24 August 2000

RUSSIAN ENVIRONMENTAL ACTIVIST FACING CHARGES VISITS WILSON CENTER

Featuring **Alexandr Nikitin**, Bellona Foundation and the St. Petersburg Environmental Human Rights Centre

The legacy of radioactive military waste produced by the Russian Northern Fleet poses a great threat to the region surrounding the fleet's bases in Northwest Russia and the Barents Sea, according to former Russian Navy submarine captain and environmental activist **Alexandr Nikitin**. Nikitin, now with the Bellona Foundation, a Norwegian environmental nongovernmental organization, visited the Woodrow Wilson Center and spoke about the August 2000 sinking of the *Kursk* nuclear submarine as only the latest radioactive threat in the region.

Of the 110 Russian nuclear submarines no longer in service, Nikitin noted that 72 still have fuel in their reactors—and 30 of those are in critical condition and in danger of sinking. As with the *Kursk*, water could break the hermetic seal around these reactors, allowing radionuclides to escape into the surrounding marine environment. The result of such an event, said Nikitin, would be an ecological and humanitarian catastrophe.

In the past five years Nikitin has been charged repeatedly in Russia with treason for passing state secrets during his preparation of the 1996 Bellona Foundation report *The Russian Northern Fleet: Sources of Radioactive Contamination.* Nikitin and his two Norwegian co-authors maintain all the information contained in the data-rich report came from open sources. Although the case against him has always been thrown out by numerous Russian courts (including the country's Supreme Court) for lack of evidence, St. Petersburg prosecutors have recently attempted to reopen the case. Nikitin, who spent almost one year in prison awaiting his initial trial, is at risk once again.

Nikitin's legal troubles are indicative of increasing efforts by the Russian government to heighten secrecy and discourage those gathering environmental data in Russia. Russian President Vladimir Putin has suggested that environmental groups provide convenient cover for Western intelligence agencies. Nikitin views his case not only as a violation of his individual rights, but also as part of a systemic deprivation by the Russian government of the rights of the population both to information and to redress for environmental catastrophes.

As environmental and human rights issues have grown intertwined in recent years in Russia, Nikitin (with support from Norwegian and Russian colleagues) has established the St. Petersburg Environmental Human Rights Centre. In coalition with other groups throughout Russia, this Centre seeks now to advance the collection of Russian environmental data and to protect those who do so. The Centre and the newly formed Environment and Human Rights Coalition (a) provide advice to communities and individuals in need of legal representation stemming from environmental activities, (b) gather and analyze environmental data throughout Russia's regions, and (c) train other lawyers in the effective strategies developed in the course of the Nikitin case.

Editor's Note: Starting in September 2001, Alexandr Nikitin will be a Galina Starovoitova Fellow on Human Rights and Conflict Resolution with the Kennan Institute for Advanced Russian Studies at the Woodrow Wilson Center.

20 September 2000

WILSON CENTER HOSTS FORUM ON HIV/AIDS IN SOUTHERN AFRICA

Featuring **Makate Sheila Sisulu**, South African Ambassador to the United States; **Ron Dellums**; President, Healthcare International Management Company, Chair; President's Advisory Council on HIV/AIDS; and former Congressman; and **Dr. Anthony Fauci**, Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health (NIH)

The number of HIV/AIDS cases in Southern Africa continues to grow at an alarming rate. Seventy percent of all people with HIV worldwide live 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 have HIV/AIDS. The disease has also 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. 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 Her Excellency **Makate Sheila Sisulu** and **Ron 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. Dr. **Anthony 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 preventive 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

Cosponsored by the Woodrow Wilson Center's Africa Project, the Environmental Change and Security Project, and Dialogue

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 programs in addition to what the national government contributes. Sisulu also publicly addressed 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

Dellums

а

these countries.

suggested

the controversy over Mbeki's questioning of the link between HIV and AIDS early in 2000. 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 are 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

(From Left) Ron Dellums, Lee H. Hamilton, Makate Sheila Sisulu, Anthony Fauci

eila Sisulu, a large-scale public-private partnership that billions of dollars into Southern Africa to

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.



29 September 2000

Environment, Population, and Conflict: Assessing Linkages

Featuring **Thomas F. Homer-Dixon**, Director, Peace and Conflict Studies Program, University of Toronto; and **David Dessler**, Professor of Political Science, College of William and Mary

egros Island in the Philippines has suffered in the last two decades from severe erosion and cropland destruction. According to **Thomas Homer-Dixon**, the practice of swidden (slash-and-burn) agriculture on the island in combination with population growth and migration has played a major role in this environmental degradation. And this degradation in turn

has combined with extreme poverty and weak governmental structures to contribute to Negros' rural insurgency and guerrilla warfare and violence.

Homer-Dixon presented some of these key findings from his research projects on environmental scarcity and violence (summarized in his 1999 Princeton University Press book, *Environment, Scarcity, and Violence*). Using the Philippines as a case study, Homer-Dixon also detailed a two-step causal model of environmental contributions to violent conflict within

developing countries. Political scientist David Dessler followed by arguing that, in order to understand and respond to environmental stress and scarcity more effectively, researchers such as Homer-Dixon must develop broader theories using the strategies of other social scientists, including historians.

Three Forms of Resource Scarcity

Thomas Homer-Dixon focused on the three key renewable resources (cropland, fresh water, and forests) within the context of three sources of scarcity. First, he identified "supply-induced" scarcity, which he said is caused by the loss of resources (such as lack of quality drinking water or fertile land). Population growth or migration (or both combined) can also increase the perperson demand, leading to demand-induced scarcity. Third, a skewed or disproportionate distribution or access



Thomas Homer-Dixon

to resources can lead to what Homer-Dixon termed "structural scarcity."

For Homer-Dixon, there are two types of interactions between the three types of scarcities. The first is "resource capture," which occurs when access to resources shift to favor powerful groups—a process economists call "rent-seeking." "Ecological

marginalization," on the other hand, takes place when the combined impact of population growth and unequal resource access leads to a decrease in quality and quantity of renewable resources, resulting in increased environmental scarcity. Such scarcity, Homer-Dixon explained, can lead to forced migration into ecologically-marginalized areas.

The Case of Negros

H o m e r - D i x o n highlighted the case of Negros, where swidden

agriculture is the primary method of farming. This method did little harm when Negros had lower population densities, as the burned land had time to regenerate while other land was cultivated. With rapid increase in population and migration, however, the fallout from swidden agriculture on Negros has been devastating. Environmental consequences have included (a) erosion slides, (b) flash floods, (c) washed out bridges and other structures, (d) increased silt burdens, (e) coral reef destruction, and (f) fish stock depletion. Homer-Dixon said that, in the Philippines, such ecological problems have created a vicious cycle of migration, both further upland as well as into squatter settlements of large urban areas such as Manila. He added that these migration flows appear to have fueled both urban unrest and rural insurgency.

Factors Influencing Environmental Scarcity

While environmental scarcity is not a direct cause of violent conflict, Homer-Dixon argued that in the context of other variables such scarcity can be a contributing factor to violence. He outlined two distinct categories of such variables. The first category includes: (a) the general adaptability of a state's social structures; (b) the stability of its financial markets; (c) autonomy of the state; (d) the strength of social capital (such as norms, trust, and reciprocity); and (e) the strength of a social norm of responsibility for the greater good. The second category is tied to relations among groups: (a) the strength of preexisting ethnic divisions; (b) a conception of justice by those challenging the government (as opposed to traditional peasant resignation or fatality); (c) the resources and organizations of the challengers to the status quo; and (d) the quality of leadership.

Methodological Issues: Exogenous vs. Endogenous

David Dessler presented an overview of what methodology does to assist social science research and where he feels Homer-Dixon's methodology falls short. First, Dessler outlined the two questions methodology seeks to answer in the case of environmental stress. The first question is predictive, and asks if researchers can predict future levels of conflict from environmental trends. Second, the causal (or explanatory) question asks how environmental change might provoke or catalyze conflict. From the methodological questions, two types of information emerge: (a) descriptive (describing the subjects under study); and (b) a broader, contextualizing information that offers general knowledge of what the researcher is studying.

This methodological discussion leads to an examination of exogenous and endogenous boundary conditions and their impact on predictions of social/human behavior. The key problem with Homer-Dixon's work, claimed Dessler, is that only one of the three scarcities discussed in his environmental scarcity theory is exogenous, and therefore unaffected by other social factors. Supply-induced scarcity is exogenous because it deals with natural resources and has nothing to do with human behavior. But the remaining two scarcities—demand-induced and structural—are endogenous conditions that are affected by human activities.

In conclusion, Dessler detailed four actions that could considerably improve theory (and broaden the debate without diminishing the quality of the data) in the field of environmental scarcity research. First, Dessler argued, researchers must conduct detailed narratives of individual cases of conflict using existing theoretical work as a guide, with the aim of creating data that can be used for competing theories with equal effectiveness. Second, Dessler said that the field must borrow from social scientists the informal terminology of strategic choice theory, wherein actors have preferences and beliefs and the environment constitutes actors and information. Third, he said that the field must also borrow the concern for evidence that marks the historian's research. Finally, Dessler advised that researchers avoid methodology that is too restrictive. Dessler agreed with the scope of Homer-Dixon's research, but pressed for a more finely-detailed and exacting methodology to avoid discrepancies.

A lively discussion followed the two presentations, in which a primarily practitioner and policymaker audience that works in the field of environmental stress and/or violent conflict questioned the applicability of Homer-Dixon's research for predictive value. A commonlyvoiced opinion held that early warning indicators have thus far been unsatisfactory; participants as well as the two speakers agreed that much more research with a more refined methodology is needed to rectify this deficiency.

10 October 2000

VANISHING BORDERS: PROTECTING THE PLANET IN THE AGE OF GLOBALIZATION

Featuring Hilary French, Vice President for Research, Worldwatch Institute

H ilary French, a prolific author on environmental issues, presented the findings of her new Worldwatch 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?

Globalization: A World of Challenges and Opportunities

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 policymakers 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 environmental 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.

Hillary French

TRADE AND THE ENVIRONMENT: INSTITUTIONAL COOPERATION

Featuring **Hussein Abaza**, Chief, Economics and Trade Unit, United Nations Environment Programme (UNEP), Geneva, Switzerland

R epresentatives from environmental nongovernmental organizations and the private sector discussed with Dr. **Hussein Abaza** how environmental and trade institutions can improve cooperation and give a voice to each other in their deliberations.

Cooperation between Trade and Environment Camps Needs Improvement

Abaza argued that cooperation among international institutions on trade and environment issues is still very spotty. Negotiators for multilateral environmental agreements (MEA) commonly invite only environmental people to their meetings, while World Trade Organization (WTO) negotiators only include those interested in trade. While UNEP and the Convention on Biological Diversity have requested observer status at the WTO's TRIP (traderelated aspects of intellectual property) agreement discussions, this participation has not been approved to date. Additionally, MEA negotiators have no mechanism through which to ask the WTO for a preliminary position on a proposed measure's acceptability within the trade rules. [Editor's note: UNEP hosted a meeting 23 October 2000 in Geneva with both trade and environment officials to address potential synergies.]

