environmental Monitoring and Information System (Phase II)	600,000
	5900	REG	Regional Study on Forest Policy and Institutional Reforms	595,000
2000	3501	ETM	Environmental Assessment Capacity Improvement	250,000
	3423	IND	Environmental Management at the State Level	3,620,000
	3499	KGZ	Environmental Monitoring and Management Capacity Building II	650,000
	3535	LAO	Energy and Transport Socio-Environmental Management	150,000
	3557	LAO	Strengthening Social and Environmental Management Capacity in the Department of Roads	200,000
	3393	PHI	Implementation of the Convention on Biological Diversity	120,000
	3469	PHI	Capacity Building Support for Pasig River Environmental Management and Rehabilitation	1,000,000
	3447	PRC	Strengthening Urban Solid Waste Management	600,000
	3462	PRC	Acid Rain Control and Environmental Improvement	964,000
	3488	PRC	Hebei Province Wastewater Treatment	850,000
	3551	PRC	Fujian Soil Conservation and Rural Development, Phase II	650,000
	3588	PRC	Transjurisdiction Environmental Management	2,100,000
	3477	SRI	Coastal Resource Management	12,760,000
	3519	SRI	Protected Area Management and Wildlife Conservation	10,200,000
	3614	TAJ	Capacity Building for Environmental Assessment and Monitoring	600,000
	3561	THA	Capacity Building for Regional Environmental Management	900,000
	3570	THA	Solid Waste Management Sector	150,000
	3583	THA	Mae Moh Environmental Evaluation	500,000
	5913	REG	Capacity Building to Promote Traditional Environmental Management in the Pacific DMCs	300,000
	5934	REG	Regional Environmental Action Plan in Central Asia	500,000
	5937	REG	Action Plans for Reducing Vehicle Emissions	900,000
	5939	REG	Strategies for Poverty Reduction through Urban Environmental Improvement	500,000
	5941	REG	Combating Desertification in Asia	450,000
2001	3688	CAM	Rural Water Supply and Sanitation	700,000
	3675	PAK	Environmental Assessment	50,000
	3692	PHI	Integrated Coastal Resource Management	598,000
	3638	PRC	Wuhan Wastewater Treatment	500,000
	3624	SRI	Integrating Cleaner Production into Industrial Development	800,000
	3639	SRI	Aquatic Resources Development and Quality Improvement	800,000
	3706	UZB	Institutional Support for Sustainable Agricultural Development	600,000
	5972	REG	Promotion of Renewable Energy, Energy Efficiency, and Greenhouse Gas Abatement Projects	5,000,000
	5973	REG	MFI Environmental Group Meeting	25,000
	5974	REG	Coastal and Marine Resources Management and Poverty Reduction in South Asia	600,000
	5996	REG	Ten Years After Rio: Promoting Subregional Cooperation for Sustainable Development	200,000

CAM = Cambodia; ETM = East Timor; IND = India; KGZ = Kyrgyz Republic; LAO = Lao People's Democratic Republic; PAK = Pakistan; PHI = Philippines; PRC = People's Republic of China; REG = regional; SRI = Sri Lanka; TAJ = Tajikistan; THA = Thailand; UZB = Uzbekistan.

INTERFACE BETWEEN THE ENVIRONMENT POLICY AND OTHER ADB CROSSCUTTING AND SECTOR POLICIES

	Sector						Crosscutting															
Theme/Issue	Agricultural/Natural Resources Research (1995)	Energy (2000 Review)	Fisheries (1996)	Forestry (1995)	Health (1998)	Water (2001)	Anticorruption (OM 55, 2000)	Benefit M&E (OM 22, 1997)	Cooperation with NGOs	Environment (2002)	Gender and Development (OM 21, 1997)	Governance (OM 54, 1997)	Indigenous People (OM 53, 2000)	Information Policy (1998)	Inspection (OM 49, 1998)	Involuntary Resettlement (OM 50, 1997)	Poverty Reduction Strategy (1999)	Population (1995)	Private Sector Strategy (2000)	Public Disclosure (1994)	Regional Cooperation (OM 28, 1995)	Social Dimensions (OM 47, 1997)
Social																						
Access to Information						x	x			x		x		x	x	x	x	x		x	x	
Access to Proceedings for Redress of Problems										x					x							
Accountability and Transparency						x	x		x	x		x	x				x		x			
Benefit Monitoring and Evaluation			x	x	x	x		x	x		x		x				x					x
Capacity Building			x		x	x	x	x	x	x	x	x	x						x			x
Compliance and Performance Monitoring										x												
Compliance with Treaty Requirements						x				x												
Decentralization to Appropriate Level			x			x				x		x					x					
Education, Public Awareness, Training		x			x	x		x	x	x	x	x					x	x				x
Gender Equity	x		x	x	x	x		x		x	x		x			x	x	x				x
Good Governance				x		x	x			x		x					x		x			
Health Protection		x			x	x		x		x	x		x				x	x				x
Indigenous Peoples					x	x		x	x	x	x		x			x	x					x
Involuntary Resettlement		x				x		x	x	x	x		x			x						x
Institutional and Legal Framework			x	x	x	x	x			x		x				x	x	x				
NGO Participation	x		x	x	x	x	x	x	x	x	x	x	x				x	x				x

