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Environmental governance – the potential of regional institutions: Introduction

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The traditional role of regional institutions has been in the areas of peace, security, and economic development. The significance and role of regional arrangements in maintaining international peace and security, for example, are recognized in the UN Charter. Chapter 8 of the Charter details the role of regional arrangements in the context of the UN system for maintaining international peace and security. In practice, peace and security are among the key concerns of regional organizations in all parts of the world. Similarly, regional arrangements to promote economic development have been common since 1945. Regional environmental cooperation, however, is relatively new and can be traced to the 1970s. Since then regional arrangements and agencies pertaining to the environment have proliferated in nearly all parts of the world. Increasing awareness of environmental problems and their growing magnitude, and recognition of the transnational character of many of these problems and the close interconnection between environment and socio-economic development, account for the growth in environment-related regional arrangements. Regional institutions are becoming an important component of the global architecture for environmental governance.

The role and effectiveness, and hence the significance, of regional institutions, however, vary widely. They depend on the nature of the problem (global issues, specific regional or subregional concerns, bilateral problems, or issues of concern within state boundaries), the level at which it is addressed, and the nature of the specific regional institution and its

capacity to address such problems. All these factors vary widely. In practice, therefore, the role of regional institutions in managing the environment is not uniform across regions and subregions. Some, like those in Western Europe, are more effective and have a much higher role capacity than those in other regions and subregions.

Recognizing the existence of such variations, this overview and the three chapters that follow describe and analyse the role and place of regional institutions in environmental governance in general terms, on the understanding that the role of specific institutions will have to be determined on the basis of their respective strengths and weaknesses, and the nature of the problem to be dealt with. The overview and chapters address three key questions.

- What roles can and do regional institutions play in managing environmental concerns?
- What explains their effectiveness or non-effectiveness?
- How do regional agencies relate to other actors like the state, global institutions, the private sector, and NGOs who are also involved in managing the environment?

One must begin by defining regional arrangements and agencies. Regional arrangements or regionalism (these two terms are used interchangeably in this chapter) may be defined as ''cooperation among governments or non-governmental organizations in three or more geographically proximate and interdependent countries for the pursuit of mutual gain in one or more issue areas'' (Alagappa 1997, 423). Regional agencies refer to formal and informal regional organizations (with physical and organizational infrastructure, staff, budgets, etc.) with responsibility for implementing regional arrangements. Such agencies may be regionwide, sometimes spanning a continent like the Organization of American States (OAS) and the Organization of African Unity (OAU), or may be subregional like the Association of South-East Asian Nations (ASEAN), the Southern Common Market (MERCOSUR) in Latin America, the Southern African Development Community (SADC), and the Commonwealth of Independent States (CIS) that comprises the republics of the former Soviet Union. Regional agencies are usually coterminous with regional arrangements, but not necessarily so. The term ''institutions'' is used in this chapter to cover both regional arrangements and agencies.

Regional environmental arrangements may be sector-specific, like the 1979 Geneva Convention on Long-range Transboundary Air Pollution and the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Or they may be case-specific like the Nile Basin Action Plan, the Treaty for Amazon Cooperation, and the Convention for the Protection of the Mediterranean Sea

Against Pollution. Sectoral and case-specific arrangements are often interrelated, with the former providing an umbrella framework for the latter. Sectoral and case-specific arrangements may lead to the creation of separate specialized agencies or they may be nested in existing multi-purpose regional institutions like the European Union, the OAS, the OAU, MERCOSUR, and ASEAN.

What role for regional institutions?

In generic terms, regional institutions can play a number of roles, including:

- provision of high-level forums to map the regional environmental agenda, articulate regional goals, and build relevant regional norms;
- facilitation of regional input into the formulation of global conventions and the implementation of such conventions through their translation into regional conventions and national action plans;
- development and management of regional initiatives and action plans to address transboundary environmental problems in the region;
- mediation of disputes between member states; and
- harmonization of national efforts on issues that fall under the domestic jurisdiction of member states.