Abaza indicated that the best approach for reconciling trade and environmental interests is to develop a process that meshes these interests instead of pressing first for institutional reform. Abaza also noted that his Economics and Trade Unit of UNEP is focused on capacity development in developing countries: it has established a joint project with the United Nations Conference on Trade and Development (UNCTAD) to develop capacity and is conducting training at the national level. Funded by Norway, Sweden, Canada, and others, the project has the objective of building confidence between the North and the South.

Finally, Abaza introduced a trade and environment workbook that the Economics and Trade Unit of UNEP is developing. UNEP is currently seeking input from interested groups around the current draft of this workbook, which is posted on the UNEP web site. The organization hopes to finalize it shortly.

Discussants identified two issues: (1) How do we improve environmental standards in a way that achieves environmental objectives, allows economic growth, and does not run afoul of the trade rules? (2) How should we define the WTO's relationship to international environmental issues? One participant noted that one of the causes of the conflict is that, while the trade agenda seeks to promote deregulation, environmental agendas are most often regulatory.

Cosponsored by the Environmental Change and Security Project and the Wilson Center's Global Inclusion Initiative

New Think Tank Focusing on Environment and Sustainable Peace

Building bridges across the Atlantic on global environmental issues is the mission of Adelphi Research, the recently established not-for-profit think tank on sustainable development based in Berlin, Germany. Adelphi Research focuses in particular on global environmental change and international environmental regimes. It utilizes research, public policy consulting, and policy dialogues to foster transboundary cooperation on sustainable resource management. The institute's program on "Environment and Sustainable Peace" is composed of a series of research and consulting projects and dialogue forums conducted on behalf of a variety of international organizations and national governments. Adelphi Research is also a partner in a multidisciplinary research team analyzing the impacts of extreme weather events (Security Diagram) and quantitatively linking environmental stress, susceptibility, and crisis. The institute is directed by Alexander Carius (former director of Ecologic) and Walter Kahlenborn. Senior scientists with different academic backgrounds form the core of the consulting team.

For information, e-mail: office@adelphi-research.de *Internet:* http://www.adelphi-research.de

17 October 2000

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

66 N ational 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.

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.

Poverty and Environmental Stress: Intertwined Problems

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 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.

Solutions

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 capacity, 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. (Pachuari 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 non-existent, 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.

Attendees 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



R. K. Pachauri

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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31 October 2000

TRANSBOUNDARY BIOSPHERE CONSERVATION, DEVELOPMENT AND PEACE-BUILDING: LESSONS FROM THE ALTAI MOUNTAINS

Featuring **Gila Altmann**, Parliamentarian State Secretary, German Federal Ministry for Environment, Nature Conservation and Nuclear Safety; **Hardy Vogtmann**, President, German Federal Agency for Nature Protection; and **Robin Mearns**, Senior Natural Resource Management specialist, The World Bank

The Altai Mountain range—an ethnically diverse area of over 37 million acres that straddles the borders of Russia, Mongolia, China and Kazakhstan—has been named one of the world's most significant areas of biodiversity by the World Wildlife Fund. But protected portions of this region suffer from the tension there between environmental and economic goals. Because it is difficult for residents of the Altais to fashion sustainable livelihoods, their societies have little capacity for environmental protection. As a result, some of the important large animals of the Altai range are now threatened with extinction.

Gila Altmann of the German Federal Ministry for Environment, Nature Conservation, and Nuclear Safety and Dr. **Hardy Vogtmann**, president of the German Federal Agency for Nature Protection, outlined an evolving international effort to facilitate transboundary conservation management in the Altais. The initiative is being watched closely and could serve as a conservation and peacemaking model for other areas around the world.

Toward a Sustainable Development Policy

Two areas in the Altai range had already been designated UNESCO natural heritage sites. But economic growth and industrialization in the region have clashed with local sustainable development initiatives. In response, the four countries of the Altais in September 1998 signed a "Protocol of Intentions" to work towards an "Altai Convention for Sustainable Development," which among other measures would declare the entire area a UNESCO biosphere reserve. The Convention is intended as a first step towards a coordinated policy for sustainable and culturally-sensitive development of the region.

Initiated by the Russian government as a joint German-Russian cooperative nature protection effort, this endeavor to promote sustainable and culturally sensitive development in the Altais is also designed to strengthen and promote conflict prevention by setting a collaborative precedent. As Altmann put it, "a successful environmental protection policy is peace policy."

Both Altmann and Vogtmann are senior German officials who are intimately involved in the Altai project. They stressed that Germany is playing a facilitator role in creating multilateral institutions in the Altais while remaining cognizant of the challenges of applying sustainable development models from the West. (German interest in this area stems in part from the sizable ethnic German population now residing there, the result of forced migrations early in the 20th century.) Altmann and Vogtmann said they remain at the beginning stages of their efforts, however, and were making their presentation to gather feedback and formulate partnerships. They requested assistance from meeting participants in the design, implementation, and funding of this emerging multilateral biosphere conservation effort.

Caution About Conservation Efforts

Robin Mearns, senior natural resource management specialist at the World Bank, highlighted his keys for any conservation effort in the Altai region. Mearns said that it is unrealistic to hope that the region will return to an earlier form of pastoralism, and that any conservation effort must take into account economic reforms that are changing the livelihood context for local inhabitants.

Mearns also emphasized the importance of distinguishing between policy and policy-in-practice in the Altais, saying that on-the-ground reality may differ greatly from what formal regulations dictate. He also cautioned against always associating conservation with peace. Mearns said he could envision some situations in the Altai region where exchanging present land-use patterns for conservation patterns could exacerbate rather than ameliorate conflict. Rhetoric about "peace parks," he noted, is often unpopular with local populations when it is not accompanied by an emphasis on tourism within a larger sustainable development framework.

Cosponsored by the Environmental Change and Security Project and the Heinrich Böll Foundation

SOMETHING NEW UNDER THE SUN: AN ENVIRONMENTAL HISTORY OF THE TWENTIETH-CENTURY WORLD

Featuring John R. McNeill, Professor of History, Georgetown University.

66 The ecological peculiarity of the twentieth century" is the subject of **John R. McNeill**'s new book, *Something New Under the Sun: An Environmental History of the Twentieth-Century World.* McNeill discussed the book (which he began writing as a Wilson Center fellow in 1996-1997) at a November meeting sponsored by the Environmental Change and Security Project.

McNeill asserted that the period encompassing the 1890s through the 1990s has seen some of the most striking environmental events in history: a four-fold increase in world population; 13-fold increases in both world urban population and sulfur dioxide emissions; and a 17-fold increase in carbon dioxide emission. *Something New Under the Sun* explores the impact of these events on the earth's four different environmental spheres (atmosphere, hydrosphere, lithosphere, and biosphere).

McNeill said that the greatest intellectual challenge of the project was explaining both why these environmental changes happened and why they happened when they did. The most obvious causes, he said, are: (a) population explosion; (b) the broad conversion to fossil fuels in the energy sector; (c) the evolution of the world's economy; (d) the different types of technologies that carry their own environmental dangers; and (e) (very importantly) ideas and politics.

These six broad categories "co-evolved" because they were compatible with the socio-economic climate of the century, and their synergy led to drastic environmental changes. McNeill focused on the impacts of population and politics. Population, he said, was "one of the most important driving forces behind modern environmental change." The environmental impact of global population's increase from 1.5 billion to 6 billion has been exacerbated by both urbanization and migration. According to McNeill, environmental policy, throughout the twentieth-century, was an "accidental byproduct of other policies."

Something New Under the Sun will be included as a volume of The Global Century Series (edited by Paul Kennedy) from W.W. Norton. It will be the first volume on the environment for the Series.

Remote Sensing and Environmental Treaties: Building More Effective Linkages Report of a Workshop

Sponsored by the Socioeconomic Data and Applications Center, Center for International Earth Science Information Network (CIESIN), Columbia University

A final report is now available for this workshop, held at the Woodrow Wilson International Center for Scholars on December 4-5, 2000 in association with the Wilson Center, the Environmental Change and Security Project, IUCN-The World Conservation Union, and MEDIAS-FRANCE.

The workshop highlighted the potential for enhancing the effectiveness of multilateral environmental agreements (MEAs) through the appropriate application of remote sensing data and technology now available. Sixty-eight professionals from the remote sensing community and MEA constituencies—including environmental NGO representatives, environmental lawyers, political scientists, and officials of the U.S. State Department—met for two days of lively discussion. Among other conclusions, the group reached consensus recommendations on the need for: (a) a coordinated suite of environmental monitoring instruments; (b) coordinated institutional arrangements among space agencies, value-added companies, and MEA constituencies; and (c) education for MEA constituencies about the capabilities of current and future remote sensing instruments.

The report is an excellent introduction to the advances and challenges provided to MEA constituencies by remote sensing data and technologies. To receive the report, please contact Ed Ortiz of CIESIN at eortiz@ciesin.columbia.edu. Please also visit the workshop's Web site at http://sedac.ciesin.columbia.edu/rs-treaties for additional information.

16-17 November 2000

GLOBALIZATION AND ECOLOGICAL SECURITY: THE NEXT TWENTY YEARS

ore than twenty years ago, U.S. President Jimmy Carter ordered a major review of long-range planning within the U.S. government. The resulting *Global 2000 Report* painted a picture of poor coordination and mutually exclusive predictions about future trends among different government agencies and departments. The report also brought together a number of environmental, technological, demographic, and economic forecasts for the state of the world in the year 2000.

"Globalization and Ecological Security: The New Twenty Years," a conference held at both the University of Maryland and the Woodrow Wilson Center, analyzed the process and predictions of *Global 2000 Report* in an effort to emphasize the need for continued and increased coordination among U.S. government departments. The conference also offered a rare opportunity to look ahead systematically another twenty years in the same critical areas addressed by the *Report*.

Wilson Center Flum Scholar **David Rejeski** established a framework for the conference with a presentation on how workers in institutions need peripheral vision. Rejeski detailed the many bureaucratic disincentives and educational traditions that prevent us from taking views that are wider than our department or profession. Citing examples of under-appreciated technology in the areas of microprocessors, genetics, sensors, and manufacturing, Rejeski demonstrated how the widespread inability to know and understand developments in other sectors will necessarily limit civil society and policymakers to reactive, after-the-fact responses.

The necessity for peripheral vision dominated subsequent discussions. Panelists discussed the major factors that in the next twenty years will impact population growth, migration, population "graying," health, energy use, climate change, globalization, and institutions. **Gerry Barney**, the lead author of the *Global* 2000 Report, remarked during the conference that it had been 19 years since he had addressed an audience honestly interested in how long-range planning affected environmental processes. However, there was little optimism among participants that coordinated planning and modeling had improved or would improve greatly in the coming twenty years.

