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## Introduction

APEC—the Asia Pacific Economic Cooperation forum—boasts the three largest economies in the world and nine of the world’s ten fastest-growing economies, and it accounts for half of global output and trade. APEC members, however, are also home to seven of the world’s ten most polluted cities and include four of the six countries with the highest greenhouse gas emissions, while the Asia Pacific region has the highest annual deforestation rate of any part of the world. Nowhere else on the planet are such large and growing economies juxtaposed with such serious and worsening environmental harms. The confluence of these trends raises the following question: *Is economic growth in the context of deepening regional economic integration compatible with a commitment to improved environmental quality?*

This study concludes that economic expansion and environmental protection can, in fact, be made mutually supportive—and APEC is well-positioned to be at the vanguard of such efforts. But without natural resource management and carefully constructed pollution prevention and control policies, the nations of APEC and the region as a whole face serious—and in some cases devastating—public health and ecological problems.

Why should APEC—an economic community (see box 1.1 for an overview of APEC)—concern itself with environmental issues? First, the environmental stresses accompanying the region’s economic success cause productivity losses and require public health expenditures that together can cost countries between 3 and 8 percent of GDP, a significant offset against the social welfare gains of economic growth.

## Box 1.1 APEC: An Overview

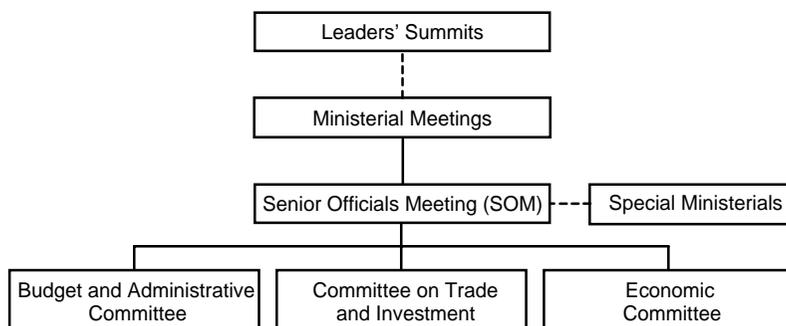
### Membership

The Asia Pacific Economic Cooperation (APEC) forum was inaugurated at a ministerial meeting—at which 12 Asia Pacific economies were represented—in Canberra, Australia, in 1989.<sup>1</sup> APEC now includes 18 “member economies”: Australia, Brunei, Canada, Chile, China, Chinese Taipei, Hong Kong, Indonesia, Japan, Malaysia, Mexico, New Zealand, Papua New Guinea, the Philippines, Singapore, South Korea, Thailand, and the United States.<sup>2</sup>

### Goals

APEC began as an informal discussion group aimed at fostering regional economic cooperation among its participating nations in light of the growing economic interdependence around the Pacific Rim. It has now refined its mission to focus on three “pillars”: (1) trade and investment liberalization, (2) facilitation, and (3) economic and technical cooperation (“ecotech”). APEC’s most dramatic accomplishment has been to agree on the goal of “free and open trade and investment” in the region by 2010 for developed countries, and 2020 for developing members. In accomplishing this goal, APEC is committed to avoiding creation of a new preferential trading agreement—“open regionalism” is the guiding principle (APEC 1994b). Beyond their economic aspirations, the overarching aim of APEC’s members is to create an Asia Pacific “community.”

### Structure



### Working Groups

- Fisheries
- Human Resources Development
- Industrial Science and Technology
- Marine Resources Conservation
- Regional Energy Cooperation
- Telecommunications
- Transportation
- Tourism
- Trade and Investment Data Review
- Trade Promotion

### Advisory Groups

- ABAC, 1996-
- PBF, 1994-1995
- EPG, 1993-1995

### Miscellaneous

- Ad hoc Policy Level Group on Small and Medium Enterprises
- Agricultural Technical Cooperation

*(continued)*

Since its inception in 1989, the highest-level official meeting in APEC has been the annual meeting of ministers<sup>3</sup> from each APEC economy. However, since 1993, the leaders<sup>4</sup> of all the APEC nations have met informally immediately after each ministerial meeting in an APEC “Summit.” Drawing on the work of the ministers and the recommendations of advisory groups,<sup>5</sup> the leaders have taken to fashioning a yearly declaration that sets out APEC’s objectives and broader vision.