Provision of high-level forums

Nearly every region and subregion has one or more ministerial-level forums on the environment. A Permanent Commission has been established by the OAS to promote and coordinate environmental cooperation in the Americas. Latin America has its own high-level forum in the annual Meeting of the Ministers of the Environment that is organized in cooperation with UNEP's Latin America regional office. The high-level policy forums in Africa include the African Ministerial Conferences on the Environment (AMCEN) established in 1985 under the auspices of UNEP, the African Economic Community (AEC) established within the framework of the OAU and the 1992 Abuja Treaty, and the Council of Arab Ministers Responsible for the Environment (CAMRE). In Asia, the forum for Asia-Pacific Economic Cooperation (APEC) has periodic meetings of environment ministers. Beginning with the Dobris Conference in 1991, pan-Europe ministerial-level conferences have been held regularly. Subregional organizations have their own ministerial-level forums.

These forums play an important role in identifying critical regional concerns, mapping the regional environmental agenda, articulating and

building consensus for regional goals and norms, identifying opportunities for regional cooperation, and facilitating such cooperation. The first pan-European Conference of Environmental Ministers that took place in 1991 in Dobris (in the then Czechoslovakia), for example, initiated the preparation of the first pan-European assessment and development of an environmental plan for all of Europe. Subsequent conferences in this process were held in 1993, 1995, and 1998. The 1995 Sofia Declaration endorsed the Environmental Programme for Europe (EPE), based on the Dobris Assessment that was prepared in response to the request of the 1991 conference. The EPE is linked to Agenda 21, adopted at the Rio Summit in 1992. Another concrete outcome of this process is the endorsement in Lucerne in 1993 of the Environment Action Plan for Central and Eastern Europe (EAP/CEE). This programme was developed by an international task force composed of the European Commission, the World Bank, and the OECD, and the European Union provides a methodology for integrating environmental concerns into the economic transitions of the CEE countries. The three key components of the programme are setting priorities, strengthening institutional capacity, and developing cost-effective financing for environmental action.

In the Americas, the OAS adopted the Inter-American Programme of Action for Environmental Protection in 1991 (Munoz 1992, 33–41). In addition to stating the objectives, principles, and tasks of the OAS in environmental protection, the programme identified the measures that should be taken by individual member states as well as through regional cooperation. The purposes of high-level forums are nicely summed up by the stated objectives of the annual Meeting of the Ministers of Environment. These include mapping and guiding the implementation of the environmental agenda in Latin America, identifying opportunities for regional cooperation in environmental matters, achieving greater effectiveness and coherence in regional planning and implementation of the global environmental agenda, and adoption of common positions on topics of importance to the region (UNEP 1995).

Input into and implementation of global conventions

A key role of high-level forums is the forging of common regional positions on global issues like the depletion of the ozone layer, climate change, and biodiversity loss. They can identify the regional dimensions of the problems, formulate priorities, and present regional perspectives at global forums. The OAU, for example, submitted a comprehensive report entitled ''African Common Position on Environment and Development'' to the Earth Summit in 1992 as its contribution to Agenda 21. In the course of negotiating a global convention, regional agencies can

advance the collective interests of member states by seeking to influence the terms of the related conventions. The European Community, for example, played a key role in the formulation of the 1985 Vienna Convention for Protection of the Ozone Layer, the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, and the 1992 UN Framework Convention on Climate Change (UNFCCC). The role of the European Community and later the European Union in this regard, however, may be rather unique. Unlike other regional arrangements, a key goal of the European Union is economic as well as some form of political and legal integration. Its member states are legally bound by various treaties, beginning with the 1957 Treaty of Rome, to agree on common positions. The European Union can be granted a political mandate by its member states to negotiate on their behalf, and they are bound to comply with the negotiated instrument. The European Union also has the necessary institutional and financial resources, and the technical expertise, to pursue specific goals in global forums. Other regional agencies are not so advantaged and they have not been active players at the global level. Often member states of such regional organizations have acted jointly under the label of developing countries, while states like the United States and Japan have acted in their individual capacities. This was the case, for example, in the third UNFCCC Conference of the Parties meeting in Kyoto in December 1997, where negotiations were essentially among four parties: the European Union, the United States, Japan, and the developing countries. The unity of the latter group rested on their common goal to secure the commitment of developed countries to cut their emissions of greenhouse gases while seeking to maintain the exemption granted to developing countries under the Berlin Mandate.

