

PECS NEWS

A POPULATION, ENVIRONMENTAL CHANGE, AND SECURITY NEWSLETTER

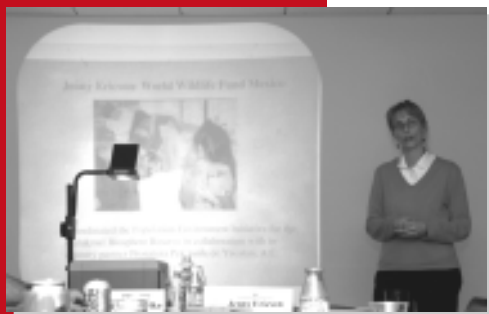
THE WOODROW WILSON CENTER

ENVIRONMENTAL CHANGE AND SECURITY PROJECT

FALL 1999

Population Dynamics, Migration, and the Future of the Calakmul Biosphere Reserve

Featuring: *Jenny Ericson - Program Associate, University of Michigan Fellows Programs, former University of Michigan Population and Environment Fellow*



Jenny Ericson

Integrated Conservation and Development Programs (ICDPs) are gaining in popularity throughout developing countries as a way to balance the needs of people with the conservation of natural resources. By employing sustainable management techniques, these programs seek to ensure the availability of natural resources for future generations by placing a value on their conservation. Most of these programs work to ensure that those people who live closest to resources are the ones to benefit from any type of 'set aside' conservation or sustainable exploitation. The basic overriding principle is that by making sustainable use more valuable than unsustainable use, those in closest contact with resources will work to conserve them and thus ensure their future livelihood.

On October 8, Jenny Ericson of the University of Michigan Population Fellows Program spoke about her experience as a University of Michigan Population and Environment Fellow placed for two years with the World Wildlife Fund (WWF) on an integrated conservation and development project in the Calakmul Biosphere Reserve, located in the southern Yucatan peninsula in Mexico. Ms. Ericson worked with WWF and a Mexican partner organization, Pronatura, to promote placing greater value on the forest and forest products in an effort to reduce deforestation and environmental degradation by relatively new settler populations in the area.

The project had a series of objectives aimed at several different levels of operation. At the macro level, the goal was to establish an understanding of the demographic trends for the region in order to have a better understanding of the human needs in the area and the human influence on the environment. At the community level, the goals were to generate dialogue among the various stakeholders, examine community desires for land use development and empower the local community to take part in decisions that

would affect their livelihoods. On an institutional level, the objectives included the establishment of a culturally and politically appropriate participatory land use system and designing a low-cost and effective population monitoring system.

In order to ensure the participation of the local population and record their opinions, Ms. Ericson used participatory rural appraisal techniques to allow the predominantly illiterate community to define their own objectives and prioritize their land use needs and desires. There is extensive discussion of the technique and several of the exercises used in the written report of her work. She highlighted that although the process was highly successful in empowering the community with a voice, it was a difficult method with which to extract quantitative data. She also briefly discussed other obstacles along the way such as the conflicting goals of different partners and cooperating agencies.

Ms. Ericson concluded by examining some of the accomplishments of the project. These included the provision of a great deal of local training and capacity building, especially in relation to future planning; the development of a series of responses and recommendations used to initiate and broaden dialogue on the links and impacts of land use at all levels; and the development of a clearer understanding of the base environmental problem, its root causes and potential development strategies. On a more concrete level, as a direct result of the project changes have been initiated in internal land use policy at the local level. On a broader level, WWF Mexico has recently decided to include population as one of its institutional priorities and to implement a three-part reproductive health program in the area.

Copies of the complete report "Population Dynamics, Migration, and the Future of Calakmul Biosphere Reserve" can be obtained from The American Association for the Advancement of Science, Directorate for International Programs, 1200 New York Avenue, NW, Washington, DC 20005.

contents

2 ECSP Meetings

World Population Beyond Six Billion

West Africa: A Briefing on Food Security, Environment, and Population Issues for Under Secretary of State Frank E. Loy

4 From the Field

Introduction to the University of Michigan's Population-Environment Fellows Programs

6 Book Review

Water and Population Dynamics: Case Studies and Policy Implications

11 Project News

ECSP Meetings



Left to right: John Haaga and Geoffrey Dabelko

On October 12, the human population will pass the six billion mark, according to United Nations projections. To mark this milestone, The Environmental Change and Security Project asked two leading demographers to address “World Population Beyond Six Million.”

