



Wilson Center Hosts Forum on HIV/AIDS in Southern Africa

The number of HIV/AIDS cases in Southern Africa continues to grow at an alarming rate. 70 percent of all people with HIV worldwide lives in Southern Africa. South Africa, with more than 4 million people infected (1 million of whom are women between the ages of 20 and 29), has the largest and fastest-growing HIV/AIDS population in the region. In neighboring Botswana, 35 percent of adults has HIV/AIDS. The disease has afflicted more than 10 percent of the adult populations in 15 other African countries.

The Wilson Center Director's Forum "HIV/AIDS and Human Security in Southern Africa" raised awareness of the disease's extent and consequences and offered an opportunity to discuss potential solutions. The forum (which was co-sponsored by the Center's Africa Project, Environmental Change and Security Project, and *Dialogue*) featured Her Excellency **Makate Sheila Sisulu**, South African Ambassador to the United States, as well as former Congressman **Ron Dellums** (president of Healthcare International Management Company and chair of the President's Advisory Council on HIV/AIDS) and Dr. **Anthony Fauci**, director for the National Institute of Allergy and Infectious Diseases at the National Institutes of Health (NIH). More than 150 people attended and many more watched this forum on local television and on the Center's first live Web cast. Some viewers also submitted questions via e-mail for the panelists to address during the program.

Obstacles to Eradicating AIDS

Both Sisulu and Dellums emphasized that the cycle of poverty that plagues Africa prevents proper prevention and treatment of HIV/AIDS. Sisulu said that Southern Africa lacks the proper health, transport, and education initiatives needed to combat the problem. Fauci agreed that HIV/AIDS cannot be addressed in a vacuum and that poverty and other conditions also must be addressed. He added that while educational campaigns aimed at prevention in some developing countries have mainly targeted women, these women often face cultural obstacles to using preventative methods (such as the inability to request that their men use condoms during sex).

Throughout the world, stigmas about HIV/AIDS have cultivated denial, leading to stereotypes

and a general reluctance to talk about the disease. Sisulu noted that negative stereotypes abound despite legislation in South Africa outlawing discrimination against AIDS victims. Dellums urged people to deemphasize the moral aspects of HIV/AIDS (such as racism, sexism, and homophobia) and instead to view the disease as a global health and security issue.

Sisulu also warned that the approaches suitable for developed countries would not necessarily work in Africa. "When you have populations who are illiterate and you unleash on them these kinds of drugs, we unleash serious problems upon that community," she said. "Affordability aside, you need roads... clinics... doctors."

Fauci explained that the human immunodeficiency virus (HIV) inserts its own genetic code into the body's immune system cells, leading to the destruction and/or functional impairment of those cells. When a person's immune system cannot properly function, simple and generally undetectable ailments can become deadly. In developed countries, drugs are available to extend life expectancy, but no drug can cure the disease and the patient requires perpetual treatment. Fauci added that cumulative toxicity (in which many patients cannot tolerate available AIDS drugs) makes HIV/AIDS even more difficult to treat.

Efforts in South Africa and beyond

Sisulu said that a comprehensive HIV/AIDS program is in place in South Africa that focuses on prevention, treatment, care and research for vaccines; the program is a collaborative effort among the 14 countries of the Southern African Development Community. South Africa's budget for this program has increased seven-fold in the past five years, and Sisulu expects the budget to increase again as much over the next five years.

In addition to these budget increases, South African President Thabo Mbeki has chaired the Partnership Against AIDS, a project that unites government ministers with the private sector to discuss what concrete actions the public and private sectors have taken to combat HIV/AIDS. Sisulu said that President Mbeki has instructed all governmental sectors to fund their own HIV/AIDS programs so that education, defense, and other individual sectors sponsor

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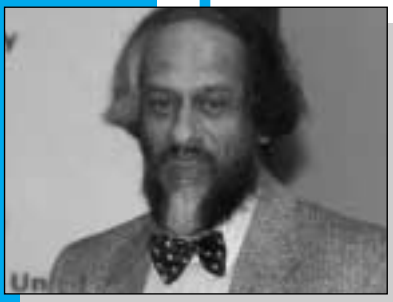
Environmental Security: A Developing Country Perspective

featuring **R. K. Pachauri**, Director, Tata Energy Research Institute (TERI) and
Vice Chairman, Intergovernmental Panel on Climate Change (IPCC)

and **Richard Elliot Benedick**, Deputy Director, Environmental and Health Sciences Division, Pacific Northwest
National Laboratory and President, National Council for Science and the Environment

sponsored by the Environmental Change and Security Project

“National security” is not simply a measure of military power or geopolitical strength—it also has major social, cultural, and human dimensions and implies a basic subsistence level and sustainable livelihoods, according to Dr. R.K. Pachauri, Director of the Tata Energy Research Institute in New Delhi, India. Pachauri discussed the concept of environmental security and what it means for the “silent majority” of the earth—the poor of the developing countries. Ambassador Richard Benedick served as discussant.



