

2 May 1997

The Findings of the Environmental Scarcities, State Capacity and Civil Violence Project: China, Indonesia and India

CHARLES VICTOR BARBER, WORLD RESOURCES INSTITUTE

JEFFREY BOUTWELL, AMERICAN ACADEMY OF ARTS AND SCIENCES

ELIZABETH ECONOMY, COUNCIL ON FOREIGN RELATIONS

THOMAS HOMER-DIXON, PEACE AND CONFLICT STUDIES PROGRAM, UNIVERSITY OF TORONTO

VALERIE PERCIVAL, UNITED NATIONS

VACLAV SMIL, DEPARTMENT OF GEOGRAPHY, UNIVERSITY OF TORONTO

[Editor's Note: The following summaries are from the Project on Environmental Scarcities, State Capacity, and Civil Violence, a joint project of the University of Toronto and the American Academy of Arts and Sciences. This meeting addressed these studies.]

SUMMARY OF THE CHINA CASE STUDY

by *Elizabeth Economy*

Since 1978 and the onset of reform in China, water scarcity in many regions of China has intensified. Unrestrained economic development and rapid societal change without attention to the ramifications of these transformations for the environment and natural resource use have placed China's already threatened water supply under tremendous stress. Population and water use per capita are growing; the physical condition of China's water facilities is aging; competition between the potential uses for water is increasing; aquifers are becoming depleted; water pollution is rising; and the societal costs of subsidizing increased water usage are increasing.

Chinese residents currently face a shortage of 28.8 million cubic meters of water daily. According to one Western expert, these shortages cost the Chinese economy between 5 billion yuan and 8.7 billion yuan¹ (US \$620 million and US \$1.06 billion) in 1990. The China case study examined the impact of growing water scarcity on state capacity. Perhaps surprisingly, it concludes that while water scarcity contributes to diminish state capacity, it does so primarily in an indirect manner and over the long term. The more compelling story is that political and economic reforms are transforming the very nature of the state. This process, in turn, has implications for the overall capacity of the state to develop and implement the policies necessary to respond to water scarcity in the PRC.

The reform process has ramifications for several characteristics of state capacity: the state's legitimacy, its fiscal strength, its coherence and its reach. Frequently, the relationship between the reforms and these factors is a negative one. The reforms have engendered an overwhelming emphasis on economic growth, a devolution of authority from central to pr

have engendered during the past almost two decades. Thus, while Beijing is racing to redress the negative institutional and environmental ramifications of the reforms through campaigns, exhortations, and new laws, it is not willing (or in some cases not able) to implement policies that might slow the pace of economic development, such as raising the price of water, increasing pollution discharge fees, or devoting sufficient state financial resources for local water conservation or waste management projects.

In this scenario of overall diminishing state capacity and growing demand for resources, the impact of water scarcity on state capacity might be expected to be dramatic. However, it is not. In some respects, the potential negative ramifications are mitigated by opportunities presented through the transformation of state capacity by the reforms. Nonetheless, there are important signals that over the longer term, water scarcity may indeed significantly diminish state capacity in several key areas.

Both demand- and supply-induced scarcities of water are increasing demands on the state for new infrastructure such as dams, canals, wastewater treatment facilities, and irrigation systems. This is placing greater stress on the fiscal strength of the state. Beijing has attempted to shift a greater portion of the burden of financing these projects on to the local and provincial governments as well as the international community. In many cases, however, the provinces lack the resources to make such substantial investments. Even Beijing has been stymied by the overwhelming costs

associated with its desired river diversion project. In response to the growing responsibility of local leaders to pay infrastructure costs, they have used China's integration with the international community to turn to the international community for substantial funding assistance for these infrastructure projects.

While the short-term implications of this behavior appear relatively benign, there are potentially quite serious longer range ramifications for state capacity. First, the autonomy of the state may be diminished by a greater reliance on foreign lenders. These lenders not only provide financial aid but also insist on additional politically sensitive measures such as pricing reform. In addition, a diminished role for Beijing in the financing of projects and greater dependence on local sources of funding also suggests a longer-term decline in the reach of the state that will not be limited to resource management issues. Local leaders, especially at the provincial level, have become increasingly vocal in their opposition to some state policies. For example, the Sichuan governor's vocal response to Beijing's inadequate financial contribution for resettlement engendered by the Three Gorges Dam indicates a threat to legitimacy of the state. In its most extreme form, this loss of legitimacy and decline in the reach of the state contribute to social instability and violent demonstrations of the sort that have occurred among those slated for resettlement or already displaced along the Yangtze River.

Both demand- and supply-induced water scarcity result in substantial interprovincial conflict. Contin-

THE CASE STUDY OF BIHAR, INDIA

by *Thomas Homer-Dixon and Valerie Percival*

Despite robust economic growth in the last few years, India is beset by a daunting combination of pressures. Population growth stubbornly remains around 2 percent; the country grows by 17 million people a year, which means its population doubles every 35 years. Demographers estimate that—even under the most optimistic estimates—India's population will not stabilize below 1.7 billion. Cropland scarcity and degradation affect large areas of the country. While data on the state of India's forests are of low quality, fuel-wood shortages, deforestation and desertification can be found over wide areas.