John Haaga outlined trends in fertility, birth rate, death rates and population growth over the last century. From global population of around 1.5 billion at the turn of the last century, we have seen a consistent and rapid growth of total numbers, with the last billion being added within the past twelve years. He was careful to make the distinction between total growth and rates of growth. Globally, rates of growth peaked around the 1970s, but because of population momentum and the number of people in reproductive age groups, total numbers continued to increase. This reduction in rates of growth is one of the often overlooked success stories of the past century. Mr. Haaga cited increasing economic development, greater employment opportunities for and education of women, reduced infant mortality and wider access to modern methods of family planning as the most important contributors to growth rate reductions.

Mr. Haaga also outlined some of the regional differences in growth rates and total growth over the past 30 years, highlighting that the greatest reductions have been in the developed OECD countries. As a corollary to this, the current challenge is within developing countries. Developing country regions are facing demographic change at an unprecedented pace, and are coping with changes in a span of 20 years that occurred in the developed countries over nearly a century. The earth currently supports the largest teenage

World Population Beyond Six Billion

Featuring:

*John Haaga - Director, MEASURE Communication Project,
Population Reference Bureau*

*Carl Haub - Conrad Taeuber Chair of Population Information,
Population Reference Bureau*

population ever, a group entering the reproductive cycle. Mr. Haaga concluded that health and planning services will need to expand and adapt to accommodate this next generation.

Carl Haub looked to the next century and explained the population projections for the next 50 years. He outlined the process of projecting growth with the essential caveats that while we can look at future postulations, it is nearly impossible to accurately predict individual behavior in relation to child bearing. He cited some predictions from previous generations and noted that population growth had actually slowed faster than has been projected. However, unfortunately, much of this trend was due to the onset of the HIV/AIDS pandemic. Mr. Haub outlined several growth rates and what large results even small variations in these would mean to total numbers in 50 years. In the absence of war, famine and abstinence, scenarios either undesirable or unlikely, he pointed to the need to increase both traditional and modern family planning services if the goal is a further reduction in fertility rates.

To read an excerpt of the text or to order *Population Bulletin* please visit the Population Reference Bureau website at www.prb.org.



Carl Haub

West Africa: A Briefing on Food Security, Environment, and Population Issues for Under Secretary of State Frank E. Loy

Featuring:

*Christine Elias, Director, International Cooperation,
World Resources Institute*

*Pietronella van den Oever, Task Manager, Social Development Training
Program, World Bank Institute*

*Rajul Pandya-Lorch, Director, 2020 Vision Initiative, International Food
Policy Research Institute*

*Mustapha Soumaré, Special Assistant to the Director UNDP Africa,
United Nations Development Programme*

*James Buizer, Director, Research and Applications,
Office of Global Programs, National Oceanic and
Atmospheric Administration*

Jeff Drumtra, Senior Africa Policy Analyst, U.S. Committee for Refugees



Left to right: Frank Loy and Geoffrey Dabelko

On June 9, ECSP hosted a meeting for Under Secretary of State for Global Affairs Frank E. Loy prior to his visit to West Africa in mid-June. The session provided an opportunity for experts from the non-governmental sector to share their knowledge about the region and answer specific questions from the Under Secretary and his staff. The session was structured to give an overview of environmental conditions, population and health trends and food security challenges in the region as a whole before examining more specific situations in several countries.

A high proportion of the economic activity in the Sahel region of West Africa is based on the use of natural resources. The predominance of agriculture and livestock rearing as a livelihood strategy means that human security directly depends on the state of the natural environment and the availability of sufficient natural resources. This region is suffering from widespread land degradation due in part to local land management practices, but more importantly as a result of climatic variability and the exploitation of marginal lands. As soils are degraded and agricultural production is expanded, the biodiversity of the region is reduced, leading to a loss of genetic resources that could contribute to a diverse and sustainable agricultural system. These losses jeopardize the food security of the local populations and ultimately result in high economic and social costs.

Also contributing to the increasing human insecurity

“A huge proportion of the economic activity in West Africa is based on the use of natural resources.”

of the region is the rising rate of population growth over the past decades. In 1998 the growth rate for West Africa stood at 2.9 percent, at which rate the population of the region will double in approximately 24 years. Part of the story behind this growth rate is a positive one: reductions in infant and child mortality following large-scale vaccination campaigns. However, this gain has been slow and life expectancy at birth for the region still remains around 50.

These high fertility rates are sustained by a combined pattern of: early childbearing, low contraceptive prevalence, and a custom of virtual universal marriage for women starting in their mid-teens. Socio-economic factors continue to be compatible with early and sustained child bearing, and a West African woman is likely to give birth to an average of 6.4 living children during her reproductive life span. As a result of past high fertility, a large population momentum has built up, with 46% of the population in the region under the age of 15.