Conference Program:

Taking Stock: From Limits to Growth to Ecological Insecurity

Dennis Pirages, University of Maryland David Rejeski, Woodrow Wilson Center Gerry Barney, Millennium Institute

Demographic Change

Geoffrey D. Dabelko, Woodrow Wilson Center Amy Coen, Population Action International Chet Cooper, Pacific Northwest Laboratory Martin Heisler, University of Maryland

Luncheon Address

Herman Daly, University of Maryland

Future Energy Sources and Global Warming

Paul Runci, University of Maryland Matthias Ruth, University of Maryland Barry Worthington, United States Energy Agency

Technology and Alternative Energy Sources

Kenneth Hunter, University of Maryland Graham Molitor, Public Policy Forecasting Robert Olson, Institute for Alternative Futures Eldon Boes, National Renewable Energy Laboratory

Water, Food, and Biodiversity

Theresa DeGeest, University of Maryland Marc Cohen, International Food Policy Research Institute David Inouye, University of Maryland Olav Slaymaker, University of British Columbia

Disease and Microsecurity

Jordan Kassalow, Council on Foreign Relations Stephen Morse, Columbia University

Cosponsored by the Environmental Change and Security Project, the Harrison Program on the Future Global Agenda at the University of Maryland, and the University of British Columbia.

Michael Moodie, Chemical and Biological Arms Control Institute Andrew Price Smith, University of North Dakota Robert Sprinkle, University of Maryland Sarah Glasgow, University of Maryland

Luncheon Addresses

Stephen Morse, Columbia University Norman P. Neureiter, Department of State

Global Environmental Governance—Multilateral or Unilateral?

Pamela Doughman, University of Maryland David Hunter, Center for International Environmental Law Hilary French, Worldwatch Institute Jacob Park, University of Maryland

Innovative Responses to Global Environmental Governance

Geoffrey D. Dabelko, Woodrow Wilson Center Margaret Keck, Johns Hopkins University / Woodrow Wilson Center Frances Seymour, World Resources Institute Virginia Haufler, University of Maryland Mark Zacher, University of British Columbia

30 November 2000

MIGRATION AND THE ENVIRONMENT IN DEVELOPING COUNTRIES

Featuring **Richard Bilsborrow**, Research Professor, Department of Biostatistics, Carolina Population Center

r. **Richard Bilsborrow** of the Carolina Population Center presented the findings and conclusions of his most recent research—a survey (commissioned by the University of Michigan) of population and human migration trends. Unlike most such research (which has dealt with rural-to-urban migration), Bilsborrow's new work primarily examines *rural-to-rural* migration in areas ranging from South America to Southeast Asia. The work focuses on (a) the environmental factors that contribute to human migration from one rural location to another, and (b) the effects of this migration on the receiving areas' environment.

Rural Migration and the Environment

Bilsborrow reminded those gathered that, while rural populations are growing at a slower overall rate than urban populations, they are growing nonetheless, particularly in the developing world. This growth will continue to place pressure on rural resources. And even in regions that are experiencing negative population growth, the environmental consequences of migration are often high. While the total population of Brazil's Amazon region is down, for example, the effect of the rural migration that follows logging operations in the area is having a devastating effect on primary forestland.

By synthesizing his own research on rural-to-rural migration with the research of others, Bilsborrow is formulating a theory to measure the role of environmental factors in the decision to migrate. He has already determined that, while economics often drive rural-torural migration, environmental factors do come into play for household and communities making the decision to move. Families and communities usually decide to migrate only after attempts at agricultural intensification have failed or the available land has proven too small to feed a growing family size. The resultant extensification of the agricultural frontier is migration's greatest environmental effect—an effect that has been documented from Latin America to Southeast Asia (where expansion of agricultural lands has led to forest loss). One striking example, said Bilsborrow, is the case of Indonesia, where the official government supported rural-to-rural transmigration that led to the destruction of 60 percent of that country's forests.

Bilsborrow then went on to discuss two particular case studies: Guatemala and the Ecuadorian Amazon. In Guatemala, a rapidly declining mortality rate and a steady fertility rate led to a high concentration of family members on family lands and an eventual fragmentation of landholdings. An examination of census data revealed that this fragmentation subsequently spurred out-migration to other rural areas (especially to Guatemala's highlands), where new land was then exploited for agricultural use.

In the Ecuador case that Bilsborrow examined, all of the original migrants into one region of the Amazon region had been granted legal land title. At the time of the first survey in 1990, 419 families were settled on individual plots in an area which remained 59 percent forested. By 1999, however, the population had approximately doubled, average land plot size had halved due to subdivision, and the settlers had removed the majority of primary forest cover to make way for agricultural crops.

These examples make clear that rural-to-rural migration has a very definite impact on the environment of the receiving area. Bilsborrow concluded, however, that a great deal more research is necessary (in areas of departure as well as destination) in order to understand the matrix of factors driving such migration.

REMOTE SENSING AND ENVIRONMENTAL TREATIES: BUILDING MORE EFFECTIVE LINKAGES

Featuring **Roberta Balstad Miller**, Center for International Earth Science Information Network (CIESIN), Columbia University; **Oran Young**, Institute on International Environmental Governance, Dartmouth College; **Jean Meyer-Roux**, Space Applications Institute, Joint Research Centre, Italy; **Robert Harriss**, Environmental and Social Impacts Group, U.S. National Center for Atmospheric Research; **Gerard Begni**, MEDIAS France; **Anthony Janetos**, World Resources Institute; **Susan Subak**, Office of Atmospheric Programs, U.S. Environmental Protection Agency; **David Sandalow**, Assistant Secretary for Oceans, Environment and Science, U.S. Department of State; **Marc Levy**, CIESIN; **Jack Estes**, Remote Sensing Research Unit, UC-Santa Barbara; **John Townshend**, Global Land Cover Facility, University of Maryland; and **Kal Raustiala**, University of California-Los Angeles Law School

he tremendous proliferation of multilateral environmental agreements (MEAs) over the past 20 years has resulted in over 240 multilateral treaties that cover scores of environmental issues—and more global and regional agreements are on the drawing board.

But to achieve their purpose, these treaties require precise and accurate information about environmental conditions. Remote-sensing technology may allow for dramatically improved monitoring of those conditions as well as have great impact on many other areas of foreign policy. Sixty-eight professionals from the remote sensing community and MEA constituencies met for two days at The Wilson Center to discuss enhancing the effectiveness of MEAs through the appropriate application of remote sensing data and technology.

Conclusions

Workshop participants came to a number of conclusions regarding the current potential of remote sensing in relation to MEAs:

• **Remote sensing creates demand for better environmental law.** Remote sensing yields information that conveys environmental changes in a visually compelling way. As a result, it is extremely useful for raising awareness and developing the political support necessary to strengthen MEAs and environmental laws at the national level.

• Remote-sensing data provide a synoptic

view of many environmental trends. Remotelysensed imagery can provide both snapshots and data over time that address environmental issues at global, regional, and national scales. It can provide these in consistent formats and in ways that complement national-level data collection efforts, which often lack full resources and are inconsistent from country to country.

• **Remote sensing can contribute to global assessments in support of MEAs.** Remote sensing provides timely information on a large and growing number of environmental issues (such as land-use/ land-cover change, carbon-monoxide plumes, and the carbon density of ecosystems) that can significantly contribute to global environmental assessments in support of MEAs (such as the Intergovernmental Panel on Climate Change and the Millennium Ecosystem Assessment).

• At present, remote sensing is not likely to contribute to compliance verification. In the short term, remote-sensing data are unlikely to play a significant role in MEA compliance verification for three principal reasons:

1. Sovereignty concerns have generally taken precedence over enforcement of treaty provisions, and therefore contracting parties are unlikely to accept external verification. This may change as environmental issues grow in salience.

2. Many treaty-specific remote-sensing applications are still experimental; these applications will need to

A conference cosponsored by ECSP, the Center for International Earth Science Information of Columbia University (CIESIN), the World Conservation Union, and MEDIAS France

be further refined before they will have the credibility necessary for use in compliance verification.

3. Issues such as guaranteed access to data by all parties, documentation of methodologies, and long-term data archiving have yet to be addressed.

Recommendations

Workshop participants also made a number of recommendations:

• **Remote-sensing instruments.** There is a need to develop a coordinated suite of environmental monitoring instruments with long-term data continuity at appropriate spatial, spectral, and temporal resolutions. Some satellites (such as Landsat) already provide crucial data, and the continuity of the program needs to be maintained. Data archiving services should be developed in parallel. For MEA applications to become operational, the price of land-based remote-sensing data would need to more closely approximate that of meteorological data, which have traditionally been available at low cost on an open-access basis.

• **Institutional arrangements.** An international institution should be mobilized to promote coordination at three levels: among space agencies, among space agencies and value-added companies, and among these two groups and MEA constituencies. An existing institution—such as the Committee on Earth Observation Satellites (CEOS) or the Integrated Global Observing Strategy (IGOS)—may be able to fill this role. This institution would also serve as a focal point for the development of the next generation of operational satellite systems. Given that the costs of such a system are likely to be beyond the means of any single country, a cooperative approach would serve to spread the costs among multiple providers.

• Awareness raising and training. MEAs constituencies—including secretariats and contracting parties—need to be educated about the capabilities of current and future remote-sensing instruments. They also need to receive training and capacity building in the use of remote sensing data for environmental monitoring.

Participants agreed that the workshop represented the first step in a dialogue between the remote-sensing community and MEA constituencies, and that further exchanges are needed. CIESIN pledged to foster that dialogue through a new Web site at http:// sedac.ciesin.columbia.edu/rs-treaties. In response to participants' recommendations, CIESIN will also summarize case studies of treaty-specific remote sensing applications that can serve as a "state-of-the-art" in the field; it will also consult with convention secretariats about their remote-sensing data needs.

Related Web Links

CIESIN: Remote Sensing and Environmental Treaties Workshop http://sedac.ciesin.columbia.edu/rs-treaties

The World Conservation Union http://www.iucn.org/

MEDIAS (France) http://medias.meteo.fr/www/anglais/reseau/

Space Applications Institute http://www.sai.jrc.it/home_mission.htm

Environmental and Social Impacts Group, National Center for Atmospheric Research http://www.ncar.ucar.edu/ncar/esig.html

World Resources Institute http://www.wri.org/wri/

U.S. EPA: Office of Environmental Protection Agency http://www.epa.gov/oar/oap.html

U.S. Department of State: Spotlight on Climate Change http://www.state.gov/www/global/

global_issues/climate/index.html

University of Maryland: Global Land Cover Facility http://glcf.umiacs.umd.edu/

Why the Family Planning Movement Shouldn't Be Afraid of Its History

Featuring **Matthew Connelly**, Faculty Fellow, Institute for the Humanities and Assistant Professor, Department of History, Gerald R. Ford School of Public Policy, University of Michigan

hile the modern family planning movement has a checkered past, the history of a movement is not necessarily its destiny. In a presentation that looked at both the positive and negative roots of the family planning movement, **Matthew Connelly** argued that we cannot discredit a 20th century movement because of its past distortions or simply because it was founded on 19th century values. Rather, Connelly said, we must examine that history and learn from it.