R. K. Pachauri

For the 2.8 billion people who live on less than \$2 a day, environmental conditions and personal health are intimately linked to economic status. But where precisely is the nexus

between poverty and environmental stress? Do we understand the links between poverty and natural resources? Can the poor take steps to ensure environmental security? For Pachauri, asking such questions is a critical step towards understanding the link between environmental security and poverty.

Pachauri broadly defined “environmental security” as the minimization of environmental damage and the promotion of sustainable development, with a focus on transboundary dimensions. “Environmental stress”—an important factor in this equation—is caused both by environmental resource scarcity (such as deforestation) and also by environmental resource degradation (such as polluted water). Economic vulnerability and resource dependency play key roles in the link between environmental change and the potential for violence and insecurity in the developing world. Developing countries also usually lack the infrastructure and institutions to respond to crises, thereby increasing the chance of violence. The majority of such disputes thus far have been solved amicably, but

Pachauri stressed that this might not be the case in the future.

Pachauri then identified five areas where poverty has either exacerbated or been exacerbated by natural resource stress. First, the continuing struggle to provide food and basic needs is increasing land degradation in the developing world. (In India, for instance, TERI researchers found that twenty-seven percent of soil cover currently suffers from severe erosion.) Second, worsening pollution increasingly impacts air quality, with vehicular traffic and industrial expansion the key contributors. Acid rain resulting from such pollution has become a critical issue in the South Asia region. Third, world climate change that has led to a rise in both temperature and sea level holds dire consequences for South Asia coastal regions. In Bangladesh, for example, hundreds of people are killed every year by a monsoon and flood cycle which has become more severe due to changes in sea-level and climate changes. Fourth, both water quality and quantity are at risk due to land-use changes, deforestation, and polluted waters both locally and across national borders. TERI has found that per capita water availability in India has declined from 6,000 cubic meters per year to 2,300 cubic meters per year in only fifty years. Finally, deforestation (due to agricultural expansion and trade in forestry products) is yet another challenge for South Asia and other developing regions. Over the last fifty years, forest cover in India has dwindled to less than fifty percent, and forest lands have been diverted to settlements, agriculture, and industry.

Before moving on to solutions, Pachauri argued the importance of understanding poverty as more than merely a lack of income. Poverty is people’s lack of ability to retain control over their living conditions. Thus, if a community (whether rural or urban) lacks empowerment to live in a way that is sustainable, poverty results. Other conditions (such as a lack of property rights; unsustainable resource exploitation; lack of

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Vanishing Borders: Protecting the Planet in the Age of Globalization

featuring **Hilary French**, Vice President for Research, World Watch Institute

sponsored by the Environmental Change and Security Project

Hilary French, a prolific author on environmental issues, presented the findings of her new World Watch Institute Press book (*Vanishing Borders: Protecting the Planet in the Age of Globalization*) to a broad audience of students, academics, policymakers, and representatives of international nongovernmental organizations as well as private industry. French's book attempts to answer two related questions: What is the impact of globalization on the environment? And which policy responses are needed to address this impact?

French called "globalization" a term not universally understood, and defined it as the increased flow of goods, ideas, and earth changes across international borders. She then identified four such "flows" that have an impact on the health of the planet: (1) rapid growth in trade; (2) capital flows; (3) ecological flows (such as invasive species, air, and water pollution); and (4) the flows of information (such as e-mail and the Internet). According to French, these flows present both broad challenges and significant opportunities for citizens and policy makers alike.

French cited three such challenges. First, the current economy is environmentally unsustainable, and globalization is further exacerbating its devastating impact. Second, hazardous industries are increasing in those countries with weak environmental standards and lax enforcement ability. Third, concerns about how environmental accords such as the Kyoto Protocol might retard economic competitiveness are hampering efforts to address climate change. But French cited current opportunities as well, including: (a) alternative power sources (such as wind power in India); (b) natural resource commodities growth (such as the rise in Mexico of organic agriculture); and (c) information flows (which have spurred an increase in citizen activism and environ-

mental movements). French pointed out the irony of the 1999 Seattle protesters using the very technology that they condemned in widening their call for action against globalization.

Finally, policy challenges lie ahead. French argued that environmental reform is needed within most global economic institutions, from the World Trade Organization to the World Bank to private lenders and investors. International environmental treaties also must be more specific than current ones, which are vague and/or lax in their monitoring and enforcement standards. And the role international nongovernmental organizations (NGOs) play in global governance must be recognized through procedural rights and increased partnership among the private sector, NGOs, and governments.