The final general topic outlined in this meeting was that of food security in West Africa and more generally in all of sub-Saharan Africa. Almost two-fifths of the sub-Saharan African population is food insecure, meaning, they do not have consistent access to sufficient food to sustain a healthy and productive life. Insecurity occurs at a variety of levels from household to national and depends on variables including productivity, markets and individual income. This

From the Field

University of Michigan Population Fellows Programs

Director: Frank Zinn

Associate Director: Jane MacKie-Mason

The Population Fellows Programs, administered by the University of Michigan School of Public Health and funded by the United States Agency for International Development, were established to train the next generation of leaders in international population assistance. The programs include five components designed to further the professional development of those building careers in international family planning and reproductive health; explore the emerging field of population-environment; or engaged in essential dialogue on the relationship among population dynamics, environmental degradation, and international security.

As an introduction to the Fellows Programs, each component is briefly described below. In each future issue of the newsletter, we will feature the work of a fellow in the field, giving an overview of their placement and allowing them to share some of their “lessons from the field.”

Population Fellows Program (PFP)

Established in 1984, the Population Fellows Program offers two-year professional fellowships to individuals with advanced degrees in population-related areas. The program aims to:

- provide relevant international experience to promising early-career professionals; and
- provide technical assistance to organizations working to improve family planning and reproductive health care in developing countries.

The Population Fellows Program is a classic win-win story in U.S. family planning and reproductive health assistance. Throughout its history, the program has placed nearly 200 early-career professionals in organizations such as CARE, Save the Children, USAID, International Planned Parenthood Federation, the Population Council, Pathfinder International, local non-governmental organizations (NGOs), and ministries of health. Not only do the fellows gain valuable practical experience in international program and policy work, but their host organizations gain access to the insights and knowledge these individuals bring from top graduate programs across the U.S.

Fellowship candidates must be U.S. citizens or permanent residents and hold a graduate degree in a population-related area.

The Population-Environment Fellows Program (PEFP)

Established in 1993, the Population-Environment Fellows Program offers two-year professional fellowships to individuals with advanced degrees in population and environment-related areas. The aims of the program are to:

- provide relevant international experience to promising early-career development professionals;
- provide technical assistance to organizations working to improve environmental and human well-being in the developing world; and
- foster innovative, cost-effective means of addressing development problems through linked population, health, and environmental programming.

Since 1993, the Population-Environment Fellows Program has worked from an important premise — that the only way to develop sustainable programs that balance both human and environmental well being — is to put them to work in the field.

This is why the Population-Environment Fellows Program was created. It provides an important means for environmental, health, and development organizations to test and refine projects that offer:

- people-centered alternatives to “fences and fines” conservation tactics;
- and a means to ease the environmental and human costs of rapid population growth, unsustainable resource use, rural-to-rural migration, and unmanaged urbanization.

To date, some 30 fellows have worked in 15 developing countries on projects designed to break the cycle of poverty, environmental degradation, and poor health that can impinge so dramatically on the quality of human life.

Fellowship candidates must be U.S. citizens or permanent residents, hold a graduate degree in a relevant area, and demonstrate expertise in both population and environment.

“The Population Fellows Program was designed to train the next generation of leaders in international population assistance.”

The Population, Environmental Change and Security Fellowship (PECS)

The Population Fellows Program has recently developed a new type of fellowship with support from the Woodrow Wilson Center's Environmental Change and Security Project. The Population, Environmental Change, and Security Fellowship combines the strengths of both programs in addressing critical aspects of evolving international security concerns. The fellowship draws on the Population Fellows Program's 15 years of experience arranging fellowships with organizations working on population and population-environment issues in the developing world. It also draws on the tremendous policy-level expertise of the Woodrow Wilson Center in the area of environmental change and international security.

The PECS Fellowship will provide a rich professional development opportunity for an early-career professional with graduate training and expertise in the linkages among population, environment, and security issues. The fellow will be placed for two years with an organization exploring these linkages through research, inter-institutional dialogue, case study preparation, and policy analysis.

The Population, Environmental Change, and Security (PECS) Fellowships are two-year professional assignments for individuals with advanced degrees in PECS-related areas. The fellowships aim to:

- develop a cadre of future leaders with expertise in these areas;
- provide technical assistance to organizations addressing security from an interdisciplinary perspective;
- facilitate research, dialogue, and analysis of long-term security issues at the nexus of population and environmental change.

Fellowship candidates must be U.S. citizens or permanent residents, hold a graduate degree in a relevant area, and demonstrate expertise in the linkages among population, environment, and security issues.