The Uses of Population

Connelly began by noting that both population and its reduction have been used throughout the last century as platforms for a variety of political projects. Even the eugenics movement—commonly seen today as automatically negative—has in some contexts had more positive aspects and consequences. In the United States and Germany, this movement was indeed primarily negative in character and used to justify the oppression of certain sectors of society. But in France and certain areas of Latin America, eugenics took on a more pronatal aspect, and was used as a political argument to support greater investment in social systems and statesponsored health programs.

Connelly also cited the anti-colonial movement in India for its intriguing use of the population issue. Indian independence activists turned the population growth question on its head by asserting that the problem was not too much Indian population growth but instead the worldwide expansion of white colonial populations (which these activists termed the "white peril"). While Indian leaders also wanted to reduce population growth, Connelly noted that they made the issue explicitly one of Indian welfare. They linked high rates of population growth to high levels of poverty and child and infant mortality as well as to the lack of education available to women. In this formulation, reducing poverty was seen as the way to slow population growth. Colonialism was blamed for the existence of these conditions, and so promoting family planning became a way to critique the colonial structure.

The Focus Shifts to Health

According to Connelly, population growth was seen by 1950 to be a serious international concern. Theories of economic development focused on the necessity for countries to undergo *demographic transition* (moving from a state of high birth rates and high death rates through a period of high birth and falling death rates to a situation of low birth and low death rates) in order to progress to a new stage of development. Contraceptives were seen as the essential quick fix to facilitate this transition in poor rural areas. As a result, the focus of family planning became contraceptive distribution and growth rate control. In many cases, individual rights became less important than the overall societal need for progress and transition.

But by the end of the 1960s, Connelly said, this paradigm came into question. With the less-thanoverwhelming success of many contraceptive programs and a few highly publicized cases of coercive family planning measures, the focus for population advocates once again began to shift toward female and child health. This shift was firmly in place by the time of the International Conference on Population and Development held in Cairo in 1994. According to Connelly, the family planning movement today has three priorities: (a) the welfare of mother and child, (b) individual choice about reproduction, and (c) poverty reduction through familysize reduction.

A Return to Positive Roots

Connelly concluded by pointing out that, in contrast to the usual perception of the term, "population control" could be seen as a form of freedom. Population policies, he said, have always had the potential to be used for both good and evil ends. However, a look through a historical lens at family planning reveals that the movement has indeed come full circle. Instead of recapitulating its darker chapters, Connelly said, family planning has returned to its more positive roots by emphasizing improved infant health, women's liberation, and individual choice.

25 January 2001

THE CHERNOBYL SHUTDOWN: END OR CONTINUATION OF AN ERA?

Featuring Vladimir Belskiy, Counselor, Embassy of Russia; Alexsandr Khmurets, Counselor, Embassy of Belarus; and Sergii Korsunskyi, Counselor, Embassy of Ukraine

The last working reactor at the Chernobyl nuclear power complex in Ukraine was closed on 15 December 2000, over fourteen years after an explosion at the plant's Number Four reactor turned into the world's worst civilian nuclear disaster. But the consequences of that explosion and its aftermath continue to grow, and the possibility of fresh radiation leaks still threatens the region. Consular officers from Russia, Ukraine, and Belarus met with an audience at the Woodrow Wilson Center to discuss how their countries are dealing with Chernobyl's ongoing impact.

A "Grave Symbol"

Sergii Korsunskyi, counselor for Ukraine's Embassy to the United States, opened the meeting by calling Chernobyl "one of the grave symbols in the modern history of Ukraine." He recounted the human costs of the disaster for Ukrainians: 3.5 million victims (1.26 million of whom are children); 160,000 displaced persons; and thousands of deaths. Korsunskyi said that one in every 16 health disorders in Ukraine can be attributed to the effects of Chernobyl; that thyroid cancer there is 15 times what it was before the accident; and that the worst health effects are yet to come. The Chernobyl complex is also encircled by a 20-mile-radius "no-go" zone of contamination that is spreading to the west and that will eventually prompt the evacuation of other towns.

Korsunskyi added that the closing of Chernobyl's last reactor will cost 5,000 workers their jobs and Ukraine 5 percent of its electricity production, posing a new set of challenges for the country.

Russia More Concerned with Nuclear Safety, but Determined to Use Nuclear Power

Vladimir Belskiy, counselor for Russia's Embassy to the United States, related how unexpected the Chernobyl accident was in the Soviet Union's corridors of power as well as how inadequately prepared the entire country (from firemen to local authorities to high government officials) was for such an event. The aftermath and subsequent public outcry, said Belskiy, spurred the era of *glasnost*.

But the biggest consequence of Chernobyl for Russia has been the persistence and institutionalization of safety concerns about the country's nuclear industry. Belskiy stated that the Russian State Ministry for Atomic Energy now is constrained by a system of checks and balances—its officials must now appear before the Duma and even in court to defend their practices and priorities. Belskiy also credited the vigorous Russian environmental movement for serving as a watchdog over the nation's nuclear activities. Despite the fact that 11 reactors of Chernobyl's architecture are still online worldwide, he asserted that Russia is doing everything it can to assure nuclear safety and is seeking international cooperation to this end.

Belskiy concluded, however, by stating that Russia (echoing the call of Andrei Sakharov) would continue expanding its nuclear power program. Ten percent of Russia's electricity is now generated by nuclear plants, with 10 such plants now online and another to open in February. A new generation of safer plants (whose waste will not be adaptable to military uses) is planned for Siberia, the northern Caucasus, and the eastern Asian region. Russia's goal is to have nuclear power producing approximately 20 percent of its electricity within two decades. Belskiy added that Russia also plans to build in the near future two nuclear reactors each in India, China, and Iran.

A Continued "Devastating Impact" on Belarus' Health and Economy

Alexandr Khmurets, counselor for Belarus' Embassy to the United States, said that Chernobyl "continues to have a devastating impact on three countries," with the worst effects—health, economic, social, and environmental—to come. Seventy percent

Cosponsored by The Kennan Institute for Advanced Russian Studies and the Environmental Change and Security Project

of the radioactive fallout from Chernobyl fell on Belarus, contaminating 20 percent of its forests and immediately ruining 6,000 square kilometers of its agricultural land. One hundred-nine thousand Belorussians have been resettled. Two million people—a quarter of them children—have been directly affected. Thyroid cancer and disorders are occurring 100 times more than normal in some areas, and the rise in such cancers is not expected to peak until the year 2006. Still, as Khmurets bemoaned, "Chernobyl is now largely forgotten" by the international community.

Khmurets added that the perception of contamination has also had ruinous effects on the country's ability to create wealth. While Belarus "used to feed Russia," it now must import everything. Even its safe food products and timber—the latter once the equivalent of hard currency in the region—are now impossible to market. A massive budget deficit has sprung up in an attempt to counteract the economic shortfalls, and Belarus spends 20 percent of its budget simply to alleviate suffering from Chernobyl and mitigate its economic effects.

Meanwhile, 150,000 square kilometers of Belarus remain contaminated and effectively barren, with the long half-lives of the explosion's released isotopes ensuring that radioactivity will menace the area for most of this century. Khmurets also warned of the possibility of recontamination from a fresh Chernobyl breach. A flood of the plain surrounding the complex could poison the main water supply for millions; the burial sites for waste are not as deep as they need to be; and forest fires threaten to release radioactive materials into huge clouds of smoke.

"The relatively small death tolls and lack of grotesque deformities have fooled people about the immeasurable toll of the disaster," Khmurets concluded. "The area stood a chance to emerge as an optimistic and progressive region after the fall of the Soviet Union, but Chernobyl destroyed this hope." He appealed for international aid and investment in Belarus, saying that its infrastructure was intact and populace well-educated and eager to become self-sufficient.

Aid Options for the International Community

The audience questioned the three officials on what role the international community should play in the Chernobyl cleanup as well as on the area's current nuclear activities. Belskiy stated that Russia has undertaken measures of "supercontrol" and modernization vis-àvis the 11 remaining Chernobyl-like reactors, and that it expects these reactors to operate safely for at least 10 to 15 more years. He added that all nuclear activities in Russia are now done in accordance with international norms and standards, and that the International Atomic Energy Agency (IAEA) now supervises all Russian nuclear construction abroad for nonproliferation and safety. Russia also has a long-term project for reprocessing other countries' nuclear waste under consideration; while many Russian green movements have criticized the plan, Belskiy said that it is likely to be approved.

Korsunskyi said that another Chernobyl would mean "the end of Ukraine," and that the two new nuclear plants under construction in Ukraine (as well as the reprocessing plant being built at the Chernobyl site) are proceeding under the strictest international safety guidelines. While the present Ukrainian contamination is beyond repair, \$750 million in international funds is being used to shore up the sarcophagus of Chernobyl to prevent further contamination. Korsunskyi stressed that one of Ukraine's biggest needs is foreign investment to generate both jobs and the production of clean food and water. Belskiy added that fewer state and more private initiatives are needed for the rehabilitation of the region's people, natural resources, and economy.

Khmurets said that last year's reprocessing plant accident in Japan should prove to the world that nuclear accidents can happen in developed countries as well as developing ones. He said that the best way to help people in contaminated areas would be to speed up the region's structural economic reforms, and he assured donors that any international aid to Belarus would be kept under the control of international officials.

30 January 2001

EXPLORING THE LINKS BETWEEN GLOBAL ENVIRONMENTAL CHANGE AND HUMAN SECURITY AND POPULATION: A MEETING IN THE AVISO POLICY BRIEFING SERIES

Featuring **Betsy Hartmann**, Director, Population and Development Program, Hampshire College in Amherst, MA; and **Alex de Sherbinin**, Research Associate, Columbia University's Center for International Earth Science Information Network (CIESIN)

onventional wisdom (and much U.S. policy toward the developing world) holds that rapid population growth is a major cause of poverty, human insecurity, and environmental degradation.

But the actual impact of large populations is much more complicated and uncertain. Human security turns out to be dependent on many different forces at many different levels—from U.S. environmental policy to single households in developing countries.

Betsy Hartmann and Alex de Sherbinin detailed their findings on this subject in a presentation of papers from the latest issue of *AVISO: An Information Bulletin on Global Environmental Change and Human Security.* While Hartmann challenged some of the overarching assumptions of current thought on population and the environment, de Sherbinin explained how grassroots efforts really can make a difference in building sustainable societies.

Toward a Broader Definition of Human Security

Betsy Hartmann said that simply blaming population growth for environmental risk and a low quality of life "blocks a deeper understanding of the obstacles to achieving human security and ultimately limits policy options." Other factors—such drastic disparities in consumption patterns, power, and income between the developed and the developing world—need to be considered.

"There is an overpopulation of cars," said Hartmann, "that is the main source of population distribution in the United States and a major factor in the degradation of the environment and quality of life here."

Hartmann cited the technology investment choices of developed countries (e.g., highways versus public transit, or missile-shield defense systems versus energysaving technologies) as another threat to global sustainability. She also argued that environmental disaster often occurs where poor people—especially women lack the means and freedom to invest in land improvement or diversify their livelihoods. "We have a tendency to blame environmental degradation on poor peasants," Hartmann said. "But this ignores the larger forces at work, the specific property regimes. In the Amazon, it's mining and ranching interests who are destroying the hillsides."