These Leaders’ Summits have been held in Seattle, United States (1993); Bogor, Indonesia (1994); Osaka, Japan (1995); and Manila, Philippines (1996). Forthcoming summits are scheduled for Vancouver, Canada (1997); Malaysia (1998); New Zealand (1999); Brunei (2000); and China (2001).

Once the leaders make decisions on broad policy goals, designated senior officials carry out APEC’s activities. These senior officials—who on average meet four times a year—are generally foreign or trade ministry bureaucrats at the assistant secretary or vice-ministerial level. The senior officials (1) coordinate and oversee the activities of APEC’s working groups, (2) manage the efforts of APEC’s Trade and Investment, and Economic Committees, and (3) act as a conduit between the general ministerial meeting and ad hoc meetings of ministers representing specific portfolios.

APEC’s ten working groups meet frequently to advance issues important to APEC members in specific sectoral areas. APEC’s committees have a broader mandate. The Committee on Trade and Investment, for example, is the key organ involved in helping countries implement the liberalization and facilitation components of the Osaka Action Agenda. The Economic Committee, in addition to analyzing economic trends and studying specific issues, manages APEC’s ecotech program. Finally, the “special” ministerial conferences bring together ministers from each APEC country to focus on particular areas—such as energy, the environment, finance, industrial science and technology, human resource development, small and medium-sized enterprise, telecommunications, trade, and transportation—in ways that connect to the broader APEC program.

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1. For a detailed discussion of APEC’s history, see Funabashi (1995).
  2. For the sake of simplicity and varied diction, we refer to the APEC “countries,” even though APEC refers to them as “member economies.” We also use the term “Taiwan” even though, in deference to Chinese sensitivities, this jurisdiction is called “Chinese Taipei” in the APEC forum.
  3. Usually, members select a trade or economic minister to represent their economy.
  4. “Leaders” refers to the presidents and prime ministers of APEC’s members.
  5. Currently, the APEC Business Advisory Group is the only active advisory group. Previously APEC’s leaders have received input from the Pacific Business Forum (PBF) and the Eminent Persons Group (EPG).

Second, because many of the environmental harms that confront APEC's members are attributable to uninternalized externalities, poor management of common resources, and government policies that distort resource prices, allocative inefficiency is widespread and the integrity of the regional economic system cannot be assured. Thus, the imperative to pursue sound environmental policies derives from a desire not only to limit environmental degradation but also to improve allocative efficiency across APEC.

Third, environmental tensions may spill over into the economic realm, jeopardizing the prospects of continuing trade and investment liberalization and further economic integration. Any number of disputes could prove to be flash points that precipitate a retreat from a commitment to open markets. In particular, if developing countries feel that health and environmental standards in developed countries unreasonably threaten their market access, or that trade measures imposed unilaterally by the United States are being unfairly used to achieve extraterritorial environmental goals, they may slacken the pace of their liberalization.

Equally important, political leaders and the public in developed countries, especially the United States, fear that economic integration has placed domestic industries at a competitive disadvantage vis-a-vis competitors in low-environmental-standard countries. The debate over the North American Free Trade Agreement (NAFTA), in which the fear of unfair advantage accruing to industries operating in Mexico remained salient to the day of the final vote, showcases the seriousness of this concern. Low environmental standards in many Asian countries, including China, raise the specter of a magnified version of this debate in the APEC context. Perhaps the most important development, however, is the growing discomfort of Americans with the environmental choices of their trading partners and the accompanying calls to respond to such behavior. Each of these tensions places a strain on the commitment of APEC's members to openness, threatening the economic growth that accompanies freer trade.

The goal of APEC governments should be—and is, at least in rhetoric—“sustainable development,” defined as economic growth that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>1</sup> Thus, APEC's members cannot simply maximize material gains but must attend to social welfare broadly, across both economic and environmental variables. Maximizing welfare more broadly and over time requires a dual policy approach. APEC must maintain its commitment to trade and investment liberalization, which supports economic growth, increases national incomes, and expands individ-

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1. This definition of sustainable development comes from the World Commission on Environment and Development (1987), better known as the “Brundtland Commission.”

ual material well-being. But the drive for economic integration and expansion must be matched by careful attention to environmental issues—locally, regionally, and globally—which are also important determinants of quality of life.