Historically Black Colleges and Universities Initiative (HBCU) and The Hispanic-Serving Institutions Initiative (HSI)

The Historically Black Colleges and Universities (HBCU) Initiative, and the Hispanic-Serving Institutions (HSI) Initiative aim to increase the number of students from HBCUs, and HSIs who pursue careers in international family planning and development. To do this, the programs:

- offers coursework and U.S.-based internships to HBCU and HSI graduate students to prepare them for a Population or Population-Environment Fellowship;
- and provides HBCU and HSI undergraduates with summer internships at U.S.-based organizations working on international population and population-environment issues.

Both of these initiatives are an important complement to the work of the Fellows Programs in training future leaders in international population and family planning assistance. Conceived as a way to increase diversity in this field, the initiative provides students with the exposure to family planning and population-environment issues not currently available at most HBCUs and HSIs. The aim is to create a U.S. development assistance effort that is more representative of the U.S. as a whole, while introducing a new set of talented students to a meaningful and rewarding field.

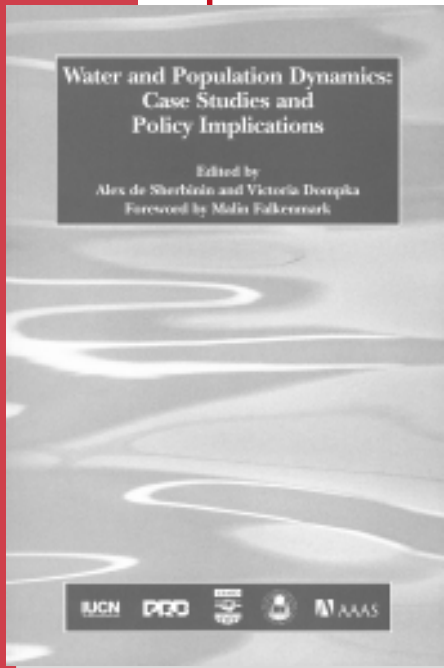


Population-Environment Fellow Dan Whyner (right) has helped his host agency introduce family planning and health services into conservation and development projects around three of Madagascar's protected areas. Here he conducts a rapid rural appraisal session with villagers.

For further information about any of the Fellowship Programs please contact:

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Book Review



Water and Population Dynamics: Case Studies and Policy Implications

Alex de Sherbinin and Victoria Dompka, Eds.

World Conservation Union (IUCN), American Association for the Advancement of Science (AAAS), 1998. 322 pp.

Reviewed by Leif Ohlsson

Having read a “first” book on water scarcity (along the lines of, for example, Sandra Postel’s *Last Oasis*), the interested reader will find it very difficult to get a book on the next level of complexity. All too often one will plow through a number of similar basic books, often referring to each other, leaving one with the impression that there is nothing new in the field. Or, one will attempt to take on very specialized hydrological surveys and policy reviews, leading to a distinct feeling of never mastering the field.

Here is a book that will fill the crucial need for a “second” book on the social consequences of water scarcity. It will leave the reader with a much enhanced understanding of both the hydrological complexities and the social challenges stemming from the need to mobilize scarce water resources. At the same time, the volume is completely comprehensible to the non-expert.

The book is the outcome of a collaborative effort of the United States Agency for International Development (USAID), International Union for the Conservation of Nature (IUCN) and Population Reference Bureau (PRB). Nine country teams (each including water resource specialists and a population specialist) contributed to the effort, resulting in a major effort to apply a common framework of

population dynamics, hydrological limitations, and policy actions to a number of case studies from developing countries.

The book contains case studies from Tanzania, Guatemala, Jordan, Zambia, Bangladesh, Mali, Southern Africa (the Zambesi), India, Morocco, and Pakistan. Geographically, it covers Southern and East Africa, the Middle East, Central America and Southern Asia. Substantively, it covers the problems of rainfed agriculture, irrigation by groundwater abstraction, shared rivers, and drinking water in rural and urban areas. In addition, the volume includes an overview of

the principles of water management, an introduction by IUCN editor Alex de Sherbinin, and a foreword by internationally renowned hydrologist Malin Falkenmark.

The strength of the case studies lies in three factors: the common framework, imposed in an exemplary way by the authors; the expertise of the case-study authors, as demonstrated by their rendering of research projects focused on

a specific region within each country; and the way the specific regional problem is placed in the context of water and development challenges on the country level.

The reader thus gets the best of three worlds: examples of water problems encountered in different world regions, valuable country overviews of both population dynamics and hydrological limitations, and

“The cases shed light on the implicit compound pressures produced by the inevitable population increases during the coming decades, the undeniably just demands for better lives, and the specific role of water in realizing those goals.”

a very concrete understanding of how these problems translate into community-level development problems and challenges to be resolved by policy efforts.