Although the role of regional agencies in the developing world may be limited in the formulation phase of global conventions, they can play a larger role in integrating global programmes into existing regional policy frameworks, and, where necessary and feasible, developing additional initiatives or measures in light of local knowledge and conditions. They can also coordinate and assist in the translation of global conventions into national action plans through information-sharing, education and training schemes, and capacity-building in member states. Finally, regional agencies can monitor implementation of global conventions, assess their effectiveness, and prepare regional reports.

This has been the case in Asia, for example, in relation to the global Convention on Biological Diversity. The ASEAN Agreement on the Conservation of Nature and Natural Resources establishes a regional framework on biological diversity conservation and sustainable use. The framework seeks to enhance the protection and conservation of heritage areas and endangered species, and strengthen research and development

capacities in member states. In South Asia the South Asian Cooperative Environment Programme's (SACEP) strategy and action programme (1992–1996) includes biodiversity as a priority area. It has plans in the areas of conservation of wildlife, corals, mangroves, deltas, and coastal areas. The ADB initiated efforts to translate the recommendations of the global convention on biodiversity through financial assistance to member countries. Indonesia, for example, was a recipient of an ADB loan and technical assistance in 1992 to conserve biodiversity in an area covering about 500,000 hectares.

The African Common Perspective and Position on Biological Diversity adopted by AMCEN in 1994 stipulates the strategy on biological diversity for Africa. It seeks to develop expertise, establish regional research institutes, and strengthen institutional capacity in this issue area. In combating land degradation, another critical concern in Africa, several regional programmes have been instituted to implement the UN Convention to Combat Desertification. Subregional organizations like the SADC, the Inter-State Committee for Drought Control (CILSS), the Economic Community of West African States (ECOWAS), the Intergovernmental Authority on Development (IGAD), and the African Development Bank have also taken initiatives to strengthen regional cooperation in combating land degradation. AMCEN has an important role in combating desertification though its Committee on Deserts and Arid Lands.

Initiatives on region-specific concerns

Apart from their role in formulating and implementing global conventions, regional agencies may also develop and manage programmes on issues which are of concern to the region but not covered by global conventions. This was the case, for example, with respect to the issue of transboundary air pollution in Europe. The efforts of the Scandinavian states, though initially resisted by some EC countries including Britain and Germany, led eventually to the adoption of the 1979 (European) Convention on Long-range Transboundary Air Pollution. A number of protocols have been adopted under this framework. Under the 1985 Helsinki Protocol, member states undertook to reduce their sulphur emissions by the end of 1993 to at least 30 per cent below 1980 levels. Under the 1988 Sofia Protocol, they undertook to stabilize nitrogen oxide emissions at 1987 levels by the end of 1994. The 1991 Geneva Protocol concerned control of emissions of volatile organic compounds or their transboundary fluxes and the 1994 Oslo Protocol sought to reduce sulphur emissions further. In 1998 two new protocols were adopted on heavy metals and persistent organic pollutants.

Regional arrangements have been instituted in Latin America to manage large ecosystems such as Amazonia, the Andes, the Central American tropical forests, the Southern Pacific, and the Caribbean small island states. The Treaty of Amazon Cooperation, for example, established a Special Commission for the Amazonian Environment that operates eight environmental programmes in the affected states. Similarly, action has been taken in Africa at the subregional level in the management and use of international waters and their basins. The SADC has a Protocol on Shared Watercourse Systems. Action plans exist for the management of the Zambezi River basin, Lake Chad basin, and the Okavango. Action plans exist in Europe for the management of many seas including the Aral, Baltic, Black, and Mediterranean Seas as well as some major river basins including the Danube and the Rhine. In South-East Asia, with the assistance of the UNDP, the riparian states negotiated the Agreement on Cooperation for the Sustainable Development of the Mekong River Basin in 1995 and established the Mekong River Commission. The agreement stipulates the principles for sustainable development, utilization, management, and conservation of the water and related resources, and the institutional, financial, and management issues relating to the Mekong River Commission.