Hartmann said that the last two decades have been a decisive era—not only for the decline of human security, but for the ways governments and nongovernmental organizations (NGOs) sought to reverse that decline. For example, she blamed the structural adjustment policies of the 80s and 90s for the defunding of African public health programs, which she said contributed to the subsequent inability of healthcare systems to cope with the AIDS epidemic there. "Access to decent health care, one of the most fundamental conditions for human security, was sacrificed on the altar of the free market," Hartmann said.

But during this same period, according to Hartmann, government and family planning officials also took an increasingly narrow approach towards population policy. The drive to reduce population growth led to a distortion of family planning programs: they became focused on meeting demographic targets instead of increasing access to birth control and meeting basic health needs. Fears of mandatory sterilization kept people in many developing countries away from clinics altogether.

Cairo and Beyond

Hartmann called the 1994 United Nations International Conference on Population and Development in Cairo "a great step forward" in population policy. But Cairo's implementation proved difficult because of a lack of funds and infrastructure, opposition from anti-abortion and fundamentalist forces, and a narrow empowerment agenda for women that gave short shrift to land and legal rights.

Now, according to Hartmann, U.S. President George W. Bush's restriction of government funds to any organization that provides abortion services or provides education about abortion overseas (known as the "global gag rule") will further undermine women's health worldwide. "What the [political] right refuses to recognize," said Hartmann, "is that women have abortions whether they are legal or not. The question is whether they are safe, or whether women will die or suffer lifelong complications."

But Hartmann said she also fears another kind of gag rule—the failure of the population policy community to critique neo-Malthusian assumptions and coercive population control policies for fear of playing into the hands of conservatives. And she criticized how both the media and international family planning programs link overpopulation with famine and conflict. Hartmann cited several examples of these linkages—from a recent RAND Corporation report to covers of *The New York Times Magazine* and the *Atlantic Monthly*—in arguing the speciousness of this approach.

"The population community needs to resist the use of negative racial and gender stereotypes that prey on fears of these people in the U.S.," said Hartmann. "Blaming the poor for environmental degradation diverts attention from the U.S. role in global warming and the lack of a responsible U.S. environmental policy overseas." She said that a far more positive way to link population issues to human security would be to expand access to reproductive health resources as well as to work for human rights.

Population and Environment are Local

Alex de Sherbinin shifted the meeting's focus to local and household strategies in coping with environmental change. According to de Sherbinin, there are five different kinds of "livelihood assets": *natural capital* (both renewable and non-renewable); *social capital* (networks, relationships of trust, and access to wider institutions of society); *human capital* (skills, knowledge, abilities, and health); *physical capital* (transport, shelter, water, energy, communications, and production equipment); and *financial capital*.

De Sherbinin emphasized that these assets interact with institutions, culture, economics, and population dynamics to produce locally differentiated environmental processes and change. Utilizing photographs from South Asia to Africa to South America, he showed local livelihood images as well as NGO efforts at creating local sustainability.

New data presented by de Sherbinin from the Pilot Environmental Sustainability Index (ESI) also revealed interesting relationships among poverty, population growth, and environmental degradation. While low human development is associated with high total fertility rates and high human vulnerability, for example, no correlation has yet been established between population growth and the condition of environmental systems. "Good governance and lack of corruption correlated highest with the best environmental quality," said de Sherbinin. (You can view the full ESI data set at http:// www.ciesin.org/indicators/ESI/pilot_esi.html.)



De Sherbinin then compared two cases (Haiti and the Machakos District of Kenya) in which increases in population density led to diametrically opposite results. The cycle of population growth and environmental decline in Haiti was caused by a legion of factors: poor governance, a feudal system that blocked the emergence of modern market dynamics, and predatory regimes that failed to respect human rights and disregarded civil society and NGOs.

The Machakos District succeeded because (among other reasons) local and national institutions encouraged not only community and private investment but access to markets and equitable land tenure. With such dynamics at work, population density contributed not only to an increased labor supply but also to lower interaction costs and more knowledge-related institutions.

Such comparisons teach valuable lessons to those interested in sustainable societies, argued de Sherbinin. National governments should promote good governance (ensuring civil liberties, democratic institutions, transparency, and land and resource rights) as well as sound physical infrastructure and human services. They also need to support women's empowerment and family planning programs that stress quality of care and male involvement. But the grassroots efforts of community-building organizations, NGOs, and individuals are equally important for sustainability.

Misplaced Alarm?

Audience members questioned the radical deemphasis of population growth as a factor in poverty and environmental degradation. Hartmann replied that "we need urban planning to manage demographic trends. Instead of making aggregate arguments, it's much more helpful to look at local situations. . .We need planning rather than panic."

Hartmann also stressed that much environmental degradation is a consequence of weak local institutions and deployment of inappropriate technologies. And she insisted that the alarm over population growth was misplaced. "There are plenty of other things to be alarmed about," Hartmann said. "It's hard to move away from alarm's proven track record, but we need to figure how we can be urgent about issues without blaming poor people."

Both Hartmann and de Sherbinin said that renewed attention on the developed world's consumption habits is overdue. "It's relatively straight forward how to get people off a high-consumption, high-technology lifestyle," said de Sherbinin. "It's more problematic to advance this option politically. We will start to face real tradeoffs eventually."

AVISO



AVISO is a series of information bulletins and policy briefings on various issues related to environment and human security. This publication series is a cooperative effort between the Global Environmental Change and Human Security (GECHS) project, the Woodrow Wilson International Center for Scholars, the U.S. Agency for International Development through a cooperative agreement with the University of Michigan, the Canadian International Development Agency, and the University of Victoria.

GECHS is a core project of the International Human Dimensions Programme on Global Environmental Change (IHDP). The main goal of the GECHS project is to advance interdisciplinary, international research and policy efforts in the area of human security and environmental change. The GECHS project promotes collaborative and participatory research, and encourages new methodological approaches.

Issues 1-8 have looked at topics as diverse as human security,

population displacement, water scarcity, food security, southern visions of sustainable development, and population and infectious disease. *AVISO* is available in English, Spanish, and French. To see past issues, please visit the GECHS website at http://www.gechs.org, where copies may be downloaded in PDF format.

THE CHALLENGE OF ENDING RURAL POVERTY: SPECIAL RELEASE AND DISCUSSION OF THE NEW 2001 IFAD RURAL POVERTY REPORT

Featuring Fawzi H. AI-Sultan, President, International Fund for Agricultural Development (IFAD); George McGovern, U.S. Ambassador to the United Nations Food and Agricultural Agencies; John Mellor, President, ABT Associates; Geeta Rao Gupta, President, International Center for Research on Women; John Westley, Vice-President, IFAD; David Beckmann, President, Bread for the World; Peter McPherson, President, Michigan State University; Co-Chair of the Partnership to Cut Hunger in Africa; and Rajul Pandya Lorch, Head of the 2020 Vision for Food, Agriculture and the Environment Initiative, International Food Policy Research Institute

orld attention needs to refocus on rural poverty and its critical importance to poverty in general, according to a new International Fund for Agricultural Development (IFAD) report released to the

public at the Wilson Center. Nearly 150 people attended the report's release and a subsequent discussion, while many more watched via live Web cast. (The archived Web cast is available at h t t p : / / e c s p . s i . e d u / ruralpov.ram.)

Three-quarters of the 1.2 billion people in extreme poverty live in rural areas. *Rural Poverty Report 2001: The Challenge of Ending Rural Poverty* details their livelihoods, the factors that keep

them impoverished, and the steps the world must take to help them. The rural poor are caught in a matrix of pernicious circumstances and forces: little access to schools, hospitals, markets, credit, and technology; dry and marginal lands; low levels of literacy; bigger families, higher mortality, and more hunger and disease (including HIV/AIDS); and fewer employment opportunities off the land.

In introducing the report, **Fawzi Al-Sultan** warned that today's rate of poverty reduction is less than a third of that needed to achieve the UN Millennium Summit's target of halving global poverty by the year 2015. He called for a reversal of the twelve-year decline in agricultural development aid given to developing countries, saying that "the rural poor must be the focus in any effort to eradicate poverty."

The IFAD report emphasizes four specific and critical needs of rural farmers: assets, markets, technology, and

Geeta Rao Gupta

institutions. Poor farmers own very little land and cannot use what they have for their own benefit, said Al-Sultan; they need more land and water access as well as more financial support and land titles. Local markets and

> infrastructure also need to be developed to give rural farmers' access to better prices. In addition, both existing and new technologies need to be brought to smallholder agriculture, and agricultural research needs to refocus on crops of use and importance to these farmers. Finally, institutions must become more responsive to and equitable for the rural poor.

Other rural residents especially vulnerable to poverty

include landless wage laborers, displaced people, and female householders. Al-Sultan noted that impoverished rural women and children often suffer the most, having even less access to land, water, credit, and social services than their male counterparts.

Agricultural Reform Key to Poverty Eradication

George McGovern called the IFAD report a wonderful statement of the need to deal more strongly and effectively with rural poverty. The drive to halve global hunger and poverty by 2015 is "perfectly practical and achievable," said McGovern. "I am sure we can do this in 15 years."

But he questioned whether donor and recipient governments have the interest or competence to use the resources now available to achieve the 2015 goal. To combat this inertia, McGovern called for a campaign focused on the 300 million hungry children worldwide. Calling nutrition "the handmaiden of education," McGovern stressed that school lunch programs are the best weapon to promote education and hence increased literacy, better health, and lower birthrates. He also vowed to lobby President George W. Bush and U.S. Secretary



of State Colin Powell on the importance of the report and the unparalleled effectiveness of investing in girls' education.

John Mellor said that he was hopeful the IFAD report could spur foreign donors to return to their higher agricultural aid levels of the 1980s, which were extraordinarily successful in reducing rural poverty. While there is now much talk of the ascendancy of urban poverty, said Mellor, absolute urban poverty in Asian countries (for example) has essentially ceased to exist. Agricultural reform is the proven engine of poverty eradication, he stressed, not only because most poverty is rural but because of the profound multiplier effect of rising rural income: for every one agriculture job created, two to three are created in domestic goods and services.

The Importance of Empowering Women

Geeta Rao Gupta called the IFAD report both a great resource and a prime advocacy tool. But she warned that the UN Millennium Summit pledge cannot be met or sustained without significantly involving poor rural women in the effort. Such involvement is both smart and right, said Rao Gupta: smart because women are crucial players in food security, and right because gender disparities are greatest among the rural poor. "A gender perspective needs to be woven through all the analyses and recommendations of the IFAD report," she said.

Rao Gupta also noted that the UN Security Council's recent discussion of AIDS as a national security issue

afforded an opportunity to place food security on the international agenda as well. Citing the success of advocacy for girls' education, she argued that comprehensive national data on women's poverty would be crucial in convincing skeptical officials of the need for action.

Implementing the Report

Audience questions focused on implementing the report's conclusions and recommendations. Calling the issue of rural poverty as important as that of debt relief, Al-Sultan noted the difficulty of getting rural agricultural programs onto the agenda of developing countries' governments. But he also noted that, after a long period of budgetary restraint, some developed countries have a renewed interest in foreign development aid.