The Value of Case Studies

Each of the three aspects—hydrological limitations, population dynamics, and policy efforts—are there in every case study, and they are given reasonably equal space. On the issue of hydrological limitations, highlights with new information cover the long and the short rains in Eastern and Central Africa, the specific geological problems of Central America, the vastly different preconditions for agriculture between distinctly different zones within single countries (such as, for example, Mali and Jordan), the consequences of urban water demands, the effect of hydropower dams on downstream agriculture in Zambia, the way the monsoon seasons govern life in Southern Asia, and the upstream-downstream problem (generally only encountered in the literature on the issue of international rivers) within a single local system of irrigation canals in Pakistan.

Similarly, one gets a valuable overview of the dynamics of population pressures in each of the countries. The cases shed light on the implicit compound pressures produced by the inevitable population increases during the coming decades, the undeniably just demands for better lives, and the specific role of water in realizing those goals. The sum of these factors presents huge challenges to the policy innovation capability of societies.

Some of the ways people adapt to limitations imposed by water scarcity deserved to be highlighted more clearly in the summaries by the editors. As an example, it is quite clear that the authors were given the explicit task of assessing migratory pressures resulting from water scarcity. In fact, one of the main results that may be read from the case studies is that migration is one of the most important determinants of population growth in villages, between villages, and in towns. It is quite evident from several case studies that people tend to migrate within (and sometimes even between) countries following water availability. Some authors attempt to trace a link between increased availability of potable water and migration to (and between) urban areas. For example, the population density in Tanzania appears much more evenly distributed if it is calculated per amount of water transpired through crops, than if it is calculated per square kilometer.

Another oft-repeated statement in a number of case-studies is that population increases in rural areas are not as large as they would have been, had there not been significant migration to cities. These conclusions are recognized by the editors in their introduction, yet the potential social and water management implications (both positive and negative)

are not discussed as important outcomes of the book, which seems a missed opportunity.

One of the most valuable contributions of the volume stems from the discussion of the difficulties of formulating and carrying out appropriate policy responses to deal with the pressures resulting from population dynamics and water scarcity. One gets a very vivid picture of the enormous difficulties involved, as well as an admiration for the efforts undertaken by countless anonymous administrators. The main value added is an enhanced understanding of the difficulties encountered when attempting to carry out what “rationally” (from the point of view of hydrological concerns and the state) appears to be the “correct” policy. These efforts must be conducted in a context of existing social, economic, and (not least) cultural preconditions on the community level.

The final case study from Pakistan is almost epic in its rendering of how the people of six small villages at the

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ECSP-FORUM

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

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

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far end of an irrigation system were marginalized by more powerful land-owners at the head of the system. The increased economic and social power clearly had come as a result of the upstream opportunity to capture illegally a larger amount of irrigation water for producing more valuable crops. In the end, three of the villages were left totally empty as a result of forced out-migration. Two of them remained half-empty as canals (important for agriculture and for drinking) ran dry. Only in the last village did people hang on. Those forced to migrate had to sell their land to destructive brick-kiln works, in turn polluting the remaining water. Women, culturally forbidden and afraid to leave their villages alone, were often the only wage earners and had to fetch water twice a day from as far as ten kilometers away.

In the end, the plight of the now dispersed villagers was taken to a human rights court. They won a judgment that guaranteed a minimum amount of water flow, sufficient for them to return and try to rebuild their lives.

Questions Not Raised

It is, of course, not a coincidence that the case study chosen to end the book is a success story of sorts. In a similar vein, the discussion of policy efforts bears a stamp of forced optimism. By common agreement, all of the authors try to incorporate what is “known” to be right and good in the field: population stabilization is vital, as is community involvement; access to water is a human rights issue; environmental conservation also meets human needs; a multidisciplinary approach is beneficial; nonstructural (small-scale) solutions can be effective; water management institutions can avert conflicts over water resources; urban population growth affects demand for water; and public education is necessary.

Yet, sometimes the enormity of the challenge to implement what is known to be right and good shines

through rather blatantly. If the doubling time of population growth in the Petén region of Guatemala, due to a combination of natural growth and in-migration, is at present 12 years, and the health situation for people suffering from intestinal infections and respiratory illnesses is such that the proportions of coffins made for children compared to adults is five to one, the picture painted should be one of an ongoing catastrophe, not a management problem.

If the population of Jordan has increased more than seven-fold in the last fifty years, it is a great achievement that the Azraq oasis (depleted by the water needs of Amman and agriculture) has been restored by pumping from other aquifers. But the pressure on water resources from a population with a present doubling time of some 20 years is still stupendous. The reader rather desperately seeks some reflections, in addition to a mere confirmation of this fact, on the nature of the policy efforts required to deal with these challenges.

In order to get a handle on the character of these challenges, a reading of the cases through two complementary conceptual frameworks—those of *environmental scarcity* and *social resource scarcity*, respectively—is helpful.