Resource scarcities in many rural areas, combined with inadequate opportunities for alternative employment, have produced rural-urban migration. The growth rate of India's cities is nearly twice that of the country's population. Their infrastructures are overtaxed: Delhi now has among the worst air pollution of any urban area in the world, power and water are regularly unavailable, garbage is left in the streets, and the sewage system can handle only a fraction of the city's wastewater.

India's recent urban violence was concentrated in the poorest slums. Moreover, it was not entirely communal violence: Hindus directed many of their attacks against recent Hindu migrants from rural areas. The rapidly growing urban population also leads to evermore competition for limited jobs in government and business. Attempts to hold a certain percentage of government jobs for lower castes have caused inter-caste conflict.

These pressures express themselves in a social environment already stressed by corruption and communal animosity. Political parties, including the Congress Party, increasingly promote the interests of only narrow sectors of society. The central government in Delhi and many state governments are widely perceived as incapable of meeting the society's needs and have lost much of their legitimacy.

ued population growth, as well as increasing demands from industry and agriculture, contribute to diminish the coherence of the state by engendering a growing number of interprovisional claims to these water resources. Rising pollution levels also result in growing interprovisional disputes over the responsibility and costs of treatment facilities and clean-up costs. These problems are endemic with little prospect for immediate resolution. Moreover, Beijing has yet to develop an effective mechanism for resolving such conflicts.

Water scarcity and pollution also occasionally have triggered violence in rural and urban areas. There is no evidence that these are more than isolated incidents with limited ramifications over the long term. It is worth mentioning, however, the extreme scenario in which security continues to grow, especially in urban areas, and a more sustained challenge to the state is posed. In continuation with a contraction in the economy and the continued spread of corruption and abuse of power at both the elite and local levels, a much more threatening form of urban civil violence, involving migrant workers, unemployed state enterprise workers, grain-short urban dwellers, and disgruntled peasants, might arise.

In the final analysis, water scarcity probably does not pose a substantial or direct challenge to state capacity. Moreover, as provincial and local regions grow wealthier, they may replace the center as the primary initiator and financial sponsor of environmental protection policies. Thus, while state capacity may be di-



have created a wholly new class of educated, increasingly mobile, urban, and informed people with greater expectations for political participation and less tolerance for autocratic or corrupt behavior on the part of government officials and agencies.

The concentration of natural resource-based wealth in the hands of a small political-economic elite, in which the president's family is very prominent, is under growing attack from many parts of society. The power and conspicuous consumption of these elites—often ethnic Chinese in league with members of the president's family and other regime figures—is increasingly unacceptable to a general public long suspicious of the country's wealthy Chinese minority; to the rising middle class which sees its own business prospects constrained by cronyism; and to elements within the military and civilian state elite itself who see the growing power and profile of the Chinese conglomerates and “the kids” as

the political and economic strategies of the New Order. They have been a substantial source of state revenue, a resource for political patronage, a safety valve

To ameliorate growing scarcities of renewable resources, minimize the spread of scarcity-induced conflicts, and protect the capacity of the state from erosion, the New Order must take its “ingenuity gap” seriously, and take steps to close it. Failure to unfetter the generation and delivery of ingenuity needed to deal



9 May 1997

Civilian-Defense Partnerships on Environmental Issues: Past Lessons and Successes, Potential Pitfalls, and Opportunities

KENT BUTTS, U.S. Army War College's Center for Strategic Leadership

SHERRI GOODMAN, Deputy Undersecretary of Defense for Environmental Security

MARC CHUPKA, Assistant Secretary of Energy for Policy and International Affairs

JONATHAN MARGOLIS, Senior Advisor for Regional Policy Initiatives, Department of State

WILLIAM NITZE, Assistant Administrator for International Activities, Environmental Protection Agency

DoD ROLE/CONTRIBUTION/COMPARATIVE STRENGTHS/FUTURE PLANS

SHERRI W. GOODMAN

The Department of Defense has a long history of working to protect the environment. There are now over eight thousand environmental professionals working in the Department of Defense. Senator Inhofe, chair of the Armed Services Subcommittee on Military Readiness, said last month that environmental issues affect the quality of life, military training, and readiness of our military facilities.

We now realize that there is a linkage between environmental degradation and resource stability around the world. In his Earth Day remarks this year, Defense Secretary Cohen said, "environmental protection is critical to the Defense Department mission, and environmental considerations shall be integrated into all of its activities." We have evolved from perceiving environmental considerations as a strain on military activities to viewing them as opportunities to serve as good stewards. From the top generals to the newest recruits, the military today makes environmental protection a matter of business.

At home we are committed to building partnerships with other agencies like State, EPA, Energy, and with citizens and non-governmental organizations. One of the things that we are trying to bring to the table is our ability to work with the different militaries around the world. We have tried to reach out with a regional approach, working closely with the unified commands within the Department of Defense: Southern Command for the Western Hemisphere, European Command for Europe and Africa, Pacific Command for the Asia-Pacific region, Central Command for the Middle East, and then Atlantic Commands for the Atlantic area. Whether regionally or with individual militaries, DoD's environmental experts can help build institutional and intellectual capacity within these nations to address environmental issues.