Mediation of bilateral disputes

At the bilateral level, regional institutions can play a mediator role in disputes among member states. The European Union, for example, was instrumental in the resolution of the dispute between Hungary and Slovakia over the construction of two dams in the Danube River basin. In the wake of the 1989 political revolution, both Czechoslovakia and Hungary, faced with domestic protests from environmental groups, decided to abandon their respective dam projects to generate electricity. The dam project in Czechoslovakia (now in Slovakia) was very near completion. Subsequently, however, Czechoslovakia decided to go ahead and finish the project. Citing ecological concerns, Hungary objected vehemently and vowed to stop completion of the project. Following the failure of bilateral negotiations, the European Union was asked in April 1992 to mediate the conflict. For several reasons, including the inability of the scientific community to agree on the nature and extent of the environmental damage, the European Union could not mediate the dispute by itself. It was, however, successful in defusing political tensions (which became more acute with the spilt of Czechoslovakia in 1993 and Slovakia's publicly declared intention to finish the project and fill the reservoir) and in persuading both countries to submit the matter to the jurisdiction of the International Court of Justice. The European Union's success was

in part due to the leverage it had over Hungary and Slovakia, both of which desire EU membership. Acceptance of the principles and norms that inform the behaviour of EU states was a way of demonstrating their readiness for such membership.

Provision of technical assistance and harmonization of national legislation

Regional institutions can also play a role in some matters, like the management of toxic waste disposal, that are essentially within the domestic jurisdiction of member states. Regional conventions in such areas may set standards and provide technical assistance in the enactment of national legislation, and in monitoring the implementation of such legislation. They may also regulate the international dimensions of such problems. The ASEAN Strategic Plan of Action on the Environment, for example, emphasizes the promotion of environmentally sound management of toxic chemicals and hazardous waste in member states and the control of transboundary movement of hazardous waste. Strategy 7 of the strategic plan seeks to establish regional guidelines for assessing highly polluting industries and for the safe handling of potentially harmful chemicals entering the ASEAN region. In Central America, the Central American Commission for Environment and Development (CCAD) joined forces with the Central American Inter-Parliamentary Commission on the Environment (CICAD) to help set up regional networks of NGOs and government bodies to monitor the dumping of wastes. An agreement was signed in 1992 by seven countries to ban the importation or the international transportation of hazardous material. In Africa, the 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa outlaws the importation of any hazardous waste into Africa.

Supporting functions and services

In addition to the above roles, regional institutions can provide a number of support functions and services that are critical to the success of global and regional initiatives as well as national action plans. These include:

- capacity-building through the development of regional databases and information-sharing systems, as well as regional training schemes;
- providing access to environmentally clean technologies and production processes;
- arranging funding support; and
- fostering interface among and the development of regional networks of governments, knowledge communities, NGOs, grassroots organizations, and other actors.

The development of reliable and mutually accepted data is crucial to the identification of common problems and forging consensus on policy measures necessary to address such problems. For a number of reasons, including human, institutional, and financial resource constraints, the national production of data is difficult. Moreover, the accuracy of such data is often contested by other parties. In North-East Asia, for example, studies by Japanese scholars suggest that China is a major source of wet sulphate deposition in Japan. Studies by Chinese scholars, on the other hand, suggest that China only accounts for 3.5 per cent of Japan's total sulphur deposition. Clearly, joint research activities by scientists from affected countries as well as from other states and agencies would help in producing a mutually acceptable database and facilitate the development of joint policies (Streets et al. 1999). Such collaborative studies, initially by the European Air Chemistry Network created in 1956 by the International Meteorological Institute, and later by the OECD and the European Community, were critical in the development of joint policy measures to address the acid rain problem in Europe. Europe now has a clear policy of promoting access to and sharing information on the environment. The 1995 Sofia Ministerial Conference endorsed the UN-ECE Guidelines on Access to Environmental Information and Public Participation in Environmental Decision-Making, and has recommended that it be developed into a convention. Agencies created to implement the UN-ECE guidelines include the European Information and Observation Network of the European Environmental Agency (EEA), and UNEP's Environment and Natural Resources Information Networking (ENRIN) programme. There have been efforts in other regions as well to develop regional databases and regional information-sharing schemes. ASEAN, for example, has established an information-sharing network on the transboundary movement of toxic chemicals and hazardous waste.