Two Alternative Readings

A reading of the cases through the conceptual framework of “environmental scarcity” provides increased understanding of the forces at work behind a perceived scarcity of water. Environmental scarcity should be understood as the outcome of three large processes of change: i) environmental impacts; ii) population increase; and iii) unequal social distribution of resources, also termed “structural scarcity.”

The concept is proposed by Thomas Homer-Dixon of the University of Toronto, whose work on the link between environmental scarcity and violent conflict has been much

“A great strength of this volume is that, in addition to the very real contribution in its own right, it has also opened the way and pointed at the need for such studies.”

Thanks to our Funders!

ECSP turned five years old this October and would like to thank its past and present funders for their generous support.

- U.S. Agency for International Development Office of Population, through a cooperative agreement with The University of Michigan Population Fellows Program
- Pew Charitable Trust Fund
- Ploughshares Fund

For ECSP's China-related activities:

- W. Alton Jones Foundation
- National Oceanic and Atmospheric Administration
- David and Lucille Packard Foundation
- The Summit Foundation

discussed in previous issues of the *Environmental Change and Security Project Report*. Here I am simply using the concept heuristically.¹

As an example, the case study of Guatemala renders an almost perfect description of how structural scarcity (unequal resource access) is linked to the state of war and general violence that has prevailed there over the last 40 years. It is noted that one result of changing ownership rights ("resource capture" by more powerful segments, one cause of structural scarcity) has been large-scale migration towards urban areas and agriculturally marginal zones prone to severe soil erosion (constituting what in Homer-Dixon's terms would be "ecological marginalization," a consequence of structural scarcity). In Zambia, hydropower dams and the Nakambala Sugar Estate have effected a similar resource capture, blocking water demands from local populations and increasing land degradation, leading to ecological marginalization.

In the state of Karnataka, India, the availability of water has declined to a much greater extent than other resources for the small and marginal farmer. The decline results from the de facto ownership of water by large farmers with private boreholes. The collapse of community water management systems has led to the silting of water tanks and the decline in their use. The overall effect of this unequal social resource distribution has been that land area used for irrigated coconut plantations (owned by the wealthy elite) has doubled, resulting in a reduction of irrigated land for annual crops to a mere 15 percent of the amount under irrigation some 25 years ago, a good illustration of structural scarcity resulting from resource capture, and the consequent ecological marginalization.

Furthermore, many of the questions left hanging in the air almost beg to be addressed by a conceptual framework of what I elsewhere have suggested ought to be termed a *social resource scarcity*, that is, a scarcity of a particular kind of resource, namely the adaptive capacity of societies facing the challenge of managing natural resource scarcities. The concept builds on the so called "ingenuity gap" suggested by Homer-Dixon, but stresses the character of the adaptive capacity of societies as a distinct resource, critically prone to scarcity.²

An example from the book under review is the case study of Morocco. It differs markedly from the other cases, in that it both recognizes the difficulties ahead and tries to identify the factor missing in many discourses. Authors Abdelhadi Bennis and Houria Tazi Sadeq raise the crucial question:

Will the population accept high annual costs for participation in investments that were decided without their consent.... Organizational initiatives rarely come from the population under the socioeconomic conditions that exist in rural areas. The government is forced to take the initiative, hoping the population will follow. On the one hand, there is the government's duty to initiate and maintain basic installations, and on the other hand there is the government's desire to transfer management, within an organized and democratic framework, to a local population that, unfortunately, is

not ready to handle it (p. 278-9).

Issues raised here are the ability and legitimacy of the state to carry out the policy measures which are "known" to be right and good, and the very real likelihood that such measures cannot possibly be realized to the degree necessary, due to the opposition formed by a variety of local coinciding vested interests.

Such difficulties deserve to be the focal point of similar studies in the future. A great strength of this volume is that, in addition to the very real contribution in its own right, it has also opened the way and pointed at the need for such studies.

Leif Ohlsson is a Ph.D. researcher at the Department of Peace and Development Research at the University of Göteborg, Sweden.

¹ Thomas Homer-Dixon, "Environmental Scarcities and Violent Conflict: Evidence from Cases," *International Security* 19 (Summer 1994): 5-40; and *Environment, Scarcity and Violence*, Princeton University Press, 1999.

² Leif Ohlsson, *Environment, Scarcity, and Conflict: A study of Malthusian concerns*, Department of Peace and Development Research, University of Göteborg, Sweden 1999. Thomas Homer-Dixon, "The Ingenuity Gap: Can Poor Countries Adapt to Resource Scarcity?", *Population and Development Review* 3 (September 1995): 587-612.