We are working under the terms of our Memorandum of Understanding (MOU), with EPA and DoE to leverage the resources that our agencies have. For example, there is an effort among Russia, Norway, and the United States to bring U.S. environmental management techniques and methods to the Russian military, particularly the Russian navy. The Russian navy's activities include operations in the Kola peninsula, which is not far from the Norwegian border. As virtually any Norwegian will tell you, the threat Norway feels from Russia today comes not from weapons, but from contamination by Russian fleets very close to the Norwegian border. The Norwegian defense minister approached the U.S. Secretary of Defense in June 1994 and asked for help in engaging the Russian military on these issues.

In September 1996, Secretary of Defense William Perry and the Russian and Norwegian defense ministers signed a Declaration on Arctic Military Environmental Cooperation (AMEC). Since then, the U.S., Norwegian, and Russian militaries have combined their efforts to begin applying modern environmental management techniques to address military-related radioactive and non-radioactive problems in the Arctic. We are working on supporting Russian efforts to use proper environmental methods in their submarine dismantlement procedures. To build trust and cooperation with the Russian military, we share information and provide training, teaching, and education.

We think that through global engagement, we can promote democratization and very importantly, civilian control of the military. Our activities show great promise in fostering international security and regional stability.

**DoE ROLE/CONTRIBUTION/COMPARATIVE STRENGTHS/
FUTURE PLANS
MARC CHUPKA**

Environmental problems vary from region to region and in time span. Some problems are immediate, and some are longer term.

One environmental problem in particular directly relates to the stability in Russia and the Newly Independent States. Civilian nuclear reactors may affect the health of local and regional populations. Everyone may recall the destabilizing effect of the Chernobyl catastrophe on the region and on the environment, the health of the people, and the government. Nuclear weapons clearly present an environmental security problem.

In Central and Eastern Europe, definitions of security are expanding. Providing such services as clean water, healthy air, environmental protection, and economic support is essential to the countries' collective strength and viability. Environmental components to development become part of the security equation.

The Department of Energy has been engaged in dismantling the nuclear legacy of the Cold War here and abroad. We now know that environment and security are linked. One of our major responsibilities relates to controlling nuclear weapons and materials. Our focus on energy security traditionally concerns global oil markets as our nation's main energy provider. To secure our energy sources, we must invest in clean and efficient energy production.

The Department of Energy can make an impact in many different areas by improving science and technology. The DoE's enormous investment in high performance supercomputing has allowed us to keep our nuclear deterrent viable without actually testing weapons. These same computational capabilities help us to

ment from the U.S. government to proceed in expanding Russia's facility for treating low-level liquid radioactive waste in Murmansk. By transferring technology and creating investment opportunities in Murmansk and across Northwest Russia, we have helped Russia begin to implement a broader radioactive waste management strategy.

In the Baltics, we had a very strong environmental relationship both on the civil and military fronts. The Baltics share development interests with Poland and

include, What capabilities exist in the government or private sector for solving the environmental problem in question? In Zimbabwe for example, the U.S. Security Assistance Program, aimed at funding African militaries to perform biodiversity and conservation work, was thwarted by the fact that game-park management

example, we are learning from the Scandinavian countries about new technologies. We worked with the Australians on clean up technology, and we try to bring those technologies or practices back into our own work. Under NATO offices, the handbook on environmental guidelines for the military sector has been shared with many militaries around the world, helping develop environmental programs in the military.

Comment: How will AMEC cope with Russia's inability to deal with certain projects?

Comment: That poses a very difficult problem. Russia lacks funds. How much money will the Russians put up for their projects? We have signed some project agreements already, and we are moving forward on these projects. We are also working closely with the Russian navy.

In Russia, if you think you've made two steps forward, you've usually also taken one and a half steps back. So, we have to be patient. Russia will continue to be a priority. We need Russia because of the importance of the Russian military.

To deal with the legacy of the Cold War, we will continue to work with countries. We have active engagements with Poland, the Czech Republic, and Hungary. The possibility might exist of having meetings with China in the near future, and we are now considering the Middle East as well.

Comment: I'd like to know what the next steps are in terms of priorities, regional issues, and areas of the

world where you may be focusing in the future?

Comment: What are our next priorities? One of the things that we are going to do is to set up a regional environmental house program, placing foreign service officers in various embassies around the world. This summer that program will actually join forces with the first six house operations in East Africa, Central America, the Middle East, Central Asia, East Asia, and Southeast Asia. Our next step will be to start various inter-agency teams to actually carry out some of the substantive activities that we have proposed.

Comment: We have shut down or redeveloped some of the military bases we have overseas. What new environmental and economic benefits have resulted?

Comment: Many of our activities overseas are advantageous to the U.S. We conduct health impact research on air pollution in China that produces results difficult to obtain in the United States. Scientifically, we have cleaned out our most obvious particulate and air pollution at a much lower cost. In Mexico, we had an Air Quality Management district try to build in El Paso. If we continue to provide such assistance, El Paso may be able to meet its own clean air goals. Activities in northwest Russia solve environmental problems by helping Russians manage radioactive waste.

Domestic leadership on global issues is strategically important. We can finally break through to a new level of political consensus on global climate change. We could indeed change the world.

May 21, 1997

Findings of the Pivotal States Project

JOHN BRESNAN, East Asian Institute, Columbia University
ROBERT CHASE, International Security Studies, Yale University
SUMIT GANGULY, City University of New York/Columbia University
EMILY H

Third, these pivotal states potentially have a significant influence on their regions, perhaps as engines of economic growth, or as models of political liberalization.