Closely related to this function is that of regional education and training to develop expertise and strengthen regional and national institutional capacities. The Central American Commission for Environment and Development, for example, initiated a project in 1994 to train the staff of government environmental agencies in participatory methods for policy formulation. In South-East Asia, ASEAN, with financial and technical assistance from the ADB, has instituted several training and information-sharing schemes in areas like the standardization of national environmental legislation, water quality management and industrial pollution, and appropriate technology transfer within the region.

Environmentally clean technologies and processes are critical to the success of regional and national action plans. For reasons alluded to earlier, individual states are often not in a position to fund and develop such technologies on their own. Acting collectively they have better prospects for both local development and the acquisition and transfer of such

technologies from more developed states and regional institutions. One of the objectives of the Inter-American Programme of Action for Environmental Protection is to ''sponsor and support projects for design and use of technologies that further environmental protection.''

Arranging financial support is another critical function that can be undertaken by regional institutions. Most regions have development banks that now include an environmental portfolio. Regional banks like the European Bank for Reconstruction and Development (EBRD) and the ADB have funded studies and supported specific projects, some of which have been noted in earlier discussion. In addition, regional institutions can also facilitate funding support for regional and national action plans from other regional agencies and states.

Finally, regional agencies, by serving nesting and cross-fertilization functions, have played a catalytic role in fostering cooperation among governments, NGOs, scientific communities, and other actors. The Central American Commission for Environment and Development, for example, brings together representatives of governments, NGOs, grassroots groups, and international agencies to discuss, analyse, and develop policy proposals and action plans in the areas of forestry and toxic waste disposal. Similarly, in Europe regional participatory networks, involving national governments, regional and international organizations, and NGOs are gaining strength. An advanced example of this is the BALLERINA network of the Baltic Sea.

How effective are regional institutions?

The preceding discussion identified the roles that can be undertaken by regional institutions. But, as noted earlier, regional institutions vary widely in terms of their goals and capabilities. In practice, relatively few regional institutions have been effective in fulfilling all their stated roles. The most effective regional environmental institutions are located in Western Europe. Environmental considerations have become a central concern of the European Union, and the European Commission now has enforcement powers. In 1997, for the first time in its history, the European Commission brought proceedings against member states for failing to implement judgements of the European Court of Justice in five cases concerning failure to comply with Community environmental law. Most member states in question have since rectified the relevant national legislation. Western European institutions enjoy certain advantages: peace and stability in the region; a long history of regional cooperation that is grounded in strong political and legal commitments from member states; well-developed regional and national institutions and governing struc-

tures; adequate financial resources and technical expertise; comprehensive and up-to-date environmental data and information; and an impressive range of environmental policy options, both tested and implemented.

Regional institutions in many other parts of the world are not so blessed, and have been much less effective, especially in implementation. Because of the many constraints confronting regional institutions in developing countries, many programmes have been only partially implemented or remain unimplemented. Though somewhat extreme, the case of the Inter-Governmental Authority on Development (IGAD) in East Africa, established in 1986 and whose primary focus is drought and desertification control, is instructive. With the exception of its food security project that was implemented with funds from Italy, all other IGAD programmes were stillborn. To revitalize IGAD, a special summit meeting of the heads of state and government was convened in 1996, and several subregional environmental projects have been submitted to the international community for consideration. The constraints on IGAD included lack of peace and security in the subregion, lukewarm support from member states, lack of democratization and grassroots participation, lack of funds, and lack of expertise and capacity at national and regional levels. Such constraints are characteristic of most regional and subregional institutions in Africa, and their implementation record for regional conventions is rather poor.

Even where the expertise and resource constraints are much less severe, as in the case in South-East Asia, regional environmental institutions have been only partially effective. Political considerations have hampered effectiveness. The ASEAN states, for example, instituted a framework for cooperation to address the severe haze problem in the region caused by forest fires in Indonesia. The 1994 ASEAN Cooperation Plan on Transboundary Pollution outlines the efforts to be undertaken at the national and regional levels. Each member state undertook to enhance national capabilities to deal with forest fires. The ASEAN states agreed to share knowledge and technology in the prevention and mitigation of forest fires and to establish a cooperative mechanism to combat such fires. The ASEAN plan, however, was and still is not legally binding. For it to work all parties must act in good faith, but this has not been the practice. The polluter state, Indonesia, did not take the required action and political inhibitions prevented the other states from confronting Indonesia over this matter. Many aspects of the ASEAN plan therefore remained underdeveloped and unimplemented. When the haze recurred in 1997, although it was more severe and occasioned a regional emergency with health and safety implications, the ASEAN states were unable to address the problem. Likewise, the North-East Asian states (China, Japan, and the two Koreas) have yet to develop a cooperative framework