A full discussion period followed the report's presentation. **John Westley** of IFAD began by announcing that the report (which had been presented two days earlier to United Nations officials) would also be presented to several donor countries in the next weeks and then to aid recipient countries.

Asserting that agricultural aid has been neglected inadvertently in foreign aid budgets of the last decade, **Peter McPherson** called for an "NIH-like" professional approach to the problem of increasing agricultural productivity worldwide. McPherson said that U.S. Secretary of State Colin Powell is deeply interested in African affairs and will be receptive to such an approach. "The technological capabilities for food production are just exploding," said McPherson. "But if we continue our short-term view, more people will die."

David Beckmann announced that a recent Bread for the World survey showed that 83 percent of the American public wants the U.S. government to support the effort to halve global poverty by 2015—and is willing to pay \$50/person annually to accomplish it. He said that \$4 billion in additional and effective poverty reduction assistance (\$1 billion more from the United States) would ensure reaching that goal, and he added that he is hopeful both the Bush administration as well as Senator Jesse Helms (R-NC) will be open to this initiative. "We need institutional reforms, too," said Beckmann, "but money is a clear sign of will to alleviate this problem."

Rajul Pandya Lorch called the IFAD report the clearest and most compelling report to date on rural poverty and how to eradicate it. However, she was pessimistic—given the intractability of global rural food insecurity—that the Millennium Summit goal could be reached. Pandya Lorch noted that food insecurity is

entrenched in Asia and has doubled in sub-Saharan Africa since the 1970s. She also cited urbanization, HIV/AIDS, and globalization as major developments that could block poverty eradication efforts.

"Looking for Openings"

Responding to audience questions, Beckmann said that the IFAD report's proposals were entirely consistent with President Bush's platform of "compassionate conservatism." And he defended his openness to working with Senator Helms, saying that Helms' staff members have told him the Senator wants to reform the U.S. Agency for International Development, not eliminate it. "I'm hopeful, not optimistic," said Beckmann. "We're looking for openings."

George McGovern echoed Beckmann's optimism and added that there has never been a better time to launch an effort to eradicate poverty. McGovern said that, while \$16 billion in productivity is lost annually because of world hunger, \$6-8 billion yearly would end it. "There is a real possibility that the kind of interesting common sense proposals heard today could be sold to the U.S. government and my UN colleagues," added McGovern.

All participants agreed with Pandya Lorch that, while foreign aid is welcome, the real goal is agricultural selfsufficiency for developing countries. She added that there must be a strong element of community participation from the beginning in any new program of agricultural assistance. Wesley of IFAD said that the report will be presented to aid-recipient countries precisely to generate such self-initiative. Beckmann concluded by lauding the IFAD report's case studies highlighting programs that increased productivity and political empowerment for the world's poor. He said that groups representing the



poor must push from below for poverty reduction strategies that are not business as usual.

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16 March 2001 U.S. Policy and the Global Environment: Memos to the President

Featuring **John A. Riggs**, Executive Director, Program on Energy, the Environment, and the Economy, The Aspen Institute; **Donald Kennedy**, Bing Professor of Environmental Science, President Emeritus, Stanford University; editor-in-chief, Science magazine; and **Franklin C. Moore**, Acting Director, Center for Environment, U.S. Agency for International Development

H ow should the Bush administration respond to critical global environmental problems? The Aspen Institute last summer asked prominent scientists and academics along with business leaders and environmental activists to formulate "memos to the president" on U.S. policy towards such linked issues as climate change, population, water, energy, and agriculture.

water resources—is rapidly accelerating; and (2) while poverty, hunger, and inequitable income distribution are largely located in the developing world, a narrow definition of national interest will be ineffective in solving them.

But aren't these problems too large to attack as a set? No, said Kennedy: work on one will help with the

The resultant book— "U.S. Policy and the **Global Environment:** Memos to the President — was presented at the Wilson Center by its co-editors John Riggs and Donald Kennedy (who is also on the advisory committee of the **Environmental Change** and Security Project). Franklin Moore of USAID served as discussant.

"We Share the Same Atmosphere"



others. He also argued that United States leadership is essential to this process. The United States can help, said Kennedy, both (a) because of its immense and transferable knowledge bank in technology and science, and (b) because it is in the U.S. national interest to take an interest in quality of life globally. "It's not just because we share the same atmosphere," said Kennedy. "We can't

Despite the fact that environmental issues and their solutions are indisputably global in scope, **Donald Kennedy** said the purpose of "Memos" was to get the attention of the next U.S. administration with an assessment "aimed very much at U.S. environmental policy." (The book is available in PDF form at www.aspeninstitute.org/eee/memos.html and was published in serial form in *Environment* magazine over the past year.)

Kennedy said that the Aspen Institute began the project with two assumptions: (1) global change—in climate, land cover, population growth, air quality, and

afford to see the developed world descend into a spiral of poverty and conflict that will eventually reach us."

Kennedy cited several papers in "Memos" as examples of the complexity and tradeoffs that the Bush administration will have to comprehend in order to effectively deal with transnational environmental and human security problems. He also warned that water is the next flashpoint issue in many regions; 70 percent of the world's major rivers have international watersheds, providing "tinder for conflict." Kennedy concluded by calling for a rigorous international governmental regime to be established for dealing with these problems.

Cosponsored by the Environmental Change and Security Project and The Aspen Institute

The Importance of Civil Society

Franklin Moore called "Memos" a "very useful capsulation of why the environment is important to the United States, to its foreign policy, and to sustainable development" in general. He said that the book strikes an important balance between the moral necessity of dealing with environmental issues and the necessity of seeing these issues as essential to national security.

And Moore lauded several articles in the book that touch on the increasingly important role of civil society in global environmental

governance. "There is a real concern about subjecting governments to additional costs for these issues," he said. "It is really civil society that leads and must lead the way." He also cited the overwhelming demand by Home Depot consumers for lumber from certifiably sustained forests as an example of the public driving corporations towards environmental consciousness. "They can't keep enough of the stuff in stock," said Moore.

However, Moore noted that "Memos" fails to address "depletion of the earth" (soil depletion and desertification), which he called one of the four fundamental global environmental issues. And he argued that, while overseas development aid has a critical role in sustainable development, the proper mix of such aid with trade, investment, and domestic sources of finance remains unclear. "We have only been in the development aid business for 55 years," Moore said. "Before that, every nation developed through trade and foreign investment."

The Political Climate for Sustainability

Topics for audience questions ranged from international standards for sustainable production to the soundness of the science behind claims of climatic change. While Kennedy supported international sustainability standards, Moore said his negotiating experience has taught him that such standards gravitate to the lowest common denominator and are often irrelevant to developed countries. He argued instead for respecting local and regional conditions in the formulation of global policy. "This should be done on a forest-by-forest basis," Moore said. **John Riggs** added that alternative standards set by nongovernmental organizations and civil society have (with public effort) become effective consumer and investor guides.

Kennedy said that the Bush administration would not be particularly receptive to "Memos" right now, in part because the book is based in science and so many of the administration's senior science positions remain unfilled. Moore added that the upcoming 2002 Rio +10conference in Johannesburg presented a variety of



opportunities for environmental advocates. However, Moore cautioned that it would be crucial for these advocates not to see the world as simply divided developed into and developing countries. Rather, large economies with large industrial components (such as China, India, and Brazil) as well as small island nations and poor countries all have different responses to the significance of overseas development assistance, trade, investment, and the

environment. Recognition of this, said Moore, would productively alter the Rio dialogue and allow new solutions to come forward on critical problems.

"The UN also doesn't give enough credibility to local governments as a group," Moore added. "With localities represented, you would get a very different discussion of urban and environmental issues."

"The Genome I Want To See Is Rice"

In response to a question about the scientific consensus expressed in "Memos," Kennedy said that, while the science on the importance of such issues as global warming, biodiversity, population, and environment and conflict is overwhelmingly convincing, this science needs to be better explained as well as exported more effectively to some developing countries. He also stressed the need for more research into crop improvement and agronomic methodologies, saying that "genomics has more to offer to Third World agriculture than First World medicine." "The genome I want to see is that of rice," said Kennedy.

21 March 2001

"THE URBAN EXPLOSION"—A FILM IN THE 2001 D.C. ENVIRONMENTAL FILM FESTIVAL

Featuring **Hal Weiner**, writer and director of "The Urban Explosion"; **Marilyn Weiner**, producer of "The Urban Explosion"; **Maureen O'Neill**, Senior Regional Urban Coordinator, U.S. Environmental Protection Agency, Region 2; and **Michael White**, Fellow, Woodrow Wilson Center

ore than half the world's population now lives in cities. A major dilemma facing civic, national, and global institutions is how to service this exploding urban base without destroying the delicate natural balance that makes urbanization possible in the first place.

"The Urban Explosion," an hour-long film from Screenscope Inc. originally broadcast as part of the "Journey to Planet Earth" series on PBS, details the dramatic environmental problems of four rapidly growing megacities—Mexico City, Istanbul, Shanghai, and New York—as well as efforts in these metropolises to work towards sustainability. The film was shown at the Wilson Center as part of the 2001 Environmental Film Festival in the Nation's Capital and was followed by a panel discussion that included the filmmakers.

Degradation and Hope

"The Urban Explosion" argues that vast waves of immigration have fueled tremendous rates of urban population growth around the world, leading to dangerous levels of air and water pollution as well as health crises and resource stress that threaten these cities' ultimate viability. For example, breathing the smoggy air of Mexico City (which has 20 million residents and is growing by three million annually) is like smoking two packs of cigarettes daily. And toxic waste runs in the city's open canals and brings cholera to the surrounding valley.

In Istanbul, green space is swallowed up by illegal housing developments, and 50 percent of the city's sewage runs untreated into the neighboring Bosphorous Strait, virtually ruining one of the world most productive fisheries. In Shanghai, the "mecca of materialism" for China, smog from low-grade coal burning, buses, and autos chokes the city. East Harlem is home to six of seven New York City bus depots and suffers from an epidemic of asthma caused by diesel exhaust.

But "The Urban Explosion" also finds hopeful

efforts in these cities—by both governments and community groups—to counteract environmental degradation and its assault on livability. Besides tightening their emissions standards and enhancing their rapid transit systems to address air pollution, both Mexico City and



Shanghai are building deep-tunnel sewage drainage systems in an effort to eliminate open wastewater canals. Texcaco Lake and nearby lands have been restored using treated Mexico City water. Community groups in Istanbul are sponsoring construction of sustainable housing with nearby hospitals, schools, green spaces, and infrastructure. Sweat equity and investment are helping to recapture neighborhoods and common spaces in the South Bronx and Brooklyn. "The Urban Explosion" ends by arguing that the right to sustainability is as much a human right as democratic or economic freedom.