Most importantly, these states are geo-strategically placed. They are large and populous, with a growing middle class, and they are located in positions of importance to U.S. security, perhaps near some of the world's hot-spots or along major maritime routes.

The point is not to split hairs about which state is pivotal but rather to use this model as a means to assess the strategic importance of different states in the developing world. Right now, the following states have been designated as pivotal: Egypt, Turkey, Brazil, Mexico, South Africa, Indonesia, Algeria, India, and Pakistan.

What does the existence of these pivotal states mean for U.S. foreign policy? The pivotal states project provides a rigorous means to prevent instability and to promote prosperity in the developing world. Instead of directing scarce national resources haphazardly to humanitarian projects, the pivotal states strategy directs funds to the establishment of relations with particular developing countries.

After the end of the Cold War, many legislators thought that less money was needed for foreign policy. As Sir Halford McKinder once noted, democracies fail to think strategically in times of peace. The repercussions of rapid change in the developing world will affect American national interests. A pivotal states strategy will encourage policymakers to confront these challenges directly, before they threaten American national security.

Robert Chase

The pivotal states idea is a device to get people talking about American priorities at the end of the Cold War. Many people have thanked us for getting the discussion started about where U.S. interests lie, but there has also been some criticism. One group of people called it overly simplistic to choose nine states out of 130 as pivotal. Some people asked, "What about America's responsibility to the poorest countries of the world?" Another group said that for diplomatic reasons, it did not make sense to list openly the countries that the United States prioritized. A fourth group said that development assistance could not help foster security.

That there are so many contradictory ideas about the pivotal states model suggests a lack of coherency among international experts in U.S. foreign policy. The pivotal states project has invested effort in bringing people together to exchange ideas and to share their expertise.

The original article on pivotal states presented the new strategy as a pragmatic re-focusing of American aid. By focusing AID's scarce and diminishing re-

sources on a limited number of countries, U.S. resources would make more of an impact. However, over the last year, we have learned from country experts that

CASE STUDY ON INDIA

Sumit Ganguly

Why does India matter? It matters because one cannot afford to ignore a fifth of humanity. India is one of the ten leading emerging markets, and despite some setbacks, India is clearly on the path towards economic liberalization. In India, democratic institutions have survived. Since 1991, India has been growing at approximately 5 percent per capita, and the projection is that it will grow at 7 percent. In ten years, income will essentially double.

What about India's longevity? There are a number of causes for concern, including ethnic-religious conflict and overpopulation. India adds approximately eleven million people, the entire population of Australia, to its population every year, with important consequences in terms of health, housing, and sanitation. However, India is not on the verge of crisis nor in immediate danger of collapse. In contrast, India has achieved extraordinary integration; the 1997 elections have improved the government's stability; and institutional renewal in India has taken place. India's economy will continue to grow, particularly as institutions acquire a great deal of robustness.

On the part of the United States, India has been the subject of considerable neglect since the 1960s. Now, there are several ways that the United States can show a renewed interest in India. The president should be swifter in terms of appointing an ambassador. The NSC could use a full-time staff for South Asia, and a position similar to assistant secretary in the State Department should be created. The Indian region would also be enhanced by a presidential, or at least a vice-presidential, visit. No president has visited India since President Carter, and now would be a good time to demonstrate American interest in India. Regional arms control, particularly within the Indian military and the U.S. military, would encourage nonproliferation. Continued support of economic liberalization in India, perhaps by increasing access to American markets, would also help stabilize the Indian economy.

CASE STUDY ON MEXICO

Peter Smith

The pivotal influence of Mexico is, in some ways, overshadowed by the presence, power, and influence of the United States. However, Mexico is critical to the United States because of bilateral links.

The future of Mexico is difficult to predict. Right now, Mexico has a "checkerboard democracy," with free and fair elections and democratic rule in some sectors, and authoritarianism in other sectors. In the last fifteen years, there has been an escalation of violence, a string of high-profile political assassinations, and rebellions in Chiapas and Guerrero. The traditional political apparatus is in an advanced state of institutional

disintegration.

One prediction for the future is that there will be a continued process of democratization in Mexico. Mexico's political situation is undergoing considerable change, and it may even be possible for an opposition candidate to win the presidential election in the year 2000 or the year 2006. For democratization to happen, free and fair elections must occur.

A less fortunate possibility for Mexico's future may be a throw-back to authoritarianism, with an alliance between reactionary elements within the PRI (the so-called dinosaurs), segments of the military, and law-enforcement agencies. In fact the populist dinosaurs are not all old, retrograde, corrupt, right-wingers as their opponents claim; only some of them fit this description. If we start seeing social unrest in Mexico City and other metropolitan centers, we might conceive an authoritarian response.

Alternatively, we may see an equilibrium or uneasy balance between democracy and authoritarianism in Mexico over the next ten to fifteen years. This would mean perpetuation of the checkerboard pattern that is now in place. Though Mexico has not collapsed—Mexico is no Yugoslavia, Rwanda, or Zaire—there is considerable uncertainty about its future.

According to the World Bank, the Mexican population is likely to be 108 million by the year 2000, 135 million by the year 2025, and 165 million by the middle of the decade. This growth may cause unemployment and social agitation, leaving the state vulnerable to authoritarian repression.