M&E = monitoring and evaluation; NGO = nongovernment organization; OM = operations manual.

	Sector						Crosscutting															
Theme/Issue	Agricultural/Natural Resources Research (1995)	Energy (2000 Review)	Fisheries (1996)	Forestry (1995)	Health (1998)	Water (2001)	Anticorruption (OM 55, 2000)	Benefit M&E (OM 22, 1997)	Cooperation with NGOs	Environment (2002)	Gender and Development (OM 21, 1997)	Governance (OM 54, 1997)	Indigenous People (OM 53, 2000)	Information Policy (1998)	Inspection (OM 49, 1998)	Involuntary Resettlement (OM 50, 1997)	Poverty Reduction Strategy (1999)	Population (1995)	Private Sector Strategy (2000)	Public Disclosure (1994)	Regional Cooperation (OM 28, 1995)	Social Dimensions (OM 47, 1997)
Population and Sustainable Development				x	x			x		x	x						x	x				x
Poverty Reduction	x	x	x	x	x	x		x		x	x		x				x					x
Private Sector Participation		x	x	x	x	x				x							x		x		x	
Public (stakeholder) Participation	x	x	x	x		x		x	x	x	x	x	x			x	x	x			x	x
Regional Cooperation	x	x	x			x	x			x							x		x		x	
Social Assessment		x	x	x		x		x	x	x	x		x			x	x					x
Technology Transfer				x						x											x	
Third Party Impacts										x												
Transboundary Impacts		x				x				x											x	
Environmental																						
Biodiversity and Conservation of Ecological Base	x		x			x				x												
Use of Biotechnology			x							x												
EIA and Impact Mitigation		x	x	x	x	x			x	x							x					
Global Environmental Concerns (e.g., GHG)		x								x												
Integrated Resources Management		x	x	x		x				x												
Precautionary Principle										x												
Preventing Desertification and Soil Degradation										x												
Protection of Marine Natural Resources	x		x							x												
Reducing Pollution		x	x			x				x												
Research and Development			x	x	x	x				x							x				x	

	Sector						Crosscutting														
Theme/Issue	Agricultural/Natural Resources Research (1995)	Energy (2000 Review)	Fisheries (1996)	Forestry (1995)	Health (1998)	Water (2001)	Anticorruption (OM 55, 2000)	Benefit M&E (OM 22, 1997)	Cooperation with NGOs	Environment (2002)	Gender and Development (OM 21, 1997)	Governance (OM 54, 1997)	Indigenous People (OM 53, 2000)	Information Policy (1998)	Inspection (OM 49, 1998)	Involuntary Resettlement (OM 50, 1997)	Poverty Reduction Strategy (1999)	Population (1995)	Private Sector Strategy (2000)	Public Disclosure (1994)	Regional Cooperation (OM 28, 1995)	Social Dimensions (OM 47, 1997)
Watershed Protection				x		x				x												
Economic																						
Adoption of Market-Based Instruments		x	x			x				x							x					
Cost Recovery Mechanism		x			x	x												x				
Internalization of Environmental Costs		x								x												
Least Cost Mitigation Options										x												
Polluter Pays Principle										x												
Rationalization of Subsidies		x	x		x	x											x					
User/Fees/Pricing Mechanism		x	x		x	x											x					

KEY MULTILATERAL ENVIRONMENTAL AGREEMENTS

1. This Appendix briefly introduces the main features of key multilateral environmental agreements, and their financial mechanisms.