New York: Success and Challenges

Maureen O'Neill of the U.S. EPA Region 2 began the post-screening panel discussion by detailing some of the environmental successes and remaining challenges for New York City. Immigration and the diversity of the

Cosponsored by the Environmental Change and Security Project & the Comparative Urban Studies Project

city impact how government must deal with environmental issues, said O'Neill: for example, a campaign against a number of illegal pesticides sold on the city's street corners and in its bodegas must be conducted in the 140 languages spoken there.

But there have been major environmental successes both in New York (such as the recent city-state watershed protection plan) and the United States (where the aggregate six priority pollutants have gone down since 1970 despite rises in GDP and vehicle miles driven over the same period). "You can have clean air and a healthy economy—they're not opposed," argued O'Neill. She warned, however, that dramatic climate change will affect New York City disproportionately: any rise in sea level because of polar ice-cap melting, for instance, would be disastrous for this predominantly coastal city.

Past and Present Urban Explosions

Demographer **Michael White** followed by contextualizing and historicizing urban population trends. According to White, "urban explosion" has been an oftrepeated theme dating back to the 1950s. In fact, today's urbanization is not out of pace with other urban population booms of the past: many cities have grown rapidly in brief periods, a dynamic usually tied to economic development and in-migration.

What is different about today, said White, is that urbanization is taking place under "incomplete demographic transition"—that is, overall national population growth rates are also growing along with those of their cities. Megacities are also now sprouting up in countries (such as China) that are making fundamental political and economic transitions. While it takes tremendous resources and money to stem environmental degradation, White also argued that strong institutions, governmental regulation, and the prodding of nongovernmental organizations and community groups are also essential to this process. He ended by noting that 90 percent of the world's urbanized population does not live in megacities but will have to respond to the same environmental issues.

The Making of "The Urban Explosion"

Filmmakers **Hal** and **Marilyn Weiner** talked about the making of "The Urban Explosion" (which was originally broadcast in 1999) as well as their plans for future films in the upcoming "Journey to Planet Earth" season. Hal Weiner said that the films they currently have in production will discuss environmental injustice (which he called a "terribly, terribly important issue") as well as emphasize U.S. responsibility in environmental degradation and the state of the planet. Marilyn Weiner added that grassland loss, infectious diseases, and environmental security issues are also critical to potential global destabilization.

In response to audience questions, Hal Weiner said that recent Bush administration actions have galvanized the environmental community, and that a counter-effort against the weakening of governmental environmental regulations is imminent. Michael White added that the "environment vs. jobs" debate so prevalent today is a false one—that we can have economic development without environmental degradation, but that community groups need to speak out to promote environmental equity. White also noted that discrepancies in resources and general issues of development affect the relative capacities of cities to carry out environmental restoration projects. "What New York City can spend on water resources is vastly different than what Mexico City or Shanghai can spend," said White.

Marilyn Weiner related that U.S. audiences are still very provincial and have to be convinced that conditions in other countries are worth caring about. Hal Weiner concluded by lamenting that the West seems to have written off Africa. He called Africa's lack of health infrastructure and economic development as well as its epidemic of HIV/AIDS "desperate and terribly unfair," and also noted the chronic epidemic of vector-borne diseases in southern Africa. (For example, 11 percent of Kenyan children under 5 die of malaria—a disease easily curable with the proper medicines).

Related Web Links

The D.C. Environmental Film Festival http://www.dcenvironmentalfilmfest.org/

Screenscope Inc.

http://www.screenscopefilms.com/contact.html

U.S. EPA Region 2

http://www.epa.gov/region02/

Michael White

http://www.brown.edu/Departments/Sociology/ faculty/white/

10 April 2001

RISKS OF CONFLICT: RESOURCE AND POPULATION PRESSURES

Featuring **Sir Crispin Tickell**, Chancellor of the University of Kent at Canterbury; Chairman of the Climate Institute of Washington, DC, and President of the Earth Centre in South Yorkshire.

There are few greater challenges to human society than the risks of conflict arising from human population growth and resource depletion. Sir Crispin Tickell, a longtime British diplomat and former British Permanent Representative to the United Nations who has also headed a variety of scientific, environmental, and sustainability initiatives, detailed these challenges and the world's difficulty in addressing them in a bracing talk.

"A Malignant Maladaptation"

Sir Crispin began by stating that the "world looks a messier place than I have known it during my 36 years as a diplomat." He noted, for example, that violence within societies has increased: of the 27 armed conflicts in 1999, all but two were within national boundaries. Power is also devolving—from nation-states to international institutions, to regional and local communities, and to citizens through old and new technologies of communication.

And the enormous growth in human population and its ever-increasing demands on global resources, said Sir Crispin, are compromising the health of the planet as well as local conditions. In the last century, human population has quadrupled, while air pollution has increased by a factor of five, water use by nine, sulphur emissions by 13, energy use by 16, carbon dioxide emissions by 17, marine fish catches by 35, and industrial output by 40. Sir Crispin maintained that there are few precedents for the current impact on the earth by the human species, whose dominance he called a "malignant maladaptation."

The Five Drivers for Global Change

Sir Crispin went on to argue that most of the implications of these trends remain unrecognized, although they are straining human communities everywhere and increasing the potential for violence. He identified five main drivers for global change—each associated with the others, and all pointing towards risks of social breakdown and conflict.

The first driver is the rate of human population increase, with attendant hyperurbanization and increased absolute poverty. Sir Crispin noted that, between 1992 and 2000, some 450 million new people came to inhabit the earth. "If the increase had been in elephants, swallows, sharks, mushrooms, or cockroaches, we would have been scared silly," he said, "but as it is ourselves, we shrug our shoulders as if it were the most normal thing in the world."

The second driver is the condition of the land. Increasing populations are claiming more and more space and resources, resulting in widespread soil degradation and advancing deserts. Soil depletion, said Sir Crispin, affects some 10 percent of current world agricultural areas. Meanwhile, increases in food supplies have not kept pace with population growth, and almost a billion people are today undernourished. Similarly, while demand for water (the third driver) doubles every 21 years, water supplies have remained at the same level they were thousands of years ago. The United Nations Environmental Programme has already referred to the existence of "a global water crisis," as major rivers become toxic streams and ocean fish stocks decline past recoverability.

Damage to ecosystems is an additional factor. Sir Crispin said that humans are causing extinction at 1000 times the normal rate, altering the course of evolution itself. The consequences are reduced food supplies and medicine as well as severe damage to forests, wetlands, soil fertility, and the natural cycles of waste reclamation. The final driver, atmospheric chemistry changes, includes acidification from industry, depletion of the atmospheric ozone layer, and the degree of global warming that greenhouse gases will spur. Sir Crispin stated that the combination of these five drivers is most worrying. Impelled by continued human population growth and economic expansion, these factors will eventually result in a creeping contagion of economic breakdown and state failure.

The Conflict-Resource Connection

Sir Crispin said that, while triggers for individual conflicts over resources are most difficult to predict, resource depletion in poor countries has led to a myriad of conflict precursors: poverty, inequity, community tension, and weakened institutions. He also argued that, while industrial countries' vulnerability to these problems is masked by their overconsumption and dependence on fossil fuels, they are generally more vulnerable than supposed. Modern conflicts between nation-states over resources have so far been rare (with the exception of oil); but this may change. Disputes over water could be a *casus belli*, as could transboundary export of pollution. "What states do to the environment within their boundaries is no longer for

and dismayed" Europeans and was an abdication of responsibility "truly out of step with the rest of the world." He raised the possibility that European governments might impose import taxes on U.S. imports

boundaries is no longer f them alone," he said.

Refugees are an additional consequence as well as a cause of environmental and state destabilization. Although cases overlap, Sir Crispin noted that there are more environmental refugees (25 million, according to some estimates) then there are political refugees, with particularly large numbers in sub-Saharan Africa. And since one-third of humanity lives within 60 kilometers of a coastline, predicted sea level increases caused by climate change could cause additional massive migrations and tremendous stress on both developed and developing nations.

Sir Crispin concluded on

a note of some pessimism. He noted that, while there are prominent cases of transboundary cooperation in the management of environmental flashpoints, catastrophe may be needed to shock people into thinking of the environment, population, and conflict as globally interrelated dynamics.

Bush, Kyoto, and The Future

In response to audience questions, Sir Crispin called the current vogue for market forces as a final arbiter of value a "fashionable delusion," and said that in the last resort the public interest must prevail. He said that the next fifty years will be an extremely difficult period and will see much more disorder and painful adjustment to the limits of environmental resources and population growth.

A regular adviser to British Prime Minister Tony Blair on environmental issues, Sir Crispin said that most governments and institutions are not at the moment wellgeared to these problems, and that authoritarian governments often set such big concerns aside altogether because of their ineffective chains of command. He castigated the Bush administration for its recent disavowal of the Kyoto Protocols, saying that the move "shocked



Sir Crispin Tickell

to redress the competitive balance, and noted that German consumers are organizing boycotts of U.S. products as a result of the Kyoto announcement.

Sir Crispin ended the discussion period by stressing the importance to population growth reduction of global female empowerment, education, availability of contraceptive devices, and better pensions and state institutions of elderly care.

Related Web Links

Sir Crispin Tickell http://users.ox.ac.uk/~ocees/tickell.htm

Millennium Report of the Secretary General of the United Nations

http://www.un.org/millennium/sg/report/

Something New Under the Sun: An Environmental History of the Twentieth Century

http://www.wwnorton.com/catalog/spring00/ 04917.htm

British Ministry of Defence: The Future Strategic Context for Defence http://www.mod.uk/index.php3?page=2449

15-17 May 2001 CONFLICT AND CONTAGION: A SOUTH ASIA SIMULATION

Featuring Dr. Helene Gayle, U.S. Centers for Disease Control and Prevention

alling HIV/AIDS "probably the greatest human tragedy of our time," Dr. Helene Gayle of the Centers for Disease Control and Prevention (CDC) told a conference and simulation cosponsored by the Environmental Change and Security Project that India may be the key to the epidemic's global course.

Gayle, director of the CDC's National Center for HIV, Sexually Transmitted Disease, and Tuberculosis Prevention, addressed "Contagion and Stability," a threeday simulation conference hosted by the U.S. Army War College in Carlisle, Pennsylvania. High-level representatives from the U.S. government, foreign embassies, and nongovernmental organizations joined leading scientists, scholars, and researchers to explore and negotiate over a scenario of plague epidemic in India and its consequences for regional and global security.

HIV/AIDS, the Developing World, and India

Gayle's speech highlighted the perniciousness of HIV/AIDS and its strains on the health infrastructures of developing countries. She said that AIDS has risen in the last twenty years from a virtually unknown disease to become the fourth-largest cause of death worldwide and the leading cause of death in Africa. Perhaps even more significantly, the virus most often attacks people in their period of highest economic productivity. Gayle noted that many African countries are already seeing significant declines in important macroeconomic indicators because of AIDS. The epidemic is also taxing health care services that are already overburdened with such diseases as tuberculosis, cholera, and malaria.

India may be a bellwether for the future of AIDS worldwide, said Gayle. Approximately four million Indians are infected with HIV, which is only one percent of the country's population. But Gayle pointed out that over 50 percent of some high-risk populations in India are infected, and that the factors that contribute most to the spread of HIV (population mobility, high rates of sexually-transmitted diseases, and gender inequality) are widespread there. "I think a lot of people actually would say that India, in many ways, may be the country that most influences the global epidemic in the long run,"

said Dr. Gayle.