There is no sign in the near future that Mexico is going to employ its next generation, so an increased number of migrants may enter the United States. We are trying to build triple fences in San Diego, double the budget for border patrol, and carry out operations like "Hold the Line." However, these policies push the migratory stream from one place to another but do little to ameliorate it.

The United States will also continue to deal with drug trafficking. Mexico was thought to be the transit point for about 30 percent of cocaine imported into the United States in the late 1980s, and 70 to 80 percent in the mid-1990s. Newly strengthened cartels represent a source of major political corruption and have caused an escalation of violence. These problems will continue to complicate our relationship with Mexico.

U.S. policy is, in some ways, institutionally and bureaucratically "balkanized" between trade, state, DEA, and INS, with each agency having its own policy toward Mexico. We need a more coherent and unified policy, with a reconciliation of our policies on immigration and trade. Right now, we have free flows of capital and products, but in contrast, no free flows of labor. What can we do to improve our policies? Guest worker programs could be explored, and collaboration along the border could be increased. As far as drug

control policy is concerned, we could turn our attention away from supply control to demand reduction.

President Clinton met briefly with opposition leaders, in the middle of a campaign swing, two months before an important mid-term election in Mexico. The PRI saw this as a great opportunity to bolster its own political capital. Though we applaud Mexico's transition toward democracy, we have to be careful about our alignment with the PRI and the ruling party.

GENERAL DISCUSSION

Comment: Did you make any attempt to quantify the different variables to lead to your pivotal states' conclusions?

Chase: Many of the definitions that make states pivotal are very difficult to quantify. We have, however, been putting together matrices to evaluate the different dimensions that Emily put together. Quantifying the different variables is certainly a valuable idea, and we are open to suggestions.

Comment: Do you agree that leadership in having a free market is one of the most important things that the United States can provide?

Kennedy: I clearly support economic integration, and open markets, but as our individual state experts would

nounced that 26 percent of deaths in China are respiratory disease related. It takes a little time for that data to penetrate, but senior Chinese policy officials know that staggering public health problems require attention. China's controlled media keeps environmental

additional state. If saving whales ranks a priority, Norway should be included. The pivotal states model can be refined, depending on the particular issue.

Comment: My fear is that leaving China and Russia off the list does not acknowledge the need for attention to global issues. For example, on climate change, we have heard from some senior Chinese officials who basically say that the United States should treat China as a developing country when it comes to international environmental issues. China would like to get more technology, and more assistance to meet environmental challenges. My fear is that by leaving them off as pivotal states, even though Russia and China will still get a lot of attention with traditional issues, they will not get much needed attention as developing countries.

Comment: I do not think that we should feel threatened by Russia and China in the midst of your global environment accords. We started off with a list of nine

30 September 1997

Bridging the Gap between the EU and the U.S.: Attitudes, Analyses, and Strategies

MICHAEL GRUBB, Energy and Environmental Program, The Royal Institute of International Affairs

Last year, in Geneva, the United States called for the Kyoto negotiations to establish leading binding targets for the reduction of CO₂ emissions. There are still considerable skeptics who question the seriousness and adequacy of these targets, but after years of debate, governments have largely gone beyond the “whether” to the “how.”

The Kyoto Agreement on restraining CO₂ emissions can be more efficient and environmentally effective through the use of intergovernmental emissions trading. After an international agreement enters into force, one government may reach agreement with another participating government to exchange part of its allowable emissions, so that one may emit more and the other correspondingly less. The terms upon which they agree to the exchange would be a matter between them—the terms might involve monetary transfer, a non-monetary political trade-off, or something in between such as debt cancellation.

Intergovernmental emissions trading increases economic and environmental efficiency. A country which has higher abatement costs for reducing emissions can trade with a country that has lower abatement costs. Therefore, the cost of achieving a collective reduction in emissions is lowered. Intergovernmental emissions trading also allows for more flexibility in negotiating binding commitments. Countries such as Norway will not be as risk-averse towards an agreement, if the security exists that when target goals cannot be met, trading to gain more emissions can ease economic strains. Clearly, introducing the option of trading increases the willingness of countries to enter into an agreement. Countries can then ease the political problem of allocation by negotiating among themselves to change individual emissions levels.

A significant part of my own efforts over the past year has been to persuade European and Japanese governments that emissions trading is a good thing. Key European policymakers came to accept that intergovernmental emissions trading is a practical proposition, and that it could have advantages. But one real and potent concern remained: could emissions trading become a means by which the world's biggest and richest polluter, the United States, could escape from having to take any significant domestic action? Specifically, if the targets established at Kyoto are relatively weak, could the United States buy in, at little or no cost, to sufficient additional quotas to avoid having to take any significant action at all?

Against this background, the European Council of Ministers met in June and crafted a simple but effective compromise that called on countries to clarify their specific commitments. The European Union stated that it is prepared to accept the logic of emissions trading, but only if clear benefits result, with greater efficiency enabling a stronger overall outcome.