I. OUTLINE PROVISIONS

A. The Rio Declaration and Agenda 21

2. These two nonbinding agreements were adopted at the Earth Summit at Rio de Janeiro in July 1992, and embody the current international consensus on the principles and content of what is meant by "sustainable development." While the Rio Declaration sets forth principles to guide actions toward sustainable development, Agenda 21 provides a concrete program covering the themes of social and economic dimensions, conservation and management of resources for development, strengthening of the role of major groups, and means of implementation. The Preamble to Agenda 21 links these diverse themes, and expresses the international political consensus on approaches to the specific sector programs. While stressing that successful implementation of Agenda 21 is "first and foremost" the responsibility of governments, the preamble also states unambiguously that international cooperation should "support and supplement" rather than seek to supplant, national efforts. The preamble also affirms that to achieve the objectives of Agenda 21, developing countries will require a substantial flow of "new and additional" financial resources to cover the incremental costs of their actions to deal with global environmental problems and accelerate sustainable development.

3. Agenda 21 is a serious attempt at harmonizing current understanding of the development process and environmental protection with political perceptions and priorities. These could change over time, and accordingly Agenda 21 is designed as a dynamic document. Apart from questions of providing financial resources and technology, a crucial element in effective implementation is technology transfer. The building of technical skills, administrative capacity, policy making skills, and institutional design is a major focus of the proposals, in which there exists considerable scope for multilateral cooperation involving many stakeholders and sectors.

B. United Nations Framework Convention on Climate Change Convention (UNFCCC) 1992, and the Kyoto Protocol (1997)

4. The Framework Convention and the Kyoto Protocol negotiated within the Framework Convention seek to address the problem of dangerous human interference with the climate, caused by emissions of greenhouse gases (GHGs) from diverse economic activities. Several Asian countries, notably small island countries such as the Pacific islands and the Maldives, and densely populated deltaic countries such as Bangladesh, are concerned that rise in the mean sea level may inundate their coastal areas, leading to loss of livelihoods, agricultural land, infrastructure, and homes. On the other hand, several industrializing developing countries dependent on fossil fuel resources, for example, the People's Republic of China, India, and Indonesia, are apprehensive that their economic growth would be adversely affected by restrictions on emissions of GHG. Climate change may also have a number of other serious impacts in the region on agriculture, forests, and natural ecosystems, primarily through changes in precipitation patterns and temperature.

5. The Kyoto Protocol (1997) when it enters into force will strengthen the commitments of industrialized countries and the European Communities ("Annex B Parties") regarding reduction of

their GHG emissions. In the first commitment period, 2008–2012, these countries are required to reduce their annual GHG emissions by specified percentages from their 1990 levels, averaging 5.2%. Developing countries (“non-Annex I”) still have no GHG reduction commitments. The Kyoto Protocol also sets up mechanisms enabling cooperative implementation of these commitments. These include emissions trading, joint implementation, and the clean development mechanism (CDM).[1]

C. Convention on Biological Diversity (CBD), 1992

6. The Convention on Biological Diversity (CBD) addresses international concerns that human activities are rapidly altering natural habitats, resulting in loss of genetic, species, and ecosystem diversity at excessive rates.[2] Developing countries, including several from Asia, are among the world's megadiversity areas. The CBD accepted the principle of state sovereignty over these resources, affirming at the same time that its conservation "is a common concern of humankind."

7. The CBD requires each country to develop national strategies, plans, or programs for the conservation and sustainable use of biodiversity. Special measures for ex-situ conservation have also been spelled out. The crux of the CBD is, however, its provisions for sharing benefits of conservation. These provisions seek to translate into certain mandatory elements of access agreements, the sovereign rights of states over these resources, which clearly include the right of regulating access. These are, first, that "prior informed consent" of the state granting access is necessary. Second, while such access should be on "mutually agreed terms," certain minimum conditions are prescribed as to the content of such terms. These include the requirements that (i) the relevant research should, as far as possible, be carried out in the country providing the resource, and in any case with the full participation of that country; (ii) the products resulting from research and development using such genetic resources should be shared equitably with the country providing the resources; (iii) the profits of commercial use of genetic resources should be similarly shared; and (iv) the resulting technology should be transferred to the country providing these resources.