ECSP on the Internet

<http://ecsp.si.edu>



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insecurity is a trend that is expected to accelerate substantially, so that by 2010, 39 percent of the population will face food insecurity. Agricultural sector development is essential to ensuring food security and good nutrition for all, but as outlined above there are additional environmental challenges to achieving this in West Africa.

After looking at overall trends in the region, the focus of the meeting shifted to examine three specific country topics with regional importance, namely desertification in Mali, climate change in Senegal and refugees in Guinea.

Mali, a landlocked country, is dominated by the Sahara desert, which covers two thirds of the country. Only 30 percent of the remaining arable land is cultivated, and a pattern of shifting cultivation and cutting for fuel-wood leads to the deforestation of 50,000 hectares a year. Past interventions aimed at combating desertification have found limited success, primarily because they were aimed at addressing the physical symptoms rather than the socio-economic root causes of unsustainable land use. More

recently, integrated approaches aimed at addressing the issue of desertification have found more success. Today, Mali is one of the West African countries most advanced in implementing legal instruments to combat climate change and desertification. Even so, there are still challenges to be met in ensuring active participation and partnership at the regional and local level within Mali. One critical element in this process is that the government must work to create an enabling environment within Mali to ensure an integrated and sustainable development package that addresses not only the symptoms, but also the causes of continued environmental degradation.

Climate change is another element in the complex pattern of environmental degradation in West Africa. Although there is a great deal of debate about the magnitude or type of impact that might occur in West Africa, it is generally accepted that climate change can further stress human and environmental systems that are already under considerable strain. Regional changes in temperature and precipitation

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Now Available ! *Environmental Change and Security Project Report, Issue 5*

The Environmental Change and Security Project (ECSP) has published its fifth issue of the *Environmental Change and Security Project Report*. A tool for researchers, policymakers, and educators, the *ECSP Report* examines the various aspects of linkages between environment, population, and security. Contents include:

FEATURES

- Population, Urbanization, Environment, and Security: A Summary of the Issues* - Ellen M. Brennan
- To Cultivate Peace: Agriculture in a World of Conflict* - Indra de Soya and Nils Petter Gleditsch
- Environmental Change, Security, and Social Conflicts in the Brazilian Amazon* - Alexander Lapez

SPECIAL REPORTS

- Environmental Security in an International Context: Executive Summary Report* - Kurt M. Lietzmann and Gary D. Vest
- State Failure Task Force Report: Phase II Findings* - State Failure Task Force
- Making A Difference at the Intersection of Population, Environment, and Security Issues: A Look at the University of Michigan Population Fellows Program* - Shannon England

OFFICIAL STATEMENTS AND DOCUMENTS

NEW PUBLICATIONS

THE WILSON CENTER'S ECSP MEETINGS

UPDATE SECTION

- Nongovernmental & Governmental Activities*
- Academic & Professional Meetings*
- Internet Sites & Resources*
- Bibliographic Guide to the Literature*



Since October 1994, the Woodrow Wilson Center's ECSP has provided specialists and other interested individuals with a "road map" to the myriad views, activities, and policy initiatives falling under the rubric of "environment, population, and security." Through meetings, publications, and the activities of the staff, ECSP explores a wide range of academic and policy-related topics. The *ECSP Report* can be obtained by email at ecspwwic@wwic.si.edu or online at <http://ecsp.si.edu/ECSP-Report5>.

Project News

- In June, ECSP added two new staff members: Shanda Leather came from Center for African Studies in London and Marie Stopes International to coordinate population and environment activities, and Clair Twigg came from the Georgetown School of Foreign Service to coordinate office activities. In September, Dr. Jennifer Turner joined ECSP to coordinate the Working Group on Environment in U.S. China Relations. She taught at Winthrop University prior to joining ECSP.
- The Project recently received \$100,000 from the USAID Office of Population, through a cooperative agreement with the University of Michigan Population Fellows Program, to establish a working group on issues of population, water, and security.
- In October, ESCP cosponsored with the University of Michigan Population Fellows Program the first of three major conferences on migration, environmental change, and security. The first two-day conference, held in Ann Arbor, Michigan, brought together scholars to examine the state of research and to identify areas for further study. Subsequent meetings will include a simulation exercise at the U.S. Army War College and a policy briefing conference in Washington, DC.