But there is reason for hope. While India's society and leaders were in denial about the impact of AIDS eight or nine years ago, Gayle said that the Indian government has now made HIV its highest public health issue priority. There is also intense interest in the problem from overseas donors such as the World Bank and the U.S. Agency for International Development. But while praising the Indian government and its international partners, Gayle argued that there are still not enough resources being devoted to fighting HIV/AIDS either in India or globally. "Although there is a clear understanding [about the problem]," Gayle said, "the level of activity, the level of focus, is still not what is should be."

Besides calling for an increase in funding, Gayle outlined a multifaceted approach to address HIV/AIDS worldwide. Keys to the effort are a high-level political commitment to destigmatizing HIV and allowing those affected to seek services without fear of retribution or ostracization. Other steps are: widespread distribution of and education about condoms; private-sector involvement; quality assurance of generic anti-retroviral therapies; and the recruitment of men to HIV prevention.

"We often talk about how, in a society where women's roles are not appreciated, it is important for women to become empowered," said Gayle. "But unless we have the other side of the equation working with it, getting men involved, we are not going to be able to do that job that is necessary in India as well as in other societies."

Disease and Stability in South Asia and the World

Gayle, who starting this fall will be on detail from the CDC to the Bill & Melinda Gates Foundation, then joined the other attendees in the "Conflict and Stability" simulation. Participants divided into teams (representing India, the United States, international organizations, and nongovernmental organizations) to formulate and negotiate responses to a scenario of massive plague outbreak in the Indian state of Andhra Pradesh.

In the scenario, international tensions are high. While India has suggested that both Pakistan and the United

Cosponsored by ECSP, the University of Michigan Population Fellows Programs, and the U.S. Army War College

States were involved in the outbreak, some countries either refuse to accept flights from the region or quarantine their passengers. A typhoon on India's western coast forces migration, which threatens to spread the contagion. Meanwhile, a software engineer from Andhra Pradesh's largest city flies to San Francisco, where he is hospitalized with signs of plague.

In essence, the scenario emphasizes the global interconnections among issues of population, health, environment, and security: what happens in an Indian village one week can easily affect California the next. Mindful of this, the simulation teams first negotiated a response to the immediate crisis that allowed India to take the lead in managing the outbreak as the international community provided supplies and funding and tried to open channels of regional communication.

The teams then developed long-term policy recommendations both for prevention of another such crisis and for U.S. action. All teams agreed that strengthening South Asian health care infrastructure—with an emphasis on HIV/AIDS care and prevention as well as enhanced delivery at the local level—was essential. Other consensus recommendations included: the easing of trade barriers between the United States and the region; the development of international early crisis warning systems; and a recommitment to education for women and access to family planning as a strategy for poverty alleviation.



ECSP Trade and Environment Forum

Promoting world trade and protecting the global commons are frequently presented as mutually exclusive goals. But this dichotomy often results in a stalemate between the business and environmental communities that inhibits progress both for future trade liberalization and for multilateral environmental solutions.

ECSP launched the Trade and Environment Forum (TEF) in the summer of 2000 to analyze this apparent impasse and to identify solutions. The goal of TEF is to recognize the legitimate claims of both international trade law and environmental law and to identify methods of harmonizing international trading rules with today's rapidly evolving environmental concerns.

International trade rules have been painstakingly developed over the past 50 years, culminating in the creation of the World Trade Organization (WTO) in 1995. At the same time, the Multilateral Environmental Agreement (MEA) has become the preferred approach to addressing international environmental issues. Today, after over a century of development, more than 200 MEAs are in force—over 20 of which have trade implications. The connection between trade and environmental issues is not especially new, but this overlap has generated concern from many parties and a general interest in finding a resolution.

Accordingly, TEF is considering possible approaches to improve governance of the MEAs and to determine the appropriate relationship between MEAs and the WTO. In cooperation with the Heinrich Böll Foundation and the National Wildlife Federation, TEF held a conference on March 29, 2001 on the issue of the WTO and MEAs. In addition, a TEF Web site (http://wwics.si.edu/tef/index.htm) has been created to help publicize these issues and keep abreast of recent developments. TEF has also identified the World Summit on Sustainable Development (to be held in Johannesburg, South Africa in September 2002) as a potentially useful venue for significant progress on the relationship of trade and environment. TEF will hold a series of workshops over the coming year to develop ideas and foster a consensus among the key players on the issues of trade and the environment leading up to Johannesburg.

Proceedings from the March 29, 2001 conference, "The WTO and MEAs," will be available in late August, 2001. For more information on TEF, please contact Bill Krist, Project Director, at KristW1@wwic.si.edu or (703) 989-2626.



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YOUNG MEN AND WAR: COULD WE HAVE PREDICTED THE DISTRIBUTION OF VIOLENT CONFLICTS AT THE END OF THE MILLENNIUM?

Featuring Christian Mesquida, York University and Neil Wiener, York University

Why is war so ubiquitous, both historically and today? In an attempt to answer this question, two psychologists from York University suggest that the size of a country's young male population can tell us if that country will engage in war or suffer from civil unrest. Their theory, which they call "the male age composition hypothesis," challenges the environmental security field's traditional model, which views conflict as the result of a variety of interrelated factors—particularly population growth, resource scarcity, and environmental degradation.

According to **Neil Wiener**, the new hypothesis shares the environmental security model's concern with population growth. But rather than focusing on growth of a society's whole population, the male age composition hypothesis looks at the size of the young male population in comparison to the whole population. The theory does not consider environmental degradation as a factor and looks at resource scarcity and competition only in terms of a "biological/evolutionary view." Wiener and his colleague, **Christian Mesquida**, used the "non-moral" framework of evolutionary psychology to explain the occurrence (and non-occurrence) of "coalitional aggression," a term they use to refer to war and other forms of collective aggression.

Stated simply, the male age composition hypothesis claims that "countries with relatively large numbers of young males are more likely to experience episodes of coalitional aggression."

Where Have All the Young Men Gone? Gone to Soldiers Every One

Building on the neglected 1960s work of scholars Herbert Moller and Gaston Bouthol, Mesquida and Wiener investigated a myriad of societies and conflicts historical and contemporary, Southern and Northern, rich as well as poor. They studied population size, with particular attention to young men ages 15 to 29, and the severity of conflict, breaking the data down both by country and by continent. Their research showed that countries with more stable young male populations tended toward political stability, while countries with large young male populations tended toward political instability—a thesis that Mesquida and Wiener suggested explains such diverse situations as the 1968 Paris riots, the 1972 Sri Lankan insurgency, and World War I Germany. Mesquida pointed to the former Soviet republics between 1989 and 1993, which all underwent similar political transformations and yet experienced different levels of conflict severity. Mesquida posited that these differences resulted from differences in young male population sizes among the republics.

The researchers also looked at violence in Northern Ireland between 1969 and 1999 and found that the bulk of the victims—those killed by bombs—were young men between the ages of 18 and 30. Mesquida suggested that, as the Irish male population ages, the violence in that troubled area will ease.

A "Natural Phenomenon"

Pointing to war's long history, Wiener called war a "natural phenomenon, in accord with human nature and part of human nature." He explained that human (especially young male) tendencies to engage in coalitional aggression must be an advantageous trait; if not, natural selection would have ensured the trait's extinction by now. Instead, Wiener suggested that coalitional aggression appears to have evolved over the years, with human physiology and chemistry adapting to maximize capabilities for war. In particular, "sexual selection" accounts for coalitional aggression: young men use the resources available to them to attract a mate and reproduce. Males with a high social status (as judged by their culture) are preferred as mates, and in many cultures men can raise their status through war. In poor countries, aggression may be the only resource young men possess to gain a spouse. "Advantaged females" mate with "advantaged males," and consequently the genetic, cognitive, and emotional make-up that supports coalitional aggression is passed on to the next generation. Although war is dangerous, "failure to take risky behavior leads to a worse consequence-failure to reproduce," Wiener explained.

Mesquida displayed a number of pictures of

insurgents—Zapatistas, Khmer Rouge, Somalis, and others—and pointed to a commonality: all of the rebels were young men. Pausing at one photograph, he said, "We see Somalis when, in fact, we should see young men." While these warriors might be acting on the will of the whole population, Mesquida suggested that they most likely were only following their own inclinations.

Mesquida and Wiener also attempted to debunk alternative theories of war and peace that link conflict to poverty or a lack of democracy. Although many scholars believe poverty often leads to conflict, the two psychologists insisted that, while a relationship exists *today* between per capita GDP and conflict, this was not always true. In earlier times, some of the world's wealthiest countries engaged in coalitional aggression. In contradicting the democratic peace theory—the idea that democracies do not go to war with each other—the researchers measured levels of democracy in a number of European countries in 1850 and 1900 using percentages of enfranchised population. Their findings indicate no relationship exists between levels of democratization and propensity to fight. Even "charismatic leaders," such as Saddam Hussein or Napoleon, are actually chosen by their young male populations, Wiener argued.

Wiener and Mesquida concluded that governments should pursue population and immigration policies designed to reduce the young male populations in unstable countries as well as aiming economic policies and pacification efforts at that demographic group. Wiener suggested marrying young men off by giving them the resources to form families via such means as a "family" wage and the expansion of immigration quotas in more stable countries to accept more immigrants from countries with larger young male populations.

GLOBAL ENVIRONMENTAL CHANGE AND HUMAN SECURITY PROJECT WEB SITE

The Global Environmental Change and Human Security Project (GECHS) has recently overhauled its Web site to include new links and updates. An interdisciplinary research project that strives to advance research and policy efforts in the area of human security and environmental change, GECHS is a core project of the International Human Dimensions Programme on Global Environmental Change (IHDP). Directed by Michael Brklacich, a geographer at Carleton University, the basic objectives of the project are threefold: 1) to promote research activities in the area of global environmental change and human security; 2) to promote dialogue and encourage collaboration among scholars from around the world; and 3) to facilitate improved communication and cooperation between the policy community, other groups (including nongovernmental organizations and the research community).

GECHS publications include *AVISO*, a public-policy briefing series and a collaborative effort of GECHS and the Environmental Change and Security Project. Through a cooperative agreement with the University of Michigan Population Fellows Programs, the U.S. Agency for International Development, the Canadian International Development Agency and the University of Victoria all generously support the *AVISO* series.

To learn more about the GECHS Project and its activities, please visit the Project's web site at: http://www.gechs.org.

REPORT OF THE IUCN/IISD TASK FORCE ON ENVIRONMENT & Security

The International Union for the Conservation of Nature (IUCN) and the International Institute for Sustainable Development (IISD) recently partnered to investigate environment and security linkages in a number of case studies around the globe. The resulting edited volume is entitled *Conserving the Peace: How Protecting the Environment Today Can Prevent Conflict and Disaster Tomorrow* and is due out later this year from IISD in Winnipeg. For more information, contact Jason Switzer at jswitzer@iisd.ca.

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