D. The Ramsar Convention on Wetlands (Ramsar, 1971)

8. Wetlands have major ecological functions, as regulators of water regimes and as habitats supporting biodiversity that is often rich. Wetlands are a resource of great economic, cultural, scientific, and recreational value. The Ramsar Convention seeks to promote the conservation and “wise use” of wetlands throughout the world by national and international action, and remains the only global convention focused on a specific ecosystem. The rationale for the treaty is that progressive encroachment on, and loss of wetlands constitute serious and sometimes irreparable environmental damage that must be avoided. Accordingly, wetlands should be conserved by ensuring their “wise use.” The treaty defines “wise use” as “*sustainable utilization for the benefit of mankind in a way compatible with the maintenance of the natural properties of the ecosystem;*” while “sustainable use” is understood as “*human use of a wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations.*” “Wise use” may also require strict protection (i.e., no harvesting).

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[1] Additionally, “Joint Fulfillment” enables countries to reallocate their GHG reduction commitments among themselves ensuring that the aggregate required reductions do not decrease.

[2] One estimate of extinction rates over geological time as 1 mammal species in 400 years and 1 bird species in 200 years. Recorded rates over historical time (400 years) are 58 mammal species, and 115 bird species. In 1990, about 12% of mammal species and 11% of bird species were classified as threatened. Of course, concern over species loss extends to the entire range of flora and fauna.

9. There are four main commitments of parties under the Ramsar Convention. These include (i) designating at least one site that meets the Ramsar criteria for inclusion in the *List of Wetlands of International importance (the* "*Ramsar List*"), and ensuring the maintenance of the ecological character of each Ramsar site.; (ii) including wetland conservation within the national land-use planning, so as to promote the "wise use" of all the wetlands (not only those included in the Ramsar List); (iii) establishing nature reserves on wetlands, and promoting training in wetland research, management, and wardening; and (iv) consulting with other parties on the implementation of the Ramsar Convention, in particular regarding transfrontier wetlands, shared water systems, shared species, and development projects affecting wetlands.

10. The Ramsar Small Grants Fund provides small grants (maximum SF40,000 per project) for projects in developing and transition countries. Multilateral and bilateral agencies have also assisted projects for wetlands conservation.

E. The Convention to Combat Desertification

11. The Convention to Combat Desertification (CCD) was adopted in response to developing country assertions that desertification should count as a global environmental problem. Asia has 1,949 million hectares of drylands. This constitutes almost 50% of Asia's surface area, and 30% of the world's total land area.[3] Data on desertification trends is notoriously unreliable. However, according to assessments by the United Nations Environment Programme (UNEP),[4] desertification affects 1,341 million hectares of productive drylands in Asia, which are estimated to be about 70% of total global drylands area.

12. The CCD defines "desertification" to be "land degradation in arid, semiarid, and dry subhumid areas[5] resulting from various factors, including climatic variations and human activities." The objective of the CCD is, "…through effective actions at all levels, [to support] international co-operation and partnership arrangements, … with a view to contributing to the achievement of sustainable development in affected areas."

13. To meet the CCD objective, parties are guided by three principles. The first commits parties to "ensure that decisions on the design and implementation of programs… are taken with the participation of populations and local communities, and that an enabling environment is created at higher levels to facilitate action at national and local levels." The second emphasizes the need for "international partnership and coordination to overcome traditional donor-driven and uncoordinated responses to dryland development." The third states that "Parties should take into full consideration the special needs and circumstances of affected developing country Parties, particularly the least developed among them." The CCD also emphasizes the need for programs to be conceived and implemented as integrated parts of development policies, particularly with "strategies for poverty eradication."

14. Affected developing country parties take on obligations to (i) give due priority to combating desertification and allocate adequate resources for this purpose; (ii) establish strategies and priorities for desertification control, within the framework of national sustainable

[3] CERES. 1998. Inventory Study for the Interim Secretariat of the CCD.
[4] UNEP/GRID. 1991.
[5] Arid areas are defined as areas that receive a mean annual precipitation between 200-300 millimeters (mm), with interannual variation of 50-100%. Semiarid areas have mean annual values of 500-800 mm, with interannual variation of 25-50%. Dry subhumid areas have less that 25% interannual rainfall variability. In the CCD, "arid, semiarid, and dry subhumid areas" means areas, other than polar and subpolar regions, in which the ratio of annual precipitation to potential evapotranspiration of 0.05 and 0.65.

development plans; (iii) address underlying causes of desertification, paying special attention to socioeconomic factors and poverty; (iv) promote awareness and facilitate full participation of affected communities; and (v) provide an enabling macroeconomic, institutional, and legislative environment for improved dryland management.