The “international trade in emission allowances” (ITEA) model is an easy-to-use and transparent tool that predicts the outcome of intergovernmental trading and explores key themes related to defining commitments in the Kyoto negotiations. The costs to the European Union, the United States, and Japan were predicted and compared under the following conditions: without trading of CO₂ emissions, with trading of only CO₂ emissions, without trading of all greenhouse gases, and with full intergovernmental trading of all greenhouse gases. The data used came mainly from governmental submissions made available by the International Energy Agency. The results show that the costs to the major OECD countries associated with reducing domestic CO₂ emissions by 5 percent from 1990 levels are the same as those arising from a flat-rate reduction of 13.9 percent across all industrialized countries, if that 13.9 percent reduction is implemented with the ‘full flexibility’ of including all greenhouse gas emissions with full intergovernmental trading. In other words, when costs are kept constant, full intergovernmental trading of all greenhouse gases results in a net benefit of about 9 percent in reductions.

Technological developments can further reduce the cost of emissions reduction and help provide more efficient electricity. For example, the United Kingdom owes its ability to reduce carbon dioxide output to advances in the electricity sector. Around the world, improved technology has made possible the use of alternative energy sources. The use of wind energy was negligible in 1990, but capacity in Europe has grown at roughly 25 percent annually. Wind energy capacity in Europe is now projected to exceed 6000 MW by the year 2000 with rapid increase thereafter.

The most valuable aspect of Kyoto is the creation of a structure which offers a first and simple step on the road to defining appropriate commitments. Developing countries should be involved, but the responsibility for reducing emissions should reside with the countries that cause the bulk of the problem, release the most emissions, and have the best technology. When those countries demonstrate seriousness of intent—when they bring their own emissions down to

historic levels—then a precedent for developing countries to follow will be set. Therefore, the reduction in Kyoto is a pre-condition for negotiating with developing countries. An important goal is to remove the hesitation of developing countries to being drawn into commitments and to make it attractive to those countries to reduce emissions. Emissions trading offers a way forward.

Wilson Center Fellows and Scholars

The Wilson Center has a long history of fellows and guest scholars coming to research and write on environment, population and security issues. Here is a selection of recent and upcoming fellows and the Wilson Center programs sponsoring their stays. For more information on all Wilson Center programs and projects, visit our web site at <http://wwics.si.edu>.

ASIA PROGRAM:

Dai Qing - Woodrow Wilson Center Fellow

Freelance Writer and Journalist, Beijing, China
“Zhang Dongsun: The Fate of China’s Leading Independent Intellectual”
September 1998-May 1999

DIVISION OF U.S. STUDIES

Robert Fishman - Public Policy Scholar

Professor of History, Rutgers University
“Metropolitics: What Washington Needs to Know About the New Regional Politics of Cities and Suburbs:”
September 1998-June 1999

LATIN AMERICAN PROGRAM:

Raul Benitez-Manaut - Guest Scholar

Researcher of the Centro de Investigaciones Interdisciplinarias en Ciencias y Humanidades UNAM, Mexico
“Mexican National Security at the End of the Century: Challenges and Perspectives”

Charles Briggs - Woodrow Wilson Center Fellow

Professor of Ethnic Studies, University of California, San Diego
“Infectious Diseases and Social Inequality in Latin America”
September 1997-June 1998

KENNAN INSTITUTE FOR ADVANCED RUSSIAN STUDIES:

Theresa Sabonis-Chafe - Short-Term Scholar

Ph.D. candidate, Department of Political Science, Emory University
“Power Politics: National Energy Strategies of the Nuclear Successor States”
June-July, 1997

Viacheslav Glazychev - Guest Scholar

President of the Academy of Urban Environment and Professor, Moscow Architectural Institute
“Cultural Foundations for the Urban Environmental Development”
July-August 1997

Tatyana N. Garmaeva - Guest Scholar

Russian Academy of Sciences, Siberian Division, The Baikal Institute of Nature Management
“Problems of Sustainable Development and the Role of International Cooperation in the Lake Baikal Region”
January-April 1998

Frances L. Bernstein - Research Scholar

Postdoctoral Fellow, Department of History of Science, Medicine and Technology, Johns Hopkins University
“Gender and the Politics of Public Health in the Soviet Union”
September 1998-February 1999

The Challenges of Freshwater Resources into the Next Millennium

AGENDA

Framing the Debate: Scarcity versus Distribution
SANDRA POSTEL, Director, Global Water Policy Project

***Framing the Debate:
Allocating Benefits versus Allocating Water***
EVAN VLACHOS, Associate Director, International School
for Water Resources, Colorado State University

Water and Conflict Resolution
AARON WOLF, Assistant Professor,
Department of Geography, University of Alabama

Water and Civilization
JEROME DELLI P

20 November 1997

Damming Troubled Waters: Conflict over the Danube

RONNIE D. LIPSCHUTZ, Associate Professor of Politics and Director of the Stevenson Program on Global Security, University of California, Santa Cruz

Dr. Ronnie Lipschutz, a prominent contributor to the ongoing debate over environment and security linkages, presented findings from his case study on conflict and the Danube River. With research originally prepared for the Environmental Security Project of Columbia University, Lipschutz provided a detailed historical examination of the conflicts that have arisen along the Danube. He paid particular attention to the modern confrontation between the states of Slovakia and Hungary over their shared Gabčíkovo-Nagymaros Barrage System (GNBS). In this case, the Danube River provided an important example of a “dog that didn’t bark,” a case where shared water concerns led to strained tensions but did not result in violent conflict. Lipschutz highlighted the critical roles played by institutions in mitigating a violent outcome.