A lively discussion session followed, with many participants citing the role of other factors in this globalization and environment relationship, including population growth and migration, international crime rings, human health consequences, the attention (or inattention) of the media, and whether or not a global consensus exists on these issues. In response, French

argued that government must play a crucial role in managing globalization, and that capacity-building is being hampered by societal and governmental institutions that lack the wherewithal and/or the political will to address some of the above concerns. French also eloquently outlined some of the principle concerns that environmentalists have with globalization and identified some key policy actions needed to address these concerns. ■



Hilary French

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From The Field

Global Urban Health and Megacities

*Brian Hubbard, University of Michigan International Development Associate
placed with the Centers for Disease Control*

During 1998, The National Center for Environmental Health (NCEH)—one of Centers for Disease Control's ten major organizational/programmatic components—developed its strategic global health plan. As part of this process, the Center set its four highest global priorities, including: (a) childhood lead poisoning; (b) water/sanitation/hygiene; (c) urban health and megacities; and (d) micronutrient malnutrition. The goal of working with the University of Michigan and an International Development Associate was to substantially advance NCEH's agenda related to global urban health/megacities. Proposed activities of the Global Health Office of the NCEH involved addressing urban health data needs at various levels. The focus included both secondary and primary data collection, data collection on cities as a whole, and intraurban environmental health data and mapping. The Global Health Office also wanted to develop opportunities for primary urban environmental and health data collection. As a University of Michigan International Development Associate, I was invited to participate in the collection, assessment, analysis, presentation, and use of global health data that would be obtained from multilateral agencies, nongovernmental organizations (NGOs), and foreign governments.

After arriving at the NCEH's Atlanta based offices, my initial activities focused on the development of a global urban health database. The idea was to continue the research of the office that had concentrated on collecting environmental, demographic, economic, and health indicators on global megacities. Specifically, the goal was to collect data at a disaggregated level so that research could more easily be focused on intraurban disparities in health status. While working with secondary data sources in the Atlanta offices, two separate opportunities arose that would allow the office to collect primary data.

The first of these opportunities was located in Lima, Peru, where CARE/Peru had received funding from the CARE-CDC Health Initiative (CCHI) for the project, "Enhancing the Programming of Urban Environmental Health in Peru." The major project goals were: (1) to identify and analyze the major urban environmental health problems in poor peri-urban neighborhoods with a specific focus in the district of San Juan de Lurigancho in Lima and the city of Iquitos;

and (2) to develop strategic and operational plans to improve the quality of life for the poorest sectors of the Peruvian population. The project also had a number of specific objectives: (a) to create an inter-institutional committee to improve environmental health (CIMSA) that would be made up of representatives from local public and private organizations working in San Juan de Lurigancho and Iquitos; (b) to work with CIMSA in diagnosing local environmental health problems; (c) to work with CIMSA in developing long-term strategic plans to address identified and prioritized environmental health issues; and (d) to work with CIMSA in preparing a 24-month operational plan with accompanying project profiles. This project represented an important entry point for CARE into the critical subject area of urban environmental health in partnership with CDC. The complementary technical expertise of CARE and CDC addressed urban environmental health issues in a field setting that lies within CARE's scope of responsibility, especially given CARE's experience in community based participatory projects. The health of the urban poor is a largely-neglected area, and it is hoped that this partnership will enable CARE to generate other such major projects that address the issue through intervention.

As part of the CDC's technical responsibility in this project, I traveled to Lima, Peru in order to assist with the development of data collection instruments as well as to manage the data generated by the project over the 12-month duration of the work. The major focus of this effort was to utilize the information collected from San Juan de Lurigancho and the human settlement areas of Iquitos to develop impact indicators that were dependent on the specific problems or topics selected for diagnosis by the CIMSA in each of the Peruvian communities. Eventually, these impact indicators will be used to monitor the proposed interventions developed by CIMSA (as part of the strategic and operational plans) to address the urban environmental health problems in Lima and Iquitos. In the case of San Juan de Lurigancho, CIMSA decided to focus on three main problem areas: (a) food handling; (b) trash collection services; and (c) water (service delivery, quality, and quantity). Once these problems were prioritized, CARE/Peru and the CDC worked together to develop a methodology that would adequately assess these problems. The result was a

methodology that made use of the technical experience of the CDC; it used a systems approach to identify the environmental risks of the three problem areas and also made use of CARE's ability to develop a participatory approach to ensure project sustainability. As efforts were taken to strengthen CIMSA, the CARE/Peru and CDC team began collecting data from three primary locations: community kitchens, households, and schools. The data collection itself focused on three different areas: the storage and use of water; the provision, preparation and consumption of foods; and the storage and elimination of solid waste. Two main challenges presented themselves during this phase of the project.