15. Obligations of developed country parties include the responsibility to (i) actively support the efforts of affected developing country parties, (ii) provide substantial financial resources and other forms of support to implement strategies and programs, (iii) promote the mobilization of new and additional resources, and (iv) promote and facilitate access to appropriate technology.

16. The CCD is to be implemented through national action programs, which are to be complemented by subregional and regional action programs. The national action programs are intended to include action to (i) promote preventive measures; (ii) strengthen climatologic, meteorological, and hydrological capacities; (iii) build institutional capacities; (iv) ensure mechanisms for stakeholder participation; and (v) allow review and updating over time. The subregional and regional action plans are intended to harmonize national action plans within a region or subregion, address transboundary and common issues, and facilitate sharing of knowledge and approaches across countries.

F. The Basel Convention

17. The Basel Convention reflects the international community's concerns about the risk to human health and the environment posed by the uncontrolled movement and disposal of hazardous wastes.[6] Developing countries were particularly concerned because their territories are often used for dumping wastes from other countries. Another of their concerns is that some imported wastes are recycled into usable materials in their countries (e.g., scrap iron into steel), and where the wastes are not hazardous, these recycling industries should not be denied their material inputs. The overarching objective of the Basel Convention is to further sustainable development by minimizing the generation of hazardous waste.

18. The three main objectives of the Basel Convention are to (i) reduce and control transboundary movements of hazardous waste, (ii) ensure that hazardous wastes are treated and disposed of as close as possible to their source of generation, and (iii) reduce generation of hazardous and toxic wastes. To achieve these objectives, the Basel Convention regulates the transboundary movements of hazardous waste to ensure environmentally sound management and disposal. The Basel Convention demonstrates new norms and procedures to manage the movement and disposal of hazardous waste at the international as well as the national levels.

19. Important commitments of the parties include (i) ensuring that the generation of hazardous wastes is minimized, taking into account social, technological, and economic considerations; (ii) ensuring environmentally sound management and safe disposal of hazardous wastes; (iii) preventing pollution and risk to human health and the environmental from hazardous waste management; (iv) minimizing transboundary movement of hazardous waste and ensuring that any such movement does not pose risk to human health and the environment; (v) preventing export of hazardous waste to parties, in particular developing countries, that have prohibited such imports; (vi) providing sufficient information about transboundary movements of hazardous wastes; and (vii) cooperating with other parties and international organizations to improve environmentally sound management of such wastes and

[6] Over 400 million tons of hazardous wastes are generated every year, and a significant fraction of it moves across national boundaries.

prevent illegal traffic. Specific areas of cooperation identified in the Basel Convention, in particular to enable developing countries to meet their commitments include (i) monitoring effects of management of hazardous waste on human health and the environment, (ii) developing and implementing low-waste technologies, (iii) transferring technology and management systems for hazardous waste and developing technical capacity, and (iv) developing appropriate technical guidelines and codes of practice.

20. Subsequent to its adoption, the conference of parties has agreed to ban the export of hazardous waste from developed to developing countries, prevent illegal traffic in hazardous waste, create an emergency fund, and adopt a protocol on liability and compensation.

II. SPECIALIZED FINANCIAL MECHANISMS

21. Several mechanisms that have been created or have special roles pertaining to multilateral environmental agreements are described below:

A. Global Environment Facility (GEF)

22. The GEF[7] is identified as the financial mechanism for channeling financial and technological support to developing countries under the UN Framework Convention on Climate Change and the UN Convention on Biological Diversity. Its operations are organized in the categories of operational programs, which are an organizing framework for country-driven projects; enabling activities, which are means of fulfilling the requirements of national communications to a relevant convention, or provide a basic level of information for policy making and planning; and short-term response measures, which refer to projects that do not fall in either category, but would yield short-term global environmental benefits at low cost.

23. The GEF provides grant financing to cover the agreed incremental costs of achieving global environmental objectives in four focal areas: biodiversity, climate change, international waters, and ozone depletion. Activities to address land degradation, as it relates to these focal areas, are also eligible. The GEF was replenished with $2.98 billion in 2002. Considerable scope exists to blend Asian Development Bank finance for sustainable development with GEF grant resources for global environmental objectives.

B. Mechanisms under the Kyoto Protocol

24. The Kyoto Protocol (para. 4) also sets up certain mechanisms enabling cooperative implementation of these commitments. These potentially market-based approaches include emissions trading, joint implementation, and the clean development mechanism (CDM). The first two mechanisms apply only between countries with actual greenhouse gas (GHG) reduction commitments, and are to be available from 2008. CDM, on the other hand, applies between Annex B and partner non-Annex I countries, and is expected to be operational before them.