Beginning in Germany and ending 2,888 km later in the Black Sea delta, the Danube River Basin includes 13 countries in Europe and is shared by a mix of religious and ethnic groups. Historically, the delta was a flood plane that people struggled to manage. Over the last two hundred years, the river has turned from a “natural habitat” into a highly industrialized area. Paradoxically it is now the fact that flood control is so good that there is a water shortage for some parties along the river.

In the 1920s, the Soviet Union proposed to build a barrage system across the Danube to make the region navigable for military purposes. By the 1950s and 1960s, joint planning among the communist countries of the Eastern Bloc proposed the Gabčíkovo-Nagymaros Barrage System (GNBS) on the middle part of the Danube River running through Czechoslovakia and Hungary. Supporters argued that the new source of electricity that would come with the dams and power plants would substitute for air-polluting soft brown coal, help meet the energy needs of both countries, provide flood control and agricultural irrigation, and improve the river’s navigability. Although there was skepticism on environmental, ethnic, and other grounds, the governments and water management sectors of both Hungary and Czechoslovakia were enthusiastically in favor of the project. Hungary and Czechoslovakia finalized plans for the river in a 1977 bilateral treaty.

In the 1980s with work on the barrage system underway, opponents of the GNBS formed the group Danube Circle in Hungary. In 1988, 40,000 people turned out to protest before the Parliament Building in Budapest. Not long after, the organization was able to give the government 140,000 signatures from people against the project. Hungarian officials did not strongly curb these political actions as they thought it less threatening for their citizens to protest water rights than human rights. The officials miscalculated according to Lipschutz. What first began as an environmental group turned into a broader force of opposition to the Hungarian regime. Although external funding had been obtained and construction begun, growing political opposition in Hungary to the dam coalesced into a mass movement that was eventually able to raise the matter to the highest political levels and bring the project to a halt on the Hungarian side.

However, in Slovakia, the plans for damming the river were not similarly sidetracked: a new alternative plan for the series of dams, known as Variant C, came into favor. Without building on Hungarian territory, the Slovaks managed to alter drastically the Danube’s water flow by closing off side channels in Slovakia. The

Variant C remains a symbol of sovereignty and strength for Slovakia. Slovakian Prime Minister Meciar can shore up his own power base by using the issue to play what Lipschutz calls the “Hungarian card” in eastern Slovakia where there is a sizable Hungarian minority. Politically, Hungary has more incentive to find a solution: the carrot of European Union membership could be a reward. Since EU membership is further off for Slovakia, Lipschutz believes that the final outcome will favor Variant C.

In terms of lessons to be taken from the Danube and the Gabcikovo-Nagymaros dispute, the emphasis according to Lipschutz should rest on recognizing the importance of domestic and international institutions in conflict resolution. In the realm of environment and conflict, institutions matter and future research must better integrate these variables intervening between

environmental degradation or depletion and violent conflict. In the case of the conflict between Hungary and Slovakia, recourse to the European Commission and the International Court of Justice in The Hague provided a social structure that allowed for the exploration of alternative social arrangements. A density of linked and overlapping institutions dampened tendencies toward an anarchic and violent relationship between contending parties.

Editor’s Note: For more on Ronnie Lipschutz’s arguments on environment, conflict and security, see his publications cited in sections A, B, and D of the Bibliographic Guide to the Literature. For more on Columbia University’s Environmental Security Project, see the entry in the Updates Section.

December 11, 1997

U.S. Population Activities: Ongoing Plans and Future Directions

JULIA TAFT, Assistant Secretary of State, Bureau of Population, Migration and Refugees, Department of State
DUFF GILLESPIE, Deputy Assistant Administrator, Center for Population, Health and Nutrition, USAID
PATRICIA ROWE, Chief, Population Studies Branch, International Programs Center, Census Bureau

Julia Taft

The State Department has established that international population policy is critical to sustainable development strategies. International family planning policy affects the ability of people around the world to sustain livelihoods. It also has an impact on issues surrounding women's health, children's survival, and healthy families. I think that there is a great deal of misunderstanding or conscious deception in what the U.S. policy is toward population.

When we promoted our pro-choice program and tried to provide worldwide family planning assistance, some people characterized our policy as pro-abortion. Actually, pro-choice is pro-life. Our emphasis is on keeping the already-born children alive, opening up options, and educating women.

When children are too closely spaced, their survival rate is very low. How do we provide families with an environment in which their children can survive? The U.S. funds family planning programs. We give money to Georgetown University for consultations, to try to help families determine the best method of birth spacing for them. We conduct programs in micro-credit so that women have options of working rather than just staying at home and producing more children. We promote female education because women who are educated gain more respect as well as develop the ability to take care of the children they already have.

The legislative challenge that we face is the global gag rule. We all know and comply with the restriction that all recipients of federal money may not use these funds to pay for abortions. There was, in fact, a recommendation that organizations could not—even with their own money—fund discussion about abortions or the promotion of policies to change rules, in their own or other countries. The Istook Amendment attempted to tell recipients of federal money, the NGOs, that they could not use any portion of their own money to try to influence national legislatures. That has been discarded; I hope permanently. The debate around the amendment centered on free speech. Does the federal government have any authority to tell organizations or individuals what they can do with their own money?