To be sure, one might accept the argument about the importance of good environmental policies that are integrated with economic goals without embracing the need for APEC to play a role in this process. Thus, the more specific question remains: *Why should APEC act rather than national governments or existing international organizations?*

APEC is the best institutional response to pollution and resource management problems on a regional scale. Since government intervention to respond to externalities should be at the scale of the harm to be addressed, to the extent that externalities exist at the regional scale the logic for an APEC environment program is unimpeachable.

Of course, the fact that spillovers—physical, economic, and psychological—occur at a variety of geographic scales argues strongly for a multi-tiered structure of environmental governance. Thus, problems that arise at the local level should be handled by national governments and their jurisdictions, and issues with a global dimension should be addressed by international institutions. But in many cases, the efforts of national governments and international organizations are either substandard or nonexistent because of regulatory failures or political constraints. In these cases, APEC intervention may improve outcomes in practice, no matter that some other body is theoretically better positioned to respond to the harm or issue.

Moreover, as we explain in detail in the following chapters, deepening economic integration in APEC requires the evolution of a regional “community” in APEC. While all of APEC’s members agree on the *de minimus* objective of creating an economic community, a narrow focus on strengthening economic interdependence cannot be sustained without attention to noneconomic issues. The beginnings of this process in the APEC context are best illustrated by the demands—at annual “People’s Summits”<sup>2</sup>—that APEC address environmental, labor, and human rights issues. Continuing economic integration must be undergirded by the development of shared values and norms along environmental and other social dimensions. And the deeper the economic connections, the broader the set of common values that will be required to sustain the commitment to freer trade. APEC thus has an important role to play in Asia Pacific community building as a foundation for continued economic integration.

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2. Since 1994, a parallel “civil society” conference has been convened immediately prior to (and, where possible, in the same city as) each Leaders’ Summit. These “People’s Summits” focus on the social and economic impacts of Asia Pacific integration and the commitment to further trade and investment liberalization.

Promoting environmental quality involves more than simply carving out the appropriate role for governments and intergovernmental bodies like APEC. Understanding the role that nongovernmental actors—the private sector and environmental nongovernmental organizations (NGOs)—can play in improving environmental performance across APEC is also critical.

Taking advantage of private-sector investment activity stands as a central challenge to environmental policymakers, particularly in APEC's developing countries, because the cost of environmental investments required in those countries far exceeds the available public funds. Environmental infrastructure needs across APEC top \$40 billion per year today and could rise to \$200 billion annually by 2020 (ADB 1997). Meanwhile, total official development assistance (ODA) given to APEC's developing countries by the World Bank, the Asian Development Bank, the Global Environment Facility, other international organizations, and bilateral foreign aid donors amounts to just a few billion dollars per year. Sustainable development in the Asia Pacific region therefore requires harnessing the \$70 billion in private-sector foreign direct investment—together with the hundreds of billions in portfolio equity investment and debt finance—that is flooding into APEC's developing economies each year.

Environmental NGOs can also play an important role in improving APEC's environmental performance. Environmental groups can, in particular, sharpen the public's understanding of environmental issues, giving rise to public concern that will then motivate governments to strengthen their environmental programs. NGOs may also serve as the "connective tissue" that links individuals and local groups to the distant governmental bodies—such as APEC—that make environmental decisions and carry out policies on their behalf. In addition, environmental groups and other organizations often act as a source of "competition" to governments. They are able to generate alternative data, science, analysis, and policy options that force government officials to rethink their own approaches to environmental protection.

Chapter 2 lays the foundation for our argument about the need for an APEC environmental program with an analysis of the economic trends in the Asia Pacific region. The analysis shows impressive performance across the board: APEC's Asian members continue to experience extraordinary economic growth, its Latin American members are showing consistently strong growth, and its North American and Australasian members are proving to have the developed world's most vibrant economies. APEC's economic trajectory is also marked by deepening economic integration in the region in the form of expanded intraregional trade and investment.