25. Under emissions trading, Annex B countries that exceed their GHG reduction commitments may (voluntarily) transfer the excess credits to other Annex B countries that fall short, receiving negotiated monetary or in-kind benefits from the recipient country. This mechanism thus relates to GHG accounts at national aggregate levels. Under joint implementation, on the other hand, a firm

[7] The GEF was restructured in 1994 after its pilot phase. It has three implementing agencies: the United Nations Development Programme, United Nations Environment Programme, and World Bank. As a GEF Executing Agency, ADB has been granted access to GEF resources under the GEF expanded opportunities decision of May 1999.

in an Annex B country may undertake a project that reduces GHG emissions from a baseline ("what would be expected to happen in the absence of the project"), transfer these reductions (reckoned from the baseline) to another firm in another (or the same) Annex B country, obtaining monetary or in-kind payments for transferring the GHG credits. CDM is similar to joint implementation, except that the project must be in a non-Annex I country. Additionally, CDM projects must promote sustainable development in the non-Annex I host country, while a share of the proceeds of CDM projects must be realized by an international regulatory body for climate change adaptation in vulnerable developing countries, and for meeting administrative costs of the mechanism.

26. The CDM has considerable potential for facilitating transfers of finance and technology to developing countries willing to cooperate with Annex B countries in enabling the latter to meet their GHG reduction commitments under the Kyoto Protocol. However, a number of difficult issues need to be resolved at the conference of parties, including linkages between the three mechanisms, before the CDM can start to function. A major attraction of the CDM is that, unlike the GEF or other official development assistance or multilateral funding, it is not dependent on donor support or preferences. In particular, it will facilitate private sector investment in GHG abatement projects in non-Annex I countries, involving both financing and technology transfers.

C. Mechanisms under the Basel Convention

27. Financial provisions under the Basel Convention include (i) a trust fund for the convention from contributions made by the parties to the convention, other government and intergovernment organizations, and other sources; and (ii) the convention requires a revolving fund for emergency situations, particularly for damage caused by accidents in transboundary movements of hazardous wastes.

D. Mechanisms under the Convention to Combat Desertification

28. Unlike the other Rio Conventions, which depend on a single financial instrument, the CCD embodies a multisource, multichannel approach to finance. Financing is to come from domestic resource mobilization, bilateral and multilateral channels, and the private sector. Article 21 of the CCD on financial mechanisms establishes a global mechanism to "increase the effectiveness and efficiency of existing financial mechanisms," and "promote actions leading to the mobilization and channeling of substantial financial resources, including for the transfer of technology," on a grant basis, and/or on concessional and other terms, to affected developing countries." The global mechanism functions under the authority and guidance of the conference of parties and is accountable to it. The International Fund for Agricultural Development (IFAD) was selected to house the global mechanism. These three agencies form the nucleus of a facilitation committee for the global mechanism, which has been extended to include the regional development banks, and the GEF.

29. The CCD also provides the GEF with a supporting role as one of the relevant channels for convention finance. Article 20 of the Convention on Financial Resources calls upon developed country parties to promote new and additional funding from the GEF and other sources. This role is, however, circumscribed by the terms of the *Instrument Establishing the Restructured Global Environment Facility (GEF)*, whereby the agreed incremental costs of activities concerning land degradation, primarily desertification and deforestation, are eligible for funding (CCD Art. I, para. 2) but only as they relate to the GEF's four focal areas (climate

change, biodiversity, ozone depletion, and international waters).[8] The instrument is likely to be amended in October 2002 to allow a greater role for GEF in combating land degradation.

E. Mechanisms under the Ramsar Convention

30. The Ramsar small grants fund established under the Ramsar Convention provides small grants (maximum SF40,000 per project) for projects in developing and transition countries. Since 1990, 113 projects have been funded, totaling SF3.82 million. The conference of parties has established a target of $1 million per year.

[8] Land degradation is now fully integrated into the GEF operational strategy (GEF, 1996). It is likely to become a GEF Focal Area in its own right.