to address the acid rain problem that confronts this subregion. Apart from the lack of a history of regional cooperation in the subregion, cooperation to address this issue is hindered by political tensions, a lack of political will, especially on the part of China, and the lack of a common data point. A further constraint arises from the fact that regional organizations and schemes are largely bureaucratically driven, lacking the participation of scientific communities and civil society organizations.

However, not all regional institutions in developing regions have been ineffective. The CCAD, for example, has been quite successful in discharging its mission to promote policy coordination, harness funding, build new institutions, foster information-sharing, and encourage citizens' participation in addressing environmental programmes in the subregion. Generally, regional agencies appear to be quite successful in providing high-level forums and in formulating regional goals and conventions, but their implementation record is mixed if not poor. This should not be interpreted to mean that regional institutions cannot play a significant role in environmental governance; only that they may be more effective in some roles than others, and that effectiveness varies widely across regions and subregions. Moreover, while the limitations must be recognized, necessary action must also be taken to build up the capacities of regional institutions in the developing world. With the necessary support these institutions can play a key role in complementing the roles of the other actors in managing environmental problems.

How do regional institutions relate to the other actors?

Regional institutions, like other intergovernmental organizations, are creations of states. They can only be as strong as is desired by member states. Except for the European Union, regional organizations do not have independent political, legal, or resource bases. They cannot command support or compliance on their own accord. It is therefore imperative that regional institutions act in conjunction with other actors including member states, international organizations like the United Nations and its specialized agencies such as UNEP and the UNDP, international and regional financial institutions like the World Bank, the ADB, and the EBRD, and NGOs and other grassroots organizations. In other words, to be successful regional institutions must be an integral part of a multilayered arrangement that spans several levels. They must also bring together a multitude of international, governmental, private sector, NGO, and grassroots actors at the regional and subregional levels. The nesting, interface, and cross-fertilization functions of regional institutions

are critical. The successful examples cited in the previous two sections illustrate this contention. Further, each regional institution must find its own specific niche by fulfilling a critical need or function that cannot be effectively provided by the other actors.

Environmental problems are the product of several factors, like population growth, economic development, and political conflict, and they have several dimensions, including environmental, economic, social, cultural, and political. In light of the multifaceted causes and dimensions, an integrated approach is critical. Environment management must form an integral part of broader arrangements that are concerned with managing political, economic, and security affairs in the region. Effort must be made to incorporate environmental concerns into the agenda of these bodies and develop the necessary policies and institutions in the context of the existing regional policy and institutional frameworks. Lyuba Zarsky, in her chapter, for example, argues the case for lodging the environmental goals in relation to energy use in the Asia-Pacific in the context of regional economic organizations. Similarly, Egbert Tellegen in his chapter makes the case for linking energy conservation and waste minimization to trade and financial aid from Western Europe. In addition to facilitating an integrated approach, this route will ensure that environmental problems receive the attention of high-level political leaders, thus fostering political and institutional support for regional environment initiatives and action plans.

This, however, does not and should not preclude specialized regional agencies, although their task should be limited to implementing global and regional initiatives and plans, and, as noted earlier, they should be integrated into the existing regional framework. The integrated approach and institutional structure will also prevent duplication and turf conflict, as well as conserve and pool limited resources. An integrated approach is most advanced in Europe, where environmental considerations have been effectively integrated into other community policies, in particular the energy policy and common agricultural policy. In 1996–1997 the European Union took initiatives on subjects such as the auto-oil programme, CO_2 and vehicle emissions, and the internalizing of external costs, in particular through the directive on the reduction of the sulphur content of fossil fuels. Other integrated EU strategies include those against acidification and biodiversity. An integrated approach is also the practice in several other regions and subregions. The need now is to elevate this approach to the level of a norm and encourage all regional and subregional agencies to become environmentally conscious and incorporate environmental concerns as an integral part of their agendas and policies.