Chapter 3, which surveys the environmental problems of APEC countries, shows that environmental degradation has become a significant

offset against the quality-of-life gains brought to many Asia Pacific countries by economic growth. Each APEC country confronts a unique set of threats that derive from its stage and pace of development, income levels, and industrial structure. The major problems, which vary in severity from country to country, are land degradation, deforestation, water pollution, air pollution, hazardous and solid waste disposal, fisheries depletion, ozone layer thinning, climate change, and biodiversity loss. In examining these problems, we differentiate among local/national problems, regional issues, and global harms for two reasons: first, the optimal policy response and level of required government intervention varies depending on the geographic scope of the harm, and second, the scale of the problem often helps to determine how difficult the issue will be to address.

Chapter 4 analyzes the underlying reasons for the deterioration of the environment across so many APEC countries. Market failures, particularly externalities and problems of the commons, emerge as the primary source of environmental harms. Because polluters and resource users are able to spill the environmental costs of their activities onto others, overconsumption of resources and suboptimal levels of environmental protection result.

In some cases, market-failure-driven environmental problems can be overcome by properly allocating, defining, and enforcing property rights. Many harms, however, are not amenable to solutions based on property rights, making government intervention to protect the environment a necessity if the welfare losses of degradation are to be avoided. Even when the need for regulatory intervention is understood, the complexity of environmental policymaking and systemic regulatory incapacity frequently render the response to environmental problems suboptimal. In addition, governments often adopt policies in nonenvironmental areas—in particular, price-distorting subsidies for energy and agricultural activities and inputs—that have unintended negative effects on the environment. More broadly, a focus on economic development without attention to the effects on environmental welfare contributes significantly to environmental degradation. Additional environmental problems arise as a result of “public choice” problems, when governments fail to faithfully and accurately represent the views of their citizens.

Transboundary harms—“super externalities”—are especially difficult to address. In such cases, countries spill harms onto other countries or onto the commons largely without consequence as a result of a mismatch between the regulatory reach of national environmental authorities and the scale of the environmental harm in question. Empirical evidence shows that government responses to localized pollution harms improve as countries become wealthier. Better environmental performance can be attributed to improved government and private-sector capacity to make the necessary environmental investments and to demands by a richer public that govern-

ments improve local environmental quality. Regional and global trans-boundary harms, however, continue to worsen, even as incomes rise. When harms can be spilled onto other countries or the commons, there is little incentive to pay the costs of abatement since much of the benefit will accrue to citizens in other countries.

Chapter 5 examines the tensions at the economy-environment interface—environmental standards that obstruct market access, the use of trade measures to advance environmental goals, competitiveness concerns, and discomfort with trading partners’ environmental choices—that endanger the continued commitment of APEC’s members to trade and investment liberalization. An additional threat to openness comes from environmental NGOs in developed countries, which argue that expanded trade and the economic growth it generates are fundamentally at odds with environmental quality.

Chapter 6 explains why APEC must act in the environmental sphere—and addresses the specific question: What is APEC’s environmental “value added?” Most directly, an APEC environmental regime would respond to the need for environmental governance to address regional super externalities. From the perspective of economic theory, the reach of government should match the scope of the public goods that must be provided. Given that the geographic extent of environmental problems varies widely, government response structures must concomitantly exist at various levels. Currently, no such structures exist at the overarching Asia Pacific level. APEC can fill the breach.

In addition to its potential to resolve regional-scale environmental issues, APEC could also make up for deficiencies at the national and global level—an important “second-best” institutional role. APEC could improve environmental policymaking at the national level by helping its less-developed members overcome their regulatory capacity constraints, facilitating collaboration among its members in response to common environmental problems, and enriching policy debates by sharing important environmental information with NGOs and the public as well as with governments.

APEC could similarly intervene at the worldwide level to make up for systemic problems in the global environmental regime. In this regard, it could act strategically in international negotiations to “ratchet up” results where multilateral efforts have been disappointing. It could also serve as a regional laboratory for supranational policy experimentation. Finally, it could establish its own environmental protection mechanisms to compensate for absent or deficient structures at the global level.