MEDIUM-TERM ACTION PLAN (2002–2005)

IMPLEMENTATION AND MONITORING MATRIX

Objectives	Medium-Term Actions (2002-2005)	Outputs and Performance Indicators
Assisting DMCs to invest in environmental protection and sustainable natural resource management for poverty reduction	ADB environment lending and TA will focus on • Protection, conservation, and sustainable use of natural resources through increased participatory resource management—with emphasis on conservation of biodiversity, protection and management of fresh water resources, protection of coastal and marine resources, and combating land degradation, including desertification. • Reduction in air, water, and soil pollution to reduce health risks, emphasizing the introduction of cleaner production techniques and practice and targeted assistance to small and medium enterprises. • Environmental improvement in urban and rural areas, emphasizing investments in water supply, wastewater management, solid waste management, hazardous waste management, and energy efficient urban transportation systems. • Reducing vulnerability to natural hazards and environment related disasters.	• A key performance indicator will be the extent to which regional departments deliver projects with environment as a thematic priority, and the extent to which sectoral interventions capture opportunities for environmental improvement identified in country environment analyses.
Strengthening the capacity of DMCs for mainstreaming environment in economic growth and development planning	ADB will assist DMCs to pursue • Policy integration research. • Continued dialogue on policy integration. • Strengthening environmental planning and policy-making capability in development institutions. • Integrated economic and environmental planning. • Market-based and other policy instruments. • Environmentally responsible procurement, ecolabeling, and voluntary compliance programs.	• Performance will be measured through quantitative and qualitative assessment of the extent to which policy dialogue, TA, and capacity building activities strengthen the policy, legislative, and institutional framework for environmental protection in each DMC.
Enhancing international, regional, and subregional cooperation for maintaining global and regional life support systems	ADB will focus on • Supporting subregional cooperation programs. • Assisting DMCs to implement multilateral environmental agreements and access relevant financial mechanisms.	• Performance will be measured by qualitative assessment of ADB's role in assisting DMCs to implement MEAs, and quantitative and qualitative assessment of ADB operations that contribute to subregional environmental programs.
Strengthening partnerships	• ADB will initiate strategic alliances with key NGOs. • ADB will actively increase its partnership with the GEF, and enhance its capacity to help DMCs identify and develop ADB-GEF pipeline opportunities.	• At a minimum, performance will be measured through quantitative and qualitative assessment of the number, coverage, and effectiveness of partnerships, and reporting on the accomplishments of each partnership.

Objectives	Medium-Term Actions (2002-2005)	Outputs and Performance Indicators
	• ADB will explore opportunities to enter into partnership with other agencies to develop a sector program for environmental management in one or more DMCs by 2004. • ADB will continue to participate in the Multilateral Financial Institutions Working Group on Environment to harmonize safeguard policies and procedures.	
Enhancing the integration of environmental considerations in ADB's operations	• Increase the effectiveness of environmental assessment, through introduction of revised environmental assessment guidelines. • Training on the environmental assessment guidelines. • Ensuring greater accountability for development results. • Institutionalizing performance-based allocation of ADF resources. • Introducing environmentally responsible procurement practices and requirements.	• The integration of environmental considerations in CSPs will be measured by the extent to which they (i) identify critical environmental issues facing development and poverty reduction in the country, and (ii) provide credible lending and nonlending responses to these issues. • Overall performance in regard to safeguard policies will be measured through the compliance monitoring system to be implemented by the Environment and Social Safeguards Division. • ADB will establish an effective mechanism for interdepartmental interaction and knowledge sharing through the environment committee and through internal networks along thematic and sector lines. Priority will also be given to establishing external networks for information sharing. • ADB will introduce a performance monitoring and reporting system to measure progress in relation to the five objectives of the environment policy.

ADB = Asian Development Bank; ADF = Asian Development Fund; CSP = country strategy and program; DMC = developing member country; GEF = Global Environment Facility; MEA = multilateral environmental agreement; NGO = nongovernment organization; TA = technical assistance.