Initially, as data was gathered in order to support the sampling frame used in San Juan de Lurigancho, it became very clear that sources of demographic data were often deficient. Furthermore, the situation in the human settlement areas of San Juan de Lurigancho is extremely dynamic; thus, confident, reliable, and up-to-date data are often nonexistent. Sometimes there are a variety of sources for the same data, which have been collected using a variety of methods that makes the data difficult to compare or non-comparable. Moreover, information is often times very old, and the funding and support to maintain important databases is often unreliable. As a result, data are frequently inaccurate. These findings have presented unique challenges to the project, but have also created opportunities to involve the community and to create greater participation among community members.

The second problem encountered in the project was the volatility of CIMSA. As CARE/Peru began to build the group of community representatives, it became apparent that political changes resulting from the new elections were affecting the organization and composi-

tion of CIMSA. However, with the passing of the elections and continued efforts to strengthen the participation within CIMSA, the CARE office now finds that it has developed a more autonomous and diverse group of community representatives. As an added component to the Urban Environmental Health Project, CARE/Peru has taken the responsibility to sponsor several workshops in Lima and Iquitos in order to provide feedback to the community. These events have included a three-day workshop in both San Juan de Lurigancho and Iquitos on the training of food handlers in food hygiene as well as a two-day environmental health workshop in Lima. Furthermore, CARE/Peru has made it a priority to pursue funding for community-based projects in both San Juan de Lurigancho and Iquitos. During the activities of the project, CARE/Peru staff have encountered smaller community groups in the confines of San Juan de Lurigancho that have already developed proposals to help develop their community. Therefore, CARE/Peru has worked with these smaller action committees to pursue funding sources.

The second opportunity for the Global Health Office of the NCEH to collect primary data took place in December of 2000. NCEH has forged a relationship with Dr. Cifuentes of "El Instituto de Salud Pública" (INSP) in Cuernavaca, Mexico. Recently, Dr. Cifuentes has started to design a similar urban environmental health study that will have project locations in both the central part of Mexico and along the US-Mexican border. It appears that a great deal of data collection has already taken place and that some of the main responsibilities for the CDC and Michigan International Development Associate will be to provide technical support and shared experience in the generation of environmental health

indicators based on the results of the collected data. Both institutions also hope to incorporate the use of GIS in the mapping of the environmental information. ■



*Brian Hubbard
on site in Peru.*

Book Review

Five Cities: Modeling Asian Urban Population-Environment Dynamics

Gayl D. Ness with Michael M. Low for AUICK and UMPEDP
Oxford: Oxford University Press. 2000. 311 pp.

Reviewed by Jennifer L. Turner

The idea that population growth is a contributing factor to environmental degradation is deeply engrained within many population-environment studies (as well as a key assertion in the work of advocacy organizations such as Population Action International). However, in-depth studies that explicate the specific relationships between population and environmental trends are less common. Even rarer are systematic comparative studies on *urban* population-environment dynamics. *Five Cities: Modeling Asian Urban Population* models urban population-environment dynamics in five Asian cities and therefore represents an important contribution towards filling this knowledge gap.

Five Cities was a collaborative study conducted by the Asian Urban Information Center of Kobe (AUICK) and the University of Michigan Population Environment Dynamics Project. The University of Michigan Population Environment Dynamics Project was formed in 1988 to promote interdisciplinary work on population-environment dynamics. The City of Kobe and the United Nations Population Fund jointly created AUICK in 1989 to carry out studies of urban problems in Asia. The results of these studies are to be disseminated to Asian urban administrators and used to develop training programs.

In order to delve into the black box of urban population-environment dynamics, the authors constructed a model to map out some key demographic and environmental trends and interactions in five Asian cities—Faisalabad (Pakistan), Khon Kaen (Thailand), Cebu City (Philippines), Pusan (South Korea), and Kobe (Japan). These cities were selected not simply for economic diversity but also because of their size. While considerable research and attention has focused on megacities in developing countries, medium-sized cities (such as the five in this study) that facing identical pressures of urbanization are rarely targets of research. Better understanding of population-environment trends in medium-sized cities could highlight actions that could be taken now to avoid

explosive urban concentration and worsening environmental degradation.

The Model for Urban Population-Environment Dynamics

The opening historical overview of *Five Cities* compares demographic and urban transitions in industrialized and developing countries in a simple, straightforward manner that makes its findings very insightful to those unfamiliar with this field of study. The authors also present a model for recognizing and understanding urban population and environmental problems that initially appears quite straightforward and accessible. The discussion of the model aims to show how simple models can provide insights into complex phenomena.

Since one of the main goals of the book is to disseminate studies that are accessible and non-intimidating to urban administrators, this simplified approach to modeling is clearly intentional. Urban managers in developing countries with rapid rates of urbanization and population growth need accessible analytical tools to enable them to assess demographic and environmental trends and interactions in their own cities. It is thus not surprising that the variables included in the model focus on factors over which urban administrators have some direct control.