Chapter 7 introduces a generalized theory of optimal environmental governance. Building on the analysis in chapter 6 of APEC’s role in managing environmental issues, the theory sets out guidelines for determining how to allocate responsibility for various environmental issues to govern-

ments at a range of geographic scales. The theory demonstrates, first, the need for a multitiered structure of environmental governance and, second, the importance of cooperation and competition across the various levels of government and among nongovernmental actors (businesses and NGOs) so as to improve the environmental performance at each jurisdictional level.

Chapter 8 surveys APEC's existing efforts to achieve sustainable development, concluding that APEC rhetoric about the environment is much more advanced than actual policy work. Current efforts are largely limited to information gathering and sharing. This level of cooperation is simply not enough. There is, moreover, little hope that things will improve at APEC's Vancouver Summit in November 1997, despite Canada's stated commitment to make environmental issues a key component of the Summit. Environmental attention in Vancouver appears likely to focus on the so-called FEEEP (food, energy, environment, economic growth, and population) initiative, a misguided long-range effort without an action program that is unlikely to result in a measurable improvement in environmental performance across APEC.

Finally, chapter 9 offers an environmental "action agenda" that would move APEC decisively from cooperation to coordination, from talk to action. The agenda, which promises to be both environmentally substantive and supportive of economic integration in the Asia Pacific region, builds on the theoretical and analytic work in the preceding chapters. It asks the following questions: What are the region's most serious harms? What is causing them? What might APEC do to address them? And what is the impact of deepening economic integration? The proposed agenda attends to the unique characteristics of APEC and its members. Substantial efforts have been made to ensure that the agenda has broad political appeal and is, in fact, practical and achievable.

We propose four substantive initiatives relating to climate change, energy and agricultural subsidies, sustainable fishing, and environmental standards. Given that the signatories to the Climate Change Convention are meeting in Kyoto in December 1997, APEC should promote cost-effective and flexible approaches to mitigate the buildup of greenhouse gases in the atmosphere that have the potential to contribute to climate change. In particular, APEC's members should support a *joint implementation* initiative as a way to promote North-South collaboration on projects to reduce greenhouse gas emissions.

Recognizing that while the ultimate aim of environmental policy should be to make the polluter pay, we suggest APEC begin by stopping "pay-the-polluter" programs. Specifically, APEC should lead a multilateral effort to reduce *agricultural and energy subsidies*. Such an initiative not only offers significant economic welfare gains but promises to reduce environmental harms resulting from the misallocation of resources for which subsidies

are responsible. Moreover, since APEC's commitment to "full" free trade implies eliminating export subsidies and import controls, much of this proposal simply requires renewing and clarifying the Bogor commitment.

APEC countries should also consider introducing a regionwide *tradable fishing permit system* to return the Pacific fisheries to sustainability, thus ensuring a stable and secure supply of seafood for the region's citizens. In addition, consideration should be given to an *environmental standards* initiative that strengthens the enforcement of existing environmental regulations and encourages convergence or, where appropriate, limited harmonization of environmental product and process standards. Addressing standards in this manner would simultaneously address fears that environmental regulation will become a barrier to market access for developing countries and that high environmental standards will place developed countries at a competitive disadvantage.

To support the initiatives proposed, a number of institutional reforms will be required: the creation of an environment committee to oversee APEC's environment program, track key environmental indicators, and coordinate a regional capacity-building program; the establishment of an environmental advisory group charged with making proposals to APEC's leaders; and the development of an environmentally sensitive dispute mediation procedure. Much of the proposed action agenda will be self-funding or even result in an overall reduced need for government moneys. The proposed institutional innovations will, however, entail modest resource commitments; to this end a small APEC environment fund, to which APEC members could voluntarily contribute, would be required.

We conclude that economic integration and environmental protection can be achieved together, but only if APEC both responds to a difficult challenge and takes advantage of a unique opportunity. The challenge is to ensure that environmental issues do not become the battleground for competing conceptions of regional integration and globalization. If such skirmishes become widespread, economic openness is likely to be the casualty. Beyond the need to react to potential economy-environment conflicts, there is an important opportunity to strengthen the evolving Asia Pacific community. Specifically, by developing a mutual understanding of the seriousness of environmental issues and the elements of a common response, APEC's members can strengthen the social supports for continuing economic integration.