SUMMARY OF RESOURCE REQUIREMENTS FOR IMPLEMENTATION OF THE MEDIUM-TERM ACTION PLAN

Program Element	ADB Resource Requirements	DMC or Partner Resource Requirements
A. Assisting DMCs to Invest in Environmental Protection and Natural Resource Management for Poverty Reduction		
1. Protection, Conservation, and Sustainable Use of Natural Resources 2. Reduction in Air, Water, and Soil Pollution 3. Environmental Improvement in Urban Areas 4. Reducing Vulnerability to Natural Hazards	• These program elements are designed to reduce poverty. • In principle, no additional resources will be required, as activities will be part of the normal lending operations within existing envelope. • However, additional resources may be required to meet ADB's environmental requirements during project preparation and implementation (see D, Strengthening Partnerships)	
B. Strengthening the Capacity of DMCs for Mainstreaming Environment in Development Decision Making		
1. Policy Integration Research	• TA funds • Staff time to manage TA	• Counterpart participation in TAs • In-kind resources
2. Continued Dialogue on Policy Integration	• Staff to manage consultations—additional input of 0.5 person-months and/or policy-based loans; 5 person-months	• DMC participation in consultations • Counterpart funding for participation
3. Strengthening Environmental Planning and Policy Making in Economic and Financial Institutions	• TA funds • Staff time to manage TA	• Extensive DMC participation as beneficiaries in TAs • Counterpart funding
4. Ecolabeling and Voluntary Compliance Programs in DMCs	• TA funds • Staff time to manage TA	• Extensive DMC participation as beneficiaries in TAs • Counterpart funding
5. Market-Based Instruments	• TA funds • Staff time to manage TA	• Extensive DMC participation as beneficiaries in TAs • Counterpart funding
C. Enhancing International, Regional, and Subregional Cooperation on the Environment for Maintaining the Global and Regional Life Support Systems		
1. Support for Subregional Cooperation Programs	• TA funds • Staff time to manage TA	• Counterpart participation • Counterpart funding
2. Support for Regional Cooperation Programs	• TA funds • Staff time to manage TA	• Counterpart participation • Counterpart funding
3. Acceleration of the Use of Financing Mechanisms in International Agreements	• TA funds • Staff time to manage TA	• Counterpart participation • Counterpart funding
D. Strengthening Partnerships		
1. Maintaining Partnerships 2. Nongovernment Organization Partnerships 3. Environment Program Loans	• Staff or consultant time to manage and administer agreements • TA and other funds • Staff or consultant time to assist DMC to prepare program and negotiate policy matrix	• Staff or consultant time to manage and administer agreements • Staff to participate in partnerships • Staff to prepare and negotiate program • Counterpart resources

Program Element	ADB Resource Requirements	DMC or Partner Resource Requirements
4. GEF Partnerships	• TA funds • Staff or consultant time to prepare and negotiate partnerships • ADB cofinancing funds • Additional full-time senior technical support staff to assist on global environment Issues	• Counterpart participation • Counterpart funding • GEF resources
E. Enhancing the Integration of Environmental Considerations in ADB Operations		
1. Increasing the Effectiveness of Environmental Assessment	• Increased staff or consultant time to ensure environmental assessment requirements are met-in-house training and additional input of 3 person-months for strengthening categorization and environmental assessment process. Additional costs associated with consultation during environment assessment process (to be covered by project preparatory TA resources where applicable).	• Increased staff time for preparation of environmental assessment reports • Increased staff time for review of environmental assessment reports • Increased staff time for consultation • Costs of adequate implementation of EMPs
2. Ensuring Environmental Sustainability of Country Programming	• Staff or consultant time to manage or conduct environmental assessment— training of RM staff required • Additional 4 person-months/year for CEA	• Increase staff time to participate in country programming • Greater efforts to provide reliable environmental background data
3. Ensuring Greater Accountability for Development Results	• Increased time to monitor and report on project performance • Training for PAU and RM staff	• Increased staff time to monitor and report on project performance, and implement overall environmental performance monitoring
4. Environmentally Responsible Procurement Requirements and Guidelines	• Staff of consultant time to develop procurement requirements and practices—additional input of 2 person-months in 2002 • Implementation costs in changing format and approaches to international bidding • Implementation costs in changing contracts and other arrangements with suppliers	• Additional costs to suppliers to meet the new requirements
5. Institutionalizing Environmental Criteria for PBA of ADF Fund Resources and Developing National Environmental Performance Assessment Systems	• TA of $500,000 as ADB contribution to a $2 million, 3-year system development program • Staff equivalent of 3 person-months/regional department/year to measure and report environmental performance for PBA- training required for national staff in Resident Missions to enable assessment by RM	• DMC staff time to monitor and report on environmental performance criteria

ADB = Asian Development Bank; ADF = Asian Development Fund; CEA = country environmental analysis; DMC = development member country; EA = environmental assessment; EMP = environmental management plan; GEF = Global Environment Facility; PBA = performance-based allocation; RM = resident mission; TA = technical assistance.