The model of urban population-environment dynamics presented in *Five Cities* includes two types of information: (a) data on environmental conditions; and (b) data on key institutions (e.g., economic, political, and social institutions). The central concern of the book is how these environmental and institutional factors impact the quality of life of the urban citizens. The key environmental variables chosen for measurement in the model include:

- Air quality
- Energy (supply and types)
- Land use (patterns of land use and housing trends)
- Water quality and quantity

The three institutional sectors that were considered to most strongly interact with urban population-environment dynamics and impact the quality of life include:

- Transportation sector (vehicle growth, passenger travel pattern, and road accidents)
- Social services (health, education, and family planning)
- The Social-Political-Economic-Cultural System (SPECS)

Five Cities gathers quantitative and some qualitative data since 1970 on the seven variables for the cities under study as well as information on their rates of birth, death, and migration; it then projects trends to the year 2020 based on the data. Ness and Low used the computer program STELLA (which utilizes time series information) to model each city's possible population-environment trends. For example, the flows of births, deaths, and migration can be factored together and used to project a variety of possible scenarios of future population growth.

Despite its initial impression of simplicity, the methodological section of the book does demand several readings, for it is not readily apparent how the model is *specifically* capturing the interaction of population dynamics with the environmental and institutional variables. In other words, while the model is titled "urban population-environment dynamics," the text explanation and figure of the model appear to address mainly environmental and institutional dynamics. Only in some of the case studies does it become clear that the authors focused on how population change was impacting on or interacting with the seven variables. The case studies also clarify how major shifts in population can work through social or economic institutions to influence human health positively or negatively. For example, massive in-migration to a city can overwhelm the social service sector and lower its ability to provide sufficient health-care services.

The unstated belief in *Five Cities* appears to be that population change is *the* defining factor for quality of life. The book's analysis and model would have had greater clarity, however, if it had been clearly stated that population change is the driving force for nearly all the variables in the model. While the model is a dynamic one, population change in the case studies appears to be acting as both a dependent and an independent variable. Feedback effects are clearly taking place, and these need to be captured in future iterations of the model. In the future, AUICK researchers may wish to focus on parts of this current model to construct more detailed feedback loops. A good example for this elaboration would be the model designed by Catherine Locke, et al (Catherine Locke, W.

Neil Adger, and P. Mick Kelly. 2000. "Changing Places Migration's Social and Environmental Consequences." *Environment* Vol. 42 (7):24-35.), which delineates the social and environmental impacts of migration.

At the end of each case study, the authors utilize the assembled environmental, institutional data and interviews with local urban administrators to make an assessment of how the population and environmental trends are impacting the quality of life in each city. Quality of life represents the outcome of the dynamic interaction of these variables. In the opening chapter presenting the model of urban population-environment dynamics, however, this "quality of life" concept was somewhat loosely defined. Only at the end of the book (p. 260) do the editors present much clearer criteria for this variable: its components are health, cleanliness of air and water, educational opportunities, ease of transportation, the quality of government services, and available housing. Again, if these explicit criteria been introduced earlier in the book it would have helped to clarify the model.

The least explained (and subsequently, the least explored) variable of the model in *Five Cities* was the broadly defined Social-Political-Economic-Cultural System (SPECS). This component is meant to capture the arena in which policy decisions that affect environmental and institutional sectors take place. To capture these qualities of the urban policy environment, the AUICK researchers aimed to include information on the urban political and administrative systems as well as discussion of how culture shaped the definition and execution of authority.

Some of this SPECS information was scattered throughout the case studies, but it was only directly addressed in a very short analysis in the next to last chapter of the volume. Ness and Low explain how the SPECS evaluation (particularly its descriptions of the political dynamics between the central governments and the urban areas and within the urban governments) could be viewed as criticism of the government. The editors understandably did not wish such remarks to be associated with specific authors, since the main goal of this volume is to encourage urban governments to collect information on urban environment and population trends and to use that data to make projections that better inform urban planning and decision making. One can assume that the targeted urban administrators already understand the political, social, economic, and cultural environment in which they operate day to day.

While the more superficial SPECS analysis, particularly of the intergovernmental politics, may hinder non-regional experts from completely understanding the influence of the SPECS factors, *Five Cities* generally meets its goal of remaining accessible to urban adminis-

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programs in addition to what the national government contributes. Sisulu also publicly addressed the controversy over Mbeki's questioning of the link between HIV and AIDS earlier this year. She said that the president was misunderstood and that he was simply calling for a comprehensive solution, a theme she reiterated throughout this forum.

Some countries have succeeded in bringing HIV/AIDS rates down and can serve as models for other countries. Fauci said that private organizations have partnered with the governments of Uganda and Senegal to focus on education, testing, and condom distribution. Senegal has implemented a comprehensive treatment program for all sexually-transmitted diseases, including HIV/AIDS.

Fauci noted that in the United States, the NIH spends 12 percent of its entire budget (some \$2.1 billion) on HIV/AIDS research. Currently, 17 HIV drugs have been approved and in use nationwide. In addition, pharmaceutical companies have paired with government agencies to increase availability of treatment.

Suggested Solutions

Sisulu appealed for international cooperation in confronting the Southern African HIV/AIDS crisis. "I want to underscore the need to increase partnerships and collaborative action," Sisulu said, "and to respect and accept the fact that African countries...are doing the best we can with the limited resources that we have. Therefore, work with us! Work with us so that we are able to work with our people. We, as a government, cannot manage this pandemic on our own."

Sisulu added that Southern African countries oppose additional loans to deal with HIV/AIDS because loans only lead to more debt and dependency. She urged the international community to assist the region in a sustainable way. Fauci suggested partnering nongovernmental and governmental organizations to make HIV/AIDS drugs deliverable and usable in developing countries.

Sisulu also emphasized the need for HIV prevention campaigns to target men more effectively. Fauci agreed that men should share the burden of prevention, adding that something must be done to help change the mindset of how men view and treat women in these countries.

Dellums suggested a Marshall Plan approach (the 1948 U.S. plan that sent billions of dollars of foreign aid to Western Europe in the wake of World War II) to the crisis. He proposed a large-scale public-private partnership that would infuse billions of dollars into Southern Africa to improve roads, health care, and education as well as to provide training for program sustainability. His plan also contains a debt forgiveness component in order to give the region freedom to build an infrastructure to cope with HIV/AIDS and to improve the quality of life. ■

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entitlements; restricted or denied access to resources such as fuel; the impact of science and technology; global economic factors; and national economic policies) serve to strengthen the cycle between environmental degradation (both immediate and long term) and poverty.

So what can the world do to combat this situation? Pachauri identified six concrete actions that must be undertaken. First, access to resources must be addressed through ensuring entitlements for the poor, building and sustaining ability, ensuring the property rights of the community over commons, creating market access, and creating rural enterprises and jobs. Second, governance must focus on participation, the capacity and ability to address crises, and the building of political, economic, and social infrastructure. (Pachauri argued that even the developed world is weak in this area, particularly with regard to the central role of energy.) Third, property rights must be redefined with regard to common resources. Fourth, the world must reorient the development and use of science and technology. Fifth, national economic policies in their current status are insufficient because they do not ensure equitable growth or internalize environmental costs (for instance, national income accounts do not count the cost of environmental degradation). In addition, regulatory bodies are weak or nonexistent, and centralized policies benefit only a small proportion of the population. Finally, Dr. Pachauri suggested that global economic policymakers should make more effort (a) to promote traditional product markets, (b) to push development assistance agencies for a greater stress on poverty reduction, and (c) to address climate change through economic measures.

As discussant, Ambassador Richard Benedick emphasized that these environmental security issues are global problems that require global solutions. He stressed the importance of Pachauri's focus on governance as well as science and technology in the crafting of solutions. Most importantly, Benedick reiterated that solving poverty and the resulting environmental degradation requires more than just money. Developed countries are just as responsible for ensuring the sustainability of not only the North but of the South.

Participants discussed the importance of population growth and migration, the growth of civil society, and the too-often-ignored impact of overconsumption in rich countries. There was agreement that, while there are many potential synergies for global, regional, and national goals, too much focus often goes into international agreements that are too weak and lack any real authority because their signatories fear loss of sovereignty. Another critical factor blocking resolution of many of these issues is the short-term focus of both politicians and the private sector at the expense of equitable, long-term solutions. ■

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trators. The compilation of such a rich array of data for each city also provides a valuable source of material for future researchers interested in these cities. If this volume were to be used as a textbook for a development and environment course, this lack of in-depth information on political dynamics could be supplemented by a comparative Asian politics text.

The Five Case Studies

The majority of *Five Cities* is devoted to the five case studies, presenting data and projections of trends for population, transportation, energy consumption, social services, economic growth, and environmental quality. The AUICK researchers have worked quite closely with the urban administrators in each of the five cities for a number of years, which explains how they succeeded in gathering an impressive amount of data for each of these sectors. While the five cities examined in this study differ in terms of natural resource base as well as political and socio-cultural backgrounds, as one moves through the case studies it becomes clear how the urban managers in each city all face some similar challenges in balancing population and environmental pressures.

Where concise numerical data were missing (most notably from Cebu City and Khon Kaen), the researchers used interviews with local administrators to help build estimates for some demographic and environmental factors. While the severe gaps in data in cities such as Cebu may weaken the ability to create reliable projections, this paucity of information underlines a serious challenge urban administrators face in many developing countries—planning without sufficient information. In all five cities under study, urban migration and the extension of city boundaries was not systematically tracked. The researchers were thus forced to make estimates on the flows of migration. Such estimates on migration trends potentially can help city managers to better plan for health care and education provision.

Methodological challenges and critique of model design aside, this volume presents a succinct history and a well-balanced overview of the past development trends in five diverse Asian cities. A major strength of the study is that it builds on previous AUICK research in these cities and drew in a large number of collaborative partners to collect data on demographic, environmental, and economic trends since 1970. With such a rich amount of information, each case study provides insights into each city's historical background and structure of the urban administration. Each chapter also includes a brief discussion of culture and customs that strongly influence demographic trends, the treatment of women, and political decision making. This large amount of information on environmental, population, and institutional trends was used to inform a short analysis of the quality of life at the end of every chapter.

In the Kobe case study, the quality of life analysis concluded that “[t]he population-environment relationship in Kobe has been a benign and productive one. The population has grown substantially while the environment has become healthier” (p. 240). It is then briefly mentioned that much of this success is attributed to the progressive thinkers within the Kobe city government and active participation of the citizens in shaping their urban management. Unfortunately, there are few details on the activities of the citizens. The analyses for each city could have benefited from discussion of the roles citizen groups and other non-state actors (e.g., the news media) play as catalysts for some of the positive changes taking place.

Short anecdotes scattered throughout the volume provide unique insights into the challenges urban administrators are facing in these rapidly growing Asian cities, such as how the Korean government's imposition of green belts around cities has both increased the quality of life but also severely restricted urban planning flexibility. Another example is how the lack of land for development has driven up land prices in Pusan, which in turn has motivated many factories to relocate to less expensive parts of Korea. Such short anecdotes help make up for the lack of systematic analysis of intergovernmental politics in the volume.

Lessons Learned and Future Research

Ness and Low present comparative analyses of the five case studies and directions for future research in the final two chapters of the volume. After working through five case studies replete with numbers and trend projections, one is hungry for some rich comparative analysis. Conclusions from the comparisons range from the predictable to the insightful. For example, it is a logical lesson that the slowing of population growth by reducing fertility enables urban administrators to more easily manage their city's population-environment relationship. The case studies showed how Kobe, Pusan, and Khon Kaen are clearly benefiting from past declines in fertility: lower demands on health and educational facilities in these cities free up resources for their governments to spend on their citizens.

The study of Khon Kaen in Thailand raised an insightful linkage among urbanization, education, and migration trends in developing countries—namely, that rural people send their children to the cities for a few years to receive a better education. This explains why Khon Kaen primary and secondary enrollment figures were greater than expected. Another insightful conclusion was drawn from the population projections for Khon Kaen, Cebu City, and Faisalabad. These projections highlighted the potentially destabilizing impact in-migration could have on city services and environmental quality. Of the five cities, Faisalabad is the most vulnerable to massive in-migration.

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Project News

UPDATE

- Staff changes at ECSP:

In October 2000, **Shanda Leather** was promoted to Deputy Director.

In January 2001, **Robert Lalasz** replaced Jessica Powers as Editor.

In January 2001, **Richard Thomas** replaced Karin Mueller as Production Editor.

- Please note that **Issue 6** of the ECSP Report is now available online. The PDF file can be found on our Web site at http://ecsp.si.edu/Ecsp_pdf.htm#report6.

- ECSP has recently received \$50,000 from USAID Office of Population through a cooperative agreement with the **University of Michigan Population Fellows Programs** to work on issues relating to population, environment, and health. We will be undertaking specialized programming over the next 18 months to two years to explore this particularly fascinating nexus of issues.

- The Wilson Center's *Dialogue* program and ECSP have produced a **video** of the September 2000 meeting on HIV/AIDS in southern Africa highlighted earlier in this issue. Copies are available by contacting ECSP directly. In addition, you can view the video online at <http://uwvics.si.edu/NEWS/aids.htm>.

- ECSP staff members will take part in the upcoming **International Studies Association** annual convention in Chicago, 20-24 February 2001. ECSP materials and staff members will be at the Woodrow Wilson Center booth in the convention's exhibition hall. More information on the ISA convention is available at <http://csf.colorado.edu/isa/chicago/>.

- ECSP is benefiting from a number of Wilson Center Fellows and Public Policy Scholars currently in residence at the Wilson Center. **William Krist**, formerly of the American Electronics Association, is writing on trade and the environment. **Ellen Messer** of Brown University is writing on hunger and food security. **Michael White** of Brown University is writing on urbanization, environment and development. **Murray Feshbach**, formerly of Georgetown University, is writing on demography and health in the former Soviet Union. **David Rejeski**, formerly of the Council on Environmental Quality, has also joined the staff as the Flum Scholar to study and facilitate strategic and long-range planning within government. All of these scholars and practitioners have contributed directly to ECSP activities.

The Environmental Change & Security Project's E-mail Forum for Environment, Population and Security Issues

The Environmental Change and Security Project (ECSP) is pleased to announce its new e-mail forum for environment, population and security-issues-ECSP-FORUM. This forum, which operates via e-mail, serves as a means for practitioners, scholars and policymakers to participate in a dialogue with others in the community. The purpose of the ECSP-FORUM is to provide a forum for discussing relevant issues and research, posting current policy questions, and listing relevant policy, scholarly and teaching resources. Accessible from the ECSP website or by e-mail, it is a convenient and resourceful tool for all interesting in the topics of environment, population and security. Discussions will be archived and fully searchable through the ECSP website, providing a useful reference point for accessing information at a later date. There is no charge to subscribe.

To subscribe to the ECSP Forum, send an e-mail to listproc@listproc.net and

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The comparison of environmental problems in the five cities also emphasized some common problems. For example, urban air quality among the cities illustrated how poverty can increase air pollution while wealth in urban areas can lead to better protection of air quality. While air and water quality are the most serious pollution problems these urban administrators face, future models of urban population-environment dynamics utilized by AUICK should more systematically include the challenge of solid waste disposal. In many developing countries urban wastes are often poorly controlled and dumped in or near the city, posing risks of injury and exposure to citizens. Projections of solid waste and particularly of toxic substances should be included in future projections, for city administrators also need to prepare for such long-term pollution problems.

Without collecting data on population, environment, and social services, urban administrators are deprived of information they need for effective long-term planning. Perhaps one of the strongest lessons from the five in-depth studies of urban population-environment trends was that the authors helped to identify key areas that city administrators could more systematically monitor and measure. One of the key recommendations the authors propose to promote better monitoring and mod-

eling of population-environment dynamics in these cities is that city-university partnerships be created to assist city managers in data collection and analysis.

After the comparative analyses and discussion of lessons learned, Ness and Low move to thoughtful questions of modeling population and environmental dynamics in an urban system. Specifically, they focus on the utility of using closed versus open modeling and how to incorporate more complex environmental and population dynamics into the model. The model in this book was intentionally designed to be a closed-system model. In the concluding chapter, however, the authors propose examples of how a more open-model could be developed to help expand the analysis to factors outside the cities that could drive urban population and environmental trends. Equally important would be how a more open-model could emphasize the impact a city's population and environmental management could have on outside areas. In light of the strong working relationship AUICK researchers have with numerous urban administrators in Asia, AUCIK possesses a strong foundation to further expand their model of urban population-environment dynamics. ■

□ *Jennifer Turner is a Senior Program Associate for the Environmental Change and Security Project at the Woodrow Wilson Center.*

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Published tri-annually by
The Woodrow Wilson
Center's Environmental
Change and Security Project

EDITOR

Shanda Leather

PRODUCTION & DESIGN

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This publication is made possible through support provided by the Office of Population, U.S. Agency for International Development, and the University of Michigan, under the terms of Grant No. HRN-A-00-00-0001. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Agency for International Development, the University of Michigan, or the Woodrow Wilson Center.



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Congress as the nation's memorial to President Woodrow Wilson. Through its renowned fellows program and a range of regional and functional programmatic activities, the non-partisan center fosters scholarship and dialogue in the humanities and the social sciences. As such, The Wilson Center serves as an ideal meeting place for scholars and practitioners of widely divergent ideological and professional backgrounds. Meetings are marked by free intellectual exchange, reflecting a tradition of bringing together people who differ in discipline, profession, and nationality, but who share an interest in a subject and in having their views challenged in lively debate. The Wilson Center is directed by The Honorable Lee H. Hamilton and its Board of Directors is chaired by Joseph A. Cari, Jr., Esq. Prior to becoming Director, Lee Hamilton served for thirty-four years as a United States Congressman from Indiana. He served as a member of the Committee on Foreign Affairs, now the Committee on International Relations, for his entire tenure.

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Environmental Change and
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Since October 1994, the Woodrow Wilson Center's Environmental Change and Security Project (ECSP) has provided specialists and interested individuals with a "road-map" to the myriad conceptions, activities and policy initiatives related to environment, population and security. The Project pursues three basic activities: (1) gathering information on related international academic and policy initiatives; (2) organizing meetings of experts and public seminars; and (3) publishing the *ECSP Report*, *The China Environment Series*, and related projects. ECSP is directed by Geoffrey Dabelko and housed in the Wilson Center's Division of International Studies—headed by Robert S. Litwak. ECSP explores a wide range of academic and policy-related topics: various theoretical linkages among environment, population and security; how environment, population and security ideas are nested in the broader debates over redefining security; the ways in which policymakers in the United States and other countries are utilizing these ideas and making related policies; and how governments, NGOs, businesses, and other organizations respond to the causes and symptoms of environmental and demographic issues.

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