Conclusion

The foregoing discussions suggests two conclusions. One, regional and subregional cooperation can augment the roles and effectiveness of other actors (global institutions, the nation-state, NGOs, and the private sector) in implementing international conventions on global issues like climate change and ozone depletion, as well as take a lead role in addressing regional or subregional-specific concerns like land degradation, food security, international rivers management, and acid rain. They may mediate bilateral disputes among member states and provide technical assistance in the development of national legislation. They can also perform a number of supporting functions and services, like the development of databases, information-sharing networks, and regional education and training schemes, sponsoring clean technology projects, arranging funding support, and fostering regional networks among NGOs and experts. Regional environmental cooperation, however, is still relatively new and, except in Western Europe, still at an early stage. Regional institutions, especially those in the developing world, face numerous difficulties and their track record is, at best, mixed. For them to function effectively, they require the support of their member states as well as the support and assistance of global institutions and the rich nations.

Notwithstanding their limitations, regional institutions can be and have been a critical force in raising national and regional awareness of environmental problems and in urging the need for and benefits of cooperation in addressing such problems. Regional arrangements and agencies are becoming more significant and they have the potential to become an important component of the global environment architecture. The United Nations should foster the development of regional agencies in the management of environmental concerns, and should seek to integrate them into its institutional framework for the formulation and implementation of global conventions as well as the management of region-specific problems.

The second conclusion is that environmental concerns and policies must be embedded in the larger regional picture, and institutional and policy frameworks. Environmental problems have multiple causes and implications, and successful implementation of environmental policies hinges upon a variety of factors that span the political, economic, and security arenas. They cannot therefore be addressed in isolation. An integrated approach that connects environmental concerns to the more urgent concerns like development and security is critical to the effective implementation of environmental initiatives. It is imperative to encourage the inclusion of environmental concerns into the agenda of existing multipurpose regional institutions that are concerned with the manage-

ment of political, security, and economic affairs, and to develop environmental policies in the context of the broader regional institutional and policy frameworks. The multifaceted nature of environmental problems and their resolution also requires regional institutions to act in concert with other actors, especially the parliamentarians, the private sector, the scientific community, NGOs, and grassroots organizations. They must not only serve as a vertical link between the state and global institutions but also as a horizontal link fostering cross-fertilization among these and other actors at the national and subnational levels.

As noted earlier, in light of the wide variations across regional institutions in terms of authority, goals and priorities, institutional capacity, financial resources, and expertise, the specific roles and tasks of regional institutions can only be ascertained in specific contexts. In line with this understanding, the ensuing three chapters investigate the possibilities and limitations of regional cooperation in three regions: the Asia-Pacific, Central and Eastern Europe, and sub-Saharan Africa. Lyuba Zarsky's chapter argues that the next 10 to 15 years present a crucial window of opportunity to lay the foundations for more environmentally sustainable energy use in Asia. She advocates the case for the high-energy-consuming Asia-Pacific states to develop a long-term market-oriented regional energy plan that integrates environmental considerations. The development of such a plan must include input from the scientific community, the business community, and environmental advocacy groups. Egbert Tellegen's chapter investigates the role of regional cooperation in energy conservation and waste minimization in Central and Eastern Europe. He argues that preventive environmental policy has not figured as prominently as it should in Western European assistance to Central and Eastern Europe. To stimulate preventive environmental measures he makes the case to link aid-giving and trade to energy conservation and waste minimization. Gregory Myers's chapter reviews the role of African regional organizations in addressing land and natural resource degradation. Because of weaknesses at the national level, regional organizations may on the surface appear to have an important role to play in resource management and conservation in Africa. Myers, however, cautions against unrealistic expectations. African regional organizations suffer many weaknesses. Further, regional organizations cannot force policy changes on states. The drive for change, in his view, must come from below: from local communities and civil society. The task of regional organizations, according to Myers, is to create ''enabling environments'' to facilitate the interaction of government and civil society. To promote bottom-up change, he asserts that regional organizations should facilitate discussion about land policy and property rights among all related actors and act as conduits of information and ideas.

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