Publications

- The Project is collaboratively publishing a series of eight "AVISO" briefing papers with the Global Environmental Change and Human Security Project (GECHS). Four have been produced so far: "Environmental Change, Vulnerability, and Security in the Pacific"; "Environmental Degradation and Population Displacement"; "Water and Human Security"; and, "Food Security in a Changing World." To obtain copies, visit the AVISO website at <http://gechs.org/aviso/>.
- Project Director, Geoffrey Dabelko, and Stacy VanDeveer, assistant professor of political science at the University of New Hampshire, jointly authored "Redefining Security Around the Baltic: Environmental Issues in Regional Context," an article which appeared in *Global Governance*, volume 5 (1999).
- In June, ECSP jointly published the bilingual monograph "Climate Action in the United States and China." Co-authored by former ECSP staffer Aaron Frank, the publication highlights policy steps on climate change in the United States and China. For copies, call Jennifer Turner at (202) 691-4233 or visit <http://ecsp.si.edu/Climate-brochure>.
- In October, the Project published the fifth annual issue of the *Environmental Change and Security Project Report*. For copies of the *Report* call (202) 691-4130 or visit <http://ecsp.si.edu/ecsplib.nsf/Publications>.
- *The Wilson Quarterly*, a publication of The Woodrow Wilson Center, published "The Environmental Factor" by Geoffrey Dabelko in their Autumn 1999 issue. The article traces the ups and downs of the environment and security debates in U.S. policy circles. To purchase a copy of the *Wilson Quarterly*, visit <http://wwics.si.edu/>

OUTREACH/WQ/QUARTERL.HTM.

- ECSP is collaborating with the Woodrow Wilson Center's internationally-syndicated radio program *Dialogue* to produce a CD box set of interviews recorded on environmental and demographic topics. The half hour, one-on-one interviews were conducted by *Dialogue* host and producer, George Liston Seay. Interviewees include Allen Hammond (World Resources Institute), Eugene Linden (*Time*), Paul Simon (former Senator), Linda Lear (Smithsonian) and Geoffrey Dabelko (Wilson Center). For more information contact ECSP at (202) 691-4130 or ecspwwic@wwic.si.edu.

Meetings recently held at The Wilson Center

- September 1, 1999
"Environment and Security in an International Context:
A Pilot Study Report from NATO's Committee on the Challenges of Modern Society"
- September 14, 1999
"World Population Beyond Six Billion"
- October 5, 1999
"The GLASS Model: Assessing Environmental Threats to Food and Water Security in Russia"
- October 8, 1999
"Population Dynamics, Migration, and the Future of the Calakmul Biosphere Reserve"
- October 27, 1999
"USAID-WHO Collaboration for Health in the Millennium"
- October 28, 1999
"The Future of Environmental Security in European Institutions"
- November 5, 1999
"Forest Futures: Population, Consumption and Wood Resources"

ECSP Website

For information about the Environmental Change and Security Project visit <http://ecsp.si.edu>. The Project's website includes: a virtual library of all ECSP publications available in both text and .pdf format; summaries and photos of ECSP meetings and events; extensive updates on environment, population and security activities and research; a bibliography of ECSP related literature; and information about the Project's electronic listserv *ECSP-FORUM*.

PECS NEWS

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will lead to climate variability and more frequent incidents of events such as floods, drought and tropical storms. When these events are combined with human systems unable or unwilling to undertake short-term adaptive measures, as is the case in West Africa, severe losses are inevitable. These changes are particularly relevant for coastal states like Senegal because of the high level of coastal exposure and the high proportion of the population dependent on rain-fed agriculture for their livelihood and human security.

The final specific topic addressed in the meeting was that of refugees in Guinea. Guinea hosts more refugees than any other country in Africa, and is ranked fifth globally in number of refugees. The country is currently home to between 400,000 and 500,000 displaced people, primarily from Sierra Leone but also with significant numbers from Liberia. Since 1989 there have been several waves of refugees from these two countries fleeing the violence in their home states. Ninety percent of these refugees live in the western and eastern forest zones in Guinea – two of the poorest regions of the country. Refugee populations survive by sharecropping, working as laborers and selling firewood. The conditions faced by the refugee populations are similar to conditions elsewhere; poor infrastructure, poorly managed food distribution, poor access to medical care, and personal insecurity. Although Guinea hosts an unusually large number of refugees, the challenges posed in dealing with that population are mirrored across the region in dealing with smaller refugee flows and are reflective of general challenges in all of West Africa.

This meeting highlighted many of the challenges to improving human security throughout West Africa. In general three of the key issues to be addressed are food security, population trends and environmental degradation. One of the main conclusions to be drawn from all of the speakers was the inter-related nature of these broad topics. All three feed into and influence one another, and it is essential to approach the challenges to sustainable development in West Africa in an integrated manner.



The Woodrow Wilson International Center for Scholars, located in the Ronald Reagan Building in the heart of Washington D.C., was founded in 1968 by Congress as the nation's memorial to President

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

ENVIRONMENTAL CHANGE AND SECURITY PROJECT (ECSP)

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

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