Family planning is particularly relevant to the national security community. Look at some of the countries that have incredibly high unsustainable population growth—Nigeria, Saudi Arabia, Liberia, and in particular, Rwanda. These countries do not have room for all their people. They cannot educate their citizens nor handle migrations of people. They devastate forests to create land and grow food. Major tensions exist between ethnic groups, as factions attempt to gain economic and political leverage. When governments cannot service the needs of their societies, the result is upheaval.

There are 125 million women who have already expressed a need, a willingness, and an urgency for family planning, but who are unable to obtain it. Because of this, many will have abortions, and many of them will die. We need to consider these women as we put forward a new population policy.

Duff Gillespie

USAID is the primary executor of the U.S. government's population program, which was begun in 1965. The bulk of USAID funds go to family planning activities either directly, such as for the provision of contraceptives, or indirectly, such as to research related to the assessment of family planning efforts. The budget in FY 1998 is \$385 million. We operate in sixty countries, but there are fifteen countries designated as priority countries. These include the largest countries in which we have bilateral programs: India, Bangladesh, Indonesia, Ethiopia, and Peru.

We classify eight additional countries as "special concern countries." These are countries in which we are active either because of a crisis situation, such as Haiti, or for historical reasons, such as Mexico. At the present time, Haiti receives more population funds per capita than any other country in the world. This is because of the

special crisis situation that exists there. However, that level of support is probably not likely to continue. For most of these eight countries—special concern countries—we are either in the process of withdrawing or reducing aid.

The rationale for the program, as defined by Congress and the administration, is to make population dynamics consistent with sustainable development. We do not set a particular demographic target, but we do see population as an important dynamic for our social and economic development. In most cases, the actual population plan of action that occurs in a particular country is that which is defined by the host country's government.

USAID has focused on building upon its family planning and research programs in order to have a greater impact in the areas of family planning and reproductive health. For example, a major new initiative under the Clinton administration is post-abortion care, which I might add is fairly noncontroversial, even on the Hill. This post-abortion care involves taking life-saving steps for women who have had incomplete abortions, usually as a result of illegal abortions.

We are much more active in programs focused on sexually transmitted diseases, such as HIV/AIDS programs. We are also involved with internal and reproductive health programs, and a population health nutrition program, with spending on health-nutrition totaling about \$550 million per year.

What has been the result of our work? USAID is by far the largest donor in the area of population and, with the exception of China, has played a pretty important part in all major family planning programs in the developing world. There has been a major shift in the demographic situation of the world. In the 1960s the doubling time for the developing world was thirty-four years, and the average family size was over six. Now, the doubling time is forty-six years, and average family size is under four.

Groups like ours try to show that in order to improve health and empower women, societies must make population control and reproductive health a priority. I have serious doubts, however whether these findings will provide enough incentive for host country governments to start making major investments. The challenge is to try to show individuals who control policies why this is something that should be considered as important for the well-being of not just their citizens but also their economies.

Patricia Rowe

The International Programs Center is part of the U.S. Bureau of the Census. The U.S. Bureau of the Census does not do policy; it essentially produces data. The Center has two components, technical assistance and research. For more than forty years, the bureau has been helping countries by providing technical assis-

tance in gathering information. This assistance in more than 100 countries has taken the form of teaching statistical office staff how to plan, design, conduct, analyze, and disseminate the data.

The Center provides to their sponsors information

late large families for various economic reasons. But why would people who are wealthy refrain from having more children?

Gillespie: Child survival may play a very important role. The expectation of children living to adulthood is incorporated into people's decision-making process, and therefore, almost invariably, there's a change in the desire for fertility. That change actually takes several generations to take place, so the relationship between child survival and fertility is much more complex than it may at first seem. The other factor is that people realize the relationship between their number of children and lifestyle. That relationship is not as good as it used to be. In an agrarian based economy, with little technology, it was advantageous to have an extended family. Now, when you have inheritance, a large family actually decreases the family's power.

Comment: All the initiatives that focus on girls' education are really important. The relationship between the education level of the girl and her fertility is just incredible. For every year beyond four years that a girl goes to school, she later has one less pregnancy and 20 percent more future earning income. Providing her with other alternatives and more value in her society, through education, should be a continued focus, and hopefully we will find more money for that.

Comment: There are a lot of people who are unemployed and undereducated. There are many angry and rebellious youth. How do we find ways of lessening these pressures? What kinds of health services are needed? I think there is a real gap—which I know DIA is trying to reduce—with the NGOs. We've got to figure out how we can keep these issues from becoming so mysterious that we lose sight of the fact that the only way to address them is by having people come together and share information. To meet the challenges of today, we need to foster open discussion.

Comment: We have to recognize the appropriate limitations and use of classification. Just by virtue of CIA and USAID or NGO in the same sentence, we may stand accused of spying on an NGO, which we do not do, or of somehow being involved or tainted with the spread of AIDS. It is as bad as being accused of promoting crack-cocaine in some circles.

The point is that we are all concerned about the issue of unsustainable population growth. We have to broaden the constituency of people who are as committed as we are to trying to do something constructive. We must figure out a way to have at least the ability to talk to one other.

[Editor's note: This meeting also featured a speaker from the U.S. intelligence community who asked that his comments not be